



# Switching & Controls

## ► Catalogue

OUR COMMITMENT MAKES THE DIFFERENCE ►

**BACO**<sup>®</sup>

## Baco fully committed into the future

A Key player on the market for control and signalling units, cam switches and switch disconnectors, Baco is recognized for its professional expertise and compliance with safety standards. Baco is committed to a quality charter based on the quality and reliability of its numerous and flexible solutions.

### CONTROL AND SIGNALLING UNITS

► **A wide range**

- Excellent modularity for a large choice of combinations with a minimum number of items
- Customised products to meet the most specific needs



### CAM SWITCHES

► **A reference on the market**

- A worldwide reputation of know-how for more than 50 years
- A range from 10 to 250 A (panel mount or enclosed)
- More than 50,000 different electrical diagrams available
- Numerous specific functions and special engravings



### SWITCH DISCONNECTORS

► **Great flexibility in use**

- Compactness
- Infinite number of combinations for customised applications
- Reversible terminal blocks for front or rear mounting saving valuable time during installation



### THE BACO QUALITY REQUIREMENT

Our products have a 10-year guarantee and are exceptionally reliable, that is why they are ideal for integration into systems that do not tolerate any failure (military, aeronautical, space exploration, medical research equipment, etc.). Moreover, BACO product ranges offer ingenious and reliable solutions that are fast and easy to implement.

That's why Baco is now providing a 10-year guarantee on all products. This guarantee strengthens the assurance of having a solid and committed brand by your side. With Baco, you can be sure that you have made the right choice.



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T16ME20		116	227616		130	GND53		279	J962GN61		267	NB02EQ1	227589	134
T16ME50		116	227617		130	GND60		279	J963GN61		267	NB02EX80	227701	135
T16MG10		116	227618		131	GND61		279	LB01AQ9		140	NB03AC113		135
T16MG20		116	227619		131	GND63		279	LB02AQ9		140	NB03AHQ	227712	136
T16MG50		116	227620		131	GSN53		266	LB03AQ9		140	NB03AQ1	227402	134
T16MH10		116	227621		131	HB01AAQ		139	LB04AQ9		140	NB03AX80		135
T16MH20		116	227622		131	HB01AQ7		138	LC01GQ9		154	NB03EQ1	227590	134
T16MH50		116	227623		132	HB02AAQ		139	LC02GQ9		154	NB03EX80	227702	135
T16MJ10		116	227624		131	HB02AQ7		138	LC03GQ9		154	NB04AC113		135
T16MJ20		116	227625		131	HB03ABQ		139	LC04GQ9		154	NB04AHQ		136
T16MJ50		116	227626		131	HB03AQ7	227422	138	LC51DQ9		163	NB04AQ1	227403	134
T16MK01		108	227627		131	HB04ABQ		139	LC52DQ9		163	NB04AX80		135
T16MK02		108	227629		132	HB04AQ7		138	LC53DQ9		163	NC01CQ1	227490	147
T16MK08		108	227630		131	HC01GAQ		153	LC54DQ9		163	NC01GC113		148
T16MR01		109	227631		131	HC01GQ7		153	LD01AQ9		204	NC01GQ1	227430	147
T16MR03		109	227632		131	HC02GBQ		152	LD02AQ9		204	NC01GX80	227545	148
T16MR08		109	227636		132	HC02GQ7	227451	152	LD03AQ9		204	NC01GXQ		149
T16MT01		109	227637		132	HC03GCQ		153	LG3EV72		141	NC02CQ1	227491	147
T16MT03		109	BC05Q3		292	HC03GQ7	227452	152	LG3EV73		141	NC02GC113		148
T16MT08		109	BC06Q3		292	HC04GDQ	227748	153	LG3RV72		143	NC02GQ1	227431	147
T16MU01		109	BC07Q3		292	HC04GQ7	227453	152	LG3RV73		143	NC02GX80	227546	148
T16MU03		109	BC11Q3		292	HC51DAQ		162	LG4EV72		141	NC02GXQ		149
T16MU08		109	BC12Q3		292	HC51DQ7		161	LG4EV73		141	NC03CQ1	227492	147
T16NA00		110	BC13Q3		292	HC52DBQ		162	LG4RV72		143	NC03GC113		148
T16NC00		110	BC13Q3		292	HC52DQ7		161	LG4RV73		143	NC03GQ1	227432	147
T16ND00		110	BC14Q3		292	HC53DCQ		162	LS3EV72		141	NC03GX80		148
T16NK00		110	BC15Q3		292	HC53DQ7		161	LS3EV73		141	NC03GXQ		149
T52QA02		107	BC16Q3		292	HC54DDQ		162	LS3EV97		142	NC04GC113		148
T52QA03		107	BCF140		292	HC54DQ7		161	LS3RV72		142	NC04GQ1	227433	147
UA0011		121	BCF240		292	HD01ABQ		202	LS3RV73		142	NC04GX80		148

Control and signalling units

Cam switches

Switch disconnectors

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NC04GXQ		149	Q480		265	SZ52CQ1	227517	183	ZZ11GQ7		168	172599	222249	314
NC51DC113		157	Q480		283	SZ52CXQ		183	ZZ11GXQ		168	172601	222250	307
NC51DQ1	227460	156	Q480PC50		264	TB01AQ1	227410	137	ZZ13GQ7		174	172601	222250	311
NC51DX80		157	Q480PN50		264	TB01AXQ		137	ZZ51BQ7		179	172602	222260	307
NC51DXQ		158	Q48PC50		264	TB02AQ1		137	ZZ51BXQ		179	172603	222251	307
NC52DC113		157	Q48PN50		264	TB02AXQ		137	ZZ52BQ7		185	172604	222261	307
NC52DQ1	227461	156	Q61		265	TB03AQ1	227412	137	ZZ52BXQ		185	172612	222263	311
NC52DX80		157	Q61		283	TB03AXQ		137	ZZ52CQ7		185	172621	222252	314
NC52DXQ		158	Q610		265	TB03EQ1	227594	137	ZZ52CXQ		185	172622	222262	314
NC53DC113		157	Q610		283	TB04AQ1		137	165009	222142	298	172629	222280	309
NC53DQ1	227462	156	Q63		265	TB04AXQ		137	165109	222143	298	172629	222280	312
NC53DX80	227552	157	Q63		283	TC01GQ1	227440	150	165209	222144	298	172629	222280	315
NC53DXQ		158	Q630		265	TC01GXQ		151	165309	222145	298	172639	222281	309
NC54DC113		157	Q630		283	TC02GQ1		150	165409	222146	298	172639	222281	312
NC54DQ1	227463	156	Q64		283	TC02GXQ	227736	151	165509	222147	298	172639	222281	315
NC54DX80	227553	157	Q640		283	TC03GQ1		150	168009	222152	303	172649	222282	309
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ND01AC113		198	Q640PC50		264	TC04GQ1		150	168209	222154	303	172649	222282	315
ND01AQ1	227502	197	Q640PC60		264	TC04GXQ	227738	151	168309	222155	303	172901	222101	294
ND01AX80		197	Q640PN50		264	TC51DQ1	227470	159	168409	222156	303	172911	222109	294
ND01AXQ		198	Q64MN60		264	TC51DXQ		160	168509	222157	303	172921	222111	294
ND02AC113		198	Q64PC50		264	TC52DQ1		159	172000	222110	306	172945	222295	294
ND02AQ1	227503	197	Q64PC60		264	TC52DXQ		160	172001	222102	295	172945	222295	300
ND02AX80		197	Q64PN50		264	TC53DQ1		159	172002	222122	296	172961	222171	299
ND02AXQ		198	Q65		265	TC53DXQ		160	172003	222132	297	172965	222231	294
ND03AC113		198	Q65		283	TC54DQ1		159	172011	222108	295	172965	222231	300
ND03AQ1	227504	197	Q650		265	TC54DXQ		160	172021	222112	295	172971	222178	299
ND03AX80		197	Q650		283	TD01AQ1		200	172061	222172	299	172981	222181	299
ND03AXQ		198	Q68		265	TD01AXQ		200	172065	222212	306	174001	222164	301
ND51EQ1	227597	205	Q680		265	TD02AQ1		200	172071	222179	299	174002	222188	302
ND52EQ1	227598	205	Q71		265	TD02AXQ		200	172075	222202	306	174005	222195	304
ND53EQ1	227599	205	Q71		283	TD03AQ1		200	172100	222130	306	174061	222118	305
NDF03	227704	195	Q710		265	TD03AXQ		200	172101	222103	295	174101	222165	301
NDF15	227705	157	Q710		283	TZ11GQ1		167	172102	222123	296	174102	222189	302
NR51UQ1		207	Q72		283	TZ11GXQ		167	172103	222133	297	174105	222196	304
NR52UQ1	227706	208	Q720		283	TZ13GQ1		173	172121	222113	295	174161	222119	305
NR53UQ1		209	Q720MN60		264	TZ13GXQ		174	172161	222173	299	174179	222275	309
NR54UQ1		210	Q720PC60		264	TZ51BQ1		178	172165	222213	306	174179	222275	312
NR55UQ1		211	Q72MN60		264	TZ51BXQ		178	172167	222232	309	174179	222275	315
NY11AQ1	227533	189	Q72PC60		264	TZ52BQ1		184	172174	222201	306	174189	222276	309
NY11AX80		189	Q73		265	TZ52BXQ		184	172175	222203	306	174189	222276	312
NY14AQ1		190	Q73		283	TZ52CQ1		184	172177	222235	309	174189	222276	315
NY14AX80		190	Q730		265	TZ52CXQ		184	172179	222208	306	174199	222274	309
NY17AQ1	227535	191	Q730		283	UF36		282	172179	222208	310	174199	222274	312
NY17AX80	227558	191	Q75		265	UF36000		282	172179	222208	313	174199	222274	315
NY31AQ1	227536	193	Q75		283	UF38		282	172185	222222	306	174201	222166	301
NY31AX80	227561	193	Q750		265	UF38000		282	172189	222238	309	174202	222190	302
NY37GQ1	227537	194	Q750		283	WE40		281	172189	222238	312	174205	222197	304
NY37GX80	227562	195	Q78		265	WE41		281	172189	222238	315	174249	222269	309
NZ11GQ1	227510	165	Q780		265	WE43		281	172195	222225	306	174249	222269	312
NZ11GXQ		165	Q91		265	WE45		281	172199	222239	309	174249	222269	315
NZ13GQ1		171	Q91		283	WE47		281	172199	222239	312	174259	222271	309
NZ13GXQ		172	Q93		265	WE60		281	172199	222239	315	174259	222271	312
NZ51BQ1		176	Q93		283	WE61		281	172200	222140	310	174259	222271	315
NZ51BXQ		176	Q95		265	WE63		281	172201	222104	295	174261	222120	305
NZ52BQ1		182	Q95		283	WE65		281	172202	222124	296	174269	222273	309
NZ52BXQ		182	Q96		283	WE67		281	172221	222114	295	174269	222273	312
NZ52CQ1		182	Q96GC60		264	WE70		281	172261	222174	299	174269	222273	315
NZ52CXQ		182	Q96GN60		264	WE71		281	172265	222214	310	174301	222167	301
PC50		280	Q98		265	WE73		281	172267	222270	309	174302	222191	302
PC51		266	SB01AQ1		136	WE75		281	172267	222270	312	174305	222198	304
PC51		280	SB01AXQ		137	WE77		281	172267	222270	315	174361	222121	305
PC53		266	SB02AQ1	227406	136	WE90		281	172275	222204	310	174399	222243	308
PC53		280	SB02AXQ		137	WE91		281	172277	222272	309	174401	222168	301
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PC61		266	SB03AXQ		137	WE95		281	172277	222272	315	174405	222199	304
PC61		280	SB03EQ1	227592	136	WR01		269	172300	222150	310	174449	222299	309
PC63		266	SB04AQ1	227408	136	WR02		269	172301	222105	295	174461	222128	305
PC63		280	SB04AXQ		137	WR03		269	172302	222125	296	174501	222169	301
PCD50		280	SB04EQ1	227593	136	WR04		269	172321	222115	295	174502	222193	302
PCD51		280	SC01GQ1	227435	149	ZB01AQ7	227415	138	172361	222175	299	174505	222200	304
PCD53		280	SC01GXQ		150	ZB01AXQ		138	172365	222215	310	174559	222285	309
PCD60		280	SC02GQ1		149	ZB02AQ7		138	172367	222233	312	174561	222129	304
PCD61		280	SC02GXQ		150	ZB02AXQ		138	172375	222205	310	174569	222286	309
PCD63		280	SC03GQ1		149	ZB03AQ7	227417	138	172377	222236	312	174599	222284	309
PN50		279	SC03GXQ		150	ZB03AXQ		138	172385	222223	310	174601	222255	307
PN51		266	SC04GQ1	227438	149	ZB03EQ7	227596	138	172395	222226	310	174601	222255	311
PN51		279	SC04GXQ		150	ZB04AQ7	227418	138	172399	222242	308	174621	222257	314
PN53		266	SC51DQ1		158	ZB04AXQ		138	172400	222170	313	174901	222163	300
PN53		279	SC51DXQ		159	ZC01GQ7		151	172401	222106	295			
PND50		279	SC52DQ1		158	ZC01GXQ		152	172402	222126	296			
PND51		279	SC52DXQ		159	Z								

# Heads, blocks and connection...

designed to last!



LOCKING RING

## ► HEAD

*“Cleverly designed to be both ergonomic and clearly visible”*

- Insulating material ensures electrical safety
- Integrated anti-rotation tab
- Legend holder frame keeps IP 66 + IP 69K protection
- Optimised ergonomic design
- Choice of bezels: black or chrome plastic
- Innovative and varied functions
- Optimised dimensions

See pages 23 to 50

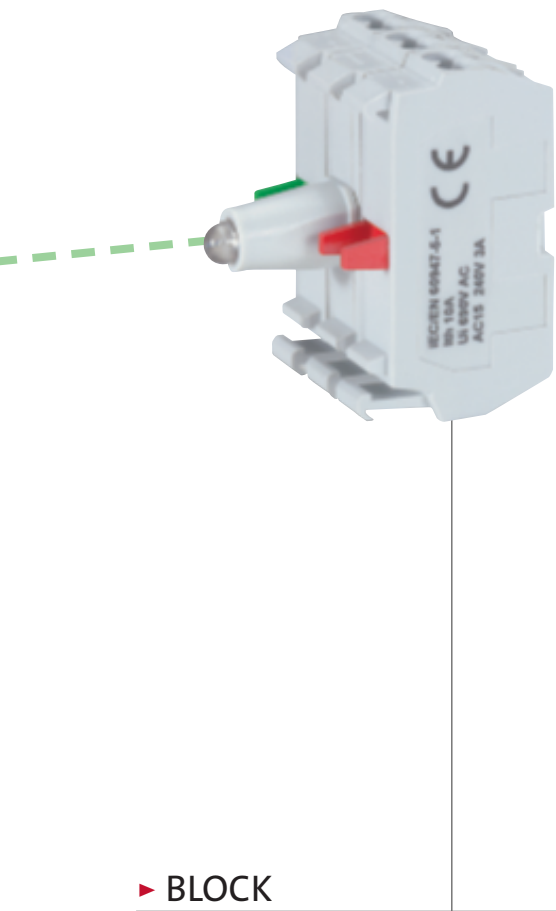
## ► CLIP

*“Flexibility of configuration: 1, 3 or 5 position clips  
Contact blocks can be assembled in any order...”*

- Enhanced rigidity
- For 1, 3 and 5 blocks
- Blocks are simply snapped onto the clip

See page 69





► **BLOCK**

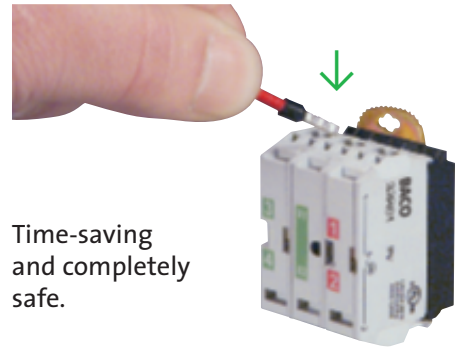
*“Imagatively designed to be safe, robust and durable”*

- Securely fixed by clipping into place
- Stackable
- Grade protection: IP 20 as “finger safe” on screw and plug-in terminals
- Electrical insulation
- LED blocks combining long life and economy (100,000 hours)
- Corrosion resistant to some chemicals and sea air, etc
- Conform to standard EN/IEC 60947-5-1
- Compliant with RoHS European directive (concerning restriction of hazardous substances)

See pages 52 to 68

► **CONNECTION**

**PLUG-IN TERMINALS**

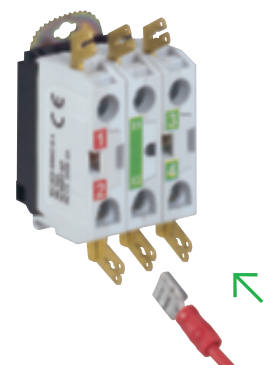


Time-saving and completely safe.

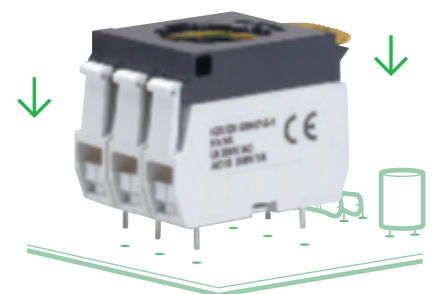
**SCREW TERMINALS**



**FASTON TERMINALS**



**PIN STYLE TERMINALS (FOR PCB)**





# New heads...

robust and clearly marked!



## ► ADVANTAGES

*We're full of innovative ideas from listening to your needs, and watching you work*

- On all heads, rotation is prevented by a tab which retracts when not required
- Insulating material ensures electrical safety
- Design and shape help avoid build-up of dirt and make the switch easy to clean
- ISO 13850 illuminated mushroom head with yellow collar for side-on visual indication
- Optimised ergonomic design
- Innovative functions: illuminated emergency stop mushroom head, etc
- Optimised dimensions: low-profile heads

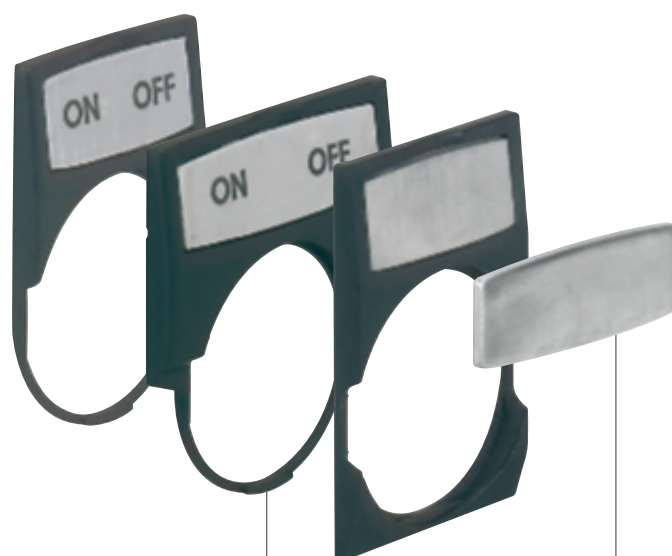
► **MARKING WITH LEGENDS**

- Frame can be turned to 4 positions (0° ; 90° ; 180° and 270°)
- Special legend plate for double touch
- Legend plates: choice between 5 colours, blank or pre-engraved



**Bezels**

Choice between:  
black or chrome



**Frame**

round or square shape,  
30 or 40 mm wide

**Legend plate**

can be clipped into  
place after installation

**Engraving**

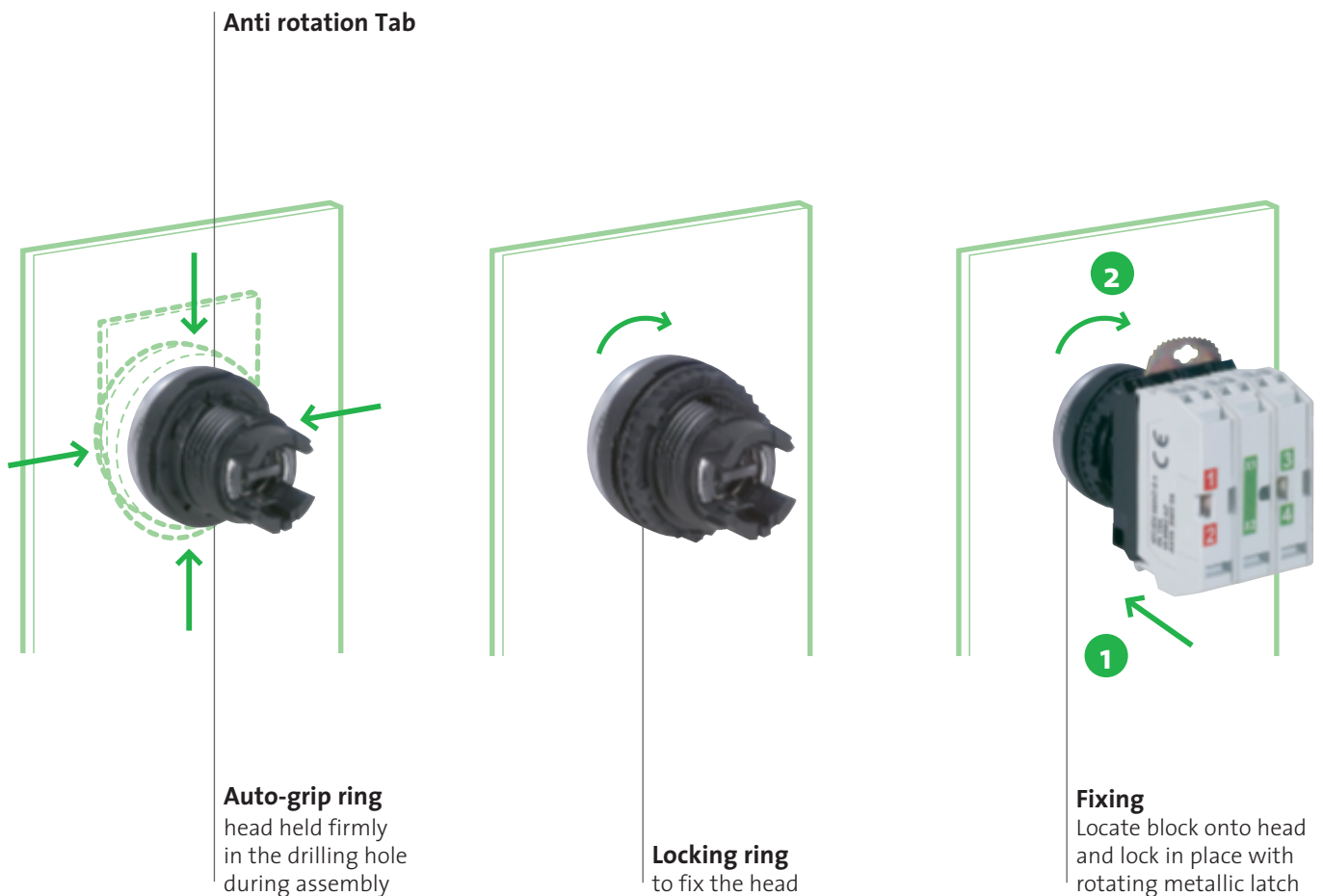
Button plate can be mounted in  
4 positions (0° ; 90° ; 180° and 270°)

► **READY-ASSEMBLED CONTROL STATION**

- Innovative design
  - 1, 2 or 3 buttons
- See page 86



# Simplicity, speed, choice!



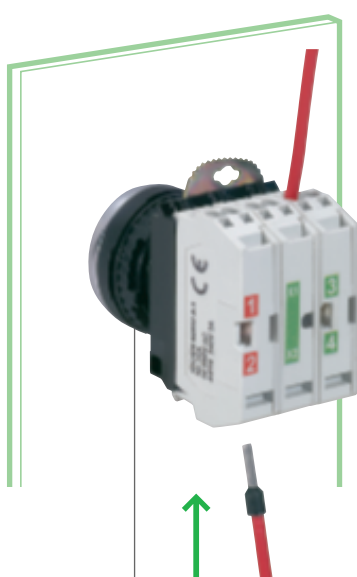
## ► ADVANTAGES

*Our objective is to simplify and shorten time of installation:*

- Head held firmly in place by auto-grip ring, allows single-hand mounting
- Foolproof method of positioning the block sub-assembly correctly on the head
- Rotating metallic latch easily accessible with a screwdriver where space is limited
- Anti rotation tab to be aligned with notch of panel cut-out (p. 95), retracts when not required

*Method for tightening the locking ring:*

Tightening torque: 3 Nm or tightened with fixing tool (p. 82) to hand tight after pressure point plus another half turn.



**Quick connection**

No tool required for wires with ferrules.  
New plug-in terminals

**► CONFIGURATIONS**

*“A range designed to meet adapt to all requirements and all situations”*

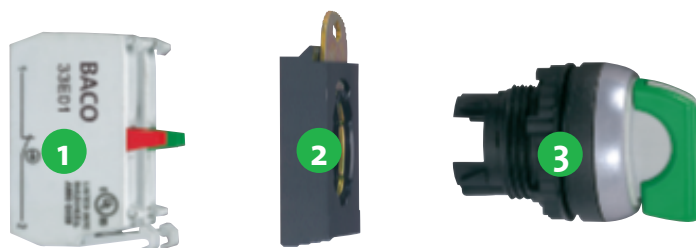
**COMPLETE UNITS**

- Control and signalling units are supplied ready for use with head and pre-assembled block/clip
- A single product code provides a solution for the most common needs



**SEPARATE UNITS**

- Maximum flexibility
- For numerous possible solutions



**CUSTOMISED SOLUTIONS (request form p. 83)**

- Custom assemblies to suit your needs
- The Baco response for specific requirements: pre-assembly, aesthetic design, engraving, etc

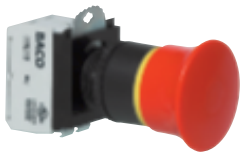


# Products for industrial environments

## ► BACO PROVIDES SOLUTIONS FOR HARSH INDUSTRIAL ENVIRONMENTS

BACO push buttons Ø 22mm are available in plastic bodies and can be fitted with an external shroud to protect against liquid and dust ingress into the head itself.

All front elements are rated to a minimum IP 66 environmental rating, protecting against high seas, sprayed water and dirt. Many standard operators have more stringent IP 67 and IP 69K ratings, protecting from submersion and high-pressure/high-temperature wash down environments.



IP 66 - IP 69K E-Stops



IP 66 - IP 69K operators



IP 66 - IP 69K selectors



IP 66 - IP 69K pilot devices



## ► ACCESSORIES TO PERFORM

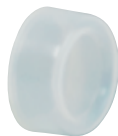
BACO Ø 22mm control and signalling devices can be equipped with protective shrouds which guarantee a degree of protection to IP 67 shrouds prevent ingress of water and dust.



Shrouds for Twin touch operator



Shrouds for projected operator



Shrouds for flush operator



IP 67 Shrouded Twin touch operator



IP 67 Shrouded projected operator

BACO operators to meet the needs of industries such as:

- |                   |                         |
|-------------------|-------------------------|
| Outdoor Machinery | Trucking/Transportation |
| Food processing   | Mobile Machines         |
| Pharmaceutical    | Material Handling       |
| Petrochemical     | Marine                  |
| Waste Treatment   | Metal Forming           |
| Bottling          | Mining                  |
| Car Wash Centers  | Oil & Gas               |



# Degree of ingress protection

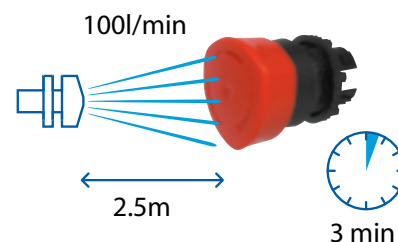
## ► WHAT IS THE MEANING OF IP 66/67/69K PROTECTION DEGREE?

IP 66/IP 67 protection degrees are degrees of protection provided by the standard (respectively against strong water jets and temporary water immersion). BACO has introduced on its products IP 69K protection degree (against water jets with high temperature and pressure), to offer the maximum achievable and testable performances, fulfilling more strict standards.

Illuminated or non-illuminated, momentary or maintained action pushbuttons, selector switches, emergency stop buttons and pilot devices for harsh environments, sealed to IP 67 or IP 69K when manufactured after week 36\_2015.

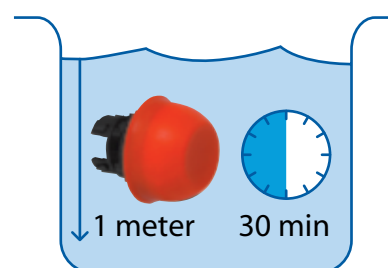
## ► WATERPROOF ACCORDING TO IP 66

BACO's control & pilot devices are protected from total dust ingress. Protected from high pressure water jets from any direction too.



## ► WATERPROOF ACCORDING TO IP 67

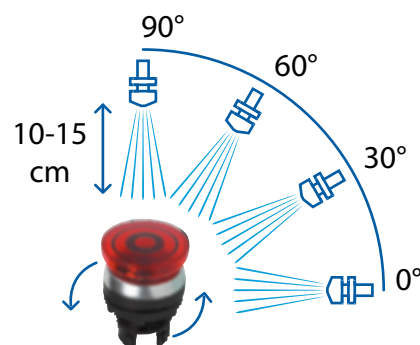
BACO's control & pilot devices are perfect for tough environments where a waterproof enclosure is required. Shrouded modular devices are approved according to IP 67. The products are protected against the effects of temporary immersion in water, one meter down, for up to 30 minutes.



## ► TOUGH AND ROBUST ACCORDING TO IP 69K

The IP 69K certification was initially developed for applications that need regular intensive cleaning (dump trucks, cement mixers, etc.).

BACO's control devices are certified according to IP 69K meaning you do not have to worry about treating them rough. Spray them with water or leave them out in the snow. They will stay reliable and functional.



Industrial vehicles



Outdoor machinery



Mining



Marine

## Complete units: Push-buttons $\varnothing$ 22

IP 66 - IP 69K  
 Complete units consisting of:  
 - head  
 - clip and screw electrical blocks assembled  
 Plastic chrome bezel - Black bezel on request (form p. 83)  
 Conform to IEC 60947-5-1



Characteristics (p. 98)

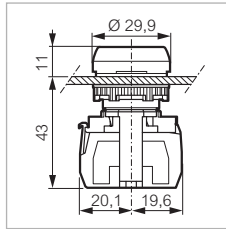
### ► SPRING RETURN - NON ILLUMINATED

#### FLUSH

Cat. No.

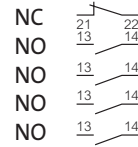


L21AA02A



#### Without engraving

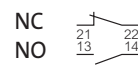
- Red
- Green
- Black
- Yellow
- Blue



- L21AA01B**
- L21AA02A**
- L21AA03A**
- L21AA04C**
- L21AA06A**

#### With engraving

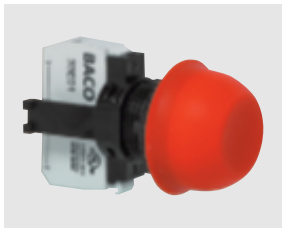
- Red
- Green



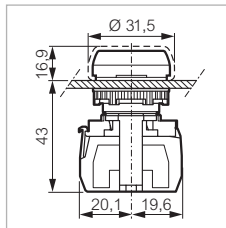
- L21AA81B**
- L21AA82B**

#### FLUSH

Reinforced degree of protection: IP 67

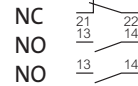


L22AF01A



Supplied with opaque shroud

- Red
- Green
- Black

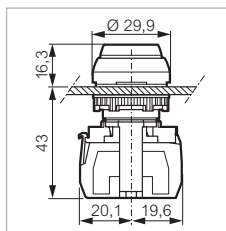


- L22AF01A**
- L22AF02A**
- L22AF03A**

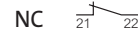
#### PROJECTING



L21AB01A



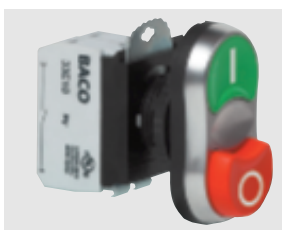
- Red



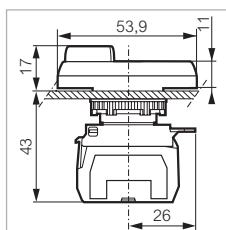
- L21AB01A**

#### FLUSH-PROJECTING

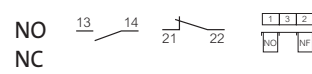
Double touch - degree of protection: IP 66



L61QB21A



- Green - Flush
- Red - Projecting



- L61QB21A**

# Complete units: Selector switches $\varnothing$ 22

IP 66 - IP 69K  
 Complete units consisting of:  
 - head  
 - clip and screw electrical blocks assembled  
 Plastic chrome bezel - Black bezel on request (form p. 83)  
 Conform to IEC 60947-5-1

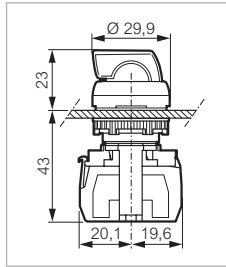
 Characteristics (p. 98)

## ▶ SELECTOR SWITCHES - NON ILLUMINATED

### WITH HANDLE

2 positions

Cat. No.



Stay-put positions - 90°

● Black



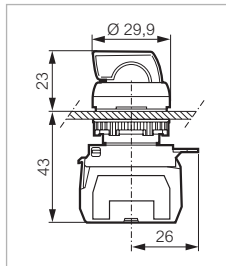
**L21KE03B**

L21KE03B

### WITH HANDLE

3 positions

Cat. No.



Stay-put positions - 45°

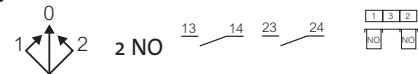
● Black



**L21MA03A**

Spring return to 0 - 45°

● Black



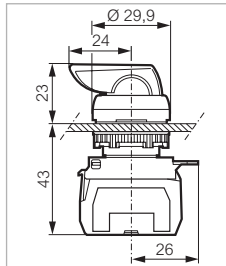
**L21MD03A**

L21MA03A

### WITH LONG HANDLE

3 positions

Cat. No.



Stay-put positions - 45°

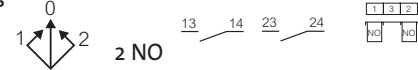
● Black



**L21MR03A**

Spring return to 0 - 45°

● Black



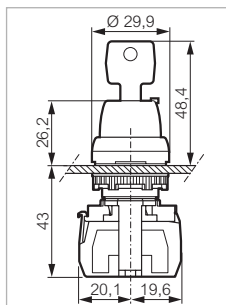
**L21MU03B**

L21MR03A

### WITH KEY

2 positions

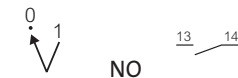
Cat. No.



Supplied with 2 keys profile n°455

Stay-put positions - 45°

Key free  
in position 0



**L21LA00G**

L21LA00G

## Complete units: Mushroom heads $\varnothing$ 22

IP 66 - IP 69K  
 Complete units consisting of:  
 - head  
 - clip and screw electrical blocks assembled  
 Conform to IEC 60947-5-1



Characteristics (p. 98)

### ► MUSHROOM HEADS - NON ILLUMINATED

#### $\varnothing$ 40 - SPRING RETURN

Push

Cat. No.



L21AD01C

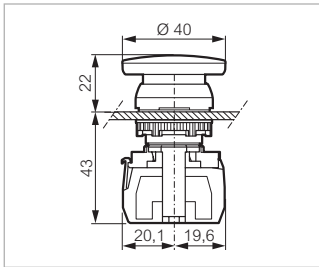
Plastic chrome bezel  
 Black bezel on request (form p. 83)

● Red

NC



**L21AD01C**



#### $\varnothing$ 40 - STAY-PUT

Push-turn to reset

Cat. No.



L22ED01D

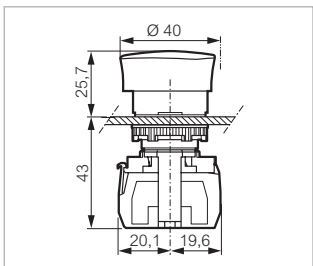
Black bezel

● Red

NC



**L22ED01D**



# Complete units: Mushroom heads $\varnothing$ 22

IP 66 - IP 69K  
 Complete units consisting of:  
 - head  
 - clip and screw electrical blocks assembled  
 Plastic black bezel  
 Conform to IEC 60947-5-1



Characteristics (p. 98)

## ► MUSHROOM HEADS - NON ILLUMINATED (CONTINUED)

$\varnothing$  40 - STAY-PUT


Push-pull to reset

Cat. No.

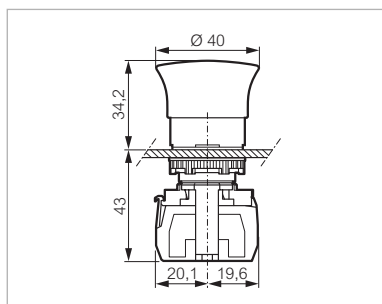


L22DD01A

● Red

NC 

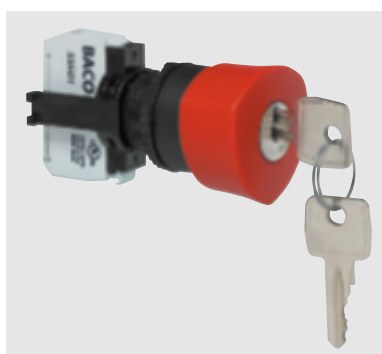
**L22DD01A**



$\varnothing$  40 - STAY-PUT

Key to reset


Cat. No.



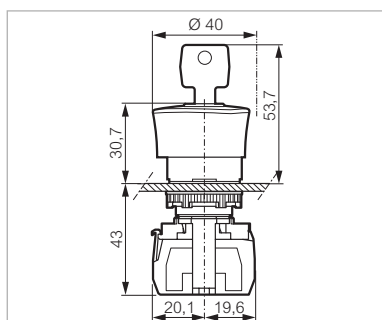
L22GM01E

Supplied with 2 keys profile n°455

● Red

NC 

**L22GM01E**





## Complete units: Mushroom heads $\varnothing$ 22

IP 66 - IP 69K  
 Complete units consisting of:  
 - head  
 - clip and screw electrical blocks assembled  
 Plastic black bezel  
 Conform to IEC 60947-5-1



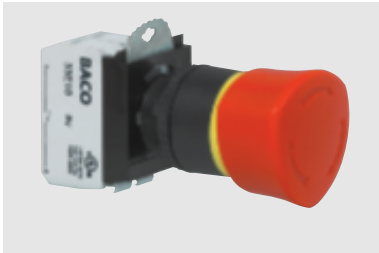
Characteristics (p. 98)

### ► ISO 13850 EMERGENCY STOP - NON ILLUMINATED

$\varnothing$  40 ISO 13850 - STAY-PUT

Push-turn to reset

Cat. No.



Head position visible from the side with yellow collar  
 Compliant with the requirements of emergency stop:  
 IEC 60947-5-5 / ISO 13850

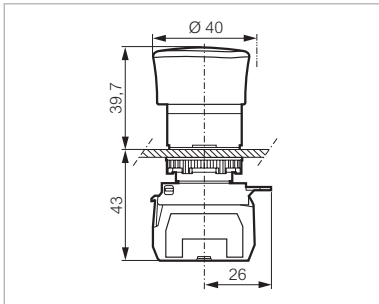
● Red

NO + NC 13 14 21 22



**L22ER01D**

L22ER01D



$\varnothing$  40 ISO 13850 - STAY-PUT

Push-pull to reset

Cat. No.



Head position visible from the side with yellow collar  
 Compliant with the requirements of emergency stop:  
 IEC 60947-5-5 / ISO 13850

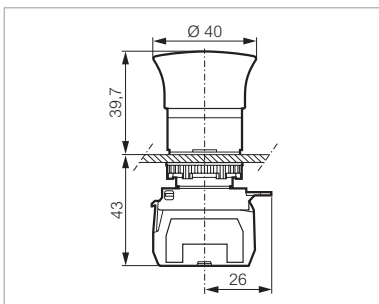
● Red

NO + NC 13 14 21 22



**L22DR01B**

L22DR01B



# Complete units: Mushroom heads $\varnothing$ 22

IP 66 - IP 69K  
 Complete units consisting of:  
 - head  
 - clip and screw electrical blocks assembled  
 Plastic black bezel  
 Conform to IEC 60947-5-1



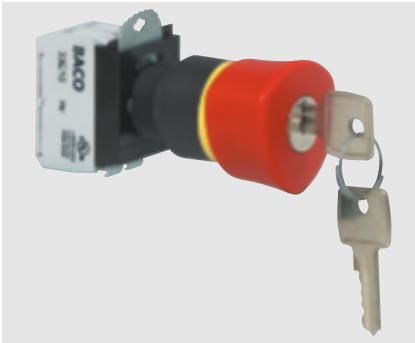
Characteristics (p. 98)

## ► ISO 13850 EMERGENCY STOP - NON ILLUMINATED

### $\varnothing$ 40 ISO 13850 - STAY-PUT

Key to reset

Cat. No.

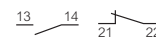


L22GR01B

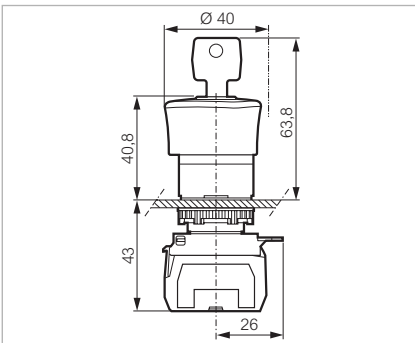
Double position indicator: head and collar  
 Compliant with the requirements of emergency stop:  
 IEC 60947-5-5 / ISO 13850  
 Supplied with 2 keys profile n°455

● Red

NO + NC



**L22GR01B**



### $\varnothing$ 54 ISO 13850 - STAY-PUT

Push-pull to reset with flag indicator

Cat. No.



L22DU01G

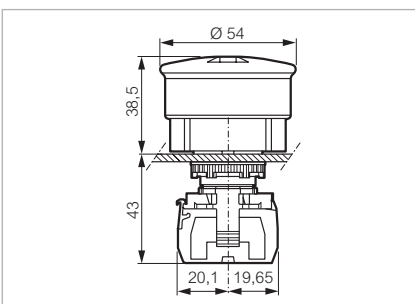
Double position indicator: head and collar  
 Compliant with the requirements of emergency stop:  
 IEC 60947-5-5 / ISO 13850  
 Flag indicator: Engraving STOP and I

● Red

NC



**L22DU01G**



## Complete units: Pushbuttons $\varnothing$ 22

IP 66 - IP 69K  
 Complete units consisting of:  
 - head  
 - clip and screw electrical blocks assembled  
 Plastic chrome bezel - Black bezel on request (form p. 83)  
 Conform to IEC 60947-5-1



Characteristics (p. 98)

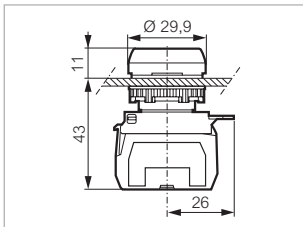
### ► SPRING RETURN - ILLUMINATED

#### FLUSH

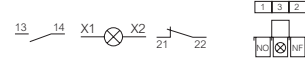
Cat. No.



L21AH20L



LED blocks



**24V**

- Red
- Green
- Yellow
- White
- Blue

NO+NC  
 NO+NC  
 NO+NC  
 NO+NC  
 NO+NC

**L21AH10L**  
**L21AH20L**  
**L21AH40L**  
**L21AH50L**  
**L21AH60L**

**130 V**

- Red
- Green

NO+NC  
 NO+NC

**L21AH10M**  
**L21AH20M**

**230 V**

- Red
- Green

NO+NC  
 NO+NC

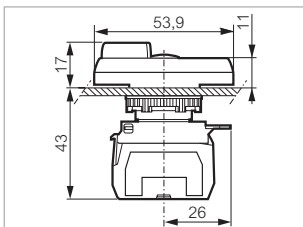
**L21AH10H**  
**L21AH20H**

#### TWIN TOUCH - FLUSH-PROJECTING

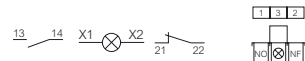
Degree of protection: IP 66



L61QK21H



LED blocks  
 Central part illuminated



**24 V**

- Green
- Red

NO  
 NC

**L61QK21L**

**130 V**

- Green
- Red

NO  
 NC

**L61QK21M**

**230 V**

- Green
- Red

NO  
 NC

**L61QK21H**

## Complete units: Selector switches $\varnothing$ 22

IP 66 - IP 69K  
 Complete units consisting of:  
 - head  
 - clip and screw electrical blocks assembled  
 Plastic chrome bezel - Black bezel on request (form p. 83)  
 Conform to IEC 60947-5-1



Characteristics (p. 98)

### ► SELECTOR SWITCHES - ILLUMINATED

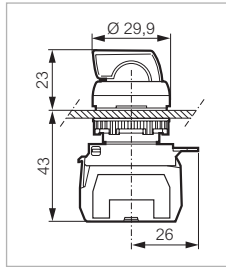
WITH HANDLE

2 positions

Cat. No.



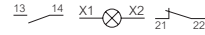
L21KG10C



LED blocks

Stay-put positions - 45°  
 24 V

- Red
- Green
- Black



- NO + NC
- NO + NC
- NO + NC



- L21KG10C**
- L21KG20E**
- L21KG30B**

## Complete units: Pilot lights $\varnothing$ 22

IP 66 - IP 69K  
 Complete units consisting of:  
 - head  
 - clip and screw electrical blocks assembled  
 Conform to IEC 60947-5-1



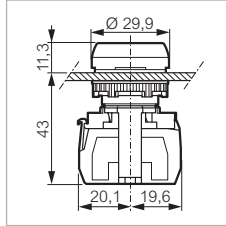
Characteristics (p. 98)

### ▶ PILOT LIGHTS

Cat. No.



L20SE20L



LED blocks



#### 24 V

- Red
- Green
- Yellow
- White
- Blue

**L20SE10L**  
**L20SE20L**  
**L20SE40L**  
**L20SE50L**  
**L20SE60L**

#### 130 V

- Red
- Green
- Yellow
- White
- Blue

**L20SE10M**  
**L20SE20M**  
**L20SE40M**  
**L20SE50M**  
**L20SE60M**

#### 230V

- Red
- Green
- Yellow
- White
- Blue

**L20SE10H**  
**L20SE20H**  
**L20SE40H**  
**L20SE50H**  
**L20SE60H**

**One-piece pilot lights (p. 49-50)**



# Separate units ø 22: Heads

IP 66 - IP 69K  
 To be combined with a clip and electrical blocks (p. 52)  
 Equipped with a locking ring  
 Plastic chrome bezel - Black bezel on request (form p. 83)  
 Conform to IEC 60947-5-1



Characteristics (p. 98)

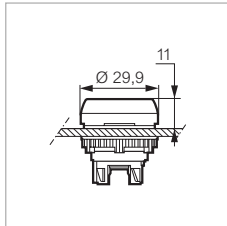
## ► PUSH-BUTTONS - NON ILLUMINATED

### SPRING RETURN - FLUSH

Cat. No.



L21AA02



#### Without engraving

- Red
- Green
- Black
- Yellow
- White
- Blue

- L21AA01
- L21AA02
- L21AA03
- L21AA04
- L21AA05
- L21AA06

#### With engraving

- ⊙ Red
- ⊓ Green
- ⊓ Black

- L21AA81
- L21AA82
- L21AA83

#### On demand engraving (p. 74)

Symbol code to be added at the end of the catalogue number

- Red
- Green
- Black
- Yellow
- White
- Blue

- L21AA31□□□□
- L21AA32□□□□
- L21AA33□□□□
- L21AA34□□□□
- L21AA35□□□□
- L21AA36□□□□

(Other colours and engraving: fill in the form p. 83)

Without button plate

L21AA00

Button plates (see p. 78)



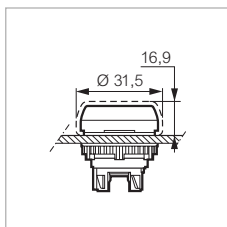
L21AA00

### SPRING RETURN - FLUSH

Reinforced degree of protection: IP 67



L22AF01



Supplied with shroud

#### Opaque

- Red
- Green
- Black

- L22AF01
- L22AF02
- L22AF03

#### Transparent

- Yellow
- White
- Blue

- L22AG04
- L22AG05
- L22AG06

# Separate units $\varnothing$ 22: Heads

IP 66 - IP 69K  
 To be combined with a clip and electrical blocks (p. 52)  
 Equipped with a locking ring  
 Plastic chrome bezel - Black bezel on request (form p. 83)  
 Conform to IEC 60947-5-1



Characteristics (p. 98)

## ► PUSH-BUTTONS - NON ILLUMINATED (CONTINUED)

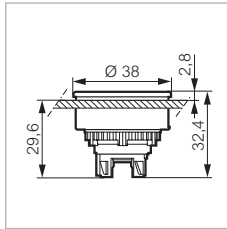
### SPRING RETURN - SUPER FLUSH

Degree of protection: IP 66

Cat. No.



L23AA02



Metallic chrome bezel  
 Cut-out  $\varnothing$  30,5 mm

#### Without engraving

- Red
- Green
- Black
- Yellow
- White
- Blue

- L23AA01**
- L23AA02**
- L23AA03**
- L23AA04
- L23AA05
- L23AA06

#### With engraving

- ⊙ Red
- ⊓ Green

- L23AA81
- L23AA82

#### On demand engraving (p. 74)

Symbol code to be added at the end of the catalogue number

- Red
- Green
- Black
- Yellow
- White
- Blue

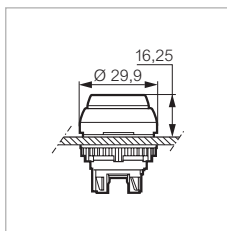
- L23AA31
- L23AA32
- L23AA33
- L23AA34
- L23AA35
- L23AA36

(Other colours and engraving: fill in the form p. 83)

### SPRING RETURN - PROJECTING



L21AB01



- Red
- Green
- Black
- Yellow
- White
- Blue

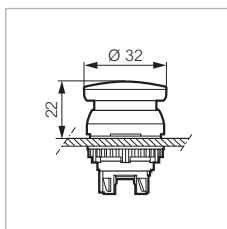
- L21AB01**
- L21AB02**
- L21AB03**
- L21AB04**
- L21AB05**
- L21AB06**

### SPRING RETURN - MUSHROOM HEAD $\varnothing$ 32

Push



L21AC03



- Red
- Green
- Black
- Yellow

- L21AC01**
- L21AC02**
- L21AC03**
- L21AC04

# Separate units $\varnothing$ 22: Heads

IP 66 - IP 69K  
 To be combined with a clip and electrical blocks (p. 52)  
 Equipped with a locking ring  
 Plastic chrome bezel - Black bezel on request (form p. 83)  
 Conform to IEC 60947-5-1



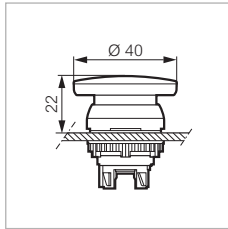
Characteristics (p. 98)

## ► PUSH-BUTTONS - NON ILLUMINATED (CONTINUED)

### SPRING RETURN - MUSHROOM HEAD $\varnothing$ 40

Push

Cat. No.



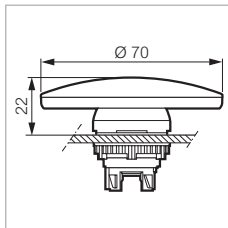
- Red
- Green
- Black
- Yellow
- Blue

- L21AD01**
- L21AD02**
- L21AD03**
- L21AD04**
- L21AD06**

L21AD01

### SPRING RETURN - MUSHROOM HEAD $\varnothing$ 70

Push



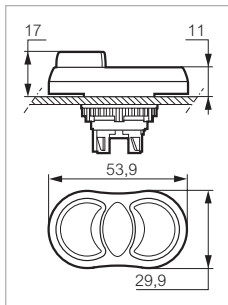
- Red
- Black

- L21AE01**
- L21AE03**

L21AE03

### SPRING RETURN - FLUSH-PROJECTING

Double touch - degree of protection: IP 66



- Green
- Red
- Green engraving START
- Red engraving STOP

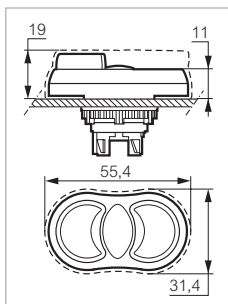
**L61QB21**

**L61QB21B**

L61QB21

### SPRING RETURN - FLUSH-PROJECTING

Double touch - reinforced degree of protection: IP 67



Supplied with transparent shroud

- Green
- Red

**L62QM21**

L62QM21

Catalogue No. in bold: normally in stock at distribution outlets

# Separate units ø 22: Heads

IP 66 - IP 69K  
 To be combined with a clip and electrical blocks (p. 52)  
 Equipped with a locking ring  
 Plastic chrome bezel - Black bezel on request (form p. 83)  
 Conform to IEC 60947-5-1

 Characteristics (p. 98)

## ► PUSH-BUTTONS - NON ILLUMINATED (CONTINUED)

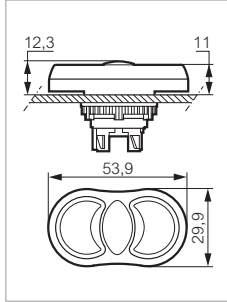
### SPRING RETURN - FLUSH-FLUSH









Double touch - degree of protection: IP 66

Cat. No.



L61QA21



-  Green
-  Red
-  Green engraving <math>\triangleleft</math>
-  Green engraving <math>\triangleright</math>
-  Green
-  Green
-  Black
-  Black

**L61QA21**

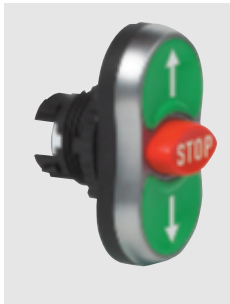
L61QA22

L61QA22K

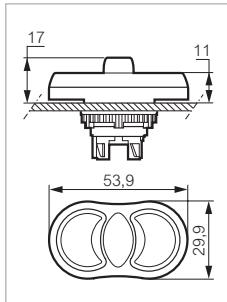
L61QA33C







### SPRING RETURN - FLUSH-PROJECTING-FLUSH

Triple touch - degree of protection: IP 66



L61BA22



-  Green
-  Red engraving STOP
-  Green
-  Green
-  Red engraving STOP
-  Green

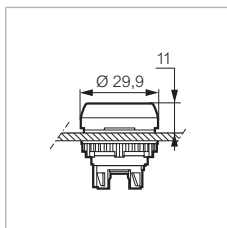
**L61BA22**

L61BA22B

### STAY-PUT - FLUSH



L21CA01



-  Red
-  Green
-  Black
-  Yellow
-  White
-  Blue

**L21CA01**  
**L21CA02**  
**L21CA03**  
**L21CA04**  
**L21CA05**  
**L21CA06**

# Separate units $\phi$ 22: Heads

IP 66 - IP 69K  
 To be combined with a clip and electrical blocks (p. 52)  
 Equipped with a locking ring  
 Plastic black bezel  
 Conform to IEC 60947-5-1



Characteristics (p. 98)

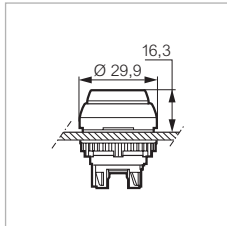
## ► PUSH-BUTTONS - NON ILLUMINATED (CONTINUED)

### STAY-PUT - PROJECTING

Cat. No.



L21CB02



Plastic chrome bezel  
 Black bezel on request (form p. 83)

- Red
- Green
- Black
- Yellow
- White
- Blue

- L21CB01**
- L21CB02**
- L21CB03**
- L21CB04
- L21CB05
- L21CB06

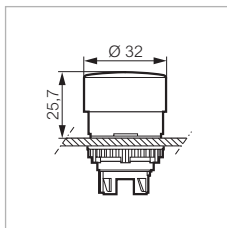
## ► MUSHROOM HEADS - NON ILLUMINATED

### $\phi$ 32 - STAY-PUT

Push-turn to reset



L22EC01



- Red
- Green
- Black
- Yellow

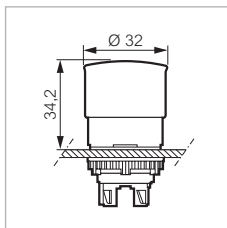
- L22EC01**
- L22EC02**
- L22EC03**
- L22EC04**

### $\phi$ 32 - STAY-PUT

Push-pull to reset



L22DC01



- Red

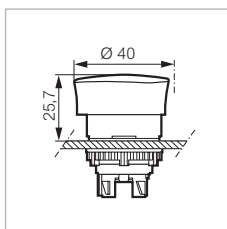
- L22DC01**

### $\phi$ 40 - STAY-PUT

Push-turn to reset



L22ED01



Without engraving

- Red
- Green
- Black
- Yellow

- L22ED01**
- L22ED02**
- L22ED03**
- L22ED04**

With engraving

- Red - engraving STOP - STOP - STOP

- L22ED01B**

# Separate units $\varnothing$ 22: Heads

IP 66 - IP 69K  
 To be combined with a clip and electrical blocks (p. 52)  
 Equipped with a locking ring  
 Plastic black bezel  
 Conform to IEC 60947-5-1

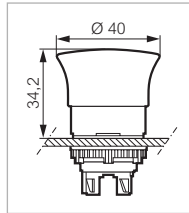
 Characteristics (p. 98)

## ► MUSHROOM HEAD - NON ILLUMINATED (CONTINUED)

$\varnothing$  40 - STAY-PUT

Push-pull to reset

Cat. No.



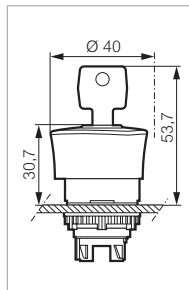
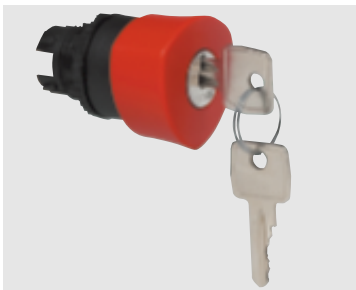
- Red
- Black

**L22DD01**  
**L22DD03**

L22DD01

$\varnothing$  40 - STAY-PUT

Key to reset



Supplied with 2 keys profile n° 455

- Red

**L22GM01**

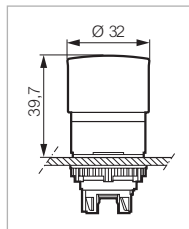
L22GM01

## ► ISO 13850 EMERGENCY STOP - NON ILLUMINATED

$\varnothing$  32 ISO 13850 - STAY-PUT

Push-pull

Cat. No.



Head position visible from the side with yellow collar  
 Compliant with the requirements of emergency stop:  
 IEC 60947-5-5 / ISO 13850

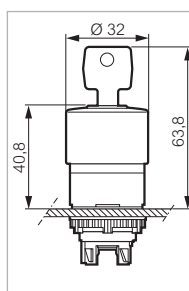
- Red

**L22DQ01**

L22DQ01

$\varnothing$  32 ISO 13850 - STAY-PUT

Key to reset



Supplied with 2 keys profile n° 455  
 Head position visible from the side with yellow collar  
 Compliant with the requirements of emergency stop:  
 IEC 60947-5-5 / ISO 13850

- Red

**L22GQ01**

L22GQ01

Catalogue No. in bold: normally in stock at distribution outlets

# Separate units $\varnothing$ 22: Heads

IP 66 - IP 69K  
 To be combined with a clip and electrical blocks (p. 52)  
 Equipped with a locking ring  
 Plastic black bezel  
 Conform to IEC 60947-5-1



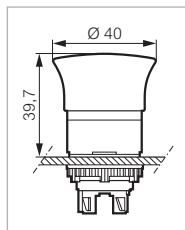
Characteristics (p. 98)

## ► ISO 13850 EMERGENCY STOP - NON ILLUMINATED (CONTINUED)

### $\varnothing$ 40 ISO 13850 - STAY-PUT

Push-pull to reset

Cat. No.



Head position visible from the side with yellow collar  
 Compliant with the requirements of emergency stop:  
 IEC 60947-5-5 / ISO 13850

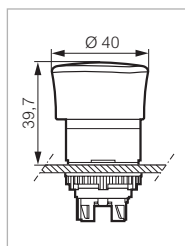
● Red

**L22DR01**

L22DR01

### $\varnothing$ 40 ISO 13850 - STAY-PUT

Push-turn to reset



Head position visible from the side with yellow collar  
 Compliant with the requirements of emergency stop:  
 IEC 60947-5-5 / ISO 13850

● Red

▼ Red with symbol IEC 60417-5638 / ISO 13850

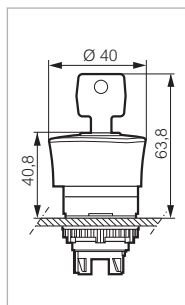
**L22ER01**

**L22ER01K**

L22ER01

### $\varnothing$ 40 ISO 13850 - STAY-PUT

Key to reset



Supplied with 2 keys profile n° 455  
 Head position visible from the side with yellow collar  
 Compliant with the requirements of emergency stop:  
 IEC 60947-5-5 / ISO 13850

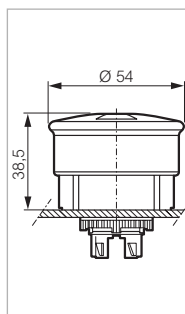
● Red

**L22GR01**

L22GR01

### $\varnothing$ 54 ISO 13850 - STAY-PUT

Push-pull to reset with flag indicator



Double position indicator: head and collar  
 Compliant with the requirements of emergency stop:  
 IEC 60947-5-5 / ISO 13850

● Red - engraving O- I  
 ● Red - engraving STOP - I

**L22DU01A**

**L22DU01**

L22DU01

# Separate units $\varnothing$ 22: Heads

IP 66 - IP 69K  
 To be combined with a clip and electrical blocks (p. 52)  
 Equipped with a locking ring  
 Plastic chrome bezel - Black bezel on request (form p. 83)  
 Conform to IEC 60947-5-1



Characteristics (p. 98)

## ▶ SELECTOR SWITCHES - NON ILLUMINATED

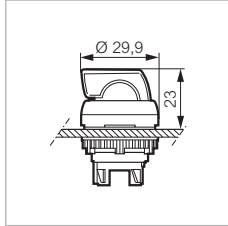
### WITH HANDLE

2 positions

Cat. No.



L21KA03



#### Stay-put positions - 45°

- Red
- Green
- Black
- Grey



**L21KA01**  
**L21KA02**  
**L21KA03**  
**L21KA08**

#### Spring return - 45°

- Red
- Green
- Black
- Grey



L21KB01  
 L21KB02  
**L21KB03**  
 L21KB08

#### Stay-put positions - 45°

- Red
- Green
- Black
- Grey



**L21KC01**  
**L21KC02**  
**L21KC03**  
**L21KC08**

#### Spring return - 45°

- Red
- Green
- Black
- Grey



L21KD01  
 L21KD02  
**L21KD03**  
 L21KD08

#### Stay-put positions - 90°

- Red
- Green
- Black
- Grey



L21KE01  
 L21KE02  
**L21KE03**  
 L21KE08

#### Stay-put positions - 90°

- Red
- Green
- Black
- Grey



L21KF01  
 L21KF02  
**L21KF03**  
 L21KF08



# Separate units $\varnothing$ 22: Heads

IP 66 - IP 69K  
 To be combined with a clip and electrical blocks (p. 52)  
 With locking ring  
 Plastic chrome bezel- Black bezel on request (form p. 83)  
 Conform to IEC 60947-5-1



Characteristics (p. 98)

## ▶ SELECTOR SWITCHES - NON ILLUMINATED (CONTINUED)

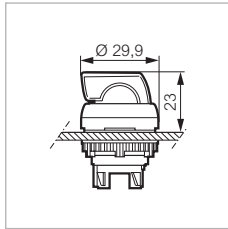
WITH HANDLE

3 positions

Cat. No.



L21MA03



### Stay-put positions - 45°

- Red
- Green
- Black
- Grey



**L21MA01**  
**L21MA02**  
**L21MA03**  
**L21MA08**

### Spring return from left to 0 - 45°

- Red
- Green
- Black
- Grey



**L21MB01**  
**L21MB02**  
**L21MB03**  
**L21MB08**

### Spring return from right to 0 - 45°

- Red
- Green
- Black
- Grey



**L21MC01**  
**L21MC02**  
**L21MC03**  
**L21MC08**

### Spring return to 0 - 45°

- Red
- Green
- Black
- Grey



**L21MD01**  
**L21MD02**  
**L21MD03**  
**L21MD08**

### Stay-put positions - 90°

- Red
- Green
- Black
- Grey



**L21MK01**  
**L21MK02**  
**L21MK03**  
**L21MK08**



L21MA08

# Separate units $\varnothing$ 22: Heads

IP 66 - IP 69K  
 To be combined with a clip and electrical blocks (p. 52)  
 With locking ring  
 Plastic chrome bezel- Black bezel on request (form p. 83)  
 Conform to IEC 60947-5-1



Characteristics (p. 98)

## ▶ SELECTOR SWITCHES - NON ILLUMINATED (CONTINUED)

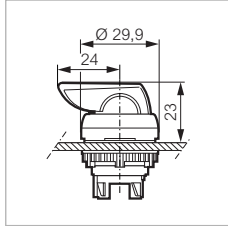
### WITH LONG HANDLE

2 positions

Cat. No.



L21KP03



#### Stay-put positions - 45°

- Red
- Green
- Black
- Grey



L21KP01  
 L21KP02  
**L21KP03**  
 L21KP08

#### Spring return - 45°

- Red
- Green
- Black



L21KQ01  
 L21KQ02  
**L21KQ03**

#### Stay-put positions - 45°

- Red
- Green
- Black



L21KR01  
 L21KR02  
**L21KR03**

#### Spring return - 45°

- Red
- Green
- Black



L21KS01  
 L21KS02  
**L21KS03**

#### Stay-put positions - 90°

- Red
- Green
- Black



L21KT01  
 L21KT02  
**L21KT03**

#### Stay-put positions - 90°

- Red
- Green
- Black



L21KU01  
 L21KU02  
**L21KU03**

# Separate units $\varnothing$ 22: Heads

IP 66 - IP 69K  
 To be combined with a clip and electrical blocks (p. 52)  
 With locking ring  
 Plastic chrome bezel- Black bezel on request (form p. 83)  
 Conform to IEC 60947-5-1



Characteristics (p. 98)

## ▶ SELECTOR SWITCHES - NON ILLUMINATED (CONTINUED)

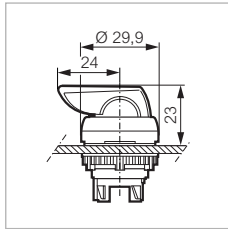
WITH LONG HANDLE

3 positions

Cat. No.



L21MR03



### Stay-put positions - 45°

- Red
- Green
- Black
- Grey



L21MR01  
 L21MR02  
**L21MR03**  
 L21MR08

### Spring return from left to 0 - 45°

- Red
- Green
- Black
- Grey



L21MS01  
 L21MS02  
**L21MS03**  
 L21MS08

### Spring return from right to 0 - 45°

- Red
- Green
- Black
- Grey



L21MT01  
 L21MT02  
**L21MT03**  
 L21MT08

### Spring return to 0 - 45°

- Red
- Green
- Black
- Grey



L21MU01  
 L21MU02  
**L21MU03**  
 L21MU08

# Separate units $\varnothing$ 22: Heads

IP 66  
 To be combined with a clip and electrical blocks (p. 52)  
 With locking ring  
 Plastic chrome bezel- Black bezel on request (form p. 83)  
 Conform to IEC 60947-5-1



Characteristics (p. 98)

## ► SELECTOR SWITCHES - NON ILLUMINATED (CONTINUED)

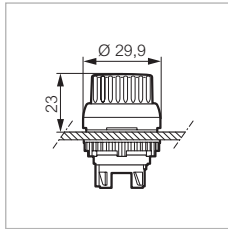
### WITH KNOB

2 positions - degree of protection: IP 66

Cat. No.



L21TF03



Stay-put positions - 45°

● Black



**L21TA03**

Spring return - 45°

● Black



**L21TB03**

Stay-put positions - 90°

● Black



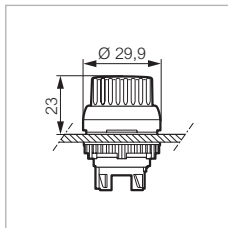
**L21TF03**

### WITH KNOB

3 positions - degree of protection: IP 66



L21UA03



Stay-put positions - 45°

● Black



**L21UA03**

Spring return from left to 0 - 45°

● Black



**L21UB03**

Spring return from right to 0 - 45°

● Black



**L21UC03**

Spring return to 0 - 45°

● Black



**L21UD03**

Stay-put positions - 90°

● Black



**L21UK03**

# Separate units $\varnothing$ 22: Heads

IP 66 - IP 69K  
 To be combined with a clip and electrical blocks (p. 52)  
 With locking ring  
 Plastic chrome bezel- Black bezel on request (form p. 83)  
 Conform to IEC 60947-5-1



Characteristics (p. 98)

## ▶ SELECTOR SWITCHES - NON ILLUMINATED (CONTINUED)

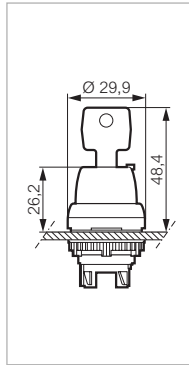
WITH KEY

2 positions

Cat. No.



L21LG00



Key free in position:

Supplied with 2 keys profile n° 455

Stay-put positions - 45°

● Black



0

**L21LA00**

Spring return - 45°

● Black



0

**L21LB00**

Stay-put positions - 45°

● Black



0

**L21LC00**

Spring return - 45°

● Black



0

**L21LD00**

Stay-put positions - 90°

● Black



0

**L21LF00**

Stay-put positions - 90°

● Black



0 - 1

**L21LG00**

Stay-put positions - 90°

● Black



0 - 1

**L21LH00**

Stay-put positions - 90°

● Black



1

**L21LK00**

Key profile n° 1424 A and others (form p. 83)

# Separate units $\varnothing$ 22: Heads

IP 66 - IP 69K  
 To be combined with a clip and electrical blocks (p. 52)  
 With locking ring  
 Plastic chrome bezel- Black bezel on request (form p. 83)  
 Conform to IEC 60947-5-1

 Characteristics (p. 98)

## ▶ SELECTOR SWITCHES - NON ILLUMINATED (CONTINUED)

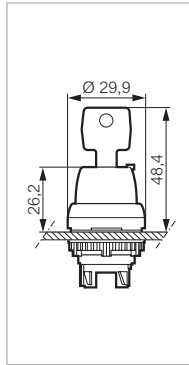
WITH KEY

3 positions

Cat. No.



L21NA00



Key free in position:

Supplied with 2 keys profile n° 455

Stay-put positions - 45°

● Black



0

**L21NA00**

Spring return from left to 0 - 45°

● Black



0

**L21NB00**

Spring return from right to 0 - 45°

● Black



0

**L21NC00**

Spring return to 0 - 45°

● Black



0

**L21ND00**

Stay-put positions - 45°

● Black



1 - 2

**L21NE00**

Spring return from right to 0 - 45°

● Black



1

**L21NJ00**

Stay-put positions - 90°

● Black



1 - 0 - 2

**L21NK00**

Stay-put positions - 90°

● Black



0

**L21NL00**

Key profile n° 1424 A and others (form p. 83)

# Separate units $\varnothing$ 22: Heads

IP 65  
 With locking ring  
 Plastic chrome bezel  
 Black bezel on request (form p. 83)  
 Conform to IEC 60947-5-1



Characteristics (p. 98)

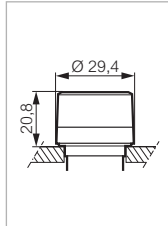
## ► ADJUSTABLE MECHANICAL PUSH/RESET BUTTON - NON ILLUMINATED

### SPRING RETURN - FLUSH

Cat. No.



L21HA01



To be used without electrical block  
 Stroke 11 mm  
 Adjustable: 26 mm min to 46 mm max / front side of panel

#### Without engraving

- Red
- Green
- Black
- Yellow
- White
- Blue

- L21HA01**
- L21HA02**
- L21HA03**
- L21HA04
- L21HA05
- L21HA06**

#### On demand engraving (p. 74)

Symbol code to be added at the end of the catalogue number

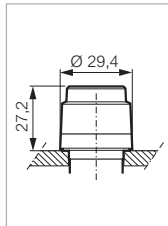
- Red
- Green
- Black
- Yellow
- White
- Blue

- L21HA31
- L21HA32
- L21HA33
- L21HA34
- L21HA35
- L21HA36

### SPRING RETURN - PROJECTING



L21HB01



To be used without electrical block  
 Stroke 11 mm  
 Adjustable: 26 mm min to 46 mm max / front side of panel

- Red
- Green
- Black
- Yellow
- White
- Blue

- L21HB01**
- L21HB02**
- L21HB03**
- L21HB04**
- L21HB05**
- L21HB06**

# Separate units $\varnothing$ 22: Heads

IP 66 - IP 69K

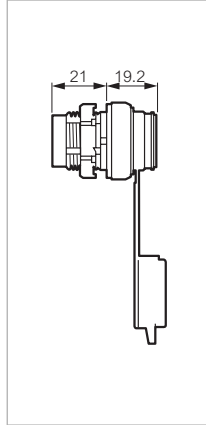


Characteristics (p. 98)

## ► USB INTERFACE 3.0 TYPE A/A CONNECTION

Degree of protection: IP 65

Cat. No.



USB interface 3.0 type A/A connection  
 USB class: 3.0 (backward compatible with USB class 2.0)

**L21VB03**

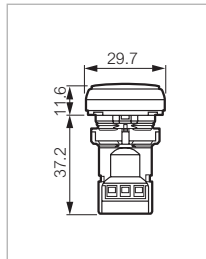
Recommended fixing tool: Tightening flat wrench size 26 mm

L21VB03

## ► AUDIBLE WARNING BUZZERS

Degree of protection: IP 66, IP 69K

Cat. No.



24 V AC/DC Buzzer pulse or continuous sound  
 130 V AC/DC Buzzer pulse or continuous sound  
 230 V AC/DC Buzzer pulse or continuous sound

**L22VA03L**  
**L22VA03M**  
**L22VA03H**

Recommended fixing tool: Tightening flat wrench size 26 mm

L22VA03L



# Separate units $\varnothing$ 22: Heads

IP 65 - IP 66  
With locking ring  
Conform to IEC 60947-5-1

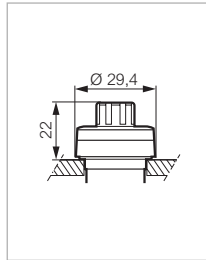


Characteristics (p. 98)

## ► BUTTON FOR POTENTIOMETER - NON ILLUMINATED

Degree of protection: IP 65

Cat. No.



Head + mounting base for potentiometer  
Plastic chrome bezel

Shaft  $\varnothing$  6 or 6.35 mm  
Potentiometer length 46 to 51 mm

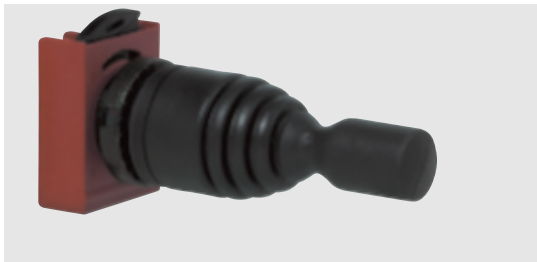
**L21RP03**

L21RP03

## ► JOYSTICKS - NON ILLUMINATED

Degree of protection: IP 66

Cat. No.



LM2F

Heads supplied with a 3 position clip  
Specific electrical blocks (p. 67)

**Head does not lock in position 0**

**2 directions - 3 positions**

2 maintained (stay-put)     A - 0 - B  
2 spring-return                A → 0 ← B

**LM2F**  
**LM2A**

**4 directions - 5 positions**

4 maintained (stay-put)     A  
  |  
  C - 0 - D  
  |  
  B

**LM4F**

4 spring-return

A  
|  
C → 0 ← D  
|  
B

**LM4A**



LMV4F

**Head locks in position 0**

**2 directions - 3 positions**

2 maintained (stay-put)     A - 0 - B  
2 spring-return                A → 0 ← B

**LMV2F**  
**LMV2A**

**4 directions - 5 positions**

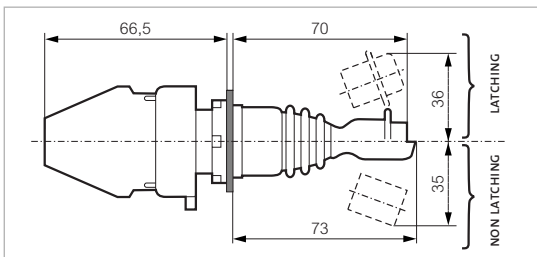
4 maintained (stay-put)     A  
  |  
  C - 0 - D  
  |  
  B

**LMV4F**

4 spring-return

A  
|  
C → 0 ← D  
|  
B

**LMV4A**



# Separate units ø 22: Heads

IP 66 - IP 69K  
 To be combined with a clip, LED block and contact blocks (p. 52)  
 With locking ring  
 Plastic chrome bezel- Black bezel on request (form p. 86)  
 Conform to IEC 60947-5-1



Characteristics (p. 98)

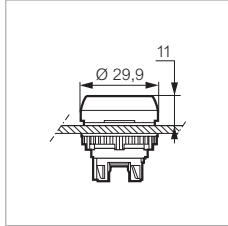
## ► PUSH-BUTTONS - ILLUMINATED

### SPRING RETURN - FLUSH

Cat. No.



L21AH20



#### Without engraving

- Red
- Green
- Yellow
- White
- Blue

**L21AH10**  
**L21AH20**  
**L21AH40**  
**L21AH50**  
**L21AH60**

#### On demand engraving (p. 74)

Symbol code to be added at the end of the catalogue number

- Red
- Green
- Yellow
- White
- Blue

L21AH31   
 L21AH32   
 L21AH34   
 L21AH35   
 L21AH36



L21AH00

Without button plate

**L21AH00**

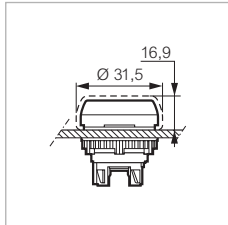
#### Button plates (p. 78)

### SPRING RETURN - FLUSH

Reinforced degree of protection: IP 67



L22AP40



Supplied with transparent shroud

- Red
- Green
- Yellow
- White
- Blue

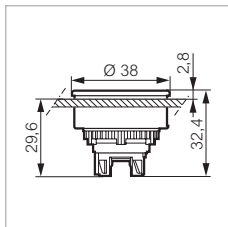
**L22AP10**  
**L22AP20**  
**L22AP40**  
**L22AP50**  
**L22AP60**

### SPRING RETURN - SUPER FLUSH

Degree of protection: IP 66



L23AH10



Metallic chrome bezel  
 Drilling ø 30,5 mm

#### Without engraving

- Red
- Green
- Yellow
- White
- Blue

**L23AH10**  
**L23AH20**  
**L23AH40**  
**L23AH50**  
**L23AH60**

#### On demand engraving (p. 74)

Symbol code to be added at the end of the catalogue number

- Red
- Green
- Yellow
- White
- Blue

L23AH31   
 L23AH32   
 L23AH34   
 L23AH35   
 L23AH36

Catalogue No. in bold: normally in stock at distribution outlets

# Separate units $\varnothing$ 22: Heads

IP 66 - IP 69K  
 To be combined with a clip, LED block and contact blocks (p. 52)  
 With locking ring  
 Plastic chrome bezel  
 Black bezel on request (form p. 83)  
 Conform to IEC 60947-5-1

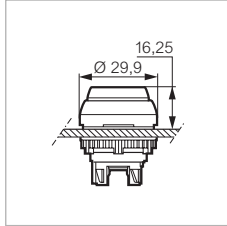


Characteristics (p. 98)

## ► PUSH-BUTTONS - ILLUMINATED (CONTINUED)

### SPRING RETURN - PROJECTING

Cat. No.



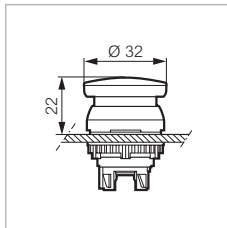
- Red
- Green
- Yellow
- White
- Blue

- L21AK10**
- L21AK20**
- L21AK40**
- L21AK50**
- L21AK60**

L21AK20

### SPRING RETURN - MUSHROOM HEAD $\varnothing$ 32

Push



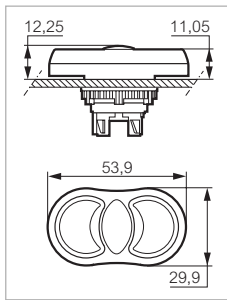
- Red
- Green
- Yellow
- White

- L21AL10**
- L21AL20**
- L21AL40**
- L21AL50**

L21AL10

### SPRING RETURN - FLUSH-FLUSH

Double touch - degree of protection: IP 66



Central part illuminated

- Green
- Red
- Green
- Green
- Green engraving START
- Red engraving STOP

**L61QH21**

**L61QH22V**

**L61QH21A**

L61QH21

# Separate units $\varnothing$ 22: Heads

IP 66  
 To be combined with a clip, LED block and contact blocks (p. 52)  
 With locking ring  
 Plastic chrome bezel - Black bezel on request (form p. 83)  
 Conform to IEC 60947-5-1



Characteristics (p. 98)

## ► PUSH-BUTTONS - ILLUMINATED (CONTINUED)

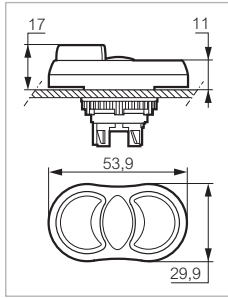
### SPRING RETURN - FLUSH-PROJECTING

Double touch - degree of protection: IP 66







Cat. No.



L61QK21



Central part illuminated

-  Green
-  Red
-  White
-  Black
-  Green engraving START
-  Red engraving STOP

**L61QK21**

**L61QK53**

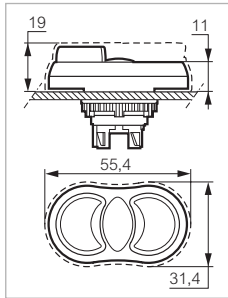
**L61QK21A**

### SPRING RETURN - FLUSH-PROJECTING

Double touch - reinforced degree of protection: IP 67



L62QN21



Supplied with transparent shroud  
 Central part illuminated

-  Green
-  Red

**L62QN21**

# Separate units $\varnothing$ 22: Heads

IP 66 - IP 69K  
 To be combined with a clip, LED block and contact blocks (p. 52)  
 With locking ring  
 Plastic chrome bezel - Black bezel on request (form p. 83)  
 Conform to IEC 60947-5-1



Characteristics (p. 98)

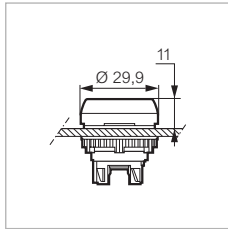
## ► PUSH-BUTTONS - ILLUMINATED (CONTINUED)

### STAY-PUT - FLUSH

Cat. No.



L21CH20



- Red
- Green
- Yellow
- White
- Blue

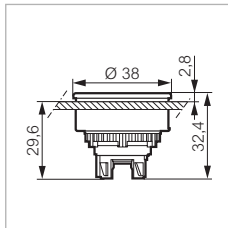
- L21CH10**
- L21CH20**
- L21CH40**
- L21CH50**
- L21CH60**

### STAY-PUT - SUPER FLUSH

Degree of protection: IP 66



L23CH10



Metallic chrome bezel  
 Drilling  $\varnothing$  30,5 mm

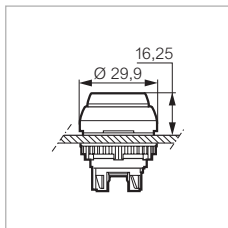
- Red
- Green
- Yellow
- White
- Blue

- L23CH10**
- L23CH20**
- L23CH40**
- L23CH50**
- L23CH60**

### STAY-PUT - PROJECTING



L21CK20



- Red
- Green
- Yellow
- White
- Blue

- L21CK10**
- L21CK20**
- L21CK40**
- L21CK50**
- L21CK60**

# Separate units $\varnothing$ 22: Heads

IP 66 - IP 69K  
 To be combined with a clip, LED block and contact blocks (p. 52)  
 With locking ring  
 Black bezel  
 Conform to IEC 60947-5-1



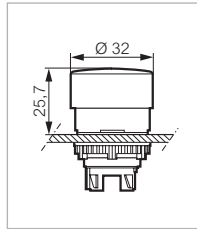
Characteristics (p.98)

## ► MUSHROOM HEADS - ILLUMINATED

$\varnothing$  32 - STAY-PUT

Push-turn to reset

Cat. No.



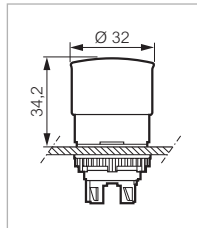
● Red

**L22EL10**

L22EL10

$\varnothing$  32 - STAY-PUT

Push-pull to reset



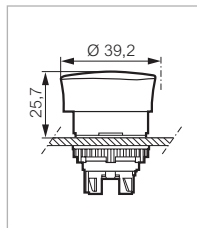
● Red

**L22DL10**

L22DL10

$\varnothing$  40 - STAY-PUT

Push-turn to reset



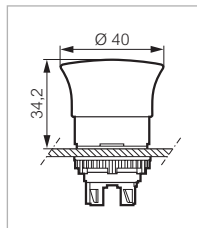
● Red  
 ● Green  
 ● Yellow

**L22EM10**  
**L22EM20**  
**L22EM40**

L22EM10

$\varnothing$  40 - STAY-PUT

Push-pull to reset



● Red  
 ● Green  
 ● Yellow  
 ○ White

**L22DM10**  
**L22DM20**  
**L22DM40**  
**L22DM50**

L22DM10

# Separate units $\varnothing$ 22: Heads

IP 66 - IP 69K  
 To be combined with a clip, LED block and contact blocks (p. 52)  
 With locking ring  
 Plastic chrome bezel - Black bezel on request (form p. 83)  
 Conform to IEC 60947-5-1



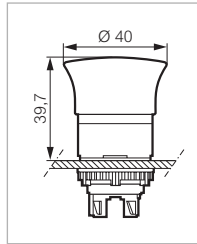
Characteristics (p. 98)

## ► ISO 13850 EMERGENCY STOP - ILLUMINATED

$\varnothing$  40 ISO 13850 - STAY-PUT

Push-pull to reset

Cat. No.



Black bezel  
 Head position visible from the side with yellow collar  
 Compliant with the requirements of emergency stop:  
 IEC 60947-5-5 / ISO 13850

● Red

**L22DN10**

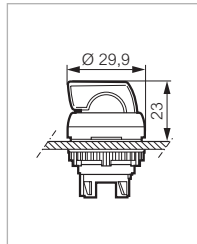
L22DN10

## ► SELECTOR SWITCHES - ILLUMINATED

WITH HANDLE

2 positions

Cat. No.



Stay-put positions - 45°

● Red  
 ● Green  
 ● Black



**L21KG10**  
**L21KG20**  
**L21KG30**

Spring return- 45°

● Red  
 ● Green  
 ● Black



**L21KH10**  
**L21KH20**  
**L21KH30**

Stay-put positions - 45°

● Red  
 ● Green  
 ● Black



**L21KJ10**  
**L21KJ20**  
**L21KJ30**

Spring return- 45°

● Red  
 ● Green  
 ● Black



**L21KK10**  
**L21KK20**  
**L21KK30**

Stay-put positions - 90°

● Red  
 ● Green  
 ● Black



**L21KL10**  
**L21KL20**  
**L21KL30**

Stay-put positions - 90°

● Red  
 ● Green  
 ● Black



**L21KM10**  
**L21KM20**  
**L21KM30**

Catalogue No. in bold: normally in stock at distribution outlets

# Separate units $\varnothing$ 22: Heads

IP 66 - IP 69K  
 To be combined with a clip, LED block and contact blocks (p. 52)  
 With locking ring  
 Plastic chrome bezel - Black bezel on request (form p. 83)  
 Conform to IEC 60947-5-1



Characteristics (p. 98)

## ▶ SELECTOR SWITCHES - ILLUMINATED

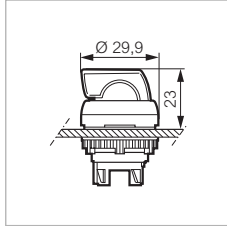
WITH HANDLE

3 positions

Cat. No.



L21ME10



### Stay-put positions - 45°

- Red
- Green
- Black



**L21ME10**  
**L21ME20**  
**L21ME30**

### Spring return from left to 0 - 45°

- Red
- Green
- Black



**L21MF10**  
**L21MF20**  
**L21MF30**

### Spring return from right to 0 - 45°

- Red
- Green
- Black



**L21MG10**  
**L21MG20**  
**L21MG30**

### Spring return to 0 - 45°

- Red
- Green
- Black



**L21MH10**  
**L21MH20**  
**L21MH30**

### Stay-put positions - 90°

- Red
- Green
- Black



**L21MJ10**  
**L21MJ20**  
**L21MJ30**



# Separate units $\varnothing$ 22: Heads

IP 66 - IP 69K  
 To be combined with a clip, LED block and contact blocks (p. 52)  
 With locking ring  
 Plastic chrome bezel - Black bezel on request (form p. 83)  
 Conform to IEC 60947-5-1



Characteristics (p. 98)

## ▶ SELECTOR SWITCHES - ILLUMINATED (CONTINUED)

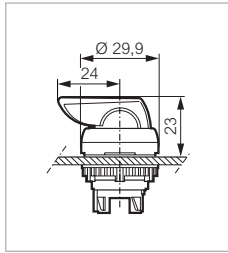
### WITH LONG HANDLE

2 positions

Cat. No



L21KV30



**Stay-put positions - 45°**

● Black



**L21KV30**

**Stay-put positions - 45°**

● Black



**L21KX30**

**Spring return - 45°**

● Black



**L21KY30**

# Separate units $\varnothing$ 22: Heads

IP 66 - IP 69K  
 To be combined with a clip, LED block and contact blocks (p. 52)  
 With locking ring  
 Plastic chrome bezel - Black bezel on request (form p. 83)  
 Conform to IEC 60947-5-1



Characteristics (p. 98)

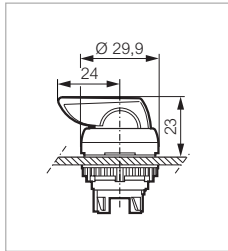
## ▶ SELECTOR SWITCHES - ILLUMINATED (CONTINUED)

### WITH LONG HANDLE

3 positions



L21ML30



#### Stay-put positions - 45°

● Black



**L21ML30**

#### Spring return from left to 0 - 45°

● Black



**L21MM30**

#### Spring return from right to 0 - 45°

● Black



**L21MN30**

#### Spring return to 0 - 45°

● Black



**L21MP30**

# Pilot lights $\varnothing$ 22

IP 66 - IP 69K  
 To be combined with a clip, LED block (p. 55)  
 With locking ring  
 Conform to IEC 60947-5-1



Characteristics (p. 98)

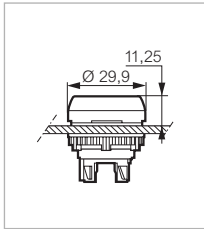
## ▶ PILOT LIGHTS - SEPARATE UNITS

### FLUSH

Cat. No



L20SE20



To be combined with a clip and LED block (p. 55)

#### Without engraving

- Red
- Green
- Yellow
- White
- Blue

**L20SE10**  
**L20SE20**  
**L20SE40**  
**L20SE50**  
**L20SE60**

#### On demand engraving (p. 74)

Symbol code to be added at the end of the catalogue number

- Red
- Green
- Yellow
- White
- Blue

L20SE31       
 L20SE32       
 L20SE34       
 L20SE35       
 L20SE36     

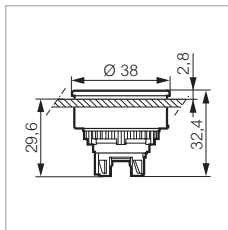
### SUPER FLUSH

Degree of protection: IP 66

Cat. No



L23SE10



Metallic chrome bezel  
 Drilling  $\varnothing$  30,5 mm  
 To be combined with a clip and LED block (p. 55)

#### Without engraving

Ribbed lens

- Red
- Green
- Yellow
- White
- Blue

**L23SE10**  
**L23SE20**  
**L23SE40**  
**L23SE50**  
**L23SE60**

#### On demand engraving (p. 74)

Symbol code to be added at the end of the catalogue number

- Red
- Green
- Yellow
- White
- Blue

L23SE31       
 L23SE32       
 L23SE34       
 L23SE35       
 L23SE36

# Pilot lights $\varnothing$ 22

IP 66 - IP 69K  
Direct supply



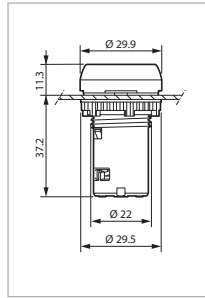
Characteristics (p. 98)

## ▶ ONE-PIECE PILOT LIGHTS

Cat. No.



L20SC20L



### 24V Without engraving

- Red
- Green
- Yellow
- White
- Blue

- L20SC10L**
- L20SC20L**
- L20SC40L**
- L20SC50L**
- L20SC60L**

#### On demand engraving (p. 74)

Symbol code to be added at the end of the catalogue number

- Red
- Green
- Yellow
- White
- Blue

- L20SC31L [ ] [ ] [ ] [ ]
- L20SC32L [ ] [ ] [ ] [ ]
- L20SC34L [ ] [ ] [ ] [ ]
- L20SC35L [ ] [ ] [ ] [ ]
- L20SC36L [ ] [ ] [ ] [ ]

### 130V Without engraving

- Red
- Green
- Yellow
- White
- Blue

- L20SC10M**
- L20SC20M**
- L20SC40M**
- L20SC50M**
- L20SC60M**

#### On demand engraving (p. 74)

Symbol code to be added at the end of the catalogue number

- Red
- Green
- Yellow
- White
- Blue

- L20SC31M [ ] [ ] [ ] [ ]
- L20SC32M [ ] [ ] [ ] [ ]
- L20SC34M [ ] [ ] [ ] [ ]
- L20SC35M [ ] [ ] [ ] [ ]
- L20SC36M [ ] [ ] [ ] [ ]

### 230V Without engraving

- Red
- Green
- Yellow
- White
- Blue

- L20SC10H**
- L20SC20H**
- L20SC40H**
- L20SC50H**
- L20SC60H**

#### On demand engraving (p. 74)

Symbol code to be added at the end of the catalogue number

- Red
- Green
- Yellow
- White
- Blue

- L20SC31H [ ] [ ] [ ] [ ]
- L20SC32H [ ] [ ] [ ] [ ]
- L20SC34H [ ] [ ] [ ] [ ]
- L20SC35H [ ] [ ] [ ] [ ]
- L20SC36H [ ] [ ] [ ] [ ]

# Block holder clips for assembly as you require

1, 3 or 5-position clips

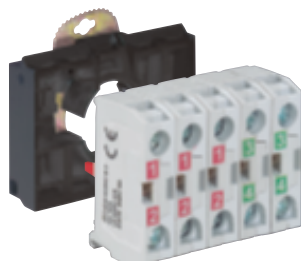
## ▶ CLIP

*"A flexible configuration for assembly in any order..."*

### ▶ 3 BLOCKS



### ▶ 5 BLOCKS



### ▶ MODULAR

Stacking without accessories



- Snap fit, tools not required to attach contact blocks
- Cost effective solution: 1 position clip
- Blocks can be stacked on 2 levels, up to 3 blocks wide
- Blocks can be assembled in any order (except pilot light)
- Optimised dimensions: reduced depth of blocks

## ▶ BLOCK

*"Imaginatively designed to be safe, robust and durable"*

### ▶ MATERIAL

- IP20 as "finger safe"
- Electrical insulation
- Corrosion-resistant



### ▶ ENVIRONMENT

- Respect for the environment, RoHS compliant



- LED blocks: combine long life and economy
- Corrosion resistant to some chemicals and sea air, etc
- Conform to standard IEC 60947-5-1
- Conform to RoHS European directive concerning restriction of hazardous substances

## Separate units: Blocks sub-assemblies

IP 20  
 Clip and electrical blocks assembled  
 To be combined with a head (p. 23)  
 Mounting (p. 96)  
 Conform to IEC 60947-5-1



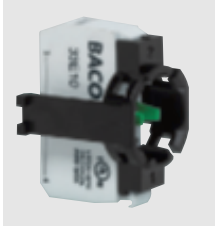
Characteristics (p. 98)

### ▶ CONTACT BLOCKS - FOR NON ILLUMINATED HEADS

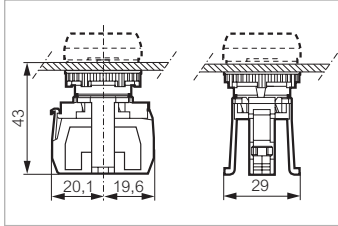
#### SCREW TERMINALS

#### 1 position clip

Cat. No.



331E10



**331E10**

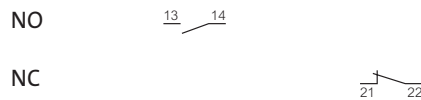
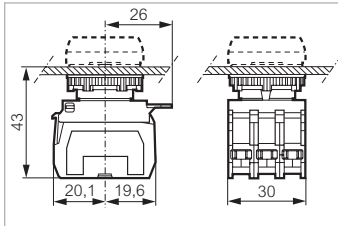
**331E01**

#### SCREW TERMINALS

#### 3 position clip

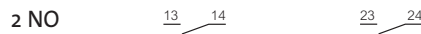


333E21



**333E10**

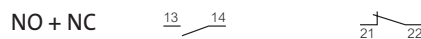
**333E01**



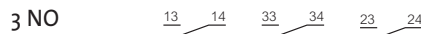
**333E20**



**333E02**



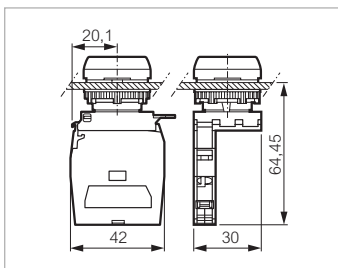
**333E11**



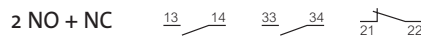
**333E30**



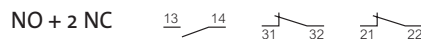
**333E03**



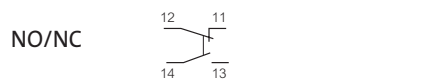
NO/NC



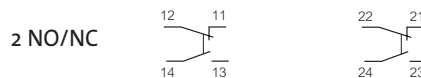
**333E21**



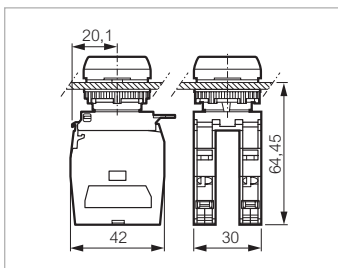
**333E12**



**334E11**



**334E22**



2 NO/NC

## Separate units: Blocks sub-assemblies

IP 20  
 Clip and electrical blocks assembled  
 To be combined with a head (p. 23)  
 Mounting (p. 96)  
 Conform to IEC 60947-5-1



Characteristics (p. 98)

### ▶ CONTACT BLOCKS - FOR NON ILLUMINATED HEADS (CONTINUED)

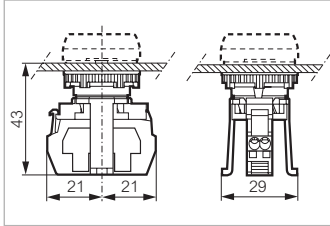
#### PLUG-IN TERMINALS


#### 1 position clip

Cat. No.



331ER01



NO   
 NC 

**331ER10**

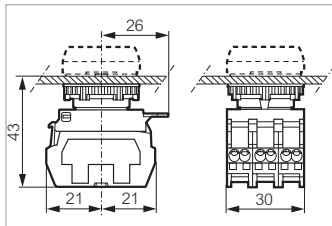
**331ER01**



#### PLUG-IN TERMINALS



#### 3 position clip




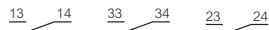
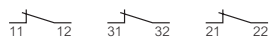
333ER11



NO   
 NC 

2 NO   
 2 NC 

NO+NC 

3 NO   
 3 NC 

**333ER10**

**333ER01**

**333ER20**

**333ER02**

**333ER11**

**333ER30**

**333ER03**



## Separate units: Blocks sub-assemblies

IP 20  
 Clip and electrical blocks assembled  
 To be combined with a head (p. 23)  
 Mounting (p. 96)  
 Conform to IEC 60947-5-1



Characteristics (p. 98)

### ► CONTACT BLOCKS - FOR NON ILLUMINATED HEADS (CONTINUED)

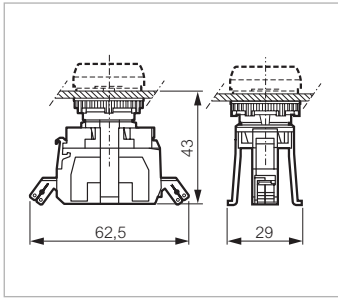
#### FASTON TERMINALS

#### 1 position clip

Cat. No.



331ED10



NO  13 14  
 NC  21 22

**331ED10**

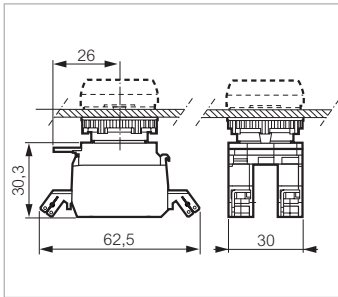
**331ED01**



#### FASTON TERMINALS

#### 3 position clip



333ED11



NO + NC  13 14  21 22

**333ED11**

## Separate units: Blocks sub-assemblies

IP 20  
 Clip and electrical blocks assembled  
 To be combined with a head (p. 23)  
 Mounting (p. 96)  
 Conform to IEC 60947-5-1



Characteristics (p. 98)

### ► ELECTRICAL BLOCKS - FOR ILLUMINATED HEADS

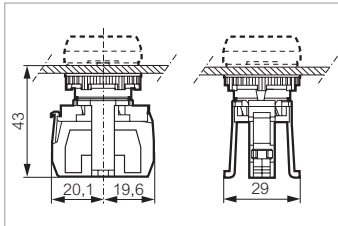
#### SCREW TERMINALS

#### 1 position clip: LED block

Cat. No.



331EAGL



#### 24 V

- White
- Red
- Green
- Blue
- Yellow

**331EAWL**  
**331EARL**  
**331EAGL**  
**331EABL**  
**331EAYL**

#### 130 V

- White
- Red
- Green
- Blue
- Yellow

**331EAWM**  
**331EARM**  
**331EAGM**  
**331EABM**  
**331EAYM**

#### 230 V

- White
- Red
- Green
- Blue
- Yellow

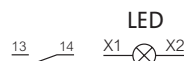
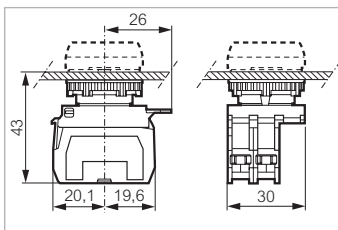
**331EAWH**  
**331EARH**  
**331EAGH**  
**331EABH**  
**331EAYH**

#### SCREW TERMINALS

#### 3 position clip: NO + LED block



333EAWM10



#### 24 V

- White
- Red
- Green
- Blue
- Yellow

**333EAWL10**  
**333EARL10**  
**333EAGL10**  
**333EABL10**  
**333EAYL10**

#### 130 V

- White
- Red
- Green
- Blue
- Yellow

**333EAWM10**  
**333EARM10**  
**333EAGM10**  
**333EABM10**  
**333EAYM10**

#### 230 V

- White
- Red
- Green
- Blue
- Yellow

**333EAWH10**  
**333EARH10**  
**333EAGH10**  
**333EABH10**  
**333EAYH10**

Catalogue No. in bold: normally in stock at distribution outlets

## Separate units: Blocks sub-assemblies

IP 20  
 Clip and electrical blocks assembled  
 To be combined with a head (p. 23)  
 Mounting (p. 96)  
 Conform to IEC 60947-5-1



Characteristics (p. 98)

### ► ELECTRICAL BLOCKS - FOR ILLUMINATED HEADS (CONTINUED)

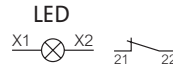
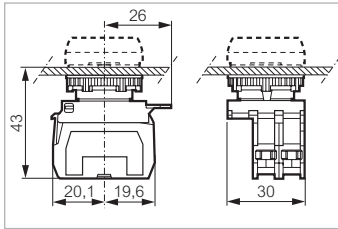
#### SCREW TERMINALS

#### 3 position clip: LED block + NC

Cat. No.



333EAWL01



#### 24 V

- White
- Red
- Green
- Blue
- Yellow

**333EAWL01**  
**333EARL01**  
**333EAGL01**  
**333EABL01**  
**333EAYL01**

#### 130 V

- White
- Red
- Green
- Blue
- Yellow

**333EAWM01**  
**333EARM01**  
**333EAGM01**  
**333EABM01**  
**333EAYM01**

#### 230 V

- White
- Red
- Green
- Blue
- Yellow

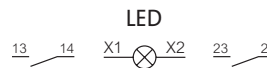
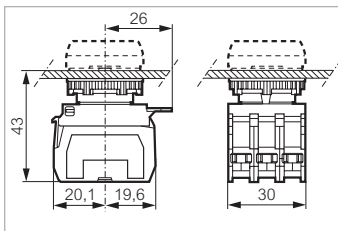
**333EAWH01**  
**333EARH01**  
**333EAGH01**  
**333EABH01**  
**333EAYH01**

#### SCREW TERMINALS

#### 3 position clip: NO + LED block + NO



333EARL20



#### 24 V

- White
- Red
- Green
- Blue
- Yellow

**333EAWL20**  
**333EARL20**  
**333EAGL20**  
**333EABL20**  
**333EAYL20**

#### 130 V

- White
- Red
- Green
- Blue
- Yellow

**333EAWM20**  
**333EARM20**  
**333EAGM20**  
**333EABM20**  
**333EAYM20**

#### 230 V

- White
- Red
- Green
- Blue
- Yellow

**333EAWH20**  
**333EARH20**  
**333EAGH20**  
**333EABH20**  
**333EAYH20**

Catalogue No. in bold: normally in stock at distribution outlets

## Separate units: Blocks sub-assemblies

IP 20  
 Clip and electrical blocks assembled  
 To be combined with a head (p. 23)  
 Mounting (p. 96)  
 Conform to IEC 60947-5-1



Characteristics (p. 98)

### ► ELECTRICAL BLOCKS - FOR ILLUMINATED HEADS (CONTINUED)

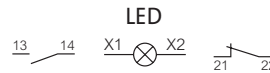
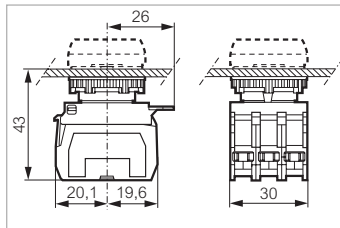
#### SCREW TERMINALS

3 position clip: NO + LED block + NC

Cat. No.



333EARL11



#### 24 V

- White
- Red
- Green
- Blue
- Yellow

**333EAWL11**  
**333EARL11**  
**333EAGL11**  
**333EABL11**  
**333EAYL11**

#### 130 V

- White
- Red
- Green
- Blue
- Yellow

**333EAWM11**  
**333EARM11**  
**333EAGM11**  
**333EABM11**  
**333EAYM11**

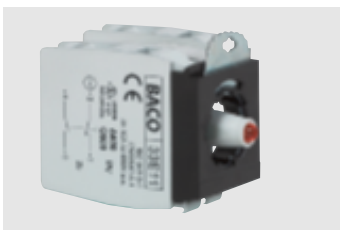
#### 230 V

- White
- Red
- Green
- Blue
- Yellow

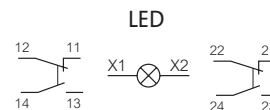
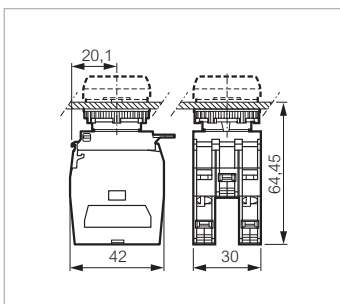
**333EAWH11**  
**333EARH11**  
**333EAGH11**  
**333EABH11**  
**333EAYH11**

#### SCREW TERMINALS

3 position clip: NO/NC + LED block + NO/NC



334EARL22



#### 24 V

- White
- Red
- Green
- Blue
- Yellow

**334EAWL22**  
**334EARL22**  
**334EAGL22**  
**334EABL22**  
**334EAYL22**

#### 130 V

- White
- Red
- Green
- Blue
- Yellow

**334EAWM22**  
**334EARM22**  
**334EAGM22**  
**334EABM22**  
**334EAYM22**

#### 230 V

- White
- Red
- Green
- Blue
- Yellow

**334EAWH22**  
**334EARH22**  
**334EAGH22**  
**334EABH22**  
**334EAYH22**

Catalogue No. in bold: normally in stock at distribution outlets

## Separate units: Blocks sub-assemblies

IP 20  
 Clip and electrical blocks assembled  
 To be combined with a head (p. 23)  
 Mounting (p. 96)  
 Conform to IEC 60947-5-1



Characteristics (p. 98)

### ► ELECTRICAL BLOCKS - FOR ILLUMINATED HEADS (CONTINUED)

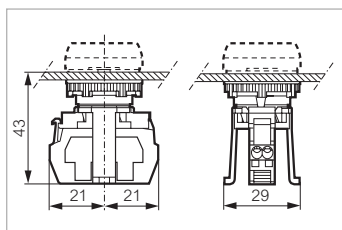
#### PLUG-IN TERMINALS

#### 1 position clip: LED block

Cat. No.



331ERAGH



#### 24 V

- White
- Red
- Green
- Blue
- Yellow

**331ERAWL**  
**331ERARL**  
**331ERAGL**  
**331ERABL**  
**331ERAYL**

#### 130 V

- White
- Red
- Green
- Blue
- Yellow

**331ERAWM**  
**331ERARM**  
**331ERAGM**  
**331ERABM**  
**331ERAYM**

#### 230 V

- White
- Red
- Green
- Blue
- Yellow

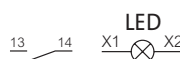
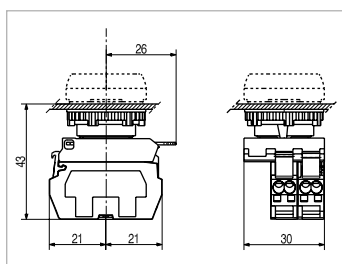
**331ERAWH**  
**331ERARH**  
**331ERAGH**  
**331ERABH**  
**331ERAYH**

#### PLUG-IN TERMINALS

#### 3 position clip: NO + LED block



333ERAGL10



#### 24 V

- White
- Red
- Green
- Blue
- Yellow

**333ERAWL10**  
**333ERARL10**  
**333ERAGL10**  
**333ERABL10**  
**333ERAYL10**

#### 130 V

- White
- Red
- Green
- Blue
- Yellow

**333ERAWM10**  
**333ERARM10**  
**333ERAGM10**  
**333ERABM10**  
**333ERAYM10**

#### 230 V

- White
- Red
- Green
- Blue
- Yellow

**333ERAWH10**  
**333ERARH10**  
**333ERAGH10**  
**333ERABH10**  
**333ERAYH10**

Catalogue No. in bold: normally in stock at distribution outlets

## Separate units: Blocks sub-assemblies

IP 20  
 Clip and electrical blocks assembled  
 To be combined with a head (p. 23)  
 Mounting (p. 96)  
 Conform to IEC 60947-5-1



Characteristics (p. 98)

### ► ELECTRICAL BLOCKS - FOR ILLUMINATED HEADS (CONTINUED)

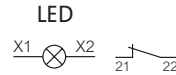
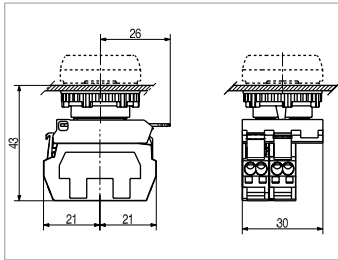
#### PLUG-IN TERMINALS

#### 3 position clip: LED block + NC

Cat. No.



333ERAGH01



#### 24 V

- White
- Red
- Green
- Blue
- Yellow

333ERAWL01  
 333ERARL01  
 333ERAGL01  
 333ERABL01  
 333ERAYL01

#### 130 V

- White
- Red
- Green
- Blue
- Yellow

333ERAWM01  
 333ERARM01  
 333ERAGM01  
 333ERABM01  
 333ERAYM01

#### 230 V

- White
- Red
- Green
- Blue
- Yellow

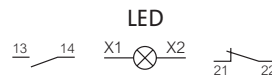
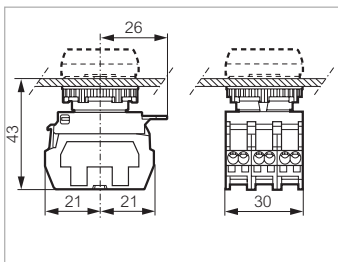
333ERAWH01  
 333ERARH01  
 333ERAGH01  
 333ERABH01  
 333ERAYH01

#### PLUG-IN TERMINALS

#### 3 position clip: NO + LED block + NC



333ERAGH11



#### 24 V

- White
- Red
- Green
- Blue
- Yellow

333ERAWL11  
 333ERARL11  
 333ERAGL11  
 333ERABL11  
 333ERAYL11

#### 130 V

- White
- Red
- Green
- Blue
- Yellow

333ERAWM11  
 333ERARM11  
 333ERAGM11  
 333ERABM11  
 333ERAYM11

#### 230 V

- White
- Red
- Green
- Blue
- Yellow

333ERAWH11  
 333ERARH11  
 333ERAGH11  
 333ERABH11  
 333ERAYH11

Catalogue No. in bold: normally in stock at distribution outlets

## Separate units: Blocks sub-assemblies

IP 20  
 Clip and electrical blocks assembled  
 To be combined with a head (p. 23)  
 Mounting (p. 96)  
 Conform to IEC 60947-5-1

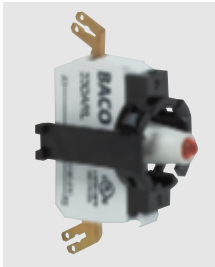
 Characteristics (p. 98)

### ► ELECTRICAL BLOCKS - FOR ILLUMINATED HEADS (CONTINUED)

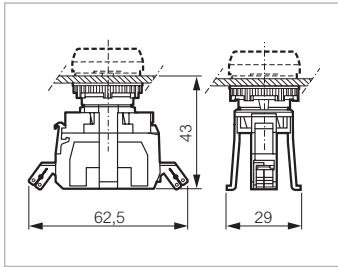
#### FASTON TERMINALS

#### 1 position clip: LED block

Cat. No.



331EDARL



#### 24 V

- White
- Red
- Green
- Blue
- Yellow

331EDAWL  
 331EDARL  
 331EDAGL  
 331EDABL  
 331EDAYL

#### 130 V

- White
- Red
- Green
- Blue
- Yellow

331EDAWM  
 331EDARM  
 331EDAGM  
 331EDABM  
 331EDAYM

#### 230 V

- White
- Red
- Green
- Blue
- Yellow

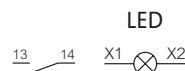
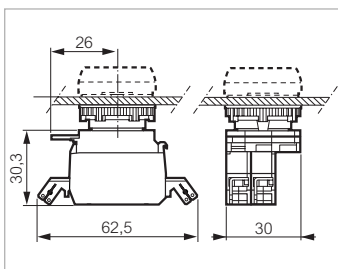
331EDAWH  
 331EDARH  
 331EDAGH  
 331EDABH  
 331EDAYH

#### FASTON TERMINALS

#### 3 position clip: NO + LED block



333EDARL10



#### 24 V

- White
- Red
- Green
- Blue
- Yellow

333EDAWL10  
 333EDARL10  
 333EDAGL10  
 333EDABL10  
 333EDAYL10

#### 130 V

- White
- Red
- Green
- Blue
- Yellow

333EDAWM10  
 333EDARM10  
 333EDAGM10  
 333EDABM10  
 333EDAYM10

#### 230 V

- White
- Red
- Green
- Blue
- Yellow

333EDAWH10  
 333EDARH10  
 333EDAGH10  
 333EDABH10  
 333EDAYH10

Catalogue No. in bold: normally in stock at distribution outlets

## Separate units: Blocks sub-assemblies

IP 20  
 Clip and electrical blocks assembled  
 To be combined with a head (p. 23)  
 Mounting (p. 96)  
 Conform to IEC 60947-5-1



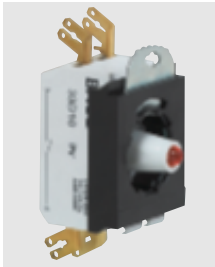
Characteristics (p. 98)

### ► ELECTRICAL BLOCKS - FOR ILLUMINATED HEADS (CONTINUED)

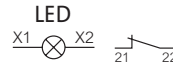
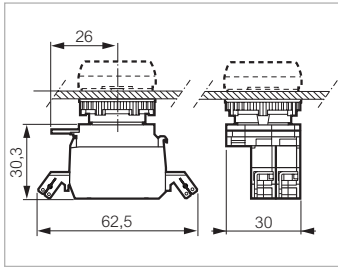
#### FASTON TERMINALS

#### 3 position clip: LED block + NC

Cat. No.



333EDARM01



#### 24 V

- White
- Red
- Green
- Blue
- Yellow

333EDAWL01  
 333EDARL01  
 333EDAGL01  
 333EDABL01  
 333EDAYL01

#### 130 V

- White
- Red
- Green
- Blue
- Yellow

333EDAWM01  
 333EDARM01  
 333EDAGM01  
 333EDABM01  
 333EDAYM01

#### 230 V

- White
- Red
- Green
- Blue
- Yellow

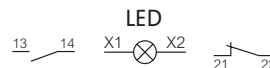
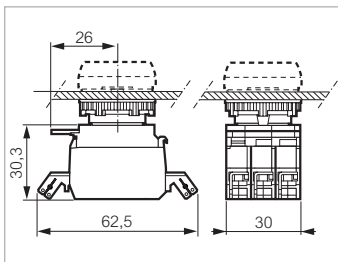
333EDAWH01  
 333EDARH01  
 333EDAGH01  
 333EDABH01  
 333EDAYH01

#### FASTON TERMINALS

#### 3 position clip: NO + LED block + NC



333EDARL11



#### 24 V

- White
- Red
- Green
- Blue
- Yellow

333EDAWL11  
 333EDARL11  
 333EDAGL11  
 333EDABL11  
 333EDAYL11

#### 130 V

- White
- Red
- Green
- Blue
- Yellow

333EDAWM11  
 333EDARM11  
 333EDAGM11  
 333EDABM11  
 333EDAYM11

#### 230 V

- White
- Red
- Green
- Blue
- Yellow

333EDAWH11  
 333EDARH11  
 333EDAGH11  
 333EDABH11  
 333EDAYH11

Catalogue No. in bold: normally in stock at distribution outlets



# Separate units: Blocks

IP 20  
To be combined with a 1, 3 or 5 position clip (p. 69)

 Characteristics (p. 98)

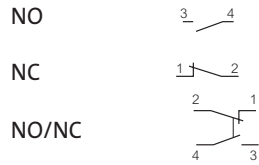
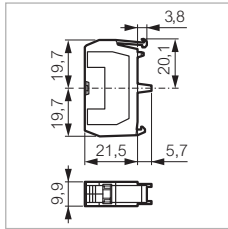
## ▶ CONTACT BLOCKS

### SCREW TERMINALS

Cat. No.



33E10



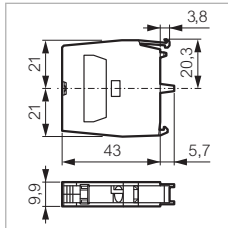
**33E10**

**33E01**

**33E11**



33E11



**Golden contacts  
for low current**



**33E10Y7**

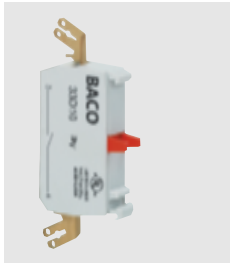
**33E01Y7**

**Contact with delayed opening**

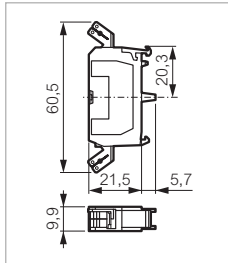


**33E01C**

### FASTON TERMINALS



33D01



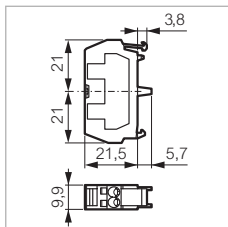
**33D10**

**33D01**

### PLUG-IN TERMINALS



33R01



**33R10**

**33R01**

# Separate units: Blocks

IP 20  
To be combined with a 1, 3 or 5 position clip (p. 69)



Characteristics (p. 98)

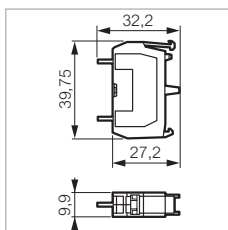
## ▶ CONTACT BLOCKS (CONTINUED)

### FOR PCB (PIN-STYLE TERMINALS)

Cat. No.



33P10



NO 

**33P10**

NC 

**33P01**

**Golden contacts  
for low current**

NO 

**33P10Y7**

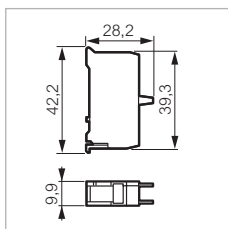
NC 

**33P01Y7**


### FOR CONTROL STATIONS (SCREW TERMINALS)



33S01



For un-equipped control stations (p. 90)  
Base mounted

NO 

**33S10**

NC 

**33S01**

## Separate units: Blocks

IP 20  
To be combined with a 1, 3 or 5 position clip (p. 69)



Characteristics (p. 98)

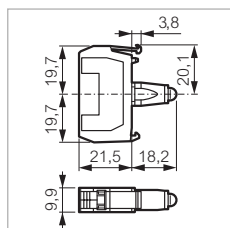
### ▶ LED BLOCKS

#### SCREW TERMINALS

Cat. No.



33EARL



#### 24 V AC + DC

- White
- Red
- Green
- Blue
- Yellow

**33EAWL**  
**33EARL**  
**33EAGL**  
**33EABL**  
**33EAYL**

#### 48 V AC + DC

- White
- Red
- Green
- Blue
- Yellow

**33EAWL4**  
**33EARL4**  
**33EAGL4**  
**33EABL4**  
**33EAYL4**

#### 130 V AC

- White
- Red
- Green
- Blue
- Yellow

**33EAWM**  
**33EARM**  
**33EAGM**  
**33EABM**  
**33EAYM**

#### 230 V AC

- White
- Red
- Green
- Blue
- Yellow

**33EAWH**  
**33EARH**  
**33EAGH**  
**33EABH**  
**33EAYH**

#### 110 V DC

- White

**33EAWDM**

## Separate units: Blocks

IP 20  
To be combined with a 1, 3 or 5 position clip (p. 69)

 Characteristics (p. 98)

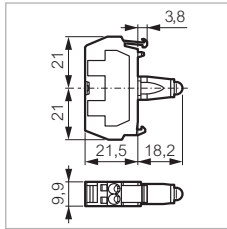
### ► LED BLOCKS (CONTINUED)

#### PLUG-IN TERMINALS

Cat. No.



33RAGH



#### 24 V AC + DC

- White
- Red
- Green
- Blue
- Yellow

**33RAWL**  
**33RARL**  
**33RAGL**  
**33RABL**  
**33RAYL**

#### 130 V AC

- White
- Red
- Green
- Blue
- Yellow

**33RAWM**  
**33RARM**  
**33RAGM**  
**33RABM**  
**33RAYM**

#### 230 V AC

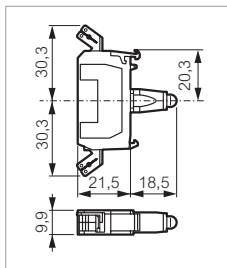
- White
- Red
- Green
- Blue
- Yellow

**33RAWH**  
**33RARH**  
**33RAGH**  
**33RABH**  
**33RAYH**

#### FASTON TERMINALS



33DARL



#### 24 V AC + DC

- White
- Red
- Green
- Blue
- Yellow

**33DAWL**  
**33DARL**  
**33DAGL**  
**33DABL**  
**33DAYL**

#### 130 V AC

- White
- Red
- Green
- Blue
- Yellow

**33DAWM**  
**33DARM**  
**33DAGM**  
**33DABM**  
**33DAYM**

#### 230 V AC

- White
- Red
- Green
- Blue
- Yellow

**33DAWH**  
**33DARH**  
**33DAGH**  
**33DABH**  
**33DAYH**

Catalogue No. in bold: normally in stock at distribution outlets

## Separate units: Blocks

IP 20  
To be combined with a 1, 3 or 5 position clip (p. 69)



Characteristics (p. 98)

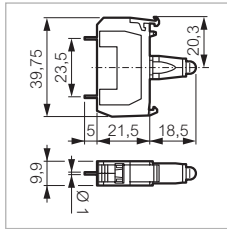
### ▶ LED BLOCKS (CONTINUED)

#### FOR PCB (PIN STYLE)

Cat. No.



33PAWL



#### 24 V AC + DC

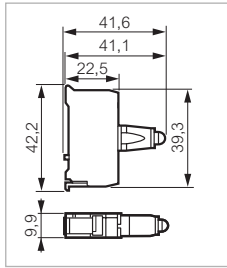
- White
- Red
- Green
- Blue
- Yellow

- 33PAWL**
- 33PARL**
- 33PAGL**
- 33PABL**
- 33PAYL**

#### FOR CONTROL STATIONS (SCREW TERMINALS)



33SAGH



For un-equipped control stations (p. 90)  
Base mounted



#### 24 V AC + DC

- White
- Red
- Green
- Blue
- Yellow

- 33SAWL**
- 33SARL**
- 33SAGL**
- 33SABL**
- 33SAYL**

#### 130 V AC

- White
- Red
- Green
- Blue
- Yellow

- 33SAWM**
- 33SARM**
- 33SAGM**
- 33SABM**
- 33SAYM**

#### 230 V AC

- White
- Red
- Green
- Blue
- Yellow

- 33SAWH**
- 33SARH**
- 33SAGH**
- 33SABH**
- 33SAYH**

# Separate units: Blocks

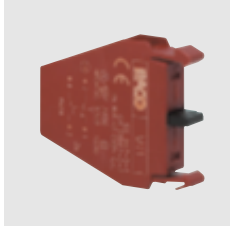
IP 20  
To be combined with a 1, 3 or 5 position clip (p. 69)

 Characteristics (p. 98)

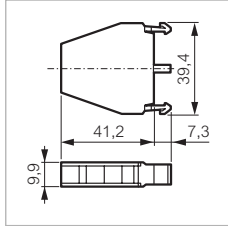
## ► SPECIFIC BLOCKS

### FOR JOYSTICKS (SCREW TERMINALS)

Cat. No.



LM11



Joysticks (p. 39)

NO - NC

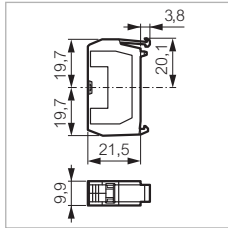


**LM11**

### LAMP-TEST BLOCKS (SCREW TERMINALS)

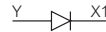


33ET



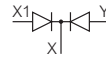
For 24 and 48 V

1 diod



**33ET**

2 diods



**33ETT**

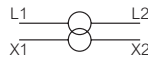
For 130 and 230 V (form p. 83)

### TRANSFORMER BLOCKS (SCREW TERMINALS)

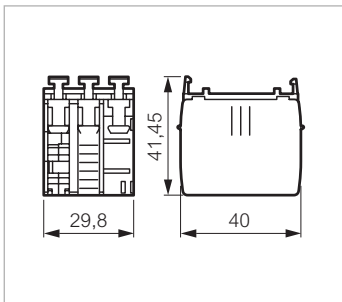


33EHC

230/24 V  
400/24V



**33EHC**  
**33ELC**



# Separate units: Blocks

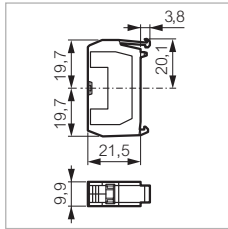
IP 20  
To be combined with a 1, 3 or 5 position clip (p. 69)

 Characteristics (p. 98)

## ► SPECIFIC BLOCKS

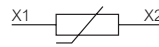
### FILTER BLOCKS (SCREW TERMINALS)

Cat. No.



Prevents from voltage peaks for LED block  
To be wired in parallel of with the LED block

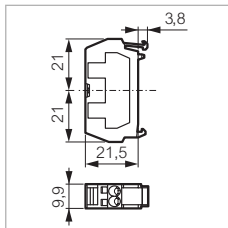
130 V  
230 V



**33EFM**  
**33EFH**

33EFH

### FILTER BLOCKS (PLUG-IN TERMINALS)



Prevents from voltage peaks for LED block  
To be wired in parallel of the LED block

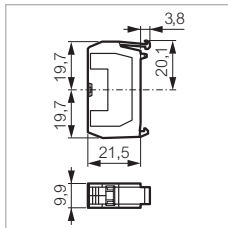
130 V  
230 V



**33RFM**  
**33RFH**

33RFH

### JUNCTION BLOCK (SCREW TERMINALS)



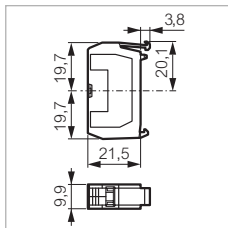
2 interconnected terminals



**33EY**

33EY

### EMPTY BLOCK



For empty positions on 3 or 5 position clip


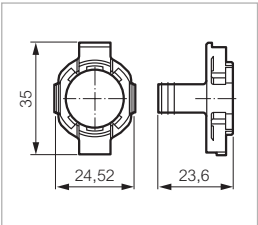
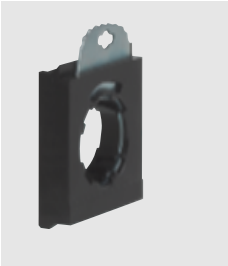
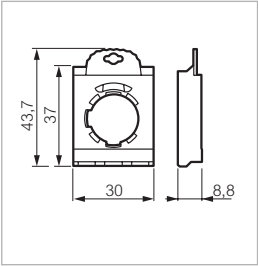
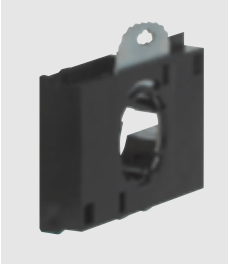
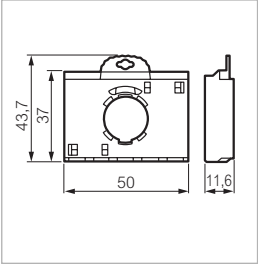
**33EX**

33EX









# Accessories

 Characteristics (p. 98)

## ▶ CLIPS

CLIPS		Cat. No.
		To be combined with blocks (p. 62 to 68) 1 position <b>331E</b>
		3 positions <b>333E</b>
		5 positions (only for $\varnothing 22$ heads) <b>335E</b>

## ▶ ROUND LEGEND PLATE

FOR MUSHROOM HEAD	Cat. No.	
	According to ISO 13850, Text + Symbol 	
	<b><math>\varnothing 60</math></b>	
	ARRET D'URGENCE + 	<b>LWE16100</b>
	NOT-HALT + 	<b>LWE16232</b>
	EMERGENCY STOP + 	<b>LWE16300</b>
	<b><math>\varnothing 80</math></b>	
	ARRET D'URGENCE + 	<b>LWE00100</b>
	NOT-HALT + 	<b>LWE00232</b>
	EMERGENCY STOP + 	<b>LWE00300</b>
	<b><math>\varnothing 60</math> Without symbol, text only</b>	
	ARRET D'URGENCE	LWE16152
	NOT AUS	<b>LWE16200</b>
	EMERGENCY STOP	LWE16352
	<b><math>\varnothing 80</math> Without symbol, text only</b>	
	ARRET D'URGENCE	LWE00152
NOT AUS	<b>LWE00200</b>	
EMERGENCY STOP	LWE00352	

Catalogue No. in bold: normally in stock at distribution outlets





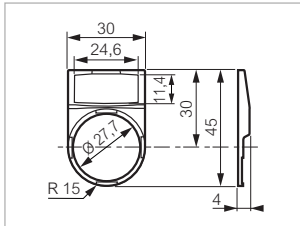
▶ COMPLETE FRAMES

Standard model - 30 x 45 mm

Cat. No.



LWP31



Round shape  
Black frame and legend plate unassembled  
2 lines maximum, 13 characters per line

**Without engraving**

- White
- Red
- Alu
- Black

**LWP35**  
**LWP31**  
**LWP39**  
**LWP33**

**On demand engraving (p. 74)**

Symbol code to be added at the end of the catalogue number

- White
- Red
- Alu
- Black

LWP35   
LWP31   
LWP39   
LWP33

**Protective mask for legend plate (paper or other ...)**

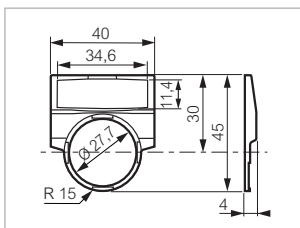
- Transparent

**LWP37**

Large model - 40 x 45 mm



LWG33



Round shape  
Black frame and legend plate unassembled  
2 lines maximum, 18 characters per line

**Without engraving**

- White
- Red
- Alu
- Black

**LWG35**  
**LWG31**  
**LWG39**  
**LWG33**

**On demand engraving (p. 74)**

Symbol code to be added at the end of the catalogue number

- White
- Red
- Alu
- Black

LWG35   
LWG31   
LWG39   
LWG33

**Protective mask for legend plate (paper or other ...)**

- Transparent

**LWG37**

► LEGEND PLATES

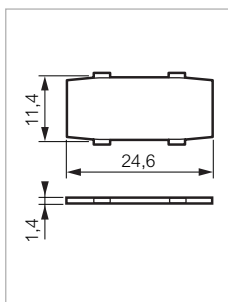
TO BE ENGRAVED

Standard model

Cat. No.



LIA5



2 lines maximum  
13 characters per line  
For round and square frames cat. nos. LWP3, LWP4 et LWP2 (p. 73)

Without engraving

- White LIA5
- Red LIA1
- Alu LIA9
- Black LIA3

On demand engraving (p. 74)

Symbol code to be added at the end of the catalogue number

- White - black engraving LIA5 □□□
- Red - white engraving LIA1 □□□
- Alu - black engraving LIA9 □□□
- Black - white engraving LIA3 □□□

Protective mask for legend plate (paper or other ...)

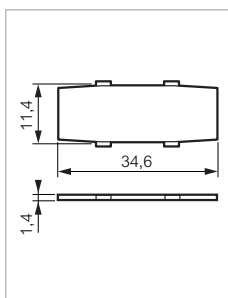
- Transparent LIA7

TO BE ENGRAVED

Large model



LIB9



2 lines maximum  
18 characters per line  
For round frame cat. no. LWG3 (p. 73)

Without engraving

- White LIB5
- Red LIB1
- Alu LIB9
- Black LIB3

On demand engraving (p. 74)

Symbol code to be added at the end of the catalogue number

- White - black engraving LIB5 □□□
- Red - white engraving LIB1 □□□
- Alu - black engraving LIB9 □□□
- Black - white engraving LIB3 □□□

Protective mask for legend plate (paper or other ...)

- Transparent LIB7

# Accessories ø 22

 Characteristics (p. 98)

## ▶ LEGEND PLATES

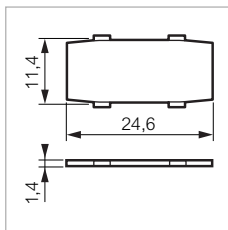
### ENGRAVED

#### Small model

Cat. No.



LIA9081



Alu legend plate, black engraving  
For round and square frames cat. nos. LWP3, LWP4 et LWP2 (p. 73)

#### With standard engraving

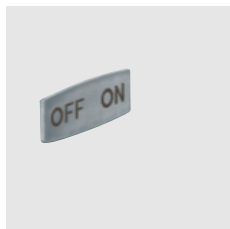
O-I	<b>LIA9081</b>
I-II	<b>LIA9082</b>
I-O-II	<b>LIA9091</b>
MANU-O-AUTO	<b>LIA9191</b>
HAND-O-AUTO	<b>LIA9291</b>
START	<b>LIA9301</b>
ON	<b>LIA9303</b>
OFF	<b>LIA9304</b>
RESET	<b>LIA9315</b>
RUN	<b>LIA9327</b>
HAND-AUTO	<b>LIA9383</b>

#### On demand engraving (p. 74)

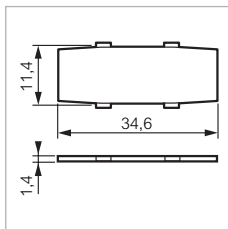
Symbol code to be added at the end of the catalogue number      LIA9□□□

### ENGRAVED

#### Large model



LIB9382



Alu legend plate, black engraving  
For round frame cat. no. LWG3 (p. 73)

OFF-ON	<b>LIB9382</b>
O-I-START	<b>LIB9093</b>

# Accessories ø 22



Characteristics (p. 98)

## ▶ FRAMES

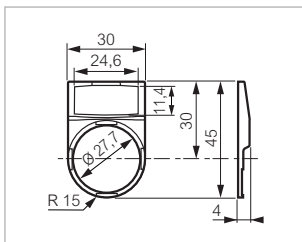
### ROUND

#### Standard model

Cat. No.



LWP3



For legend plates cat. nos. LIA5, LIA1, LIA 9, LIA 3 (p. 71)

● Black

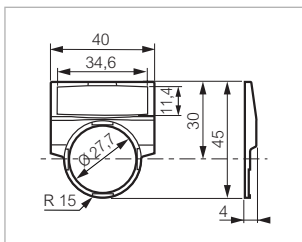
**LWP3**

### ROUND

#### Large model



LWG3



For legend plates cat. nos. LIB5, LIB1, LIB 9, LIB 3 (p. 71)

● Black

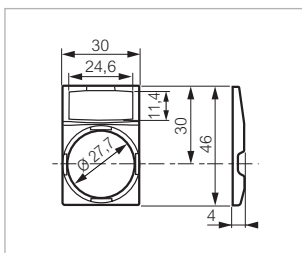
**LWG3**

### SQUARE

#### Standard model



LWP4



For legend plates cat. nos. LIA5, LIA1, LIA 9, LIA 3 (p. 71)

● Black

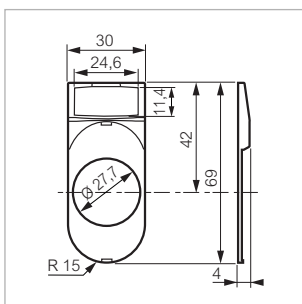
**LWP4**

### FOR DOUBLE AND TRIPLE TOUCH

#### Standard model



LWP2



For legend plates cat. nos. LIA5, LIA1, LIA 9, LIA 3 (p. 71)

● Black

**LWP2**

# Engravings

Symbol code to be added at the end of the catalogue number

## ▶ STANDARD TEXTS

### UNIVERSAL TEXT

Cat. No.

#### For selector switches and legend plates

O-I	081
I-II	082
I-O-II	091
I-II-III	092
O-I-START	093
O-I-II	094

### ENGLISH TEXT

#### For buttons, pilot lights and legend plates

CLOSE	314
DOWN	336
FAST	310
FORWARD	305
INCH	329
JOG	328
LEFT	311
LOWER	308
OFF	304
ON	303
OPEN	313
POWER-ON	330
RAISE	307
RESET	315
REVERSE	306
RIGHT	312
RUN	327
SLOW	309
START	301
STOP	302
UP	335

#### For selector switches and legend plates

FORW.-OFF-REV.	392
HAND-AUTO	383
HAND-OFF-AUTO	391
LOCAL-OFF-REMOTE	393
OFF-ON	382
STOP-START	381

# Engravings

Symbol code to be added at the end of the catalogue number

## ▶ STANDARD TEXTS (CONTINUED)

### GERMAN TEXT

Cat. No.

#### For buttons, pilot lights and legend plates

AB	208
AUF	207
AUS	204
BETRIEB	224
BREMSEN	225
EIN	203
EINRICHTEN	223
FEINHEBEN	221
FEINSENKEN	222
HALT	202
HEBEN	219
LANGSAM	209
LINKS	211
RECHTS	212
RÜCKWÄRTS	206
SENKEN	220
SCHNELL	210
VORWÄRTS	205
VORRÜCKEN	226
ZU	214

#### For selector switches and legend plates

AUS-EIN	281
HAND-AUTO	283
HAND-O-AUTO	291
ZURÜCK-O-VOR	292

### FRENCH TEXT

#### For buttons, pilot lights and legend plates

ALARME	133
ARRÊT	102
ARRÊT GÉNÉRAL	116
ARRIÈRE	106
AVANT	105
DÉCLENCHEMENT	131
DÉFAUT	132
DESCENTE	108
DROITE	112
EN SERVICE	103
FERMETURE	114
GAUCHE	111
HORS SERVICE	104
KLAXON	118
LENT	109
MARCHE	101
MONTÉE	107
OUVERTURE	113
RÉARMEMENT	115
SOUS TENSION	117
VITE	110

#### For selector switches and legend plates

ARRÊT-MARCHE	181
AVANT -O- ARRIÈRE	192
C.P.C.-NORMAL	184
HORS-EN	182
MANU-AUTO	183
MANU -O- AUTO	191

## Symbols

Symbol code to be added at the end of the catalogue number

### ▶ STANDARD SYMBOLS ISO/DIN

Description	Symbol	Cat. No.
Continuous straight-line movement ISO 1		A01
Alternating straight-line movement ISO 5		A05
Continuous rotating movement clockwise ISO 7A - DIN 100		A07
Continuous rotating mov. anti-clockwise ISO 7B		B07
Forward ISO 16		A16
Increase in value ISO 28		A28
Decrease in value ISO 29		A29
Adjustable ISO 62		A62
Clamp, block apply pressure ISO 63A		A63
Clamp, block apply pressure ISO 63B		B63
Unclamp, release ISO 64A		A64
Unclamp, release ISO 64B		B64
Brake ISO 65		A65
Release brake ISO 66		A66
Automatic cycle (or semi-automatic) ISO 67		A67
Manual control ISO 68		A68
"ON" close circuit ISO 69		A69
"STOP" close circuit ISO 70		A70
ON/OFF close + open circuit ISO 71		A71
Close circuit manual impulse ISO 72		A72
Clutch ISO 74 - DIN 46		A74

## Symbols

Symbol code to be added at the end of the catalogue number

### ▶ STANDARD SYMBOLS ISO/DIN (CONTINUED)

Description	Symbol	Cat. No.
De-clutch ISO 75 - DIN 45		A75
Warning "live" (energized) ISO 92 - DIN 131		A92
Main switch ISO 94		A94
Lubrification jet ISO 101		C01
Machine lighting ISO 102 - DIN 139		C02
Greasing ISO 107 - DIN 175		C07
Blow ISO 108 - DIN 263		C08
Suction ISO 109 - DIN 264		C09
Sound alarm DIN 155		D01
Emergency stop IEC 60417-5638 / ISO 13850		6964

### ▶ ADDITIONAL STANDARD SYMBOLS

Symbol	Cat. No.
	B01
	E01
	F01
	B62
	E62
	F62
	003
	004
	005

Catalogue No. in bold: normally in stock at distribution outlets



# Accessories ø 22



Characteristics (p. 98)

## ▶ BUTTON PLATES - FOR HEADS WITHOUT BUTTON PLATE

### NON ILLUMINATED

Cat. No.



LT05

For use with spring return button cat. no. L21AA00 (p. 23)

#### Without engraving

- Red
- Green
- Black
- Yellow
- White
- Blue

- LT01
- LT02
- LT03
- LT04
- LT05
- LT06



LT21302

#### On demand engraving (p. 74)

Symbol code to be added at the end of the catalogue number

- Red
- Green
- Black
- Yellow
- White
- Blue

- LT21 [ ] [ ] [ ] [ ]
- LT22 [ ] [ ] [ ] [ ]
- LT23 [ ] [ ] [ ] [ ]
- LT24 [ ] [ ] [ ] [ ]
- LT25 [ ] [ ] [ ] [ ]
- LT26 [ ] [ ] [ ] [ ]

### ILLUMINATED



LT20

For use with spring return button cat. no. L21AH00 (p. 40)

#### Without engraving

- Red
- Green
- Yellow
- White
- Blue

- LT10
- LT20
- LT40
- LT50
- LT60



LT34308

#### On demand engraving (p. 74)

Symbol code to be added at the end of the catalogue number

- Red
- Green
- Yellow
- White
- Blue

- LT31 [ ] [ ] [ ] [ ]
- LT32 [ ] [ ] [ ] [ ]
- LT34 [ ] [ ] [ ] [ ]
- LT35 [ ] [ ] [ ] [ ]
- LT36 [ ] [ ] [ ] [ ]

## Accessories ø 22



Characteristics (p. 98)

### ► SHROUDS - REINFORCED DEGREE OF PROTECTION: IP 67

#### FOR PUSH-BUTTONS PROJECTING

Cat. No.



LWA0203

**For spring return or stay-put buttons**

○ Transparent

**LWA0228**

**For non illuminated spring return buttons**

● Red opaque

● Green opaque

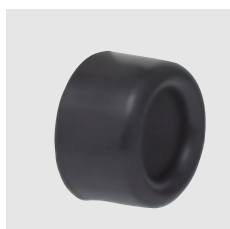
● Black opaque

**LWA0203**

**LWA0204**

**LWA0205**

#### FOR PUSH-BUTTONS FLUSH



LWA0253

**For spring return or stay-put buttons**

○ Transparent

**LWA0255**

**For non illuminated spring return buttons**

● Red opaque

● Green opaque

● Black opaque

**LWA0251**

**LWA0252**

**LWA0253**

#### DOUBLE TOUCH



LWA0223

**For double touch flush-projecting and triple touch**

○ Transparent

**LWA0223**

# Accessories ø 22

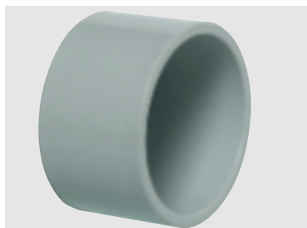


Characteristics (p. 98)

## ► MISCELLANEOUS

### GUARD

Cat. No.



LWA0225

For spring return button and spring return mushroom head  
(maxi ø 40)

- Grey

**LWA0225**

### PADLOCKABLE GUARD



LWA0240

For stay-put mushroom head  
● Yellow

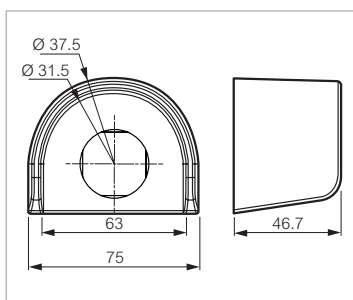
High (Height: 40 mm)

**LWA0240**

### YELLOW GUARD RING



LWA0242



For emergency stop button  
● Yellow

**LWA0242**

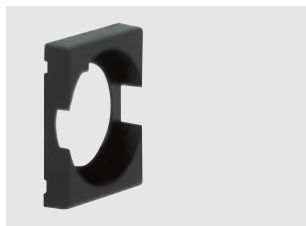
# Accessories ø 22

 Characteristics (p. 98)

## ► MISCELLANEOUS (CONTINUED)

### SQUARE FRAME

Cat. No.



LWA0230

For turning a round shape button or a pilot light into a square shape

- Black

**LWA0230**

### RELAY TERMINAL (EARTH OR NEUTRAL)



LWA0216

For control station  
Base mounted

**LWA0216**

### ANTI-ROTATION RING



LWA0237

For selector switches

**LWA0237**

### BLANKING PLUG



LWA0229

- Black
- Grey

**LWA0229**  
**LWA0215**

## Accessories ø 22

 Characteristics (p. 98)

### ► MISCELLANEOUS (CONTINUED)

#### FIXING TOOL

Cat. No.



Fixing tool for locking ring

**LWA0234**

LWA0234

#### REDUCTION RING ø 30/22



Converts ø 30 mm cut-out to 22 mm hole

● Grey

**LWA0219**

● Yellow

LWA0220

LWA0219

#### PUSH BUTTON SUPPORT CLIP-ON TO DIN RAIL



For pilot lights, spring return buttons and selector switches

**LWA0238**

LWA0238

#### PADLOCKABLE SHROUD



For spring return push-buttons

**LWA0226**

LWA0226

Catalogue No. in bold: normally in stock at distribution outlets



# Control stations

solution boxes



**Control stations with mushroom heads**  
pre-assembled



**Control stations with buttons**  
1, 2 or 3 buttons

## ► ADVANTAGES

*"All types of control station applications can be achieved"*

- Multipurpose, pre-equipped with mushroom head or pushbuttons
- Enclosures for custom assembly 1,2,3,4 or 5 holes
- Up to 3 blocks per position
- Innovative design



**Enclosures**  
1, 2, 3, 4 or 5 holes

► **SPECIAL REQUEST**

Custom assemblies and engraving options



See page 94



# Control stations $\varnothing$ 22

IP 66  
 Base mounted contact- screw terminals  
 Conform to IEC 60947-5-1  
 Marking on control station  
 Frames and legend plates (p. 70)  
 Special engraving on enclosure and mounting (form p. 94)



Characteristics (p. 98)

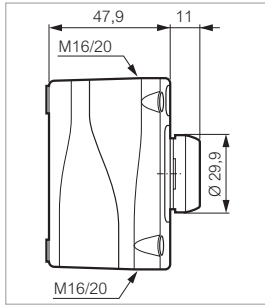
## ► CONTROL STATIONS WITH 1 BUTTON - NON ILLUMINATED

### SPRING RETURN - FLUSH

Cat. No.



LBX10110



- Green
- Red

NO  
 NC



#### Marking

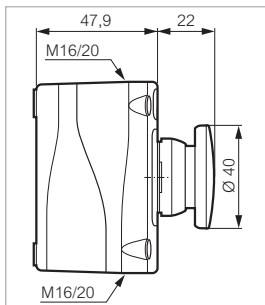


**LBX10110**  
**LBX10610**

### MUSHROOM HEAD $\varnothing$ 40 - SPRING RETURN



LBX10210



- Red

NC



#### Marking

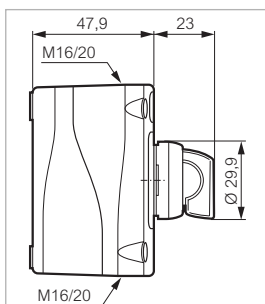


**LBX10210**

### SELECTOR SWITCH - WITH HANDLE



LBX12510



2 stay-put positions - 45°

- Black

NO



#### Marking



**LBX12510**

# Control stations ø 22

IP66  
 Base mounted contact- screw terminals  
 Conform to IEC 60947-5-1  
 Marking on control station  
 Frames and legend plates (p. 70)  
 Special marking and mounting (form p. 94)

 Characteristics (p. 98)

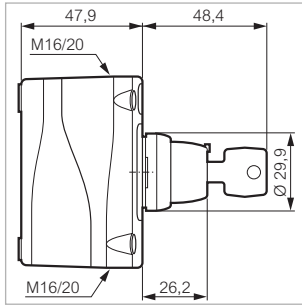
## ▶ CONTROL STATIONS WITH 1 BUTTON (CONTINUED)

### SELECTOR SWITCH - WITH KEY

Cat. No.




LBX12610



Supplied with 2 keys profile n° 455

2 stay-put positions - 45°  
 Key free in position 0-1

● Black NO 

#### Marking

○  
|

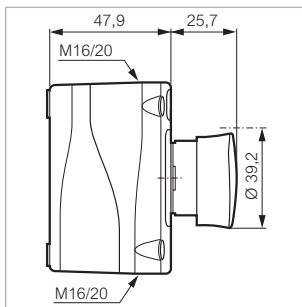
LBX12610




### MUSHROOM HEAD Ø 40 - STAY-PUT

Push-turn to reset



LBX10510



● Red NC   
 ● Red NC   
 ● Red NC 

ARRÊT D'URGENCE  
 NOT AUS  
 EMERGENCY STOP

LBX10310  
**LBX10410**  
**LBX10510**

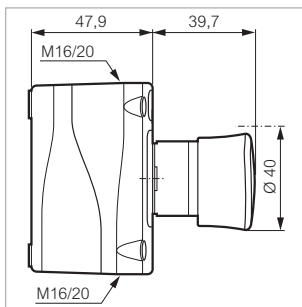
Contact blocks fixed behind cover (form p. 94)

### MUSHROOM HEAD Ø 40 ISO 13850 - STAY-PUT


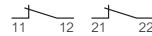

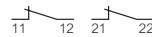

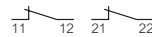
Push-turn to reset









LBX17201



Compliant with the requirements of emergency stop:  
 IEC 60947-5-5 / ISO 13850

● Red NC   
 ● Red 2 NC   
 ● Red NC   
 ● Red 2 NC   
 ● Red NC   
 ● Red 2 NC 

ARRÊT D'URGENCE +  LBX17101  
 ARRÊT D'URGENCE +  LBX17102  
 NOT-HALT +  LBX17201  
 NOT-HALT +  LBX17202  
 EMERGENCY STOP +  **LBX17301**  
 EMERGENCY STOP +  **LBX17302**

Contact blocks fixed behind cover (form p. 94)

# Control stations ø 22

IP 66  
 Base mounted contact- screw terminals  
 Conform to IEC 60947-5-1  
 Marking on control station  
 Frames and legend plates (p. 70)  
 Special engraving and mounting (form p. 94)

 Characteristics (p. 98)

## ► CONTROL STATIONS WITH 1 BUTTON (CONTINUED)

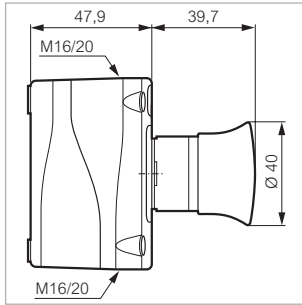
### MUSHROOM HEAD Ø 40 ISO 13850 - STAY-PUT

Push-pull to reset



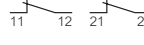



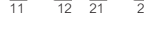



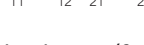

Cat. No.



LBX15101



Compliant with the requirements of emergency stop: IEC 60947-5-5 / ISO 13850

● Red	NC		ARRÊT D'URGENCE + 	<b>LBX15101</b>
● Red	2 NC		ARRÊT D'URGENCE + 	<b>LBX15102</b>
● Red	NC		NOT-HALT + 	<b>LBX15201</b>
● Red	2 NC		NOT-HALT + 	<b>LBX15202</b>
● Red	NC		EMERGENCY STOP + 	<b>LBX15301</b>
● Red	2 NC		EMERGENCY STOP + 	<b>LBX15302</b>

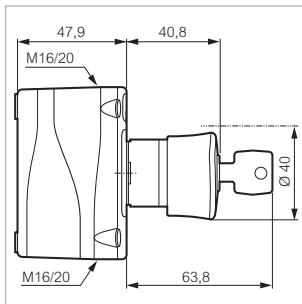
Contact blocks fixed behind cover (form p. 94)

### MUSHROOM HEAD Ø 40 ISO 13850 - STAY-PUT



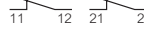







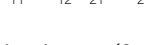

Key to reset



LBX11302



Compliant with the requirements of emergency stop: IEC 60947-5-5 / ISO 13850  
 Supplied with 2 keys profile n° 455

● Red	NC		ARRÊT D'URGENCE + 	<b>LBX11101</b>
● Red	2 NC		ARRÊT D'URGENCE + 	<b>LBX11102</b>
● Red	NC		NOT-HALT + 	<b>LBX11201</b>
● Red	2 NC		NOT-HALT + 	<b>LBX11202</b>
● Red	NC		EMERGENCY STOP + 	<b>LBX11301</b>
● Red	2 NC		EMERGENCY STOP + 	<b>LBX11302</b>

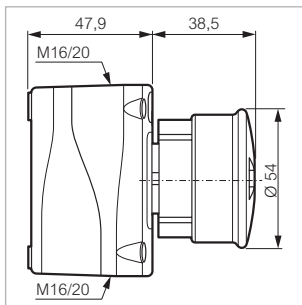
Contact blocks fixed behind cover (form p. 94)

### MUSHROOM HEAD Ø 54 ISO 13850 - STAY-PUT



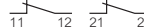

Push-pull to reset with flag indicator



LBX14201



Compliant with the requirements of emergency stop: IEC 60947-5-5 / ISO 13850  
 Double position indicator: head and collar

● Red	NC		STOP - 	<b>LBX14201</b>
● Red	2 NC		STOP - 	<b>LBX14202</b>

Contact blocks fixed behind cover (form p. 94)

# Control stations ø 22

IP 66  
 Base mounted contact- screw terminals  
 Conform to IEC 60947-5-1  
 Marking on control station  
 Frames and legend plates (p. 70)  
 Special engraving and mounting (form p. 94)



Characteristics (p. 98)

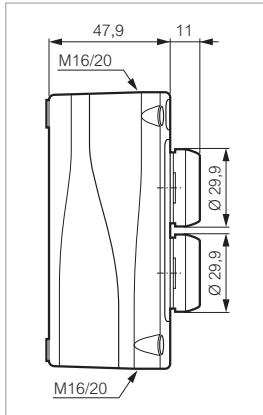
## ▶ CONTROL STATIONS WITH 2 BUTTONS

### SPRING RETURN - FLUSH

Cat. No.



LBX20120



● Green  
 ● Red

NO  
 NC



#### Marking



**LBX20120**

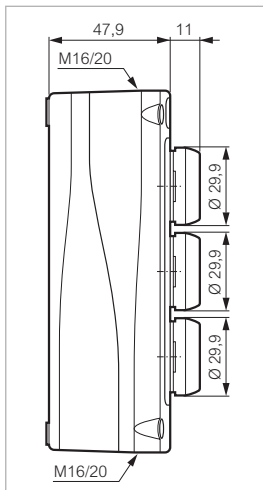
## ▶ CONTROL STATIONS WITH 3 BUTTONS

### SPRING RETURN - FLUSH

Cat. No.



LBX30430



● Green  
 ● Red  
 ● Green

NO  
 NC  
 NO



**LBX30430**

Control stations with 4 or 5 buttons (form p. 94)

# Control stations ø 22

Empty enclosures to be equipped with:  
 - illuminated or non illuminated heads p. 23-49  
 - specific blocks for control stations (base mounted) p. 66  
 - frames and legend plates p. 70  
 Other control stations to be equipped (form p. 94)



Characteristics (p. 98)

## ► ENCLOSURES

### 1 HOLE

Cat. No.

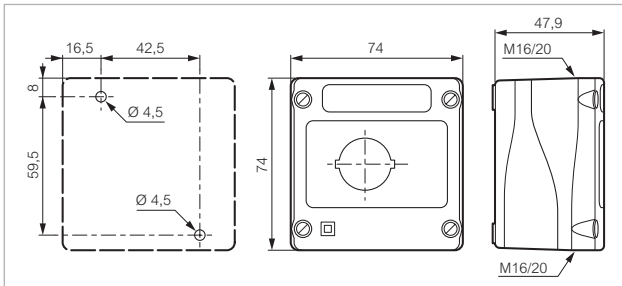


LBX0100J

**Black base**

- Grey cover
- Yellow cover
- Black cover
- Red cover
- Yellow cover with symbol IEC 60417 - 5438 / ISO 13850

**LBX0100**  
**LBX0100J**  
 LBX0100N  
 LBX0100RN  
 LBX130167



### 2 HOLES

Cat. No.

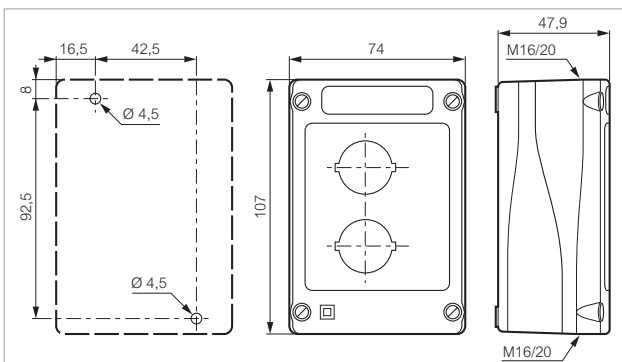


LBX0200

**Black base**

- Grey cover
- Yellow cover

**LBX0200**  
**LBX0200J**



Catalogue No. in bold: normally in stock at distribution outlets

# Control stations $\varnothing$ 22

Empty enclosures to be equipped with:  
 - illuminated or non illuminated heads p. 23-49  
 - specific blocks for control stations (base mounted) p. 66  
 - frames and legend plates p. 70  
 Other enclosures (form p. 94)

 Characteristics (p. 98)

## ► ENCLOSURES (CONTINUED)

**3 HOLES**

Cat. No.

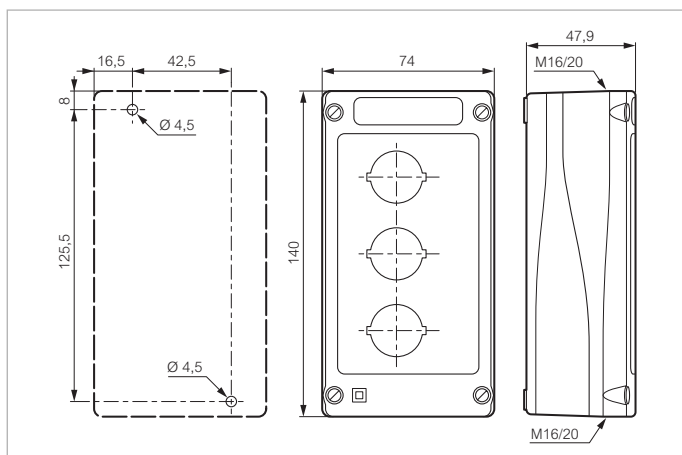


**Black base**

● Grey cover

**LBX0300**

LBX0300



# Control stations $\varnothing$ 22

Empty enclosures to be equipped with:  
 - illuminated or non illuminated heads p. 23-49  
 - specific blocks for control stations (base mounted) p. 66  
 - frames and legend plates p. 70  
 Other enclosures (form p. 94)

 Characteristics (p. 98)

## ► ENCLOSURES (CONTINUED)

### 4 HOLES

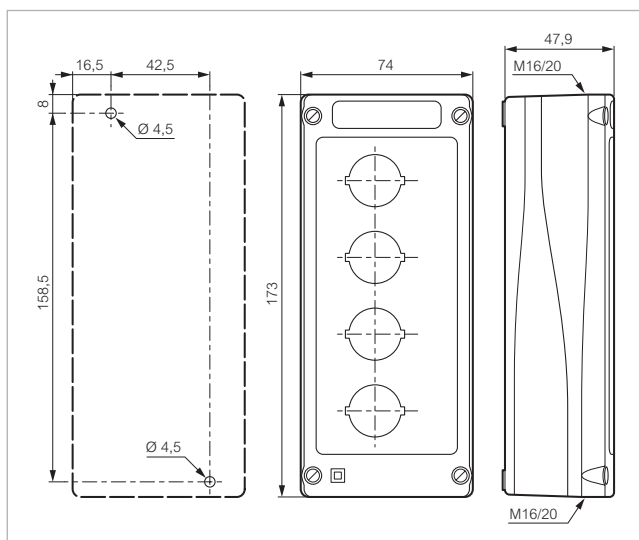
Cat. No.



**Black base**  
 ● Grey cover

**LBX0400**

LBX0400



# Control stations $\varnothing$ 22

Empty enclosures to be equipped with:  
 - illuminated or non illuminated heads p. 23-49  
 - specific blocks for control stations (base mounted) p. 66  
 - frames and legend plates p. 70  
 Other enclosures (form p. 94)

 Characteristics (p. 98)

## ► ENCLOSURES (CONTINUED)

5 HOLES

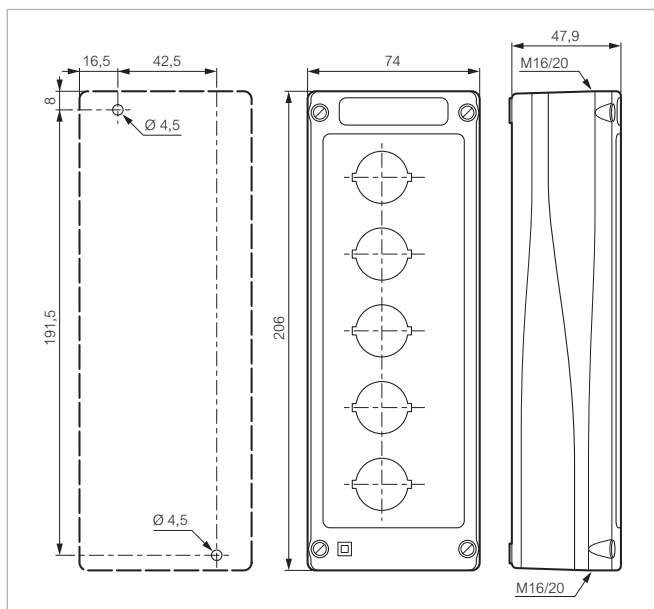
Cat. No.



**Black base**  
 ● Grey cover

**LBX0500**

LBX0500





# Request form for specific control station ø 22

**EQUIPPED CONTROL STATION (fill in one form for each type of product)**

Mounting:  horizontal  vertical

Unit type :  1 hole  2 holes  3 holes  4 holes  5 holes  
 yellow cover (only 1 hole)

Choice of head: (write the corresponding number in the table)

- |   |    |    |  |                                     |
|---|----|----|--|-------------------------------------|
| 1 | 8  | 13 | 1 Spring return flush                              | 8 Mushroom head push-turn stay-put  |
| 2 |    |    | 2 Push-push stay-put flush                         | 9 Mushroom head with key            |
| 3 | 9  | 14 | 3 Spring return projecting                         | 10 Selector switch with handle      |
| 4 |    | 15 | 4 Push-push stay-put projecting                    | 11 Selector switch with long handle |
| 5 | 10 |    | 5 Mushroom head spring return                      | 12 Knob selector switch             |
| 6 | 11 |    | 6 Mushroom head push-pull stay-put                 | 13 Key selector switch              |
| 7 | 12 | 16 | 7 Mushroom head ø 54 push-pull with flag indicator | 14 Double touch                     |
|   |    |    |  | 15 Triple touch                     |
|   |    |    |  | 16 Pilot light                      |

Please fill in the table below

Head no.	Heads										Blocks							
	Illuminated	COLOUR					BEZEL				NO	NC	illuminated with LED	LED VOLTAGE				
		Green	Black	Red	White	Blue	Yellow	Black plastic	Matt chromed	Extended				IP 67 shroud	Ø 54	Ø 40	Ø 32	ISO 13850
<input type="checkbox"/>																		
<input type="checkbox"/>																		
<input type="checkbox"/>																		
<input type="checkbox"/>																		
<input type="checkbox"/>																		

Earth terminal  Contact fixed behind the cover

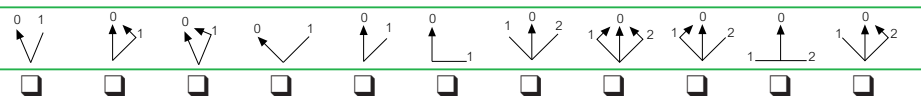
**Marking:**

Function | | | | | | | | | | | | | | | | Max. 14 characters on 1 line

	<input type="checkbox"/> On head	<input type="checkbox"/> On control station <sup>(1)</sup>	<input type="checkbox"/> On legend plate <sup>(2)</sup>	Colour			
				BLACK	RED	ALU	WHITE
<input type="checkbox"/>	_ _ _ _ _ _ _						
<input type="checkbox"/>	_ _ _ _ _ _ _						
<input type="checkbox"/>	_ _ _ _ _ _ _						
<input type="checkbox"/>	_ _ _ _ _ _ _						
<input type="checkbox"/>	_ _ _ _ _ _ _						

(1) 3 characters on 3 lines for vertical marking and max. 13 characters on 2 lines for horizontal marking  
 (2) max. 2 lines of 6 characters

**SELECTOR SWITCHES' SWITCHING ANGLE**



Key free in position :  0  1  2  other (attach diagram)

Specify the concerned buttons: .....

**YOUR DETAILS**

Company: .....

.....

Name and surname: .....

.....

Address: .....

.....

E-mail : .....

Tel.: .....

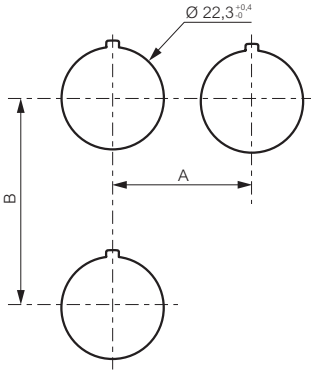
Fax: .....

**COMMENTS**

.....

# Panel cut-out

## DRILLING

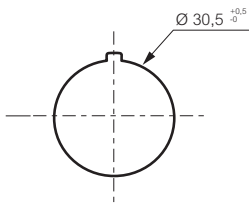


For heads equipped with electrical blocks with screw or plug-in terminals

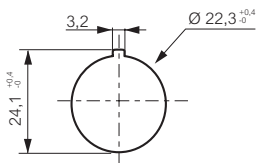
### Minimum interval (mm)

	= 30	With or without legend (usual case)
	= 33	IP 67 (silicon shroud)
	= 40	With large legend plate
<b>A</b>	> 40	For mushroom head $\varnothing$ 40
	> 45	For selector switch with long handle
	= 38	For super-flush button
	= 50	With 5 position clip
<b>B</b>	= 45	With or without legend plate (usual case)
	= 54	With double touch
	= 77	With double touch + legend plate
	= 50	Joystick

## DRILLING FOR SUPER-FLUSH BUTTON

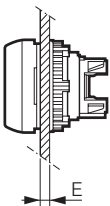


## DRILLING WHEN USING THE ANTI-ROTATION RING (OPTIONAL)



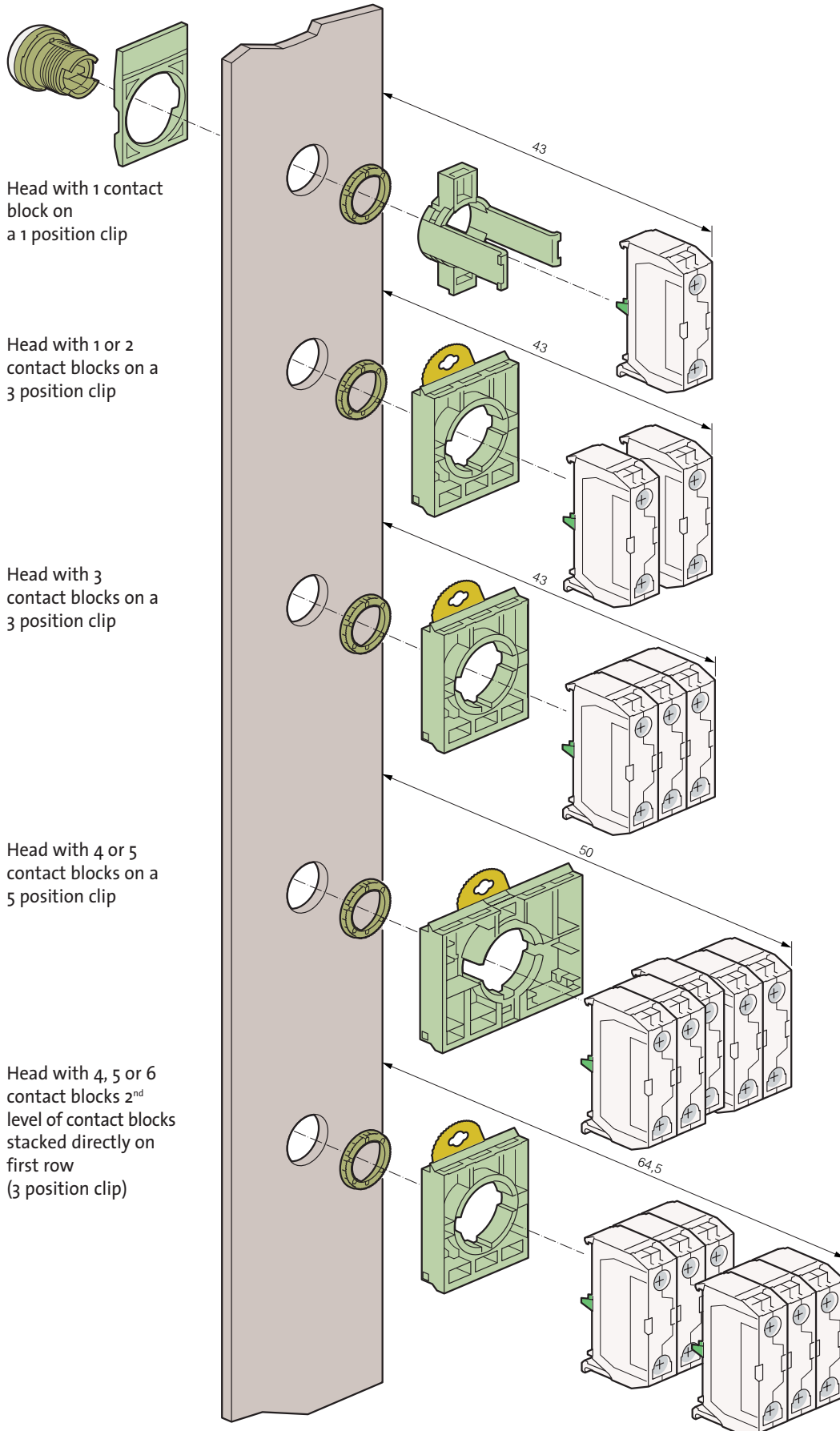
## THICKNESS OF PANEL (E)

E = 1 to 6 mm



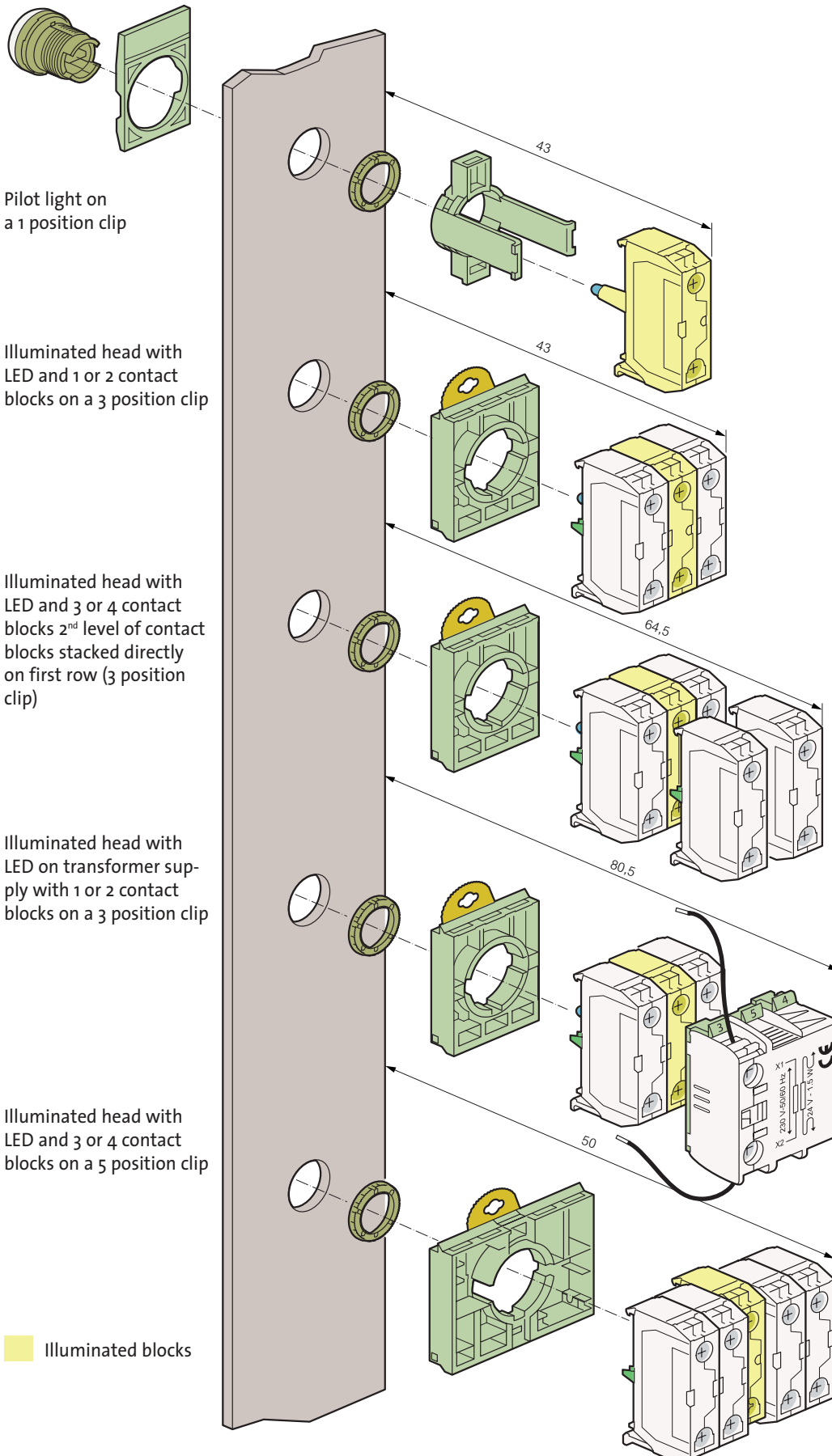
# Mounting blocks $\varnothing$ 22

NON ILLUMINATED



# Mounting blocks $\varnothing 22$

## ILLUMINATED



# Technical characteristics

## ▶ GENERAL

Characteristics	Data	Standards
▶ Storage temperature	- 40 °C to + 70 °C	
▶ Operating temperature	- 25 °C to + 70 °C	
▶ Climatic resistance	Constant humid heat Cyclic damp heat Resistance to sea air	IEC 60068-2-3 IEC 60068-2-30 IEC 60068-2-52
▶ Degree of protection	IP 65 for adjustable mechanical push button IP 65 for USB interface IP 66 for standard heads IP 67 for shrouded heads IP 66 for equipped control stations IP 69 and IP 69K for push buttons IP 69 and IP 69K for selector switches IP 69 and IP 69K for pilot devices IP 69 and IP 69K for emergency stops IP 69 and IP 69K for audible warning buzzers IP 20 at the rear of the panel for contact blocks and one piece pilot lights Type 1, 2, 3, 3R, 3S, 4, 4X, 12, and 13 for heads and control stations	IEC 60529 IEC 60529 IEC 60529 IEC 60529 IEC 60529 IEC 60529 - ISO 20653 IEC 60529 - ISO 20653 IEC 60529 - ISO 20653 IEC 60529 - ISO 20653 IEC 60529 - ISO 20653 NEMA standard
▶ Protection against mechanical impacts	IK 05 illuminated and non illuminated heads IK 07 empty control station	IEC 62262
▶ Electrical insulation	Class II - heads and control station	IEC 60947-5-1
▶ Terminal marking		IEC 60947-1
▶ Tightening torques	Locking ring: recommended 3 N.m or tightened with the fixing tool to hand tight after pressure point plus another half turn Terminals: max. 1.2 N.m	
▶ Approvals	UL United states and Canada BV Bureau Véritas Certification OC/CB	UL 508, CSA 22.2 Marine rules IEC 60947-5-1 IEC 60947-5-5 IEC 60947-5-4
▶ Vibrations	withstand vibration Fc test: 2 to 25 Hz, 1.6 mm; 25-100 Hz, 4 g	IEC 60068-2-6

# Technical characteristics

## ▶ CONTACT BLOCKS

Screw and plug-in connection characteristics	Data	Standards	
▶ Rated insulation voltage	690 V AC 600 V AC	IEC 60947-1 UL 508	
▶ NC contacts	Positive opening	IEC 60947-5-1	
▶ Rated impulse voltage Uimp Pollution degree	6kV 3		
▶ Conventional thermal current in free air conditions	AC15: 10 A DC13: 2,5 A	IEC 60947-5-1	
▶ Electrical ratings	<p><b>Alternating current</b> AC15 - A 600 Ue = 120 V, Ie = 6 A Ue = 240 V, Ie = 3 A Ue = 380 V, Ie = 1,9 A Ue = 480 V, Ie = 1,5 A Ue = 500 V, Ie = 1,4 A Ue = 600 V, Ie = 1,2 A</p> <p><b>Minimum operating current</b> - standard blocks Ue = 24 V DC and Ie = 5 mA Failure rate &lt; 10<sup>-8</sup></p>	<p><b>Direct current</b> DC13 - Q 600 Ue = 125 V, Ie = 0,55 A Ue = 250 V, Ie = 0,27 A Ue = 400 V, Ie = 0,15 A Ue = 500 V, Ie = 0,13 A Ue = 600 V, Ie = 0,1 A</p> <p>- golden contacts Ue = 5 V DC and Ie = 1 mA Failure rate &lt; 10<sup>-8</sup></p>	IEC 60947-5-1
▶ Electrical operating life	<p><b>1 million cycles for:</b> - AC15 - B 300 Ue = 120 V, Ie = 3 A Ue = 240 V, Ie = 1,5 A</p> <p>- DC13 - R 300 Ue = 125 V, Ie = 0,22 A Ue = 250 V, Ie = 0,1 A</p>		
▶ Applicable wire sizes	Rigid or flexible wire without ferrule: 0,5 mm <sup>2</sup> to 2 x 2,5 mm <sup>2</sup> Rigid or flexible wire with ferrule: 0,5 mm <sup>2</sup> to 2 x 1,5 mm <sup>2</sup>		

Faston connection	Data	Standards	
▶ Rated insulation voltage	320 V AC 300 V AC	IEC 60947-1 UL 508	
▶ NC contacts	Positive opening	IEC 60947-5-1	
▶ Rated impulse withstanding voltage Uimp Pollution degree	6 kV 3		
▶ Conventional thermal current in free air conditions	AC 15: 10 A DC 13: 2,5 A	IEC 60947-5-1	
▶ Electrical ratings	<p><b>Alternating current</b> AC15 - A 300 Ue = 120 V, Ie = 6 A Ue = 240 V, Ie = 3 A</p> <p><b>Minimum current of use</b> Ue = 24 V DC and Ie = 5 mA Failure rate &lt; 10<sup>-8</sup></p>	<p><b>Direct current</b> DC13 - Q 300 Ue = 125 V, Ie = 0,55 A Ue = 250 V, Ie = 0,27 A</p> <p>- DC13 - R 300 Ue = 125 V, Ie = 0,22 A Ue = 250 V, Ie = 0,1 A</p>	IEC 60947-5-1
▶ Electrical operating life	<p><b>1 million cycles for:</b> - AC15 - B 300 Ue = 120 V, Ie = 3 A Ue = 240 V, Ie = 1,5 A</p> <p>- DC13 - R 300 Ue = 125 V, Ie = 0,22 A Ue = 250 V, Ie = 0,1 A</p>		
▶ Faston size	6,35 mm or 2 x 2,8 mm		

# Technical characteristics

## ▶ CONTACT BLOCKS

Pin-style connection (for PCB)	Data		Standards
▶ Rated insulation voltage	250 V AC 250 V AC		IEC 60947-1 UL 508
▶ NC contacts	Positive opening		IEC 60947-5-1
▶ Rated impulse withstanding voltage Uimp Pollution degree	4 kV 3		
▶ Conventional thermal current in free air conditions	AC 15: 5 A DC 13: 1 A		IEC 60947-5-1
▶ Electrical ratings	<b>Alternating current</b> AC 15 - B 300 Ue = 120 V, Ie = 3 A Ue = 240 V, Ie = 1,5 A	<b>Direct current</b> DC13 - R 300 Ue = 125 V, Ie = 0,22 A Ue = 250 V, Ie = 0,1 A	IEC 60947-5-1 IEC 60947-5-4
	<b>Minimum current of use</b> - standard blocks Ue = 24 V DC and Ie = 5 mA Failure rate < 10 <sup>-8</sup>	- golden contacts Ue = 5 V DC and Ie = 1 mA Failure rate < 10 <sup>-8</sup>	
▶ Electrical operating life	<b>1 million cycles for:</b> - AC15 - B 300 Ue = 120 V, Ie = 3 A Ue = 240 V, Ie = 1,5 A	- DC13 - R 300 Ue = 125 V, Ie = 0,22 A Ue = 250 V, Ie = 0,1 A	
▶ Pin diameter	ø 1 mm		

# Technical characteristics

## ▶ LED BLOCKS FOR ILLUMINATED HEADS AND ONE PIECE LED PILOT LIGHTS

Characteristics	Data	Standards
▶ Rated insulation voltage	300 V	IEC 60947-5-1
▶ Rated impulse voltage Uimp Pollution degree	4 kV (with filter block see p. 68) 3	IEC 60947-1
▶ Operating voltage	12 to 24 V AC/DC 48 V AC/DC (for LED block) 110 V DC 130 V AC 230 V AC	
▶ Frequency	50 or 60 Hz	
▶ Lifetime at rated supply voltage	Red and yellow: 100 000 hours at 25 °C Other colours: 50 000 hours at 25 °C	
▶ Consumption of LED blocks	Voltage: - 24 V: 25 mA ± 20% - 48 V: 15 mA ± 5% - 110 V: 20 mA ± 10% - 130 V: 20 mA ± 10% - 230 V: 16 mA ± 30%	

## ▶ ONE PIECE PILOT LIGHT

Characteristics	Data	Standards
▶ Rated insulation voltage	300 V	IEC 60947-5-1
▶ Rated impulse withstand voltage Uimp	4 kV	IEC 60947-1
▶ Operating voltage	24 V AC/DC (± 10%) 130 V AC/DC (± 10%) 230 V AC/DC (± 10%)	
▶ Frequency	50 or 60 Hz	
▶ Lifetime at rated supply voltage	Red: 100 000 hours at 25° C Other colours: 50 000 hours at 25° C	
▶ Consumption	24 V: 4,6 mA 130 V: 5,2 mA 230 V: 4,6 mA	



# Technical characteristics

## ▶ USB INTERFACE 3.0

Characteristics	Data	Standards
▶ Rated insulation voltage	5 V AC/DC	IEC 60947-5-1
▶ Rated current	1,8 A	IEC 60947-5-1
▶ Insulation resistance	≥ 100 MΩ	
▶ Contact resistance	≤ 30 MΩ	
▶ USB class	3.0 (backward compatible with USB class 2.0)	
▶ Transmission characteristics for	5 Gbps (625 MB/sec)	
▶ Recommended fixing tool	Tightening flat wrench size 26 mm	

## ▶ AUDIBLE WARNING BUZZERS

Characteristics	Data	Standards
▶ Supply voltage	18 to 30 V AC/DC 85 to 140 V AC/DC 185 to 265 V AC/DC	IEC 60947-5-1
▶ Rated impulse voltage Uimp	4 KV	IEC 60947-5-1
▶ Sound Power	80 dB @ 10 cm	
▶ Frequency	50 or 60 Hz	
▶ Maximum power consumption	≤ 20 mA	
▶ Service life	30000 hours (continuously powered)	
▶ Recommended fixing tool	Tightening flat wrench size 26 mm	

# Technical characteristics

## ▶ HEADS

Characteristics	Data	Standards
▶ Mechanical endurance (in million cycles)	Spring return: 5 Push-push: 0,5 Selector switches: 0,3 Mushroom head maintained function ISO 13850: 0,10 Mushroom head maintained function: 0,15	
▶ Activation force in N	Spring return + NO: 6,5 Spring return + NC: 4,5 Additional NO contact: 4,5 Additional NC contact: 3,0 Push-pull mushroom head + NO + NC: 27 Push-turn mushroom head + NO + NC: 22 Push-pull mushroom head ISO 13850 + NO + NC: 37 Push-turn mushroom head ISO 13850 + NO + NC: 60	
▶ Activation force in Nm	Selector switch + NO: 0,04 Additional NO contact: 0.03	

## ▶ EMERGENCY STOP ACTUATORS - ISO 13850:

According to IEC 60947-5-5, the emergency stop function can be provided by an ISO 13850 mushroom head combined with a «positive opening» NC contact block.

The mechanism of our ISO 13850 mushroom heads is so designed that a «push» action of sufficient force to open the contact systematically triggers an irreversible locking of this opening. This generates an «emergency stop» signal which can be cancelled only by deliberate manual resetting of the mushroom head (pull and turn or unlocking by key).

This function allows to generate an «emergency stop» signal for any equipment subject to directive 98/37CE (machinery safety) completed by the IEC 60204-1 standard.

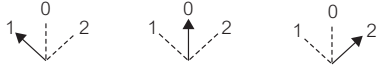
The ISO 13850 mushroom heads also comply with the safety requirements detailed in standard ISO 13850.

## Diagrams

### MECHANICAL OPERATION

For 3 position selector switches

**Handle**  
(View from front of panel)



**Contacts block actuation**  
(View from front of panel)



Back side view

Non operated block



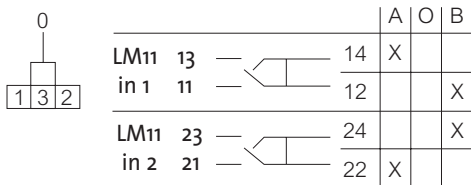
Operated block



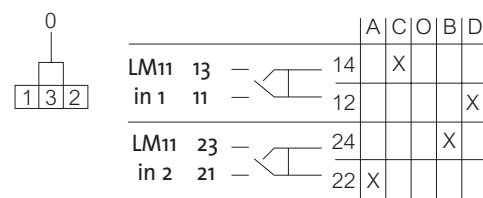
### MECHANICAL OPERATION

For Joysticks

2 positions

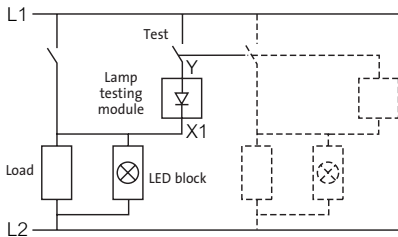


4 positions

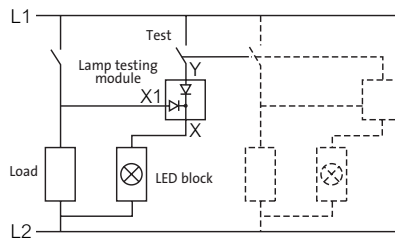


### PUSH-TO-TEST LED PILOT LIGHT DIAGRAMS

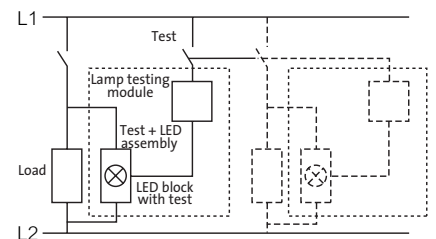
Lamp-testing module with 1 diode (33ET) for direct supply 24 V and 48V



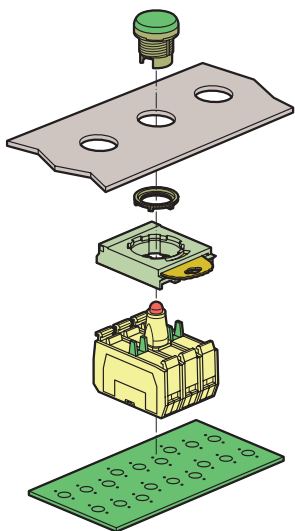
Lamp-testing module with 2 diodes (33ETT) for direct supply 24 V and 48 V



Lamp-testing assembly for direct supply 130 V and 240 V (Consult us - see page 79)

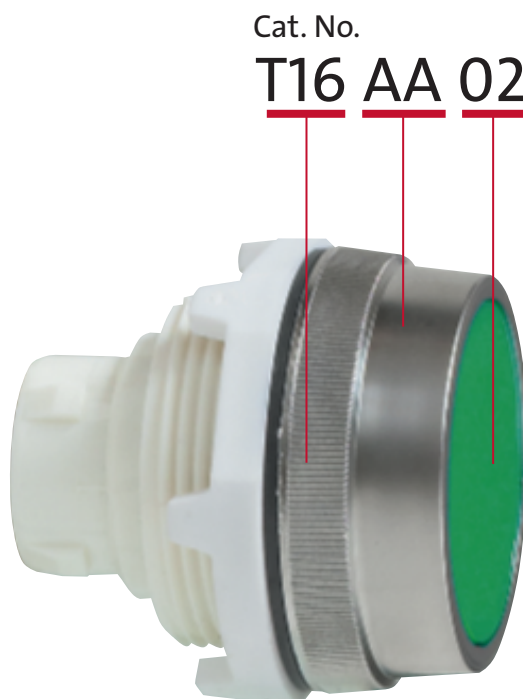


### PRINTED CIRCUIT BOARD MOUNTING



Ø 30 heads:

# Baco simplifies your choice



--- **AA** --- definition of function

**T16** AA --- choice of bezel

T16 AA **02** colour of head

## ▶ HEAD COLOUR CODES

01 ● red	04 ● yellow
02 ● green	05 ○ white
03 ● black	06 ● blue

## ▶ BEZEL CODES

T11	chrome brilliant plastic
T12	black plastic
T13	grey plastic
T14	chrome brass
T16	matt chrome plastic

## ▶ AVANTAGES

- Ø 30 heads use the same clips and blocks as Ø 22 heads
- Fully compatible with the new Ø 22 range
- Wide choice of bezels

# Separate units $\varnothing$ 30: Heads

IP 65  
 To be combined with a clip and electrical blocks (p. 52)  
 With locking ring  
 Plastic chrome bezel- Other bezel on request (form p. 123)  
 $\varnothing$  30 blocks use the same blocks and clips (except for the 5 position clip) as  $\varnothing$  22 mm heads (see p. 52-69)  
 Conform to IEC 60947-5-1



Characteristics (p. 125)

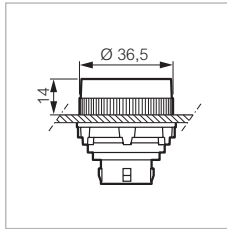
## ► PUSH-BUTTONS - NON ILLUMINATED

### SPRING RETURN - FLUSH

Cat. No.



T16AA01



#### Without engraving

- Red
- Green
- Black
- Yellow
- White
- Blue

- T16AA01
- T16AA02
- T16AA03
- T16AA04
- T16AA05
- T16AA06

#### With engraving

- ⊙ Red
- ⓪ Green
- Ⓚ Black

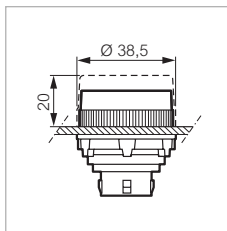
- T16AA81
- T16AA82
- T16AA83

### SPRING RETURN - FLUSH

Reinforced degree of protection: IP 67



T12AG03



Supplied with transparent shroud  
 Marking possible  
 (engravings and symbols p. 76)

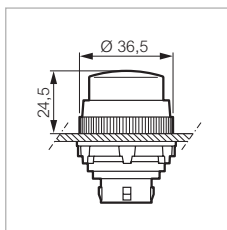
- Red
- Green
- Black
- Yellow
- White
- Blue

- T12AG01
- T12AG02
- T12AG03
- T12AG04
- T12AG05
- T12AG06

### SPRING RETURN - PROJECTING



T16AB01



- Red
- Green
- Black
- Yellow
- White
- Blue

- T16AB01
- T16AB02
- T16AB03
- T16AB04
- T16AB05
- T16AB06

# Separate units $\varnothing$ 30: Heads

IP 65  
 To be combined with a clip and electrical blocks (p. 52)  
 With locking ring  
 Plastic chrome bezel- Other bezel on request (form p. 123)  
 $\varnothing$  30 blocks use the same blocks and clips (except for the 5 position clip) as  $\varnothing$  22 mm heads (see p. 52-69)  
 Conform to IEC 60947-5-1



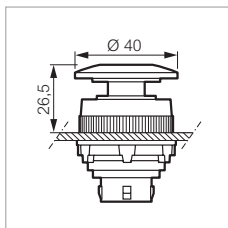
Characteristics (p. 125)

## ► PUSH-BUTTONS - NON ILLUMINATED (CONTINUED)

### SPRING RETURN - MUSHROOM HEAD $\varnothing$ 40

Push

Cat. No.



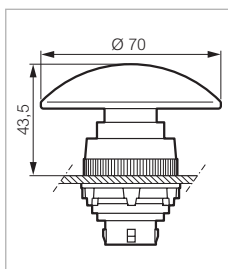
- Red
- Green
- Black
- Yellow

- T16AD01
- T16AD02
- T16AD03
- T16AD04

T16AD01

### SPRING RETURN - MUSHROOM HEAD $\varnothing$ 70

Push



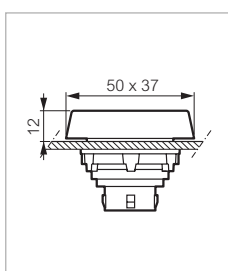
- Red - plastic
- Black - plastic

- T16AE01
- T16AE03

T16AE01

### SPRING RETURN - FLUSH-FLUSH

Double touch



Plastic black frame

- Green
- Red
- Black
- Red

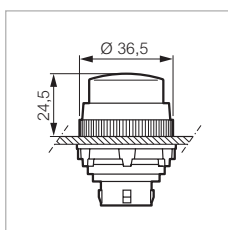
- T52QA02

- T52QA03

T52QA02

### STAY-PUT - PROJECTING

Push-push



- Red
- Green
- Black
- Yellow
- White
- Blue

- T16CB01
- T16CB02
- T16CB03
- T16CB04
- T16CB05
- T16CB06

T16CB02

# Separate units $\varnothing$ 30: Heads

IP 65  
 To be combined with a clip and electrical blocks (p. 52)  
 With locking ring  
 Plastic chrome bezel- Other bezel on request (form p. 123)  
 $\varnothing$  30 blocks use the same blocks and clips (except for the 5 position clip) as  $\varnothing$  22 mm heads (see p. 52-69)  
 Conform to IEC 60947-5-1



Characteristics (p. 125)

## ▶ SELECTOR SWITCHES - NON ILLUMINATED

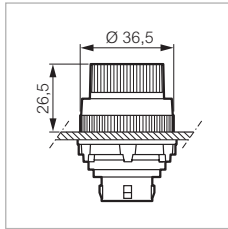
### WITH HANDLE

#### 2 positions

Cat. No.



T16KA03



#### Stay-put positions - 45°

- Red
- Black
- Grey



T16KA01  
 T16KA03  
 T16KA08

#### Stay-put positions - 45°

- Red
- Black
- Grey



T16KC01  
 T16KC03  
 T16KC08

#### Spring return- 45°

- Red
- Black
- Grey



T16KD01  
 T16KD03  
 T16KD08

#### Stay-put positions - 90°

- Red
- Black
- Grey



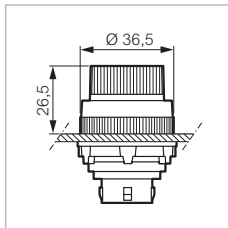
T16KF01  
 T16KF03  
 T16KF08

### WITH HANDLE

#### 3 positions

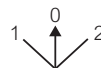


T16MA01



#### Stay-put positions - 45°

- Red
- Black
- Grey



T16MA01  
 T16MA03  
 T16MA08

#### Spring return from right to 0 - 45°

- Red
- Black
- Grey



T16MC01  
 T16MC03  
 T16MC08

#### Spring return to 0 - 45°

- Red
- Black
- Grey



T16MD01  
 T16MD03  
 T16MD08

#### Stay-put positions - 90°

- Red
- Black
- Grey



T16MK01  
 T16MK03  
 T16MK08

# Separate units $\varnothing$ 30: Heads

IP 65  
 To be combined with a clip and electrical blocks (p. 52)  
 With locking ring  
 Plastic chrome bezel- Other bezel on request (form p. 123)  
 $\varnothing$  30 blocks use the same blocks and clips (except for the 5 position clip) as  $\varnothing$  22 mm heads (see p. 52-69)  
 Conform to IEC 60947-5-1



Characteristics (p. 125)

## ▶ SELECTOR SWITCHES - NON ILLUMINATED (CONTINUED)

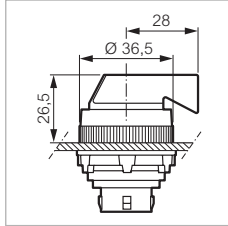
### WITH LONG HANDLE

2 positions

Cat. No.



T16KP03



#### Stay-put positions - 45°

- Red
- Black
- Grey



T16KP01  
 T16KP03  
 T16KP08

#### Stay-put positions - 45°

- Red
- Black
- Grey



T16KR01  
 T16KR03  
 T16KR08

#### Spring return - 45°

- Red
- Black
- Grey



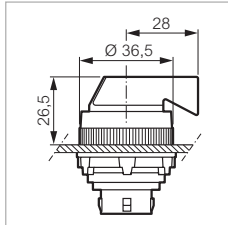
T16KS01  
 T16KS03  
 T16KS08

### WITH LONG HANDLE

3 positions

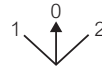


T16MR01



#### Stay-put positions - 45°

- Red
- Black
- Grey



T16MR01  
 T16MR03  
 T16MR08

#### Spring return from right to 0 - 45°

- Red
- Black
- Grey



T16MT01  
 T16MT03  
 T16MT08

#### Spring return to 0 - 45°

- Red
- Black
- Grey



T16MU01  
 T16MU03  
 T16MU08



# Separate units $\varnothing$ 30: Heads

IP 65  
 To be combined with a clip and electrical blocks (p. 52)  
 With locking ring  
 Plastic chrome bezel- Other bezel on request (form p. 123)  
 $\varnothing$  30 blocks use the same blocks and clips (except for the 5 position clip) as  $\varnothing$  22 mm heads (see p. 52-69)  
 Conform to IEC 60947-5-1



Characteristics (p. 125)

## ▶ SELECTOR SWITCHES - NON ILLUMINATED (CONTINUED)

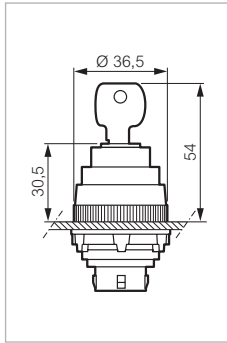
### WITH KEY

### 2 positions

Cat. No.



T16LA00



Supplied with 2 keys profile n° 455

Key free in position:

Stay-put positions - 45°

● Black



0

T16LA00

Stay-put positions - 45°

● Black



0

T16LC00

Spring return- 45°

● Black



0

T16LD00

Stay-put positions - 90°

● Black



0

T16LF00

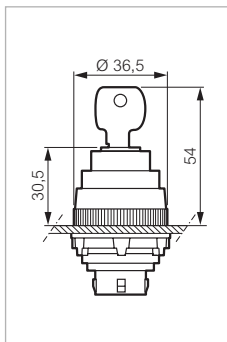
Key profile n° 1424 A and others (form p. 123)

### WITH KEY

### 3 positions



T16NA00



Supplied with 2 keys profile n° 455

Key free in position:

Stay-put positions - 45°

● Black



0

T16NA00

Spring return from right to 0 - 45°

● Black



0

T16NC00

Spring return to 0 - 45°

● Black



0

T16ND00

Stay-put positions - 90°

● Black



1 - 0 - 2

T16NK00

Key profile n° 1424 A and others (form p. 123)

# Separate units Ø 30: Heads

IP 65  
 To be combined with a clip and electrical blocks (p. 52)  
 With locking ring  
 Plastic chrome bezel- Other bezel on request (form p. 123)  
 Ø 30 blocks use the same blocks and clips (except for the 5 position clip) as Ø 22 mm heads (see p. 52-69)  
 Conform to IEC 60947-5-1

 Characteristics (p.125)

## ▶ SELECTOR SWITCHES - NON ILLUMINATED (CONTINUED)

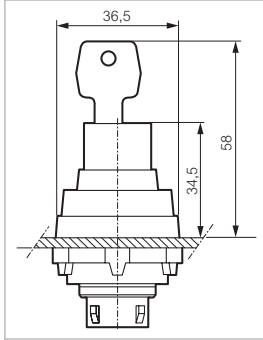
WITH KEY

Push

Cat. No.



T16GM00



Supplied with 2 keys profile n° 455

Lockable position	Key free in:	Cat. No.
<b>Stay-put</b>		
In bottom position	Top and bottom position	T16GM00
<b>Manual locking</b>		
In top position	Top and bottom position	T16GF00
In top position	Bottom position	T16GJ00
In bottom position	Top and bottom position	T16GG00
In bottom position	Bottom position	T16GK00
In top and bottom position	Top and bottom position	T16GH00
In top and bottom position	Bottom position	T16GL00

# Separate units $\varnothing$ 30: Heads

IP 65  
 To be combined with a clip and electrical blocks (p. 52)  
 With locking ring  
 Plastic chrome bezel - Other bezel on request (form p. 123)  
 $\varnothing$  30 blocks use the same blocks and clips (except for the 5 position clip) as  $\varnothing$  22 mm heads (see p. 52-69)  
 Conform to IEC 60947-5-1



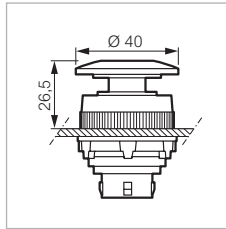
Characteristics (p. 125)

## ► MUSHROOM HEADS - NON ILLUMINATED

### $\varnothing$ 40 - STAY-PUT

Push-pull to reset

Cat. No.



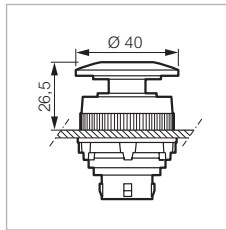
- Red
- Green
- Black
- Yellow

- T16DD01
- T16DD02
- T16DD03
- T16DD04

T16DD01

### $\varnothing$ 40 - STAY-PUT

Push-turn to reset



- Stay-put
- Red
  - Green
  - Black
  - Yellow

- T16ED01
- T16ED02
- T16ED03
- T16ED04

T16ED01

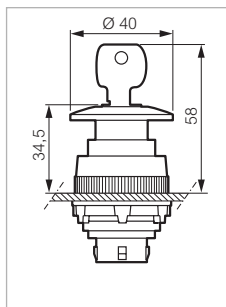
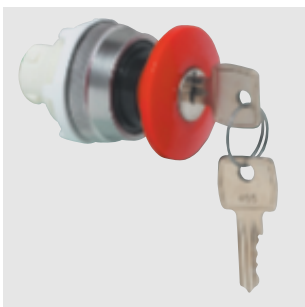
Manual locking

- Red
- Green
- Black
- Yellow

- T16FD01
- T16FD02
- T16FD03
- T16FD04

### $\varnothing$ 40 - STAY-PUT

Key to reset



Supplied with 2 keys profile n° 455

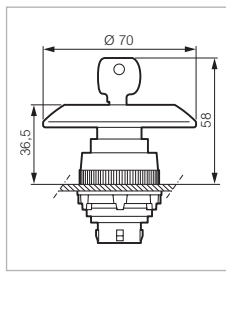
- Red

T16GM01

T16GM01

### $\varnothing$ 70 - STAY-PUT

Key to reset



Supplied with 2 keys profile n° 455

- Red

T16GP01

T16GP01

# Separate units $\varnothing$ 30: Heads

IP 65  
 To be used without electrical block  
 Black plastic bezel  
 Stroke 12 mm  
 Conform to IEC 60947-5-1

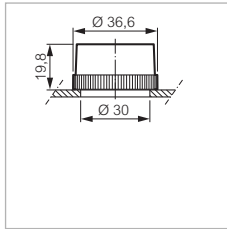


Characteristics (p. 125)

## ► ADJUSTABLE MECHANICAL PUSH/RESET BUTTON - NON ILLUMINATED

### SPRING RETURN - FLUSH

Cat. No.



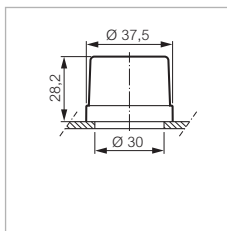
- Red
- Green
- Black
- Yellow
- White
- Blue

- T12HA01
- T12HA02
- T12HA03
- T12HA04
- T12HA05
- T12HA06

T12HA04

### SPRING RETURN - FLUSH

Reinforced degree of protection: IP 67



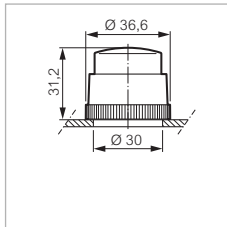
Supplied with transparent shroud

- Red
- Green
- Black
- Yellow
- White
- Blue

- T12HG01
- T12HG02
- T12HG03
- T12HG04
- T12HG05
- T12HG06

T12HG06

### SPRING RETURN - PROJECTING



- Red
- Green
- Black
- Yellow
- White
- Blue

- T12HB01
- T12HB02
- T12HB03
- T12HB04
- T12HB05
- T12HB06

T12HB05

# Separate units $\varnothing$ 30: Heads

IP 65

To be combined with a clip and electrical blocks (p. 52)

With locking ring

Plastic chrome bezel- Black bezel on request (form p. 123)

$\varnothing$  30 blocks use the same blocks and clips (except for the 5 position clip) as  $\varnothing$  22 mm heads (see p. 52-69)

Conform to IEC 60947-5-1



Characteristics (p. 125)

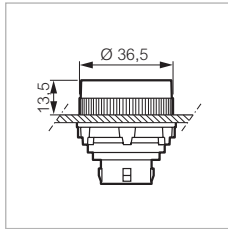
## ► PUSH-BUTTONS - ILLUMINATED

### SPRING RETURN - FLUSH

Cat. No.



T16AH20



- Red
- Green
- Colourless
- Yellow
- Opal

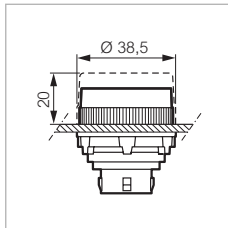
T16AH10  
T16AH20  
T16AH30  
T16AH40  
T16AH50

### SPRING RETURN - FLUSH

Reinforced degree of protection: IP 67



T12AP40



Supplied with transparent shroud

- Red
- Green
- Colourless
- Yellow
- Opal

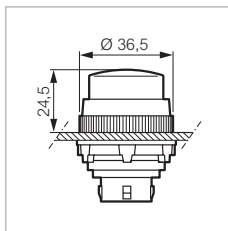
T12AP10  
T12AP20  
T12AP30  
T12AP40  
T12AP50

Enables engraving of button plate (form p. 123)

### SPRING RETURN - PROJECTING



T16AK10



- Red
- Green
- Colourless
- Yellow
- Opal

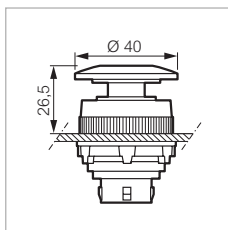
T16AK10  
T16AK20  
T16AK30  
T16AK40  
T16AK50

### SPRING RETURN - MUSHROOM HEAD $\varnothing$ 40

Push



T16AM10



- Red
- Green
- Yellow
- Opal

T16AM10  
T16AM20  
T16AM40  
T16AM50

# Separate units $\varnothing$ 30: Heads

IP 65  
 To be combined with a clip and electrical blocks (p. 52)  
 With locking ring  
 Plastic chrome bezel- Black bezel on request (form p. 123)  
 $\varnothing$  30 blocks use the same blocks and clips (except for the 5 position clip) as  $\varnothing$  22 mm heads (see p. 52-69)  
 Conform to IEC 60947-5-1



Characteristics (p. 125)

## ► PUSH-BUTTONS - ILLUMINATED (CONTINUED)

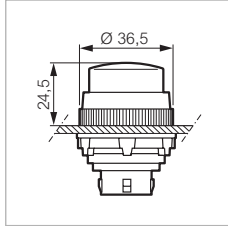
### STAY-PUT - PROJECTING

### Push-push

### Cat. No.



T16CK50



- Red
- Green
- Colourless
- Yellow
- Opal

- T16CK10
- T16CK20
- T16CK30
- T16CK40
- T16CK50

# Separate units $\varnothing$ 30: Heads

IP 65  
 To be combined with a clip and electrical blocks (p. 52)  
 With locking ring  
 Plastic chrome bezel- Other bezel on request (form p. 123)  
 $\varnothing$  30 blocks use the same blocks and clips (except for the 5 position clip) as  $\varnothing$  22 mm heads (see p. 52-69)  
 Conform to IEC 60947-5-1



Characteristics (p. 125)

## ▶ SELECTOR SWITCHES - ILLUMINATED

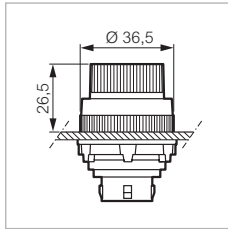
### WITH HANDLE

#### 2 positions

Cat. No.



T16KG10



#### Stay-put positions - 45°

- Red
- Green
- Opal



T16KG10  
 T16KG20  
 T16KG50

#### Stay-put positions - 45°

- Red
- Green
- Opal



T16KJ10  
 T16KJ20  
 T16KJ50

#### Spring return - 45°

- Red
- Green
- Opal



T16KK10  
 T16KK20  
 T16KK50

#### Stay-put positions - 90°

- Red
- Green
- Opal



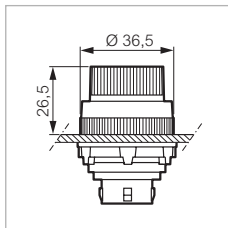
T16KM10  
 T16KM20  
 T16KM50

### WITH HANDLE

#### 3 positions



T16ME20



#### Stay-put positions - 45°

- Red
- Green
- Opal



T16ME10  
 T16ME20  
 T16ME50

#### Spring return from right to 0 - 45°

- Red
- Green
- Opal



T16MG10  
 T16MG20  
 T16MG50

#### Spring return to 0 - 45°

- Red
- Green
- Opal



T16MH10  
 T16MH20  
 T16MH50

#### Stay-put positions - 90°

- Red
- Green
- Opal



T16MJ10  
 T16MJ20  
 T16MJ50

# Separate units $\varnothing$ 30: Heads

IP 65  
 To be combined with a clip and electrical blocks (p. 52)  
 With locking ring  
 For lens engraving (form p. 123)  
 Conform to IEC 60947-5-1



Characteristics (p. 125)

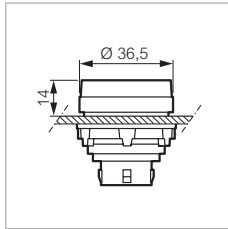
## ▶ PILOT LIGHT

### LENS WITH BEZEL

Cat. No.



T10SB50V



Smooth lens

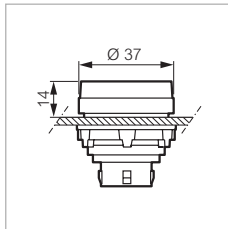
- Red
- Green
- Colourless
- Yellow
- Opal
- Blue

- T10SB10V
- T10SB20V
- T10SB30V
- T10SB40V
- T10SB50V
- T10SB60V

### LENS WITH BEZEL AND TRIM



T15SB20V



Smooth lens

- Red
- Green
- Colourless
- Yellow
- Opal
- Blue

- T15SB10V
- T15SB20V
- T15SB30V
- T15SB40V
- T15SB50V
- T15SB60V



# Accessories ø 30

 Characteristics (p. 125)

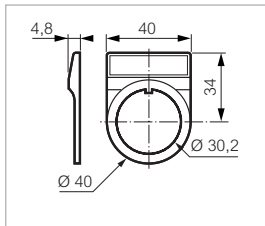
## ▶ COMPLETE FRAME

### Standard model

Cat. No.



UP39



Round shape  
Black frame and legend plate unassembled  
2 lines maximum, 18 characters per line

#### Without engraving

- Red
- Black
- Alu
- Transparent

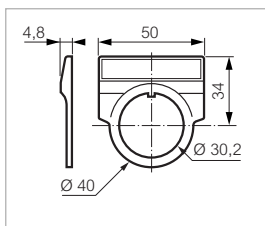
UP31  
UP33  
UP39  
UP37

On demand engraving (p. 123)

### Large model



UG39



Round shape  
Black frame and legend plate unassembled  
2 lines maximum, 24 characters per line

#### Without engraving

- Red
- Black
- Alu
- Transparent

UG31  
UG33  
UG39  
UG37

On demand engraving (p. 123)

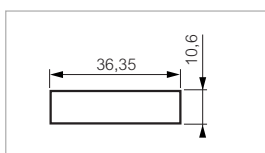
## ▶ LEGEND PLATE

### Standard model

Cat. No.



IB1



2 lines maximum, 18 characters per line  
For frame cat. no.. UP3

#### Without engraving

- Red
- Black
- Alu
- Transparent

IB1  
IB3  
IB9  
IB7

On demand engraving (p. 123)

Cardboard legend for transparent legend plate  
Sheet of 20 pieces, to be cut out

I2B

# Accessories ø 30

 Characteristics (p. 125)

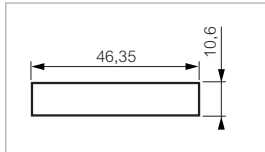
## ▶ LEGEND PLATE (CONTINUED)

### Large model

Cat. No.



IC3



2 lines maximum, 24 characters per line  
For frame cat. no.. UG3

#### Without engraving

- Red
- Black
- Alu
- Transparent

IC1  
IC3  
IC9  
IC7

#### On demand engraving (p. 123)

Cardboard legend for transparent legend plate  
Sheet of 20 pieces, to be cut out

I2C

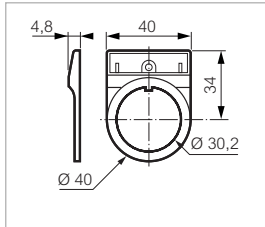
## ▶ FRAMES

### Standard model

Cat. No.



UP3



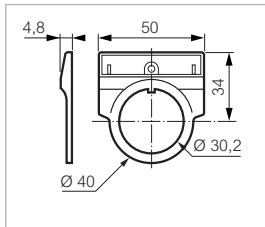
- Black

UP3

### Large model



UG3



- Black

UG3

# Accessories ø 30

 Characteristics (p. 125)

## ▶ BUTTON PLATES

### FOR ILLUMINATED FLUSH BUTTONS

Cat. No.



UE02

2 lines maximum, 10 characters per line  
To be inserted under the button

**Without engraving**

Transparent

UE02

**On demand engraving (p. 123)**

Symbol code to be added at the end of the catalogue number

Transparent (black engraving)

UE02 L L L L

**Other colours (form p. 123)**

### FOR PILOT LIGHTS



UE10

2 lines maximum, 12 characters per line  
To be inserted under the lens

**Without engraving**

Transparent

UE10

**On demand engraving (p. 123)**

Symbol code to be added at the end of the catalogue number

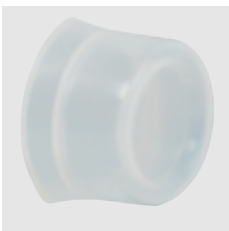
Transparent (black engraving)

UE10 L L L L

## ▶ SHROUDS IP 67

### FOR ADJUSTABLE MECHANICAL BUTTONS

Cat. No.

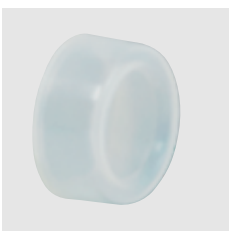


UA0219

Transparent

UA0219

### FOR FLUSH BUTTONS



UA0228

Transparent

UA0228

# Accessories ø 30

 Characteristics (p. 125)

## ▶ BEZELS

### ROUND

Cat. No.



UA0011

Height 13 mm  
Possibility of sticking the bezel on the button

Brilliant chrome plastic	UA0011
Black plastic	UA0012
Grey plastic	UA0013
Matt chrome plastic bezel	UA0016
Brilliant chrome brass	UA0014

**For adjustable mechanical button**



UA0112

Height 20 mm

Brilliant chrome plastic	UA0111
Black plastic	UA0112
Grey plastic	UA0113
Brilliant chrome brass	UA0114

### GUARD

**For flush push-buttons**



UA0202

Height 20 mm

Brilliant chrome brass	UA0202
------------------------	--------

# Accessories ø 30

 Characteristics (p. 125)

## ► MISCELLANEOUS

### FIXING TOOL

Cat. No.



Fixing tool ø 30

WA0210

WA0210

### BLANKING PLUG



● Grey

UA0215

UA0215

### ANTI-ROTATION RING
















Anti-rotation ring

UA0209

UA0209

# Request form for specific control and signalling units ø 30

▶ **HEAD (fill in one form for each type of product)**




- Type:**
-  Spring return flush
  -  Spring return projecting
  -  Mushroom head spring return
  -  Push-push stay-put
  -  Mushroom head push-pull stay-put
  -  Mushroom head push-turn stay-put
  -  Mushroom head With key
  -  Selector switch handle
  -  Selector switch with long handle
  -  Selector switch with key
    - 455 E
    - 1424 A
    - Other .....
  -  Double touch
  -  Mechanical button
    - Flush
    - Projecting
  -  Pilot light

- Options:**
- Illuminated button
  - IP 67 shroud
  - Guard for buttons
- Size (mm):**
- Mushroom head  Ø 40  Ø 70
- Colour :**
- Colourless  Green
  - Black  Red
  - Opal  Blue
  - Yellow
- Bezel:**
- black
  - grey
  - matt chromed
  - brilliant chromed
  - chromed brass

▶ **ENGRAVINGS**

- Use the grid below**
- on head**
    - standard text or symbol
    - other text (2 x 10 characters)
  - on legend plate :**
    - standard (2 x 18 characters)
    - large model (2 x 24 characters)
- Ground colour:**
- white
  - alu
  - black

▶ **BLOCKS AND CLIPS**

- Block:**
- ① NO
  - ② NC
  - ③ NO/NC
  - ④ Transformer
  - ⑤ Filter
  - ⑥ Junction
  - ⑦ Empty
  - ⑧ Lamp-test
  - ⑨ LED
- Voltage:**  24 V  130 V  230 V
- Colour:**  white  yellow  red  green  blue
- Connection:**
- Screw
  - Faston
  - Plug-in
  - For PCB
- Clips :**
- 1 position 
  - 3 positions 
  - 6 positions 
- Options:**
- Head, block and clip assembled

**YOUR DETAILS**

Company: .....

.....

Name and surname: .....

.....

Address: .....

.....

E-mail: .....

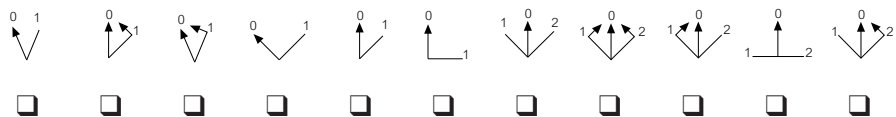
Tel.: .....

Fax: .....

**COMMENTS**

**ENGRAVING**

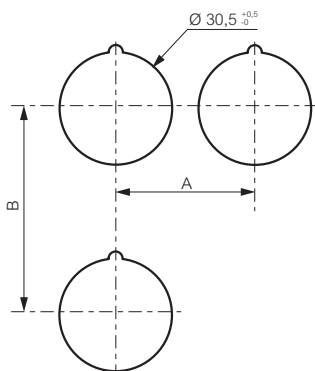
▶ **SELECTOR SWITCHES SWITCHING ANGLE**



Key free in position:  0  1  2

# Panel cut-out $\varnothing 30$

## DRILLING

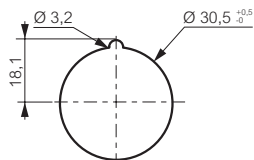


For heads equipped with electrical blocks with screw terminals

### Minimum interval (mm)

A	> 40	For mushroom head $\varnothing 40$
	> 50	For selector switch with Long handle
	> 70	For mushroom head $\varnothing 70$
B	> 50	For double touch
	> 50	For legend plates
	> 70	For mushroom head $\varnothing 70$

## DRILLING WHEN USING THE ANTI-ROTATION RING (OPTIONAL)



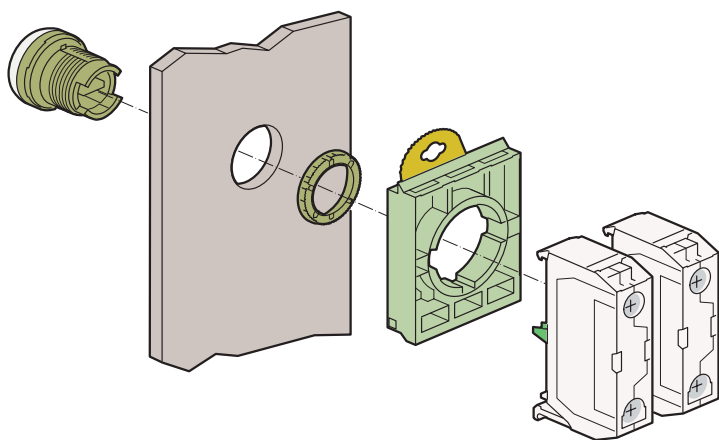
# Technical characteristics $\varnothing$ 30

## ► GENERAL

Characteristics	Data	Standards
► Storage temperature for illuminated or non illuminated button	- 40°C to + 70°C	
► Operating temperature	Non illuminated buttons: - 25°C to + 70°C Illuminated buttons: - 25°C to + 60°C	
► Degree of protection	IP 65 for standard heads IP 67 for shrouded heads	IEC 60529
► Mechanical life	Spring return push button: 3 x 10 <sup>6</sup> operating cycles	IEC 60947-5-1

The blocks used for diameter 30 are the same as for diameter 22.  
Their characteristics are described on p. 95

## ► MOUNTING THE BLOCKS





# Protection, flexibility and safety

Cam switches from 10 to 200 A

## ► STANDARD SOLUTIONS P. 134 - 212

---

The expertise of a specialist like Baco allows us to offer made-to-measure solutions, even the most specific.



**Choice of diagram**  
from 1 to 24 contacts

**Metal shaft**  
can withstand more than  
1 million operations

**Customised  
engravings**

## ► ADVANTAGES

---

- Conform to European and international standards: IEC, UL and CSA
- A metal shaft capable of withstanding more than 1 million operations
- More than 50 000 different diagrams available
- Many specific functions and special markings

## ► MADE-TO-MEASURE SOLUTIONS

How do I order a switch in 5 steps?

Example: A change-over switch without off

- 1 DETERMINE THE RATING according to the electrical specifications p. 215**  
 Voltage, performance, etc (p. 213).  
 EG: for switching of resistive loads 63A  
 ► RATING: PR 63      ► PRICE LIST CODE: I
- 2 SELECT A DIAGRAM AND ITS SWITCHING ANGLE p. 216**  
 EG: for a 2 way switch without off, with 1 pole  
 EG: for a switching angle of 90°  
 ► CAT. NO. 2251      ► PRICE LIST CODE: A02Z  
 ► CAT. NO. A4      ► PRICE LIST CODE: -
- 3 DETERMINE THE MOUNTING METHOD p. 249**  
 front or rear mounting, with screws or on DIN rail.  
 EG: for rear mounting 68 mm interval  
 ► CAT. NO. S      ► PRICE LIST CODE: Y508
- 4 DEFINE THE PRESENTATION p. 263**  
 Plate, frame and handle, padlockable, with clutch drive, in enclosure,  
 with key locking, coupling in parallel or in series, dual-voltage device, etc  
 EG: for a □ 72 frame with a medium handle  
 ► CAT. NO. Q72 MN      ► PRICE LIST CODE: Q72 MN
- 5 SELECT YOUR OPTIONS p. 278**  
 Handles and long handles, legends, legend plate, terminal cover, etc  
 EG: for a 72 "pump 1 pump 2" engraving  
 ► engraving "pump 1 - pump 2"      ► PRICE LIST CODE: Y000

Example of grid to be used for your order

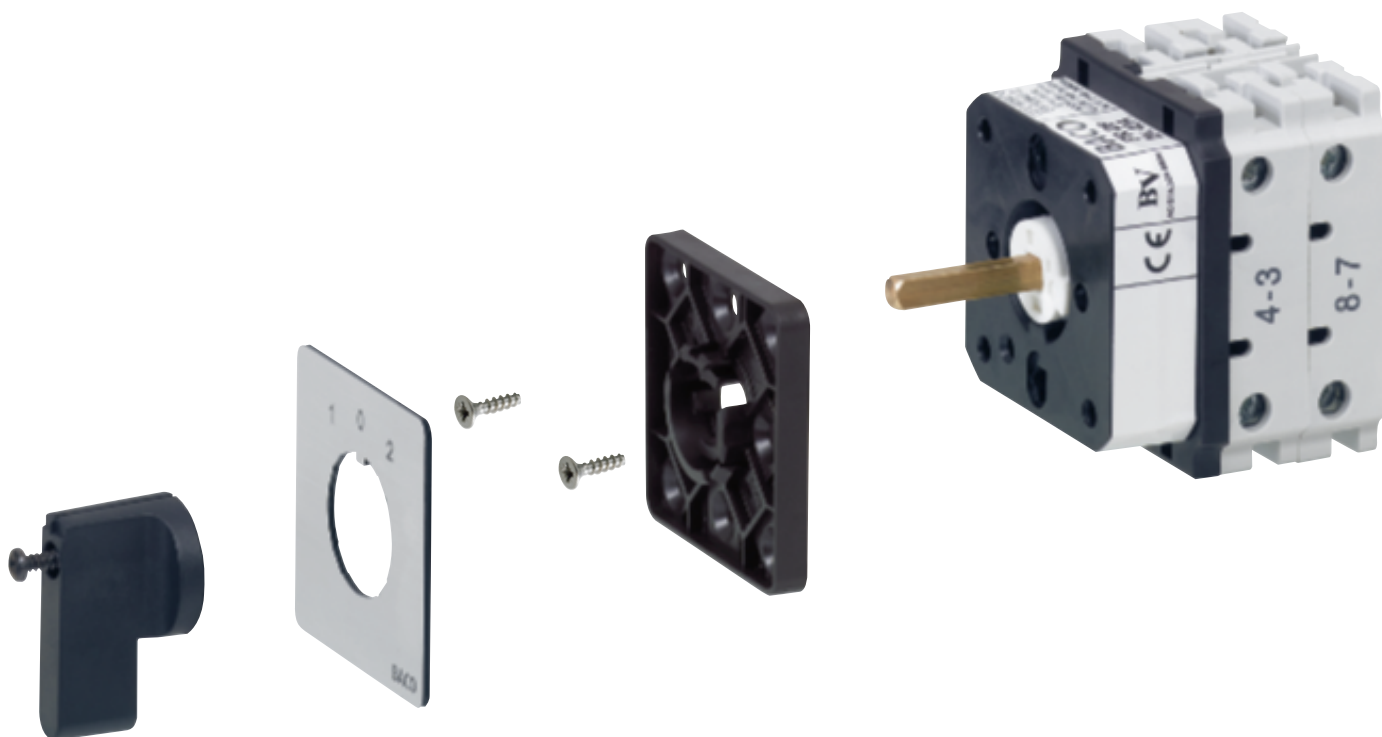
	Rating	Diagram	Mounting	Presentation	Option 1	Option 2...
<b>DESIGNATION</b>	<b>PR 63</b>	<b>2251 A4</b>	<b>S</b>	<b>Q72 MN</b>	<b>"pump 1 - pump 2"</b>	<b>-</b>
<b>PRICE LIST CODE</b>	<b>I</b>	<b>A02Z -</b>	<b>Y508</b>	<b>Q72 MN</b>	<b>Y000</b>	<b>-</b>
Observations	PR 63 AC21 = 63 A	2 way without off, 1 pole 90° switching angle	Rear mounting	□ 72 plate and frame presenta- tion Medium handle	Standard engraving	

# PR ONE cam switch Series

A selection of standard switching programmes and mounting forms for practical reliable solutions to be achieved quickly

## ► DESIGN AND FUNCTIONS

- 45° switching angle
- Forced opened contacts
- Finger protected (degree of protection up to IP 20)
- Short-circuit rated
- Fulfills the load of break requirements up to 690 V
- Terminal screws in open position
- Switching capacity I<sub>e</sub> (A): 16 A, 25 A and 32 A in AC21
- Manually operated control switches
- Front presentation: aluminium plate with black handle with index
- Laser marking on escutcheon
- Front degree of protection IP 40
- 2-screw panel mount - interval 30 mm



## ► APPLICATIONS

- ON-OFF switches
- Changeover switches
- Multi-step switches
- Instrument switches

Standard circuits diagrams from 16 A, 25 A up to 32 A

The expertise of a specialist to offer ready-solutions



### ▶ ELECTRICAL CHARACTERISTICS

▶ Thermal current, I <sub>th</sub> (A)		20	32	40
▶ Rated operating current in AC-21A, I <sub>e</sub> (A)		16	25	32
▶ Rated operating current in AC-15A, I <sub>e</sub> (A)		6	10	12
▶ Motor performance in AC-3 (kW)	3 x 230 V	3	4	5,5
	3 x 400 V	4	7,5	11
▶ Motor performance in AC-23 (kW)	3 x 230 V	4	7,5	11
	3 x 400 V	7,5	11	11
▶ Rated insulation voltage, U <sub>i</sub> (V)		690	690	690
▶ Rated short time withstand current, I <sub>cw</sub> (A) for 1 sec		300	420	800
▶ Maximum wire size (mm <sup>2</sup> rigid / flexible)		4 / 2,5	6 / 4	6 / 6
▶ Mechanical durability (nb of operations)		800 000 (max. rate 150 per hour)		
▶ Operating temperature limits		-20°C to 70°C		
▶ Degree of protection	Front	IP 40		
	Rear	IP 2X		

### ▶ FINGER PROTECTED

Degree of protection up to IP 20

### ▶ CONFORMING TO STANDARDS

- IEC EN 60947-1
- IEC EN 60947-3
- UL 508
- UL-CSA approved

# PR ONE cam switches



Dimensions (p. 133)

## ▶ ON-OFF SWITCHES

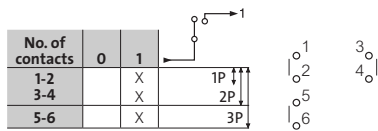
From 1 to 3 poles, each pole being a path for the current, the circuit being open at starting position 0, and closed at position 1

2-screw panel mount - interval: 30 mm

Cat. No.



227603



### 16 A

1P-1 contact  
2P-2 contacts  
3P-3 contacts



**227600**  
**227601**  
**227602**

### 25 A

1P-1 contact  
2P-2 contact  
3P-3 contacts



**227603**  
**227604**  
**227605**

### 32 A

1P-1 contact  
3P-3 contacts



**227606**  
**227608**

## ▶ CHANGE-OVER SWITCHES WITH «OFF» POSITION

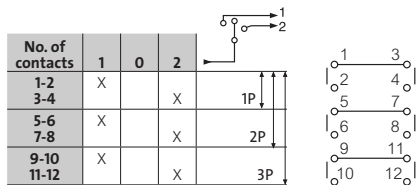
From 1 to 3 poles, each pole having two current paths, open at starting position 0, one path closes on position 1, the other on position 2

2-screw panel mount - interval: 30 mm

Cat. No.



227609



### 16 A

1P-2 contacts  
2P-4 contacts  
3P-6 contacts



**227609**  
**227610**  
**227611**

### 25 A

1P-2 contacts  
2P-4 contacts  
3P-6 contacts



**227612**  
**227613**  
**227614**

### 32 A

1P-2 contacts  
3P-4 contacts  
3P-6 contacts



**227615**  
**227616**  
**227617**

# PR ONE cam switches



Dimensions (p. 133)

## ▶ SELECTOR SWITCHES

2 to 5-way switches, each pole being respectively from 2 to 5 paths for the current, the starting position is at 0

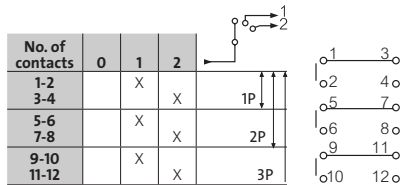
### 2-WAY SWITCHES WITH OFF

2-screw panel mount - interval: 30 mm

Cat. No.



227630



**16 A**  
1P-2 contacts  
2P-4 contacts  
3P-6 contacts



**227618**  
**227619**  
**227620**

**25 A**  
1P-2 contacts  
2P-4 contacts  
3P-6 contacts



**227624**  
**227625**  
**227626**

**32 A**  
1P-2 contacts  
3P-4 contacts  
3P-6 contacts



**227630**  
**227631**  
**227632**

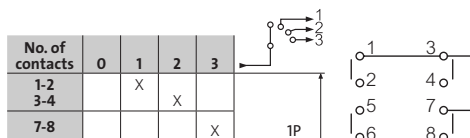
### 3-WAY SWITCHES WITH OFF

2-screw panel mount - interval: 30 mm

Cat. No.



227621



**16 A**  
1P-3 contacts



**227621**

**25 A**  
1P-3 contacts

**227627**

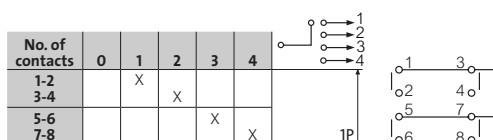
### 4-WAY SWITCHES WITH OFF

2-screw panel mount - interval: 30 mm

Cat. No.



227622



**16 A**  
1P-4 contacts



**227622**

# PR ONE cam switches



## ▶ SELECTOR SWITCHES (CONTINUED)

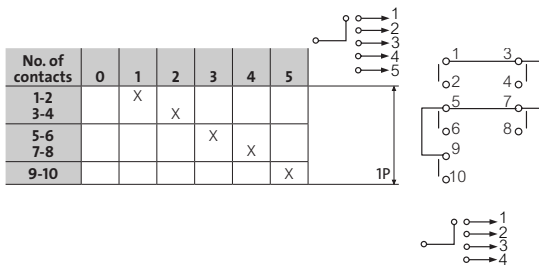
### 5-WAY SWITCHES WITH OFF

2-screw panel mount - interval: 30 mm

Cat. No.



227623



16 A  
1P-5 contacts

227623

25 A  
1P-5 contacts

227629



## ▶ INSTRUMENT SWITCHES

For ammeters wired in 3 CT's connected into the corresponding circuits. The CT's can be mounted in series with common point.  
For voltmeters wired into 3-phase networks with neutral.

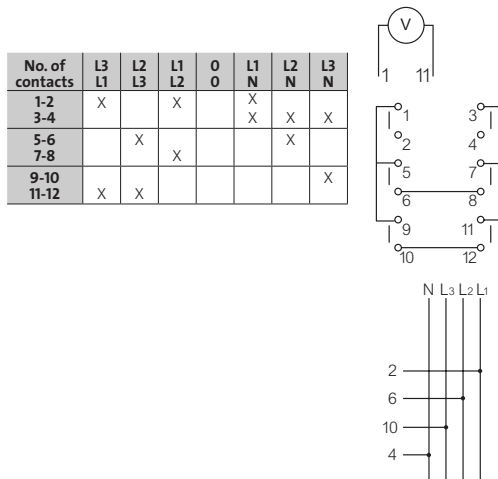
### VOLTMETER SWITCH, WITH NEUTRAL

2-screw panel mount - interval: 30 mm

Cat. No.



227636



16 A  
6 contacts

227636



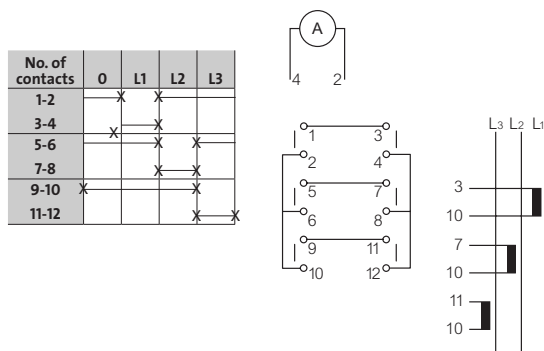
### AMMETER SWITCH, 3 CTS WITH COMMON POINT

2-screw panel mount - interval: 30 mm

Cat. No.



227637



16 A  
6 contacts

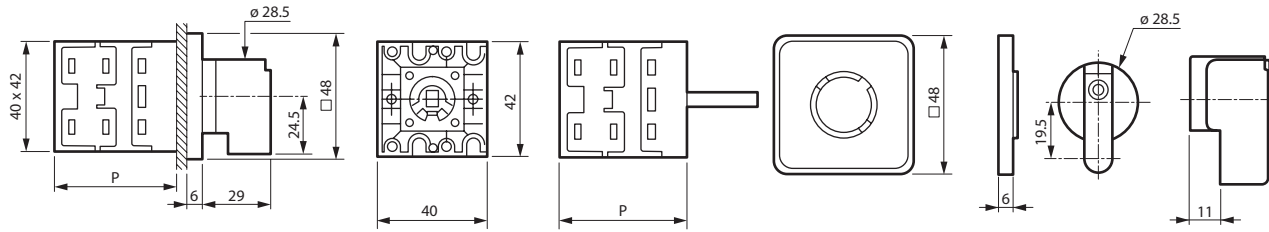
227637



# PR ONE cam switches

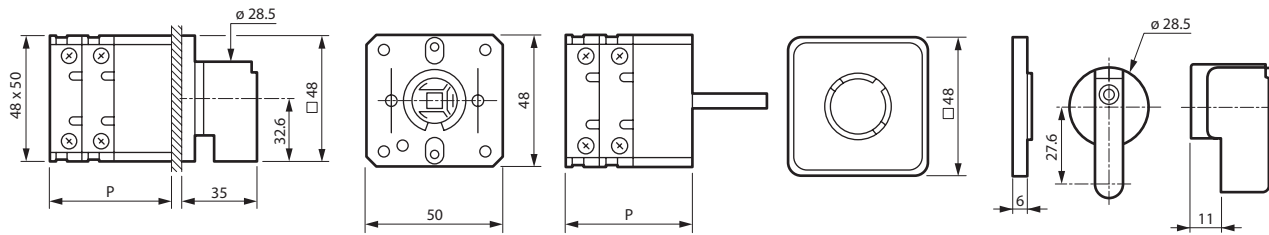
## ► DIMENSIONS

### PR One 16 A (ie)



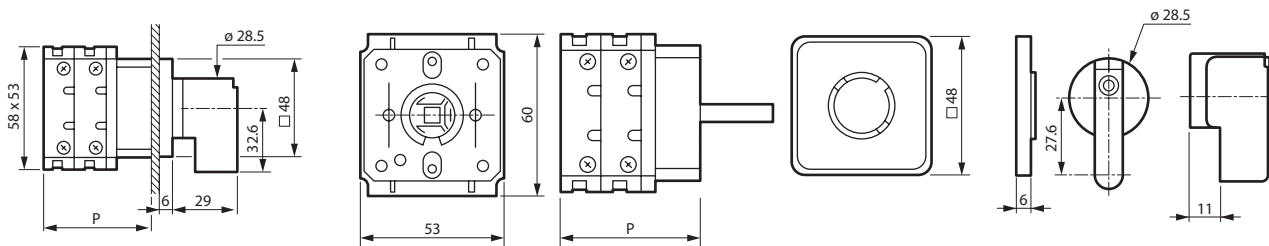
Dimensions in mm  
 \*P: 36 (1-2 contacts)  
 46 (3-4 contacts)  
 56 (5-6 contacts)

### PR One 25 A (ie)



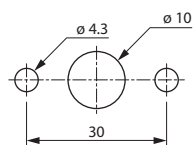
Dimensions in mm  
 \*P: 33 (1-2 contacts)  
 45 (3-4 contacts)  
 57 (5-6 contacts)

### PR One 32 A (ie)



Dimensions in mm  
 \*P: 36 (1-2 contacts)  
 51 (3-4 contacts)  
 66 (5-6 contacts)

## ► PANEL CUT-OUT




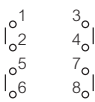


# Cam switches

 Characteristics (p. 213)

## ▶ ON-OFF SWITCH

No. of contacts	0	1		
1-2	X		1P	1
3-4	X		2P	2
5-6	X		3P	3
7-8	X		4P	4

### MINI CAM SWITCH - 10 A (AC21)

∅ 16 and 22 single hole front mounting

Cat. No.



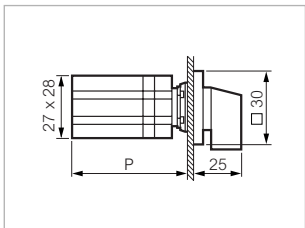
223501

30 aluminium plate and frame

- 1P - 1 contact
- 2P - 2 contacts
- 3P - 3 contacts
- 4P - 4 contacts



- 223501**
- 223502**
- 223503**
- 223504**



**Dimensions in mm**  
\*P: 50 (1-2 CONTACTS)  
62 (3-4 CONTACTS)

### PR 12 - 16 A (AC21)

2-screw panel mount – interval: 30 mm

Cat. No.



NB02AQ1

#### Designation

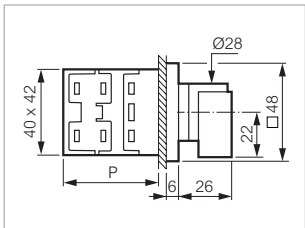
Grey/black small handle  
 48 aluminium plate and frame

- 1P - 1 contact
- 2P - 2 contacts
- 3P - 3 contacts
- 4P - 4 contacts



- PR12 1101 A4 E Q48PN
- PR12 1102 A4 E Q48PN
- PR12 1103 A4 E Q48PN
- PR12 1104 A4 E Q48PN

- NB01AQ1**
- NB02AQ1**
- NB03AQ1**
- NB04AQ1**



**Dimensions in mm**  
\*P: 36 (1-2 CONTACTS)  
46 (3-4 CONTACTS)

- 1P - 1 contact
- 2P - 2 contacts
- 3P - 3 contacts



- PR12 1101 A8 E Q48PN
- PR12 1102 A8 E Q48PN
- PR12 1103 A8 E Q48PN

- NB01EQ1**
- NB02EQ1**
- NB03EQ1**

\*P = Depth

# Cam switches



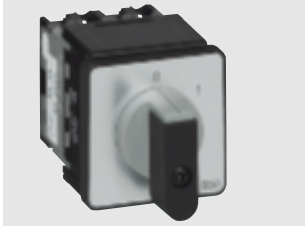
Characteristics (p. 213)

## ► ON-OFF SWITCH (CONTINUED)

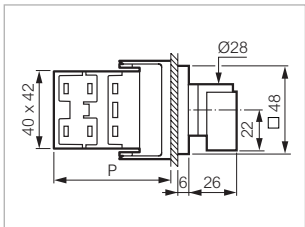
PR 12 - 16 A (AC21)

∅ 22 single hole front mounting

Cat. No.



NB03EX80



**Dimensions in mm**  
\*P: 51 (1-2 CONTACTS)  
61 (3-4 CONTACTS)

Grey/black small handle  
□ 48 aluminium plate and frame

1P - 1 contact  
2P - 2 contacts  
3P - 3 contacts  
4P - 4 contacts



1P - 1 contact  
2P - 2 contacts  
3P - 3 contacts



### Designation

PR12 1101 A4 E N48MD50  
PR12 1102 A4 E N48MD50  
PR12 1103 A4 E N48MD50  
PR12 1104 A4 E N48MD50

**NB01AX80**  
**NB02AX80**  
**NB03AX80**  
**NB04AX80**

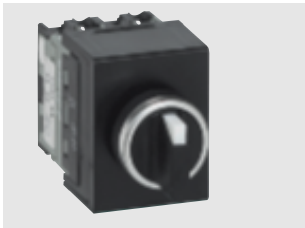
PR12 1101 A8 E N48MD50  
PR12 1102 A8 E N48MD50  
PR12 1103 A8 E N48MD50

**NB01EX80**  
**NB02EX80**  
**NB03EX80**

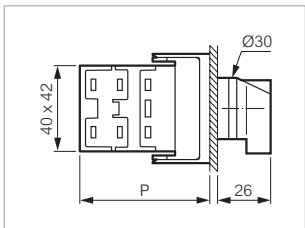
PR 12 - 16 A (AC21)

∅ 22 single hole front mounting

Cat. No.



NB03AC113



**Dimensions in mm**  
\*P: 51 (1-2 CONTACTS)  
61 (3-4 CONTACTS)

Selector switch style handle  
Matt chrome plastic bezel

1P - 1 contact  
2P - 2 contacts  
3P - 3 contacts  
4P - 4 contacts



### Designation

PR12 1101 A4 E C21RA03  
PR12 1102 A4 E C21RA03  
PR12 1103 A4 E C21RA03  
PR12 1104 A4 E C21RA03

**NB01AC113**  
**NB02AC113**  
**NB03AC113**  
**NB04AC113**

\*P = Depth

# Cam switches



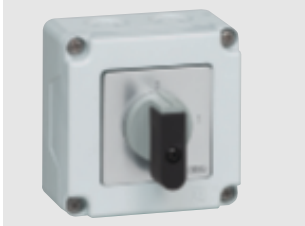
Characteristics (p. 213)

## ► ON-OFF SWITCH (CONTINUED)

**PR 12 - 16 A (AC21)**

**Enclosure**

**Cat. No.**



NB02AGQ

Grey/black small handle  
□ 48 aluminium plate

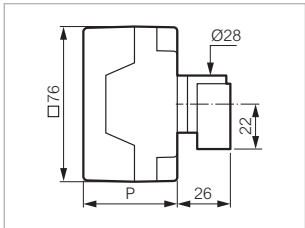
1P - 1 contact  
2P - 2 contacts  
3P - 3 contacts  
4P - 4 contacts



**Designation**

PR12 1101 A4 BPRQ48PN  
PR12 1102 A4 BPRQ48PN  
PR12 1103 A4 BPRQ48PN  
PR12 1104 A4 BPRQ48PN

NB01AGQ  
**NB02AGQ**  
**NB03AHQ**  
NB04AHQ



**Dimensions in mm**

\*P: 46 (1-2 CONTACTS)  
58 (3-4 CONTACTS)

**PR 17 - 20 A (AC21)**

**2-screw panel mount – interval: 30 mm**

**Cat. No.**



SB04AQ1

Grey/black small handle  
□ 48 aluminium plate and frame

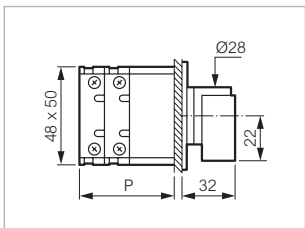
1P - 1 contact  
2P - 2 contacts  
3P - 3 contacts  
4P - 4 contacts



**Designation**

PR17 1101 A4 E Q48PN  
PR17 1102 A4 E Q48PN  
PR17 1103 A4 E Q48PN  
PR17 1104 A4 E Q48PN

SB01AQ1  
**SB02AQ1**  
**SB03AQ1**  
**SB04AQ1**



**Dimensions in mm**

\*P: 33 (1-2 CONTACTS)  
45 (3-4 CONTACTS)

3P - 3 contacts  
4P - 4 contacts



PR17 1103 A8 E Q48PN  
PR17 1104 A8 E Q48PN


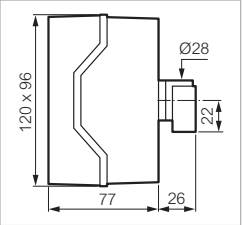

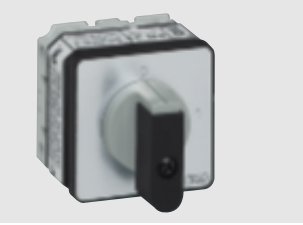
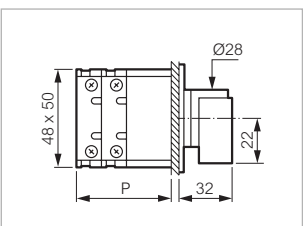



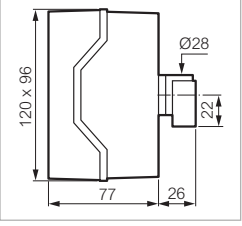

**SB03EQ1**  
**SB04EQ1**

\*P = Depth

# Cam switches

 Characteristics (p. 213)

## ► ON-OFF SWITCH (CONTINUED)

PR 17 -20 A (AC21)	Enclosure	Enclosure	Designation	Cat. No.
 <p>SB02AXQ</p>		<p>Black small handle □ 64 aluminium plate</p> <p>1P - 1 contact 2P - 2 contacts 3P - 3 contacts 4P - 4 contacts</p> 	<p>PR17 1101 A4 BCQ3 PR17 1102 A4 BCQ3 PR17 1103 A4 BCQ3 PR17 1104 A4 BCQ3</p>	<p>SB01AXQ SB02AXQ SB03AXQ SB04AXQ</p>
<b>PR 21 -25 A (AC21)</b>	<b>2-screw panel mount – interval: 30 mm</b>	<b>2-screw panel mount – interval: 30 mm</b>	<b>2-screw panel mount – interval: 30 mm</b>	<b>Cat. No.</b>
 <p>TB01AQ1</p>	 <p><b>Dimensions in mm</b> *P: 33 (1-2 CONTACTS) 45 (3-4 CONTACTS)</p>	<p>Grey/black small handle □ 48 aluminium plate and frame</p> <p>1P - 1 contact 2P - 2 contacts 3P - 3 contacts 4P - 4 contacts</p>  <p>3P - 3 contacts</p> 	<p>PR21 1101 A4 E Q48PN PR21 1102 A4 E Q48PN PR21 1103 A4 E Q48PN PR21 1104 A4 E Q48PN PR21 1103 A8 E Q48PN</p>	<p><b>TB01AQ1</b> TB02AQ1 <b>TB03AQ1</b> TB04AQ1 <b>TB03EQ1</b></p>
<b>PR 21 -25 A (AC21)</b>	<b>Enclosure</b>	<b>Enclosure</b>	<b>Designation</b>	<b>Cat. No.</b>
 <p>TB01AXQ</p>		<p>Black small handle □ 64 aluminium plate</p> <p>1P - 1 contact 2P - 2 contacts 3P - 3 contacts 4P - 4 contacts</p> 	<p>PR21 1101 A4 BCQ3 PR21 1102 A4 BQ3 PR21 1103 A4 BCQ3 PR21 1104 A4 BCQ3</p>	<p>TB01AXQ TB02AXQ TB03AXQ TB04AXQ</p>

\*P = Depth

# Cam switches

 Characteristics (p. 213)

## ► ON-OFF SWITCH (CONTINUED)

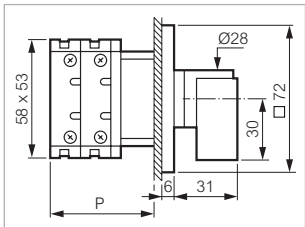
**PR 26 -32 A (AC21)**

**2-screw panel mount – interval: 30 mm**

Cat. No.



ZB04AQ7



**Dimensions in mm**  
\*P: 36 (1-2 CONTACTS)  
51 (3-4 CONTACTS)

Grey/black medium handle  
□ 72 aluminium plate and frame

**Designation**

- 1P - 1 contact
- 2P - 2 contacts
- 3P - 3 contacts
- 4P - 4 contacts



- PR26 1101 A4 E Q72MN
- PR26 1102 A4 E Q72MN
- PR26 1103 A4 E Q72MN
- PR26 1104 A4 E Q72MN

- ZB01AQ7**
- ZB02AQ7**
- ZB03AQ7**
- ZB04AQ7**

- 3P - 3 contacts

- PR26 1103 A8 E Q72MN

- ZB03EQ7**

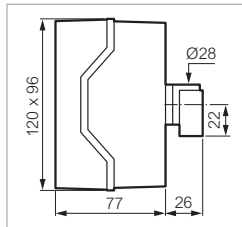
**PR 26 -32 A (AC21)**

**Enclosure**

Cat. No.



ZB02AXQ



Black small handle  
□ 72 aluminium plate

**Designation**

- 1P - 1 contact
- 2P - 2 contacts
- 3P - 3 contacts
- 4P - 4 contacts



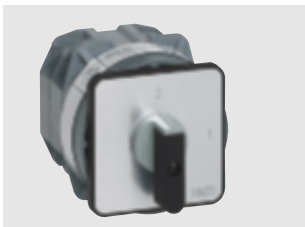
- PR26 1101 A4 BCQ3
- PR26 1102 A4 BCQ3
- PR26 1103 A4 BCQ3
- PR26 1104 A4 BCQ3

- ZB01AXQ**
- ZB02AXQ**
- ZB03AXQ**
- ZB04AXQ**

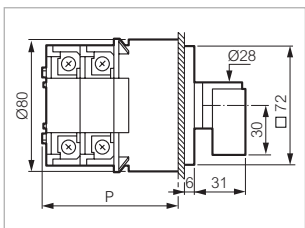
**PR 40 -50 A (AC21)**

**2-screw panel mount - interval: 50 mm**

Cat. No.



HB03AQ7



**Dimensions in mm**  
\*P: 60 (1-2 CONTACTS)  
80 (3-4 CONTACTS)

Grey/black medium handle  
□ 72 aluminium plate and frame

**Designation**

- 1P - 1 contact
- 2P - 2 contacts
- 3P - 3 contacts
- 4P - 4 contacts



- PR40 1101 A4 E Q72MN
- PR40 1102 A4 E Q72MN
- PR40 1103 A4 E Q72MN
- PR40 1104 A4 E Q72MN

- HB01AQ7**
- HB02AQ7**
- HB03AQ7**
- HB04AQ7**

\*P = Depth


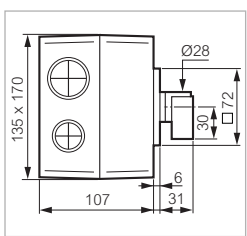

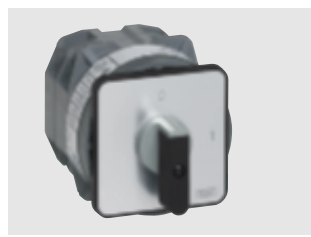

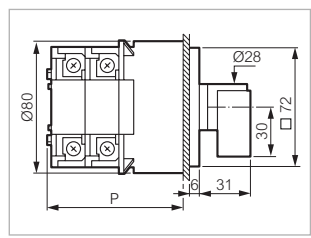

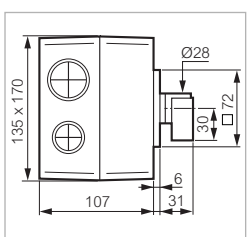

Catalogue No. in bold: normally in stock at distribution outlets

# Cam switches



Characteristics (p. 213)

## ► ON-OFF SWITCH (CONTINUED)

PR 40 -50 A (AC21)	Enclosure	Cat. No.	
 <p data-bbox="108 801 204 835">HB02AAQ</p> 	<p data-bbox="1029 571 1157 604"><b>Designation</b></p> <p data-bbox="686 604 1021 660">Grey/black medium handle □ 72 aluminium plate and frame</p> <p data-bbox="686 683 837 806">1P - 1 contact 2P - 2 contacts 3P - 3 contacts 4P - 4 contacts</p> 	<p data-bbox="1029 683 1268 806">PR40 1101 A4 BCFQ72MN PR40 1102 A4 BCFQ72MN PR40 1103 A4 BCFQ72MN PR40 1104 A4 BCFQ72MN</p> <p data-bbox="1362 683 1476 806">HB01AAQ HB02AAQ HB03ABQ HB04ABQ</p>	
<p data-bbox="68 884 279 929"><b>PR 63 -63 A (AC21)</b></p>	<p data-bbox="683 884 1077 929"><b>2-screw panel mount - interval: 50 mm</b></p>	<p data-bbox="1362 884 1452 929">Cat. No.</p>	
 <p data-bbox="108 1176 191 1209">IB03AQ7</p>	<p data-bbox="406 1220 614 1254"><b>Dimensions in mm</b></p> <p data-bbox="406 1254 622 1310">*P: 60 (1-2 CONTACTS) 80 (3-4 CONTACTS)</p>	<p data-bbox="1029 952 1157 985"><b>Designation</b></p> <p data-bbox="686 974 1021 1041">Grey/black medium handle □ 72 aluminium plate and frame</p> <p data-bbox="686 1064 837 1187">1P - 1 contact 2P - 2 contacts 3P - 3 contacts 4P - 4 contacts</p> 	<p data-bbox="1029 1064 1252 1187">PR63 1101 A4 E Q72MN PR63 1102 A4 E Q72MN PR63 1103 A4 E Q72MN PR63 1104 A4 E Q72MN</p> <p data-bbox="1362 1064 1476 1187">IB01AQ7 IB02AQ7 <b>IB03AQ7</b> IB04AQ7</p>
	<p data-bbox="683 1512 785 1556"><b>PR 63 -63 A (AC21)</b></p>	<p data-bbox="1362 1512 1452 1556">Cat. No.</p>	
 <p data-bbox="108 1814 199 1848">IB02AAQ</p>		<p data-bbox="1029 1579 1157 1612"><b>Designation</b></p> <p data-bbox="686 1601 1021 1668">Grey/black medium handle □ 72 aluminium plate and frame</p> <p data-bbox="686 1691 837 1814">1P - 1 contact 2P - 2 contacts 3P - 3 contacts 4P - 4 contacts</p> 	<p data-bbox="1029 1691 1300 1814">PR63 1101 A4 BCF140Q72MN PR63 1102 A4 BCF140Q72MN PR63 1103 A4 BCF240Q72MN PR63 1104 A4 BCF240Q72MN</p> <p data-bbox="1362 1691 1476 1814">IB01AAQ IB02AAQ IB03ABQ IB04ABQ</p>

\*P = Depth

# Cam switches



Characteristics (p. 213)

## ► ON-OFF SWITCH (CONTINUED)

**PR 125 -160 A (AC21)**

**2-screw panel mount - interval: 50 mm**

Cat. No.



LB02AQ9

Grey/black large handle  
□ 96 aluminium plate and frame

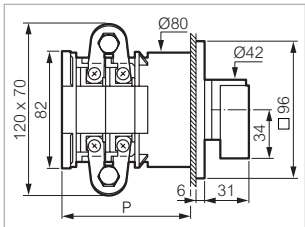
**Designation**

- 1P - 1 contact
- 2P - 2 contacts
- 3P - 3 contacts
- 4P - 4 contacts



- PR125 1101 A4 E Q96GN
- PR125 1102 A4 E Q96GN
- PR125 1103 A4 E Q96GN
- PR125 1104 A4 E Q96GN

- LB01AQ9
- LB02AQ9
- LB03AQ9
- LB04AQ9



**Dimensions in mm**  
\*P: 80 (1-2 CONTACTS)  
120 (3-4 CONTACTS)

**PR 160 -200 A (AC21)**

**2-screw panel mount - interval: 50 mm**

Cat. No.



MB02AQ9

Grey/black large handle  
□ 96 aluminium plate and frame

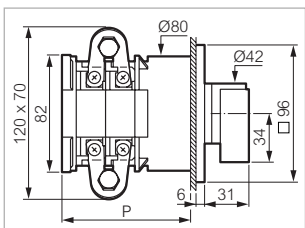
**Designation**

- 1P - 1 contact
- 2P - 2 contacts
- 3P - 3 contacts
- 4P - 4 contacts



- PR160 1101 A4 E Q96GN
- PR160 1102 A4 E Q96GN
- PR160 1103 A4 E Q96GN
- PR160 1104 A4 E Q96GN

- MB01AQ9
- MB02AQ9
- MB03AQ9
- MB04AQ9



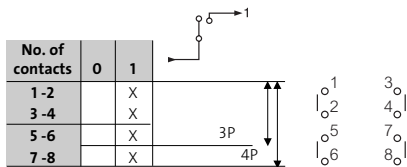
**Dimensions in mm**  
\*P: 80 (1-2 CONTACTS)  
120 (3-4 CONTACTS)

\*P = Depth

# Cam switches

 Characteristics (p. 213)

## ► MAIN SWITCH



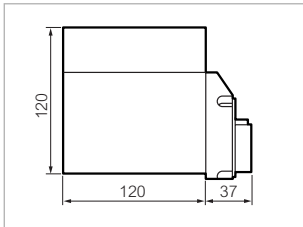
### PR 125 - 160 A (AC21)

2-screw panel mount - interval: 50 mm

Cat. No.



LS3EV733



#### Designation

Red padlockable handle  
for up to 4 padlocks  
□ 72 yellow frame

**With engraving  
MAIN SWITCH**

3P+  $\perp$  - 3 contacts  
3P+N - 4 contacts



PR125 1103GN E J723MND61  
PR125 1104GN E J723MND61

LS3EV733  
LS4EV733

**Without engraving**

3P+  $\perp$  - 3 contacts  
3P+N - 4 contacts



PR125 1103GN E J72MND61  
PR125 1104GN E J72MND61

LS3EV72  
LS4EV72

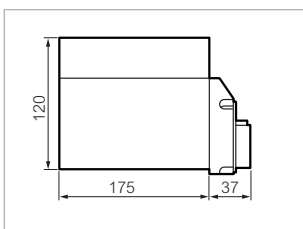
### PR 125 - 160 A (AC21)

2-screw panel mount - interval: 50 mm

Cat. No.



LG3EV733



#### Designation

Grey padlockable handle  
for up to 4 padlocks  
□ 72 grey frame

**With engraving  
MAIN SWITCH**

3P+  $\perp$  - 3 contacts  
3P+N - 4 contacts



PR125 1103GN E V723MND  
PR125 1104GN E V723MND

LG3EV733  
LG4EV733

**Without engraving**

3P+  $\perp$  - 3 contacts  
3P+N - 4 contacts



PR125 1103GN E V72MND  
PR125 1104GN E V72MND

LG3EV72  
LG4EV72



# Cam switches



Characteristics (p. 213)

## ► MAIN SWITCH (CONTINUED)

PR 125 - 160 A (AC21)

2-screw panel mount - interval: 50 mm


Cat. No.



LS3EV973

Red padlockable handle  
for up to 4 padlocks  
□ 96 yellow frame

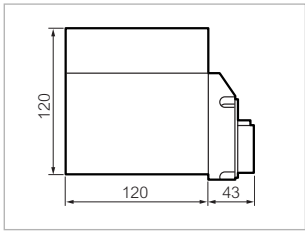
**With engraving  
MAIN SWITCH**

3P+  $\perp$  - 3 contacts   
3P+N - 4 contacts

**Designation**

PR125 1103GN E J963GND61  
PR125 1104GN E J963GND61

LS3EV973  
LS4EV973



PR 125 - 160 A (AC21)

Rear mounting with clutch drive and door interlock


Cat. No.



LS3RV733

Red padlockable handle  
for up to 4 padlocks  
□ 72 yellow frame  
Clutch drive and  
door interlock

**With engraving  
MAIN SWITCH**


3P+  $\perp$  - 3 contacts   
3P+N - 4 contacts

**Designation**

PR125 1103GN SV6 J723MND61  
PR125 1104GN SV6 J723MND61

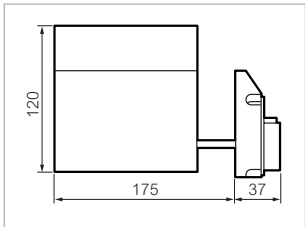
LS3RV733  
LS4RV733

**Without engraving**

3P+  $\perp$  - 3 contacts   
3P+N - 4 contacts

PR125 1103GN SV6 J72MND61  
PR125 1104GN SV6 J72MND61


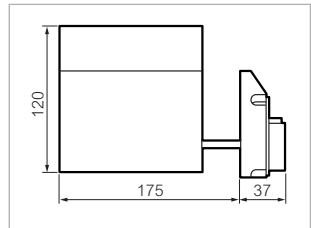
LS3RV72  
LS4RV72


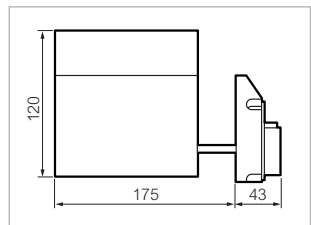


# Cam switches

 Characteristics (p. 213)

## ► MAIN SWITCH (CONTINUED)

PR 125 - 160 A (AC21)	Rear mounting with clutch drive and door interlock	Cat. No.
 <p data-bbox="108 880 199 902">LG3RV733</p> 	<p data-bbox="1029 571 1157 600"><b>Designation</b></p> <p data-bbox="686 604 941 689">Grey padlockable handle for up to 4 padlocks □ 72 grey frame</p> <p data-bbox="686 701 845 757"><b>With engraving MAIN SWITCH</b></p> <p data-bbox="686 768 941 835">3P+ <math>\frac{1}{\perp}</math> - 3 contacts <math>\overset{0}{\nearrow} \overset{1}{\searrow}</math> 3P+N - 4 contacts</p> <p data-bbox="686 857 885 891"><b>Without engraving</b></p> <p data-bbox="686 902 941 969">3P+ <math>\frac{1}{\perp}</math> - 3 contacts <math>\overset{0}{\nearrow} \overset{1}{\searrow}</math> 3P+N - 4 contacts</p>	<p data-bbox="1029 779 1300 835">PR125 1103GN SV6 V723MND PR125 1104GN SV6 V723MND</p> <p data-bbox="1364 779 1476 835">LG3RV733 LG4RV733</p> <p data-bbox="1029 913 1300 969">PR125 1103GN SV6 V72MND PR125 1104GN SV6 V72MND</p> <p data-bbox="1364 913 1476 969">LG3RV72 LG4RV72</p>

PR 125 - 160 A (AC21)	Rear mounting with clutch drive and door interlock	Cat. No.
 <p data-bbox="108 1579 199 1601">LS3RV973</p> 	<p data-bbox="1029 1270 1157 1299"><b>Designation</b></p> <p data-bbox="686 1303 941 1388">Red padlockable handle for up to 4 padlocks □ 96 yellow frame</p> <p data-bbox="686 1400 845 1456"><b>With engraving MAIN SWITCH</b></p> <p data-bbox="686 1467 941 1534">3P+ <math>\frac{1}{\perp}</math> - 3 contacts <math>\overset{0}{\nearrow} \overset{1}{\searrow}</math> 3P+N - 4 contacts</p>	<p data-bbox="1029 1478 1316 1534">PR125 1103GN SV6 J963GND61 PR125 1104GN SV6 J963GND61</p> <p data-bbox="1364 1478 1476 1534">LS3RV973 LS4RV973</p>

# Cam switches



Characteristics (p. 213)

## ► MAIN SWITCH (CONTINUED)

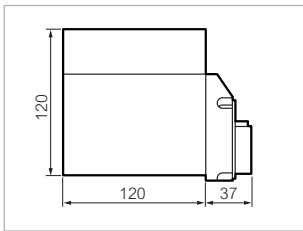
PR 160 -200 A (AC21)

2-screw panel mount - interval: 50 mm

Cat. No.



MS3EV733



Red padlockable handle  
for up to 4 padlocks  
□ 72 yellow frame

**With engraving  
MAIN SWITCH**

3P+  $\frac{\perp}{\perp}$  - 3 contacts  $\begin{matrix} 0 \\ \swarrow \\ 1 \end{matrix}$   
3P+N - 4 contacts

**Designation**

PR160 1103GN E J723MND61  
PR160 1104GN E J723MND61

MS3EV733  
MS4EV733

**Without engraving**

3P+  $\frac{\perp}{\perp}$  - 3 contacts  $\begin{matrix} 0 \\ \swarrow \\ 1 \end{matrix}$   
3P+N - 4 contacts

PR160 1103GN E J72MND61  
PR160 1104GN E J72MND61

MS3EV72  
MS4EV72

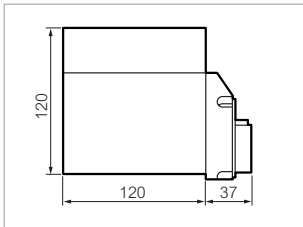
PR 160 -200 A (AC21)

2-screw panel mount - interval: 50 mm

Cat. No.



MG3EV733



Grey padlockable handle  
for up to 4 padlocks  
□ 72 grey frame

**With engraving  
MAIN SWITCH**

3P+  $\frac{\perp}{\perp}$  - 3 contacts  $\begin{matrix} 0 \\ \swarrow \\ 1 \end{matrix}$   
3P+N - 4 contacts

**Designation**

PR160 1103GN E V723MND  
PR160 1104GN E V723MND

MG3EV733  
MG4EV733

**Without engraving**

3P+  $\frac{\perp}{\perp}$  - 3 contacts  $\begin{matrix} 0 \\ \swarrow \\ 1 \end{matrix}$   
3P+N - 4 contacts

PR160 1103GN E V72MND  
PR160 1104GN E V72MND

MG3EV72  
MG4EV72

# Cam switches

 Characteristics (p. 213)

## ► MAIN SWITCH (CONTINUED)

PR 160 -200 A (AC21)

2-screw panel mount - interval: 50 mm


Cat. No.



MS4EV973

Red padlockable handle  
for up to 4 padlocks  
□ 96 yellow frame

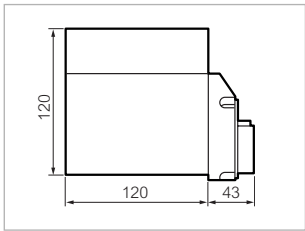
**With engraving  
MAIN SWITCH**

3P+  $\frac{\perp}{\text{—}}$  - 3 contacts   
3P+N - 4 contacts

**Designation**

PR160 1103GN E J963GND61  
PR160 1104GN E J963GND61

MS3EV973  
MS4EV973



PR 160 -200 A (AC21)

Rear mounting with clutch drive and door interlock


Cat. No.



MS3RV733

Red padlockable handle  
for up to 4 padlocks  
□ 72 yellow frame  
Clutch drive and  
door interlock

**With engraving  
MAIN SWITCH**


3P+  $\frac{\perp}{\text{—}}$  - 3 contacts   
3P+N - 4 contacts

**Designation**

PR160 1103GN SV6 J723MND61  
PR160 1104GN SV6 J723MND61

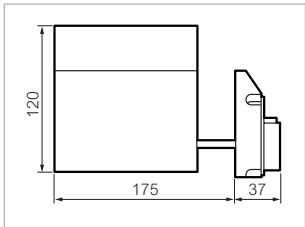
MS3RV733  
MS4RV733

**Without engraving**

3P+  $\frac{\perp}{\text{—}}$  - 3 contacts   
3P+N - 4 contacts

PR160 1103GN SV6 J72MND61  
PR160 1104GN SV6 J72MND61

MS3RV72  
MS4RV72



# Cam switches

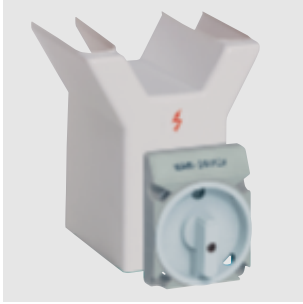
 Characteristics (p. 213)

## ► MAIN SWITCH (CONTINUED)

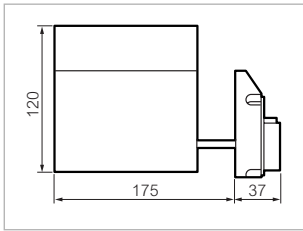
PR 160 -200 A (AC21)

Rear mounting with clutch drive and door interlock

Cat. No.



MG4RV73



Grey padlockable handle  
for up to 4 padlocks  
□ 72 grey frame

**With engraving  
MAIN SWITCH**

3P+  $\frac{\perp}{\text{—}}$  - 3 contacts  $\begin{matrix} 0 \\ \swarrow \\ 1 \end{matrix}$   
3P+N - 4 contacts

**Designation**

PR160 1103GN SV6 V723MND	MG3RV733
PR160 1104GN SV6 V723MND	MG4RV733

**Without engraving**

3P+  $\frac{\perp}{\text{—}}$  - 3 contacts  $\begin{matrix} 0 \\ \swarrow \\ 1 \end{matrix}$   
3P+N - 4 contacts

PR160 1103GN SV6 V72MND	MG3RV72
PR160 1104GN SV6 V72MND	MG4RV72

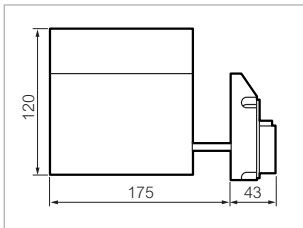
PR 160 -200 A (AC21)

Rear mounting with clutch drive and door interlock

Cat. No.



MS4RV973



Red padlockable handle  
for up to 4 padlocks  
□ 96 yellow frame


**With engraving  
MAIN SWITCH**

3P+  $\frac{\perp}{\text{—}}$  - 3 contacts  $\begin{matrix} 0 \\ \swarrow \\ 1 \end{matrix}$   
3P+N - 4 contacts

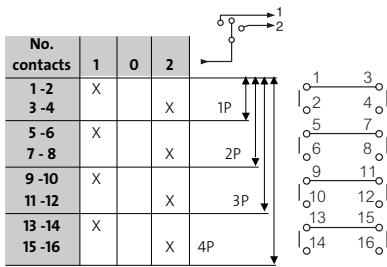
**Designation**

PR160 1103GN SV6 V963GND61	MS3RV973
PR160 1104GN SV6 V963GND61	MS4RV973

# Cam switches

 Characteristics (p. 213)

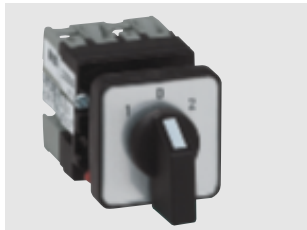
## ► CHANGE-OVER SWITCH WITH “OFF” POSITION



### MINI CAM SWITCH - 10 A (AC21)

∅ 16 and ∅ 22 mm single hole front mounting

Cat. No.



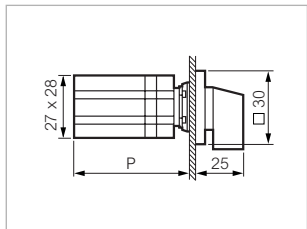
223505

30 aluminium plate and frame

- 1P - 2 contacts
- 2P - 4 contacts
- 3P - 6 contacts
- 4P - 8 contacts



**223505**  
**223506**  
**223507**  
**223508**



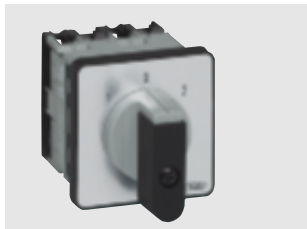
#### Dimensions in mm

- \*P: 50 (1-2 CONTACTS)
- 62 (3-4 CONTACTS)
- 74 (5-6 CONTACTS)
- 96 (7-8 CONTACTS)

### PR 12 - 16 A (AC21)

2-screw panel mount – interval: 30 mm

Cat. No.



NC02GQ1

#### Designation

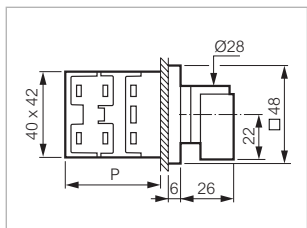
Grey/black small handle  
 48 aluminium plate and frame

- 1P - 2 contacts
- 2P - 4 contacts
- 3P - 6 contacts
- 4P - 8 contacts



PR12 2201 C8 E Q48PN  
PR12 2202 C8 E Q48PN  
PR12 2203 C8 E Q48PN  
PR12 2204 C8 E Q48PN

**NC01GQ1**  
**NC02GQ1**  
**NC03GQ1**  
**NC04GQ1**



#### Dimensions in mm

- \*P: 36 (1-2 CONTACTS)
- 46 (3-4 CONTACTS)
- 56 (5-6 CONTACTS)
- 66 (7-8 CONTACTS)

- 1P - 2 contacts
- 2P - 4 contacts
- 3P - 6 contacts



PR12 2201 C4 E Q48PN  
PR12 2202 C4 E Q48PN  
PR12 2203 C4 E Q48PN

**NC01CQ1**  
**NC02CQ1**  
**NC03CQ1**

\*P = Depth

Catalogue No. in bold: normally in stock at distribution outlets

# Cam switches



Characteristics (p. 213)

## ► CHANGE-OVER SWITCH WITH “OFF” POSITION (CONTINUED)

PR 12 - 16 A (AC21)

Ø 22 single hole front mounting

Cat. No.



NC02GX80

Grey/black small handle  
□ 48 aluminium plate and frame

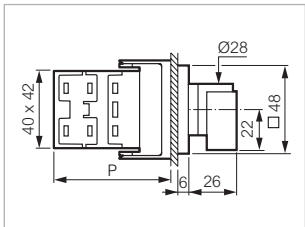
1P - 2 contacts  
2P - 4 contacts  
3P - 6 contacts  
4P - 8 contacts



### Designation

PR12 2201 C8 E N48MD50  
PR12 2202 C8 E N48MD50  
PR12 2203 C8 E N48MD50  
PR12 2204 C8 E N48MD50

**NC01GX80**  
**NC02GX80**  
NC03GX80  
NC04GX80



### Dimensions in mm

\*P: 51 (1-2 CONTACTS)  
61 (3-4 CONTACTS)  
71 (5-6 CONTACTS)  
81 (7-8 CONTACTS)

PR 12 - 16 A (AC21)

Ø 22 single hole front mounting

Cat. No.



NC02GC113

Black handle  
Matt chrome plastic bezel

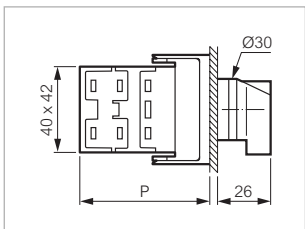
1P - 2 contacts  
2P - 4 contacts  
3P - 6 contacts  
4P - 8 contacts



### Designation

PR12 2201 C8 E C21RA03  
PR12 2202 C8 E C21RA03  
PR12 2203 C8 E C21RA03  
PR12 2204 C8 E C21RA03

NC01GC113  
NC02GC113  
NC03GC113  
NC04GC113



### Dimensions in mm

\*P: 51 (1-2 CONTACTS)  
61 (3-4 CONTACTS)  
71 (5-6 CONTACTS)  
81 (7-8 CONTACTS)

\*P = Depth

# Cam switches



Characteristics (p. 213)

## ► CHANGE-OVER SWITCH WITH “OFF” POSITION (CONTINUED)

**PR 12 - 16 A (AC21)**

**Enclosure**

**Cat. No.**



NC01GXQ

Black small handle  
□ 64 aluminium plate

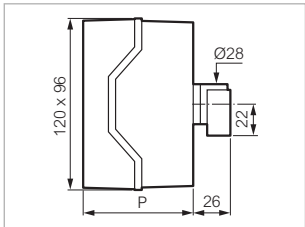
1P - 2 contacts  
2P - 4 contacts  
3P - 6 contacts  
4P - 8 contacts



**Designation**

PR12 2201 C8 BCQ3  
PR12 2202 C8 BCQ3  
PR12 2203 C8 BCQ3  
PR12 2204 C8 BCQ3

NC01GXQ  
NC02GXQ  
NC03GXQ  
NC04GXQ

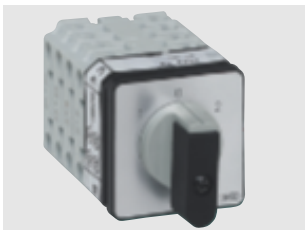


**Dimensions in mm**  
\*P: 77 (1 TO 6 CONTACTS)  
101 (7-8 CONTACTS)

**PR 17 - 20 A (AC21)**

**2-screw panel mount – interval: 30 mm**

**Cat. No.**



SC04GQ1

Grey/black small handle  
□ 48 aluminium plate and frame

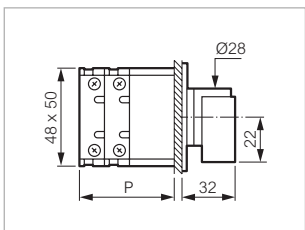
1P - 2 contacts  
2P - 4 contacts  
3P - 6 contacts  
4P - 8 contacts



**Designation**

PR17 2201 C8 E Q48PN  
PR17 2202 C8 E Q48PN  
PR17 2203 C8 E Q48PN  
PR17 2204 C8 E Q48PN

**SC01GQ1**  
**SC02GQ1**  
**SC03GQ1**  
**SC04GQ1**



**Dimensions in mm**  
\*P: 33 (1-2 CONTACTS)  
45 (3-4 CONTACTS)  
57 (5-6 CONTACTS)  
69 (7-8 CONTACTS)

\*P = Depth



# Cam switches



Characteristics (p. 213)

## ► CHANGE-OVER SWITCH WITH “OFF” POSITION (CONTINUED)

**PR 17 - 20 A (AC21)**

**Enclosure**

**Cat. No.**



SC01GXQ

Black small handle  
□ 64 aluminium plate

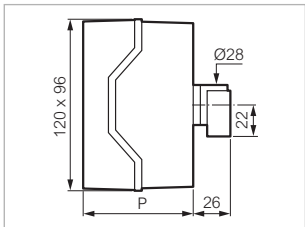
1P - 2 contacts  
2P - 4 contacts  
3P - 6 contacts  
4P - 8 contacts



**Designation**

PR17 2201 C8 BCQ3  
PR17 2202 C8 BCQ3  
PR17 2203 C8 BCQ3  
PR17 2201 C8 BCQ3

SC01GXQ  
SC02GXQ  
SC03GXQ  
SC04GXQ

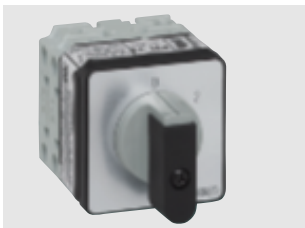


**Dimensions in mm**  
\*P: 77 (1 TO 6 CONTACTS)  
101 (7-8 CONTACTS)

**PR 21 - 25 A (AC21)**

**2-screw panel mount – interval: 30 mm**

**Cat. No.**



TC02GQ1

Grey/black small handle  
□ 48 aluminium plate and frame

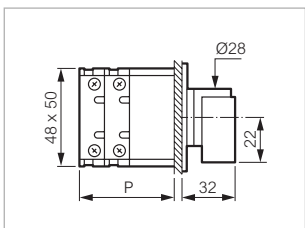
1P - 2 contacts  
2P - 4 contacts  
3P - 6 contacts  
4P - 8 contacts



**Designation**

PR21 2201 C8 E Q48PN  
PR21 2202 C8 E Q48PN  
PR21 2203 C8 E Q48PN  
PR21 2204 C8 E Q48PN

TC01GQ1  
TC02GQ1  
TC03GQ1  
TC04GQ1



**Dimensions in mm**  
\*P: 33 (1-2 CONTACTS)  
45 (3-4 CONTACTS)  
57 (5-6 CONTACTS)  
69 (7-8 CONTACTS)

\*P = Depth

# Cam switches



Characteristics (p. 213)

## ▶ CHANGE-OVER SWITCH WITH “OFF” POSITION (CONTINUED)

PR 21 - 25 A (AC21)

Enclosure

Cat. No.



TC03GXQ

Black small handle  
□ 64 aluminium plate

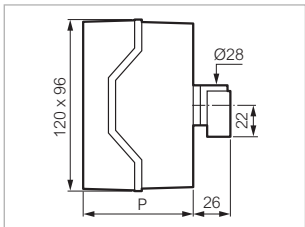
1P - 2 contacts  
2P - 4 contacts  
3P - 6 contacts  
4P - 8 contacts



Designation

PR21 2201 C8 BCQ3  
PR21 2202 C8 BCQ3  
PR21 2203 C8 BCQ3  
PR21 2204 C8 BCQ3

TC01GXQ  
**TC02GXQ**  
TC03GXQ  
**TC04GXQ**



**Dimensions in mm**  
\*P: 77 (1 TO 6 CONTACTS)  
101 (7-8 CONTACTS)

PR 26 - 32 A (AC21)

2-screw panel mount – interval: 30 mm

Cat. No.



ZC02GQ7

Grey/black medium handle  
□ 72 aluminium plate and frame

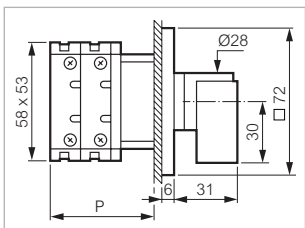
1P - 2 contacts  
2P - 4 contacts  
3P - 6 contacts  
4P - 8 contacts



Designation

PR26 2201 C8 E Q72MN  
PR26 2202 C8 E Q72MN  
PR26 2203 C8 E Q72MN  
PR26 2204 C8 E Q72MN

ZC01GQ7  
**ZC02GQ7**  
ZC03GQ7  
**ZC04GQ7**



**Dimensions in mm**  
\*P: 36 (1-2 CONTACTS)  
51 (3-4 CONTACTS)  
66 (5-6 CONTACTS)  
81 (7-8 CONTACTS)

\*P = Depth

Catalogue No. in bold: normally in stock at distribution outlets

# Cam switches



Characteristics (p. 213)

## ► CHANGE-OVER SWITCH WITH “OFF” POSITION (CONTINUED)

PR 26 - 32 A (AC21)

Enclosure

Cat. No.



ZC04GXQ

Black small handle  
□ 64 aluminium plate

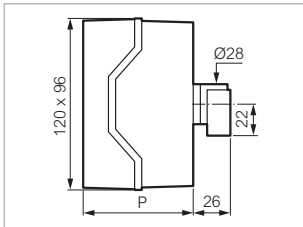
1P - 2 contacts  
2P - 4 contacts  
3P - 6 contacts  
4P - 8 contacts



Designation

PR26 2201 C8 BCQ3  
PR26 2202 C8 BCQ3  
PR26 2203 C8 BCQ3  
PR26 2204 C8 BCQ3

ZC01GXQ  
ZC02GXQ  
ZC03GXQ  
**ZC04GXQ**



**Dimensions in mm**  
\*P: 77 (1 TO 6 CONTACTS)  
101 (7-8 CONTACTS)

PR 40 - 50 A (AC21)

2-screw panel mount - interval: 50 mm

Cat. No.



HC03GQ7

Grey/black medium handle  
□ 72 aluminium plate and frame

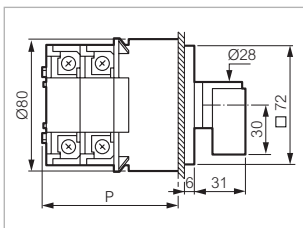
1P - 2 contacts  
2P - 4 contacts  
3P - 6 contacts  
4P - 8 contacts



Designation

PR40 2201 C8 E Q72MN  
PR40 2202 C8 E Q72MN  
PR40 2203 C8 E Q72MN  
PR40 2204 C8 E Q72MN

HC01GQ7  
**HC02GQ7**  
**HC03GQ7**  
**HC04GQ7**



**Dimensions in mm**  
\*P: 60 (1-2 CONTACTS)  
80 (3-4 CONTACTS)  
100 (5-6 CONTACTS)  
120 (7-8 CONTACTS)

\*P = Depth

Catalogue No. in bold: normally in stock at distribution outlets

# Cam switches



Characteristics (p. 213)

## ► CHANGE-OVER SWITCH WITH “OFF” POSITION (CONTINUED)

**PR 40 - 50 A (AC21)**

**Enclosure**

**Cat. No.**



HC01GAQ

Grey/black medium handle  
□ 72 aluminium plate and frame

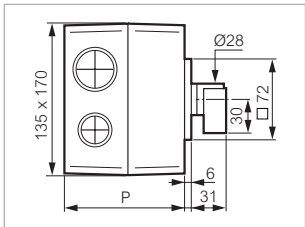
**Designation**

1P - 2 contacts  
2P - 4 contacts  
3P - 6 contacts  
4P - 8 contacts



PR40 2201 C8 BCFQ72MN  
PR40 2202 C8 BCFQ72MN  
PR40 2203 C8 BCFQ72MN  
PR40 2204 C8 BCFQ72MN

HC01GAQ  
HC02GBQ  
HC03GCQ  
HC04GDQ



**Dimensions in mm**  
\*P: 107 (1 TO 4 CONTACTS)  
145 (5 TO 8 CONTACTS)

**PR 63 - 63 A (AC21)**

**2-screw panel mount - interval: 50 mm**

**Cat. No.**



IC02GQ7

Grey/black medium handle  
□ 72 aluminium plate and frame

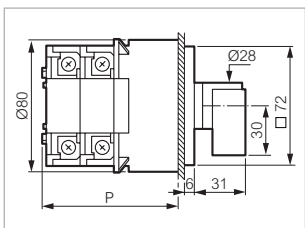
**Designation**

1P - 2 contacts  
2P - 4 contacts  
3P - 6 contacts  
4P - 8 contacts



PR63 2201 C8 E Q72MN  
PR63 2202 C8 E Q72MN  
PR63 2203 C8 E Q72MN  
PR63 2204 C8 E Q72MN

IC01GQ7  
IC02GQ7  
IC03GQ7  
IC04GQ7



**Dimensions in mm**  
\*P: 60 (1-2 CONTACTS)  
80 (3-4 CONTACTS)  
100 (5-6 CONTACTS)  
120 (7-8 CONTACTS)

\*P = Depth

# Cam switches



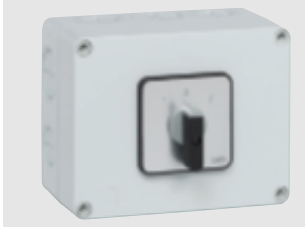
Characteristics (p. 213)

## ► CHANGE-OVER SWITCH WITH “OFF” POSITION (CONTINUED)

**PR 63 - 63 A (AC21)**

**Enclosure**

**Cat. No.**



IC02GBQ

Grey/black medium handle  
□ 72 aluminium plate and frame

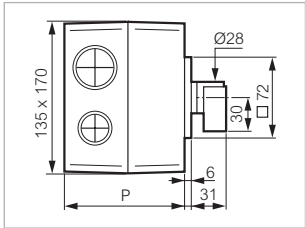
- 1P - 2 contacts
- 2P - 4 contacts
- 3P - 6 contacts
- 4P - 8 contacts



**Designation**

- PR63 2201 C8 BCFQ72MN
- PR63 2202 C8 BCFQ72MN
- PR63 2203 C8 BCFQ72MN
- PR63 2204 C8 BCFQ72MN

- IC01GAQ
- IC02GBQ
- IC03GCQ
- IC04GDQ**

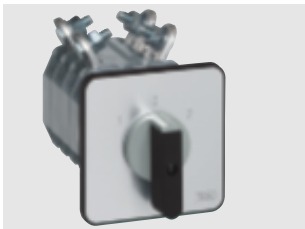


**Dimensions in mm**  
\*P: 107 (1 TO 4 CONTACTS)  
145 (5 TO 8 CONTACTS)

**PR 125 - 160 A (AC21)**

**2-screw panel mount - interval: 50 mm**

**Cat. No.**



LC02GQ9

Grey/black large handle  
□ 96 aluminium plate and frame

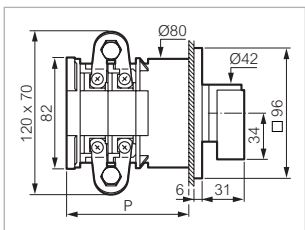
- 1P - 2 contacts
- 2P - 4 contacts
- 3P - 6 contacts
- 4P - 8 contacts



**Designation**

- PR125 2201 C8 E Q96GN
- PR125 2202 C8 E Q96GN
- PR125 2203 C8 E Q96GN
- PR125 2204 C8 E Q96GN

- LC01GQ9
- LC02GQ9
- LC03GQ9
- LC04GQ9



**Dimensions in mm**  
\*P: 80 (1-2 CONTACTS)  
120 (3-4 CONTACTS)  
160 (5-6 CONTACTS)  
200 (7-8 CONTACTS)

\*P = Depth

# Cam switches

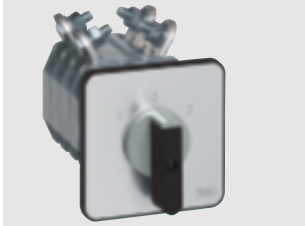
 Characteristics (p. 213)

## ▶ CHANGE-OVER SWITCH WITH “OFF” POSITION (CONTINUED)

**PR 160 - 200 A (AC21)**

**2-screw panel mount - interval: 50 mm**

Cat. No.



MC02GQ9

Grey/black large handle  
 96 aluminium plate and frame

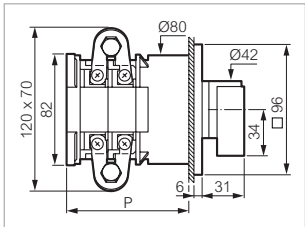
1P - 2 contacts  
 2P - 4 contacts  
 3P - 6 contacts  
 4P - 8 contacts



**Designation**

PR160 2201 C8 E Q96GN  
 PR160 2202 C8 E Q96GN  
 PR160 2203 C8 E Q96GN  
 PR160 2204 C8 E Q96GN

MC01GQ9  
 MC02GQ9  
 MC03GQ9  
 MC04GQ9



**Dimensions in mm**

\*P: 80 (1-2 CONTACTS)  
 120 (3-4 CONTACTS)  
 160 (5-6 CONTACTS)  
 200 (7-8 CONTACTS)

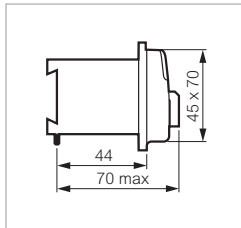
**PR 12 - 16 A (AC21)**

**Modular in panel DIN rail mounting**

Cat. No.



NDF15



Small grey handle

2P - 4 contacts



**Designation**

PR12 2202 C8 DF

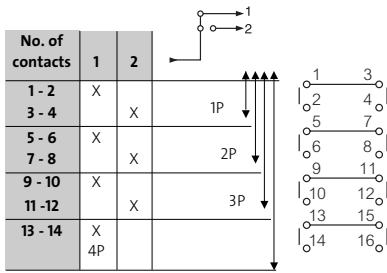
**NDF15**

\*P = Depth

# Cam switches

 Characteristics (p. 213)

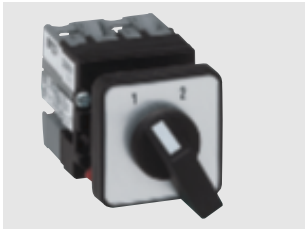
## ► CHANGE-OVER SWITCH WITHOUT "OFF" POSITION



### MINI CAM SWITCH - 10 A (AC21)

∅ 16 and ∅ 22 mm single hole front mounting

Cat. No.



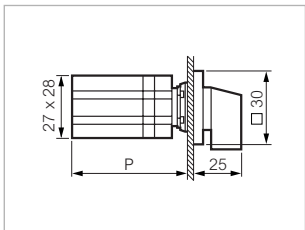
223511

30 aluminium plate and frame

- 1P - 2 contacts
- 2P - 4 contacts
- 3P - 6 contacts
- 4P - 8 contacts



- 223511**
- 223512**
- 223513**
- 223514**



#### Dimensions in mm

- \*P: 50 (1-2 CONTACTS)
- 62 (3-4 CONTACTS)
- 74 (5-6 CONTACTS)
- 86 (7-8 CONTACTS)

### PR 12 - 16 A (AC21)

2-screw panel mount – interval: 30 mm

Cat. No.



NC53DQ1

#### Designation

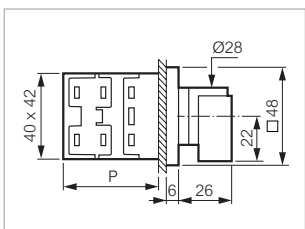
- Grey/black small handle
- 48 aluminium plate and frame

- 1P - 2 contacts
- 2P - 4 contacts
- 3P - 6 contacts
- 4P - 8 contacts



- PR12 2251 D4 E Q48PN
- PR12 2252 D4 E Q48PN
- PR12 2253 D4 E Q48PN
- PR12 2254 D4 E Q48PN

- NC51DQ1**
- NC52DQ1**
- NC53DQ1**
- NC54DQ1**



#### Dimensions in mm

- \*P: 36 (1-2 CONTACTS)
- 46 (3-4 CONTACTS)
- 56 (5-6 CONTACTS)
- 66 (7-8 CONTACTS)

\*P = Depth

Catalogue No. in bold: normally in stock at distribution outlets

# Cam switches

 Characteristics (p. 213)

## ► CHANGE-OVER SWITCH WITHOUT “OFF” POSITION (CONTINUED)

PR 12 - 16 A (AC21)

∅ 22 single hole front mounting

Cat. No.



NC53DX80

Grey/black small handle  
 48 aluminium plate and frame

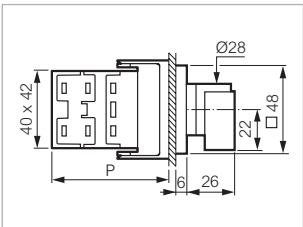
**Designation**

1P - 2 contacts  
 2P - 4 contacts  
 3P - 6 contacts  
 4P - 8 contacts



PR12 2251 D4 E N48MD50  
 PR12 2252 D4 E N48MD50  
 PR12 2253 D4 E N48MD50  
 PR12 2254 D4 E N48MD50

NC51DX80  
 NC52DX80  
**NC53DX80**  
**NC54DX80**



**Dimensions in mm**

\*P: 51 (1-2 CONTACTS)  
 61 (3-4 CONTACTS)  
 71 (5-6 CONTACTS)  
 81 (7-8 CONTACTS)

PR 12 - 16 A (AC21)

∅ 22 single hole front mounting

Cat. No.



NC52DC113

Black handle  
 Matt chrome plastic bezel

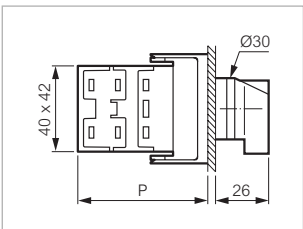
**Designation**

1P - 2 contacts  
 2P - 4 contacts  
 3P - 6 contacts  
 4P - 8 contacts



PR12 2251 D4 E C21RA03  
 PR12 2252 D4 E C21RA03  
 PR12 2253 D4 E C21RA03  
 PR12 2254 D4 E C21RA03

NC51DC113  
 NC52DC113  
 NC53DC113  
 NC54DC113



**Dimensions in mm**

\*P: 51 (1-2 CONTACTS)  
 61 (3-4 CONTACTS)  
 71 (5-6 CONTACTS)  
 81 (7-8 CONTACTS)

\*P = Depth



# Cam switches



Characteristics (p. 213)

## ► CHANGE-OVER SWITCH WITHOUT “OFF” POSITION (CONTINUED)

### PR 12 - 16 A (AC21)

Enclosure

Cat. No.



NC51DXQ

Black small handle  
□ 64 aluminium plate

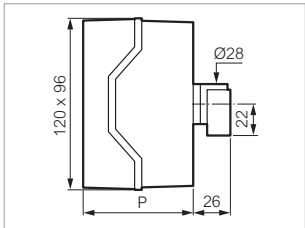
1P - 2 contacts  
2P - 4 contacts  
3P - 6 contacts  
4P - 8 contacts



#### Designation

PR12 2251 D4 BCQ3  
PR12 2252 D4 BCQ3  
PR12 2253 D4 BCQ3  
PR12 2254 D4 BCQ3

NC51DXQ  
NC52DXQ  
NC53DXQ  
NC54DXQ

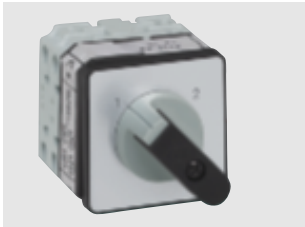


**Dimensions in mm**  
\*P: 77 (1 TO 6 CONTACTS)  
101 (7 TO 8 CONTACTS)

### PR 17 - 20 A (AC21)

2-screw panel mount – interval: 30 mm

Cat. No.



SC52DQ1

Grey/black small handle  
□ 48 aluminium plate and frame

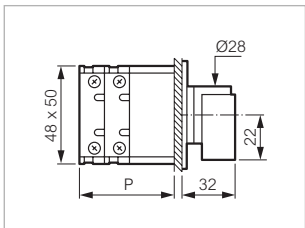
1P - 2 contacts  
2P - 4 contacts  
3P - 6 contacts  
4P - 8 contacts



#### Designation

PR17 2251 D4 E Q48PN  
PR17 2252 D4 E Q48PN  
PR17 2253 D4 E Q48PN  
PR17 2254 D4 E Q48PN

SC51DQ1  
SC52DQ1  
SC53DQ1  
SC54DQ1



**Dimensions in mm**  
\*P: 33 (1-2 CONTACTS)  
45 (3-4 CONTACTS)  
57 (5-6 CONTACTS)  
69 (7-8 CONTACTS)

\*P = Depth

# Cam switches



Characteristics (p. 213)

## ► CHANGE-OVER SWITCH WITHOUT “OFF” POSITION (CONTINUED)

**PR 17 - 20 A (AC21)**

**Enclosure**

**Cat. No.**



SC51DXQ

Black small handle  
□ 64 aluminium plate

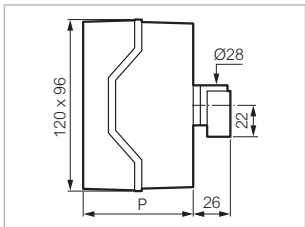
1P - 2 contacts  
2P - 4 contacts  
3P - 6 contacts  
4P - 8 contacts



**Designation**

PR17 2251 D4 BCQ3  
PR17 2252 D4 BCQ3  
PR17 2253 D4 BCQ3  
PR17 2254 D4 BCQ3

SC51DXQ  
SC52DXQ  
SC53DXQ  
SC54DXQ

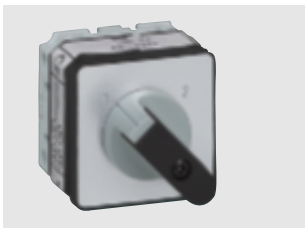


**Dimensions in mm**  
\*P: 77 (1 TO 6 CONTACTS)  
101 (7 TO 8 CONTACTS)

**PR 21 - 25 A (AC21)**

**2-screw panel mount – interval: 30 mm**

**Cat. No.**



TC51DQ1

Grey/black small handle  
□ 48 aluminium plate and frame

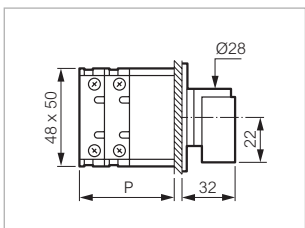
1P - 2 contacts  
2P - 4 contacts  
3P - 6 contacts  
4P - 8 contacts



**Designation**

PR21 2251 D4 E Q48PN  
PR21 2252 D4 E Q48PN  
PR21 2253 D4 E Q48PN  
PR21 2254 D4 E Q48PN

TC51DQ1  
TC52DQ1  
TC53DQ1  
TC54DQ1



**Dimensions in mm**  
\*P: 33 (1-2 CONTACTS)  
45 (3-4 CONTACTS)  
57 (5-6 CONTACTS)  
69 (7-8 CONTACTS)

\*P = Depth

# Cam switches

 Characteristics (p. 213)

## ► CHANGE-OVER SWITCH WITHOUT “OFF” POSITION (CONTINUED)

**PR 21 - 25 A (AC21)** **Enclosure** **Cat. No.**



TC53DXQ

Black small handle  
□ 64 aluminium plate

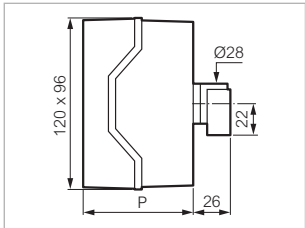
1P - 2 contacts  
2P - 4 contacts  
3P - 6 contacts  
4P - 8 contacts



**Designation**

PR21 2251 D4 BCQ3  
PR21 2252 D4 BCQ3  
PR21 2253 D4 BCQ3  
PR21 2254 D4 BCQ3

TC51DXQ  
TC52DXQ  
TC53DXQ  
TC54DXQ



**Dimensions in mm**  
\*P: 77 (1 TO 6 CONTACTS)  
101 (7 TO 8 CONTACTS)

**PR 26 - 32 A (AC21)** **2-screw panel mount – interval: 30 mm** **Cat. No.**



ZC52DQ7

Grey/black medium handle  
□ 72 aluminium plate and frame

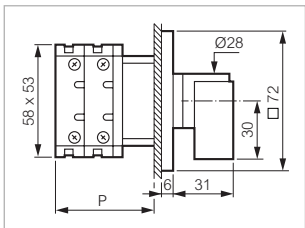
1P - 2 contacts  
2P - 4 contacts  
3P - 6 contacts  
4P - 8 contacts



**Designation**

PR26 2251 D4 E Q72MN  
PR26 2252 D4 E Q72MN  
PR26 2253 D4 E Q72MN  
PR26 2254 D4 E Q72MN

ZC51DQ7  
**ZC52DQ7**  
ZC53DQ7  
ZC54DQ7



**Dimensions in mm**  
\*P: 36 (1-2 CONTACTS)  
51 (3-4 CONTACTS)  
66 (5-6 CONTACTS)  
81 (7-8 CONTACTS)

\*P = Depth

# Cam switches

 Characteristics (p. 213)

## ► CHANGE-OVER SWITCH WITHOUT “OFF” POSITION (CONTINUED)

**PR 26 - 32 A (AC21)**

**Enclosure**

**Cat. No.**



ZC51DXQ

Black small handle  
□ 64 aluminium plate

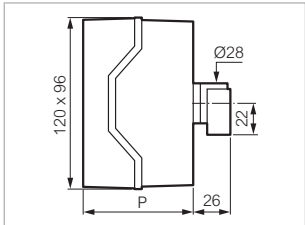
1P - 2 contacts  
2P - 4 contacts  
3P - 6 contacts  
4P - 8 contacts



**Designation**

PR26 2251 D4 BCQ3  
PR26 2252 D4 BCQ3  
PR26 2253 D4 BCQ3  
PR26 2254 D4 BCQ3

ZC51DXQ  
ZC52DXQ  
ZC53DXQ  
ZC54DXQ



**Dimensions in mm**  
\*P: 77 (1 TO 4 CONTACTS)  
101 (5 TO 8 CONTACTS)

**PR 40 - 50 A (AC21)**

**2-screw panel mount - interval: 50 mm**

**Cat. No.**



HC52DQ7

Grey/black medium handle  
□ 72 aluminium plate and frame

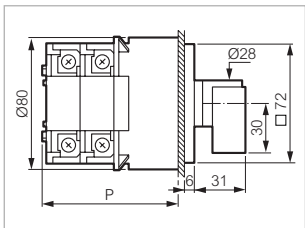
1P - 2 contacts  
2P - 4 contacts  
3P - 6 contacts  
4P - 8 contacts



**Designation**

PR40 2251 D4 E Q72MN  
PR40 2252 D4 E Q72MN  
PR40 2253 D4 E Q72MN  
PR40 2254 D4 E Q72MN

HC51DQ7  
HC52DQ7  
HC53DQ7  
HC54DQ7



**Dimensions in mm**  
\*P: 60 (1-2 CONTACTS)  
80 (3-4 CONTACTS)  
100 (5-6 CONTACTS)  
120 (7-8 CONTACTS)

\*P = Depth

# Cam switches



Characteristics (p. 213)

## ► CHANGE-OVER SWITCH WITHOUT “OFF” POSITION (CONTINUED)

### PR 40 - 50 A (AC21)

Enclosure

Cat. No.



HC52DBQ

Grey/black medium handle  
□ 72 aluminium plate and frame

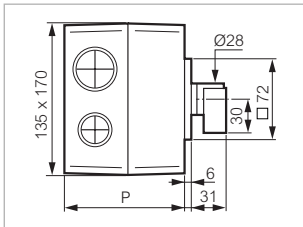
#### Designation

1P - 2 contacts  
2P - 4 contacts  
3P - 6 contacts  
4P - 8 contacts



PR40 2251 D4 BCF Q72MN  
PR40 2252 D4 BCF Q72MN  
PR40 2253 D4 BCF Q72MN  
PR40 2254 D4 BCF Q72MN

HC51DAQ  
HC52DBQ  
HC53DCQ  
HC54DDQ



**Dimensions in mm**  
\*P: 107 (1 TO 4 CONTACTS)  
145 (5 À 8 CONTACTS)

### PR 63 - 63 A (AC21)

2-screw panel mount - interval: 50 mm

Cat. No.



IC51DQ7

Grey/black medium handle  
□ 72 aluminium plate and frame

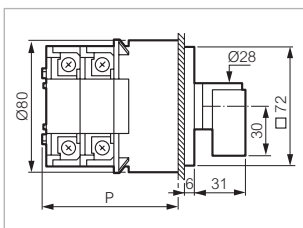
#### Designation

1P - 2 contacts  
2P - 4 contacts  
3P - 6 contacts  
4P - 8 contacts



PR63 2251 D4 E Q72MN  
PR63 2252 D4 E Q72MN  
PR63 2253 D4 E Q72MN  
PR63 2254 D4 E Q72MN

IC51DQ7  
IC52DQ7  
IC53DQ7  
IC54DQ7



**Dimensions in mm**  
\*P: 60 (1-2 CONTACTS)  
80 (3-4 CONTACTS)  
100 (5-6 CONTACTS)  
120 (7-8 CONTACTS)

\*P = Depth

# Cam switches



Characteristics (p. 213)

## ► CHANGE-OVER SWITCH WITHOUT “OFF” POSITION (CONTINUED)

**PR 63 - 63 A (AC21)**

**Enclosure**

**Cat. No.**



IC52DBQ

Grey/black medium handle  
□ 72 aluminium plate and frame

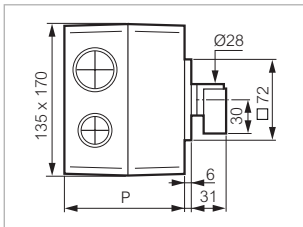
**Designation**

1P - 2 contacts  
2P - 4 contacts  
3P - 6 contacts  
4P - 8 contacts



PR63 2251 D4 BCF Q72MN  
PR63 2252 D4 BCF Q72MN  
PR63 2253 D4 BCF Q72MN  
PR63 2254 D4 BCF Q72MN

IC51DAQ  
IC52DBQ  
IC53DCQ  
IC54DDQ

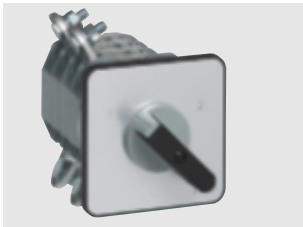


**Dimensions in mm**  
\*P: 107 (1 TO 4 CONTACTS)  
145 (5 À 8 CONTACTS)

**PR 125 - 160 A (AC21)**

**2-screw panel mount - interval: 50 mm**

**Cat. No.**



LC52DQ9

Grey/black large handle  
□ 96 aluminium plate and frame

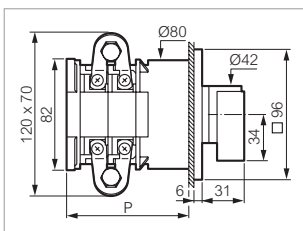
**Designation**

1P - 2 contacts  
2P - 4 contacts  
3P - 6 contacts  
4P - 8 contacts



PR125 2251 D4 E Q96GN  
PR125 2252 D4 E Q96GN  
PR125 2253 D4 E Q96GN  
PR125 2254 D4 E Q96GN

LC51DQ9  
LC52DQ9  
LC53DQ9  
LC54DQ9



**Dimensions in mm**  
\*P: 80 (1-2 CONTACTS)  
120 (3-4 CONTACTS)  
160 (5-6 CONTACTS)  
200 (7-8 CONTACTS)

\*P = Depth

# Cam switches



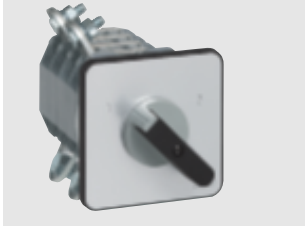
Characteristics (p. 213)

## ► CHANGE-OVER SWITCH WITHOUT “OFF” POSITION (CONTINUED)

PR 160 - 200 A (AC21)

2-screw panel mount - interval: 50 mm

Cat. No.



MC52DQ9

Grey/black large handle  
 □ 96 aluminium plate and frame

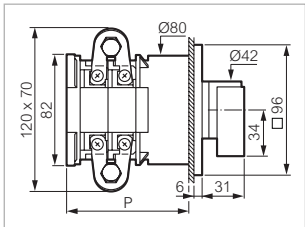
### Designation

- 1P - 2 contacts
- 2P - 4 contacts
- 3P - 6 contacts
- 4P - 8 contacts



- PR160 2251 D4 E Q96GN
- PR160 2252 D4 E Q96GN
- PR160 2253 D4 E Q96GN
- PR160 2254 D4 E Q96GN

- MC51DQ9
- MC52DQ9
- MC53DQ9
- MC54DQ9



### Dimensions in mm

- \*P: 80 (1-2 CONTACTS)
- 120 (3-4 CONTACTS)
- 160 (5-6 CONTACTS)
- 200 (7-8 CONTACTS)

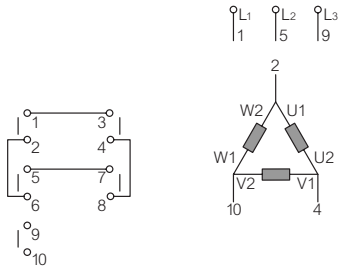
\*P = Depth

# Cam switches

 Characteristics (p. 213)

## ▶ 3 PHASE MOTOR SWITCH, FORWARD/REVERSE, 1 SPEED

No. of contacts	REV	0	FWD
1-2	X		
3-4			X
5-6			X
7-8	X		
9-10	X		X



### PR 12 - 16 A (AC21)

2-screw panel mount – interval: 30 mm

Cat. No.



NZ11GQ1

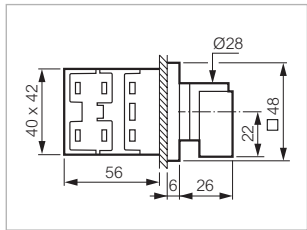
**Designation**  
 Grey/black small handle  
 □ 48 aluminium plate and frame  
 P= 4 kW in 400 V

5 contacts



PR12 9151 C8 E Q48PN

**NZ11GQ1**



### PR 12 - 16 A (AC21)

Enclosure

Cat. No.



NZ11GXQ

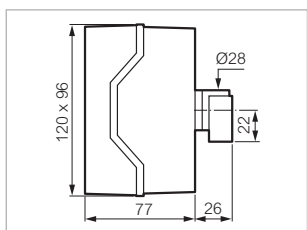
**Designation**  
 Black small handle  
 □ 64 aluminium plate  
 P= 4 kW in 400 V

5 contacts



PR12 9151 C8 BCQ3

**NZ11GXQ**



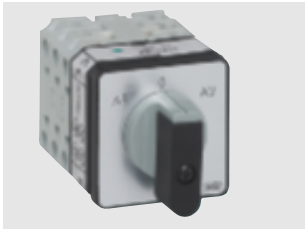


# Cam switches

 Characteristics (p. 213)

## ► 3 PHASE MOTOR SWITCH, FORWARD/REVERSE, 1 SPEED (CONTINUED)

**PR 17 - 20 A (AC21)** **2-screw panel mount – interval: 30 mm** **Cat. No.**



SZ11GQ1

**Designation**

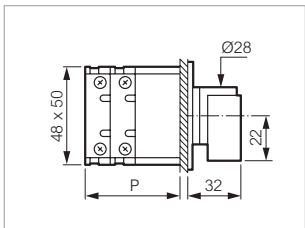
Grey/black small handle  
 □ 48 aluminium plate and frame  
 P= 7.5 kW in 400 V

5 contacts



PR17 9151 C8 E Q48PN

**SZ11GQ1**



**PR 17 - 20 A (AC21)** **Enclosure** **Cat. No.**



SZ11GXQ

**Designation**

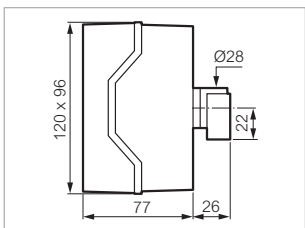
Black small handle  
 □ 64 aluminium plate  
 P= 7.5 kW in 400 V

5 contacts



PR17 9151 C8 BCQ3

**SZ11GXQ**

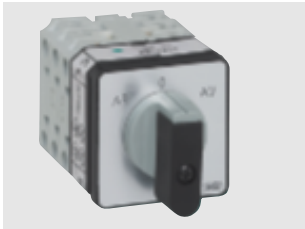


# Cam switches

 Characteristics (p. 213)

## ▶ 3 PHASE MOTOR SWITCH, FORWARD/REVERSE, 1 SPEED (CONTINUED)

**PR 21 - 25 A (AC21)** **2-screw panel mount – interval: 30 mm** **Cat. No.**



TZ11GQ1

**Designation**

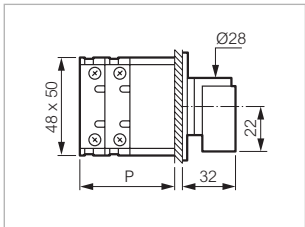
Grey/black small handle  
 □ 48 aluminium plate and frame  
 P= 7,5 kW in 400 V

5 contacts



PR21 9151 C8 E Q48PN

TZ11GQ1



**PR 21 - 25 A (AC21)** **Enclosure** **Cat. No.**



TZ11GXQ

**Designation**

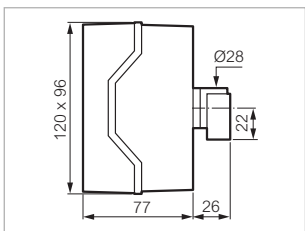
Black small handle  
 □ 64 aluminium plate  
 P= 7,5 kW in 400 V

5 contacts



PR21 9151 C8 BCQ3

TZ11GXQ



# Cam switches

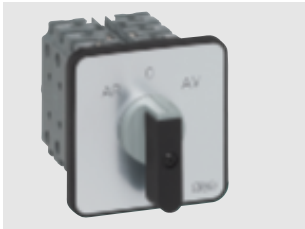
 Characteristics (p. 213)

## ► 3 PHASE MOTOR SWITCH, FORWARD/REVERSE, 1 SPEED (CONTINUED)

**PR 26 - 32 A (AC21)**

**2-screw panel mount – interval: 30 mm**

**Cat. No.**



**Designation**

Grey/black medium handle  
 □ 72 aluminium plate and frame  
 P= 11 kW in 400 V

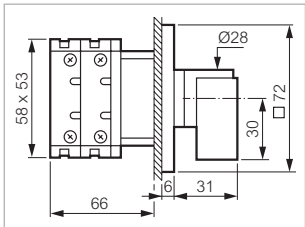
5 contacts



PR26 9151 C8 E Q72MN

ZZ11GQ7

ZZ11GQ7



**PR 26 - 32 A (AC21)**

**Enclosure**

**Cat. No.**



**Designation**

Black small handle  
 □ 64 aluminium plate  
 P= 11 kW in 400 V

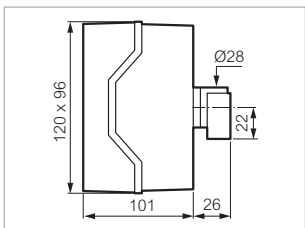
5 contacts



PR26 9151 C8 BCQ3

ZZ11GXQ

ZZ11GXQ



# Cam switches

 Characteristics (p. 213)

## ► 3 PHASE MOTOR SWITCH, FORWARD/REVERSE, 1 SPEED (CONTINUED)

**PR 40 - 50 A (AC21)** **2-screw panel mount - interval: 50 mm** **Cat. No.**



HZ11GQ7

Grey/black medium handle  
 □ 72 aluminium plate and frame  
 P= 18.5 kW in 400 V

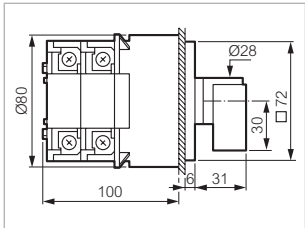
5 contacts



**Designation**

PR40 9151 C8 E Q72MN

HZ11GQ7



**PR 40 - 50 A (AC21)** **Enclosure** **Cat. No.**



HZ11GCQ

Grey/black medium handle  
 □ 72 aluminium plate and frame  
 P= 18.5 kW in 400 V

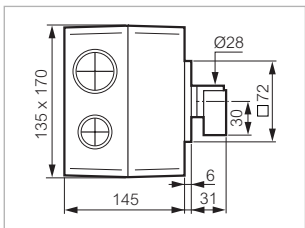
5 contacts



**Designation**

PR40 9151 C8 BCF Q72MN

HZ11GCQ



# Cam switches

 Characteristics (p. 213)

## ► 3 PHASE MOTOR SWITCH, FORWARD/REVERSE, 1 SPEED (CONTINUED)

PR 63 - 63 A (AC21)

2-screw panel mount - interval: 50 mm

Cat. No.



IZ11GQ7

Grey/black medium handle  
 □ 72 aluminium plate and frame  
 P= 22 kW in 400 V

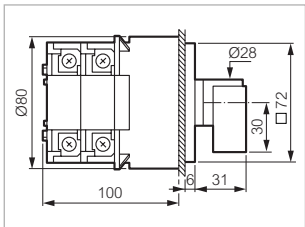
5 contacts



**Designation**

PR63 9151 C8 E Q72MN

IZ11GQ7



PR 63 - 63 A (AC21)

Enclosure

Cat. No.



IZ11GXQ

Grey/black medium handle  
 □ 72 aluminium plate and frame  
 P= 22 kW in 400 V

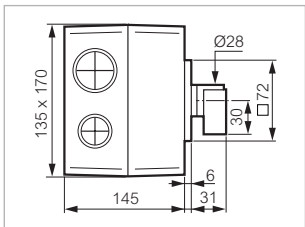
5 contacts



**Designation**

PR63 9151 C8 BCF Q72MN

IZ11GXQ

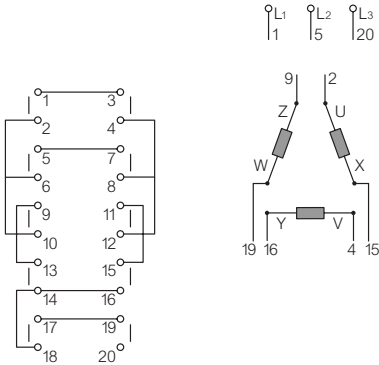


# Cam switches

 Characteristics (p. 213)

► 1 SPEED STARTER, FORWARD/REVERSE - 3 PHASE MOTOR

No. of contacts	REV			FWD	
	Δ	Y	0	Δ	Y
1 - 2				X	X
3 - 4	X	X			
5 - 6	X	X			
7 - 8				X	X
9 - 10	X				X
11 - 12	X				X
13 - 14		X	X		
15 - 16		X	X		
17 - 18	X			X	X
19 - 20	X	X		X	X



PR 12 - 16 A (AC21)

2-screw panel mount – interval: 30 mm

Cat. No.



NZ13GQ1

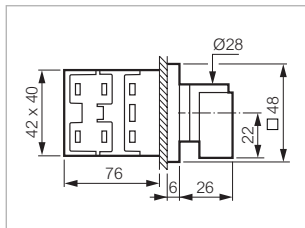
**Designation**  
 Grey/black small handle  
 48 aluminium plate and frame  
 P= 4 kW in 400 V

10 contacts



PR12 9153 C8 E Q48PN

NZ13GQ1



# Cam switches

 Characteristics (p. 213)

## ► 1 SPEED STARTER, FORWARD/REVERSE - 3 PHASE MOTOR (CONTINUED)

**PR 12 - 16 A (AC21)** **Enclosure** **Cat. No.**



NZ13GXQ

Black small handle  
 64 aluminium plate  
 P= 4 kW in 400 V

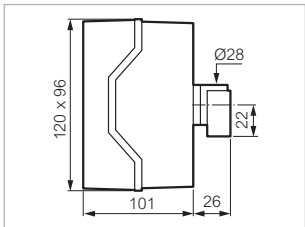
10 contacts



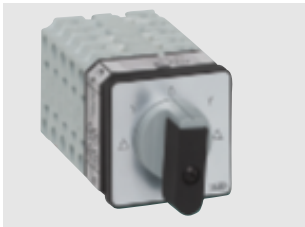
**Designation**

PR12 9153 C8 BCQ3

NZ13GXQ



**PR 17 - 20 A (AC21)** **2-crew panel mount – interval: 30 mm** **Cat. No.**



SZ13GQ1

Grey/black small handle  
 48 aluminium plate and frame  
 P= 7,5 kW in 400 V

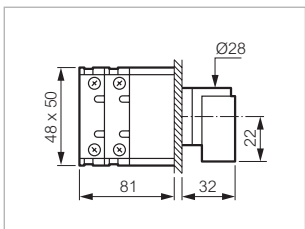
10 contacts



**Designation**

PR17 9153 C8 E Q48PN

SZ13GQ1



# Cam switches

 Characteristics (p. 213)

## ▶ 1 SPEED STARTER, FORWARD/REVERSE - 3 PHASE MOTOR (CONTINUED)

**PR 17 - 20 A (AC21)** **Enclosure** **Cat. No.**



SZ13GXQ

Black small handle  
 □ 64 aluminium plate  
 P= 7,5 kW in 400 V

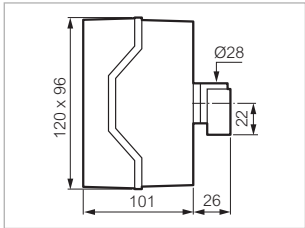
10 contacts



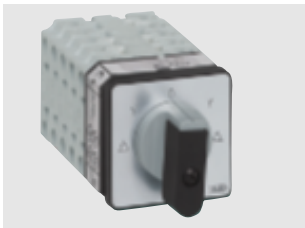
**Designation**

PR17 9153 C8 BCQ3

SZ13GXQ



**PR 21 - 25 A (AC21)** **2-screw panel mount – interval: 30 mm** **Cat. No.**



TZ13GQ1

Grey/black small handle  
 □ 48 aluminium plate and frame  
 P= 7,5 kW in 400 V

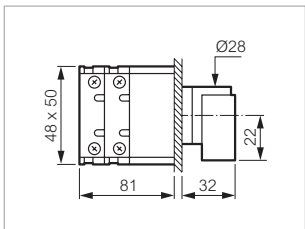
10 contacts



**Designation**

PR21 9153 C8 E Q48PN

TZ13GQ1





# Cam switches



Characteristics (p. 213)

## ► 1 SPEED STARTER, FORWARD/REVERSE - 3 PHASE MOTOR (CONTINUED)

**PR 21 - 25 A (AC21)**

**Enclosure**

**Cat. No.**



TZ13GXQ

Black small handle  
 □ 64 aluminium plate  
 P= 7.5 kW in 400 V

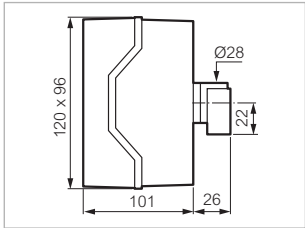
10 contacts



**Designation**

PR21 9153 C8 BCQ3

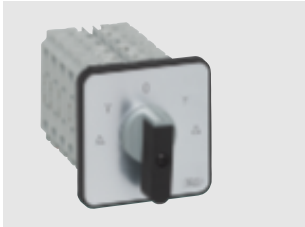
TZ13GXQ



**PR 26 - 32 A (AC21)**

**2-screw panel mount – interval: 30 mm**

**Cat. No.**



ZZ13GQ7

Grey/black medium handle  
 □ 72 aluminium plate and frame  
 P= 11 kW in 400 V

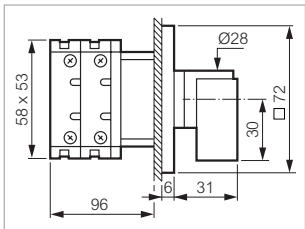
10 contacts



**Designation**

PR26 9153 C8 E Q72MN

ZZ13GQ7



# Cam switches

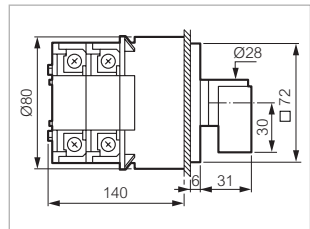
 Characteristics (p. 213)

## ► 1 SPEED STARTER, FORWARD/REVERSE - 3 PHASE MOTOR (CONTINUED)

**PR 40 - 50 A (AC21)** **2-screw panel mount - interval: 50 mm** **Cat. No.**



HZ13GQ7



**2-screw panel mount - interval: 50 mm** **Cat. No.**

**Designation**

Grey/black medium handle  
 □ 72 aluminium plate and frame  
 P= 18,5 kW in 400 V

10 contacts



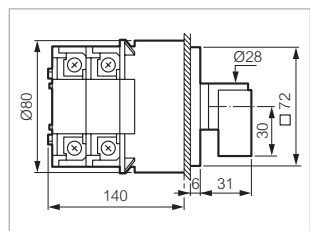
PR40 9153 C8 E Q72MN

HZ13GQ7

**PR 63 - 63 A (AC21)** **2-screw panel mount - interval: 50 mm** **Cat. No.**



IZ13GQ7



**Designation**

Grey/black medium handle  
 □ 72 aluminium plate and frame  
 P= 22 kW in 400 V

10 contacts



PR63 9153 C8 E Q72MN

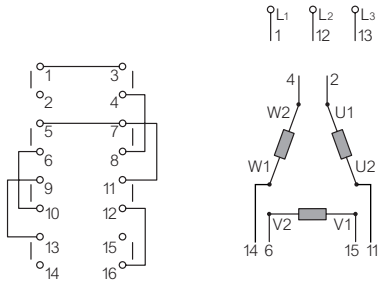
IZ13GQ7

# Cam switches

 Characteristics (p. 213)

► 1 SPEED STARTER, 1 WAY - 3 PHASE MOTOR

No. of contacts	0	Y	Δ
1 - 2		X	X
3 - 4		X	
5 - 6	X	X	
7 - 8	X	X	
9 - 10			X
11 - 12			X
13 - 14	X	X	
15 - 16	X	X	



**PR 12 - 16 A (AC21)**

2- screw panel mount – interval: 30 mm

Cat. No.



NZ51BQ1

**Designation**

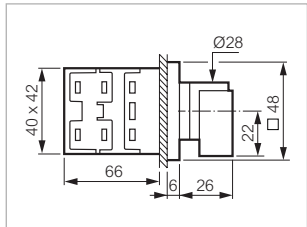
Grey/black small handle  
 48 aluminium plate and frame  
 P= 4 kW in 400 V

8 contacts



PR12 9551 B4 E Q48PN

NZ51BQ1



**PR 12 - 16 A (AC21)**

Enclosure

Cat. No.



NZ51BXQ

**Designation**

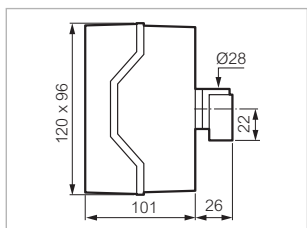
Black small handle  
 64 aluminium plate  
 P= 4 kW in 400 V

8 contacts



PR12 9551 B4 BCQ3

NZ51BXQ



# Cam switches



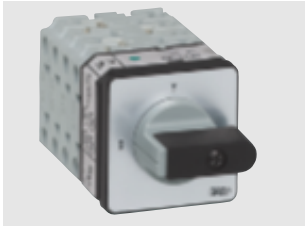
Characteristics (p. 213)

## ► 1 SPEED STARTER, 1 WAY - 3 PHASE MOTOR (CONTINUED)

**PR 17 - 20 A (AC21)**

**2-screw panel mount – interval: 30 mm**

**Cat. No.**



**Designation**

Grey/black small handle  
 □ 48 aluminium plate and frame  
 P= 7.5 kW in 400 V

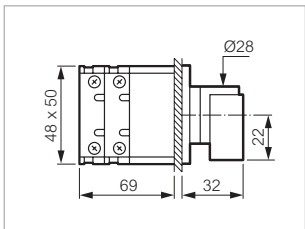
8 contacts



PR17 9551 B4 E Q48PN

SZ51BQ1

SZ51BQ1



**PR 17 - 20 A (AC21)**

**Enclosure**

**Cat. No.**



**Designation**

Black small handle  
 □ 64 aluminium plate  
 P= 7.5 kW in 400 V

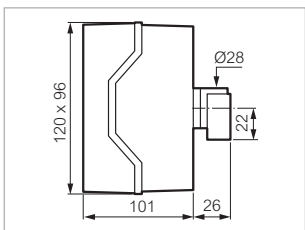
8 contacts



PR17 9551 B4 BCQ3

SZ51BXQ

SZ51BXQ



# Cam switches

 Characteristics (p. 213)

► 1 SPEED STARTER, 1 WAY - 3 PHASE MOTOR (CONTINUED)


**PR 21 - 25 A (AC21)** **2-screw panel mount – interval: 30 mm** **Cat. No.**

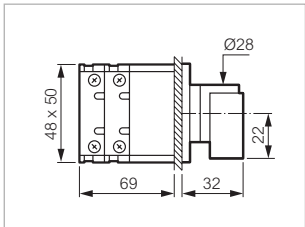


TZ51BQ1

**Designation**

Grey/black small handle  
 □ 48 aluminium plate and frame  
 P= 7.5 kW in 400 V

8 contacts  PR21 9551 B4 E Q48PN TZ51BQ1




**PR 21 - 25 A (AC21)** **Enclosure** **Cat. No.**

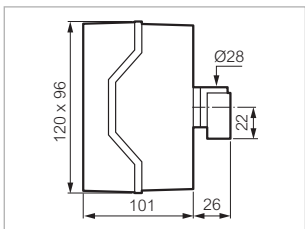


TZ51BXQ

**Designation**

Black small handle  
 □ 64 aluminium plate  
 P= 7.5 kW in 400 V

8 contacts  PR21 9551 B4 BCQ3 TZ51BXQ



# Cam switches

 Characteristics (p. 213)

► 1 SPEED STARTER, 1 WAY - 3 PHASE MOTOR (CONTINUED)

PR 26 - 32 A (AC21)

2-screw panel mount – interval: 30 mm

Cat. No.



ZZ51BQ7

Grey/black medium handle  
 □ 72 aluminium plate and frame  
 P= 11 kW in 400 V

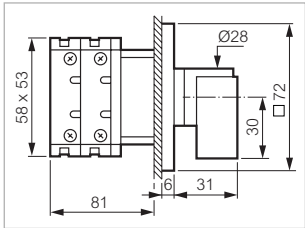
8 contacts



**Designation**

PR26 9551 B4 E Q72MN

ZZ51BQ7



PR 26 - 32 A (AC21)

Enclosure

Cat. No.



ZZ51BXQ

Black small handle  
 □ 64 aluminium plate  
 P= 11 kW in 400 V

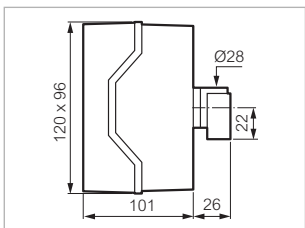
8 contacts



**Designation**

PR26 9551 B4 BCQ3

ZZ51BXQ



# Cam switches

 Characteristics (p. 213)

## ► 1 SPEED STARTER, 1 WAY - 3 PHASE MOTOR (CONTINUED)

**PR 40 - 50 A (AC21)**

**2-screw panel mount - interval: 50 mm**

**Cat. No.**



HZ51BQ7

Grey/black medium handle  
 □ 72 aluminium plate and frame  
 P= 18.5 kW in 400 V

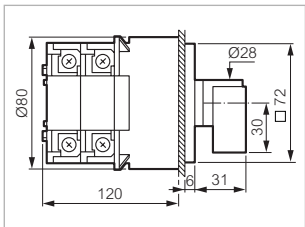
8 contacts



**Designation**

PR40 9551 B4 E Q72MN

HZ51BQ7



**PR 40 - 50 A (AC21)**

**Enclosure**

**Cat. No.**



HZ51BDQ

Grey/black medium handle  
 □ 72 aluminium plate and frame  
 P= 18.5 kW in 400 V

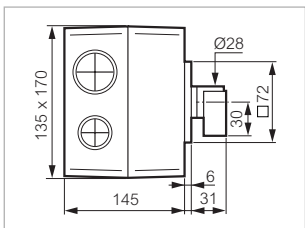
8 contacts



**Designation**

PR40 9551 B4 BCF Q72MN

HZ51BDQ



# Cam switches



Characteristics (p. 213)

## ► 1 SPEED STARTER, 1 WAY - 3 PHASE MOTOR (CONTINUED)

**PR 63 - 63 A (AC21)**

**2-screw panel mount - interval: 50 mm**

**Cat. No.**



**Designation**

Grey/black medium handle  
 □ 72 aluminium plate and frame  
 P= 22 kW in 400 V

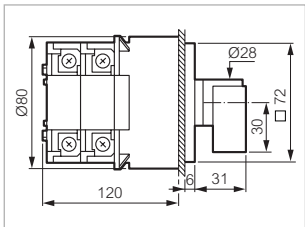
8 contacts



PR63 9551 B4 E Q72MN

IZ51BQ7

IZ51BQ7



**PR 63 - 63 A (AC21)**

**Enclosure**

**Cat. No.**



**Designation**

Grey/black medium handle  
 □ 72 aluminium plate and frame  
 P= 22 kW in 400 V

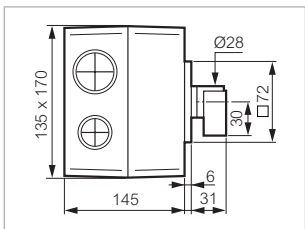
8 contacts



PR63 9551 B4 BCF Q72MN

IZ51BDQ

HZ51BDQ



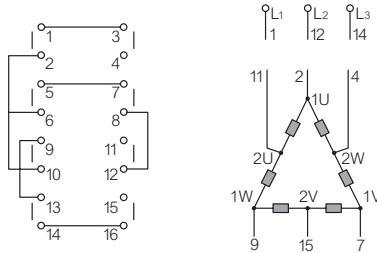


# Cam switches

 Characteristics (p. 213)

## ► 2 SPEEDS, 1 WAY – 3 PHASE DALHANDER MOTOR

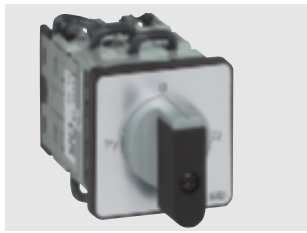
No. of contacts	LS	0	HS	No. of contacts	0	LS	HS
1 - 2	X			1 - 2		X	
3 - 4			X	3 - 4			X
5 - 6			X	5 - 6			X
7 - 8	X			7 - 8		X	
9 - 10			X	9 - 10			X
11 - 12			X	11 - 12			X
13 - 14	X			13 - 14		X	
15 - 16			X	15 - 16			X



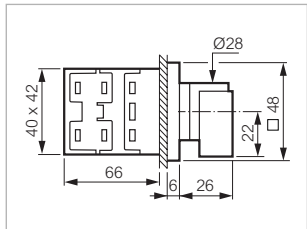
### PR 12 - 16 A (AC21)

2-screw panel mount – interval: 30 mm

Cat. No.



NZ52CQ1



#### Designation

Grey/black small handle  
 48 aluminium plate and frame  
 P= 4 kW in 400 V

8 contacts



PR12 9552 B4 E Q48PN

NZ52BQ1

8 contacts



PR12 9552 C4 E Q48PN

NZ52CQ1

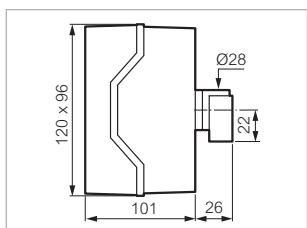
### PR 12 - 16 A (AC21)

Enclosure

Cat. No.



NZ52CXQ



#### Designation

Black small handle  
 64 aluminium plate  
 P= 4 kW in 400 V

8 contacts



PR12 9552 B4 BCQ3

NZ52BXQ

8 contacts



PR12 9552 C4 BCQ3

NZ52CXQ

# Cam switches

 Characteristics (p. 213)

## ► 2 SPEEDS, 1 WAY – 3 PHASE DALHANDER MOTOR (CONTINUED)

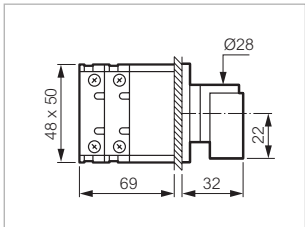
PR 17 - 20 A (AC21)

2-screw panel mount – interval: 30 mm

Cat. No.



SZ52BQ1



**Designation**

Grey/black small handle  
 □ 48 aluminium plate and frame  
 P= 7.5 kW in 400 V

8 contacts



PR17 9552 B4 E Q48PN

**SZ52BQ1**

8 contacts



PR17 9552 C4 E Q48PN

**SZ52CQ1**

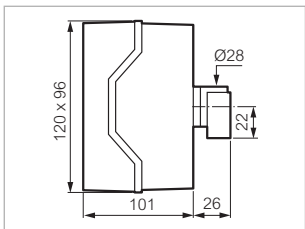
PR 17 - 20 A (AC21)

Enclosure

Cat. No.



SZ52BXQ



**Designation**

Black small handle  
 □ 64 aluminium plate  
 P= 7.5 kW in 400 V

8 contacts



PR17 9552 B4 BCQ3

**SZ52BXQ**

8 contacts



PR17 9552 C4 BCQ3

**SZ52CXQ**

# Cam switches

 Characteristics (p. 213)

## ► 2 SPEEDS, 1 WAY – 3 PHASE DALHANDER MOTOR (CONTINUED)

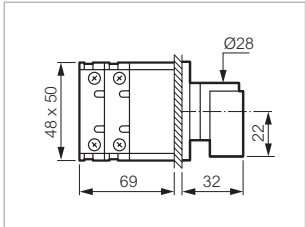
PR 21 - 25 A (AC21)

2-screw panel mount – interval: 30 mm

Cat. No.



TZ52BQ1



**Designation**

Grey/black small handle  
 □ 48 aluminium plate and frame  
 P= 7.5 kW in 400 V

8 contacts



PR21 9552 B4 E Q48PN

TZ52BQ1

8 contacts



PR21 9552 C4 E Q48PN

TZ52CQ1

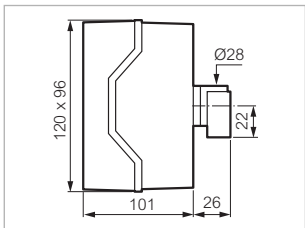
PR 21 - 25 A (AC21)

Enclosure

Cat. No.



TZ52BXQ



**Designation**

Black small handle  
 □ 64 aluminium plate  
 P= 7.5 kW in 400 V

8 contacts



PR21 9552 B4 BCQ3

TZ52BXQ

8 contacts



PR21 9552 C4 BCQ3

TZ52CXQ

# Cam switches

 Characteristics (p. 213)

## ► 2 SPEEDS, 1 WAY – 3 PHASE DALHANDER MOTOR (CONTINUED)

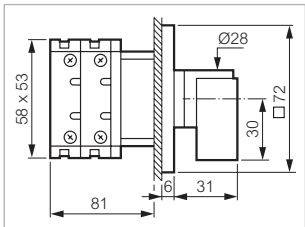
**PR 26 - 32 A (AC21)**

**2-screw panel mount – interval: 30 mm**

**Cat. No.**



ZZ52BQ7



**Designation**

Grey/black medium handle  
 □ 72 aluminium plate and frame  
 P= 11 kW in 400 V

8 contacts



PR26 9552 B4 E Q72MN

ZZ52BQ7

8 contacts



PR26 9552 C4 E Q72MN

ZZ52CQ7

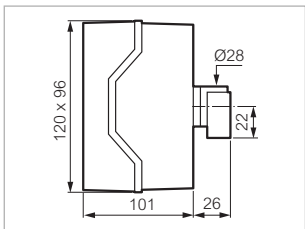
**PR 26 - 32 A (AC21)**

**Enclosure**

**Cat. No.**



ZZ52BXQ



**Designation**

Black small handle  
 □ 64 aluminium plate  
 P= 11 kW in 400 V

8 contacts



PR26 9552 B4 BCQ3

ZZ52BXQ

8 contacts



PR26 9552 C4 BCQ3

ZZ52CXQ

# Cam switches

 Characteristics (p. 213)

## ► 2 SPEEDS, 1 WAY – 3 PHASE DALHANDER MOTOR (CONTINUED)

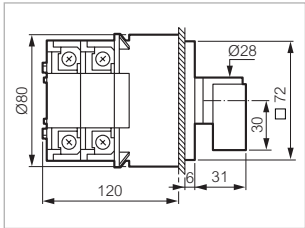
**PR 40 - 50 A (AC21)**

**2-screw panel mount - interval: 50 mm**

**Cat. No.**



HZ52BQ7



**Designation**

Grey/black medium handle  
 □ 72 aluminium plate and frame  
 P= 18.5 kW in 400 V

8 contacts



PR40 9552 B4 E Q72MN

HZ52BQ7

8 contacts



PR40 9552 C4 E Q72MN

HZ52CQ7

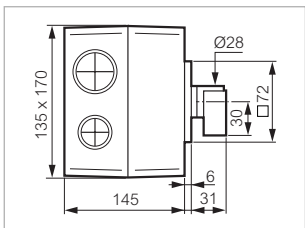
**PR 40 - 50 A (AC21)**

**Enclosure**

**Cat. No.**



HZ52BDQ



**Designation**

Grey/black medium handle  
 □ 72 aluminium plate and frame  
 P= 18.5 kW in 400 V

8 contacts



PR40 9552 B4 BCF Q72MN

HZ52BDQ

8 contacts



PR40 9552 C4 BCF Q72MN

HZ52CDQ

# Cam switches

 Characteristics (p. 213)

## ► 2 SPEEDS, 1 WAY – 3 PHASE DALHANDER MOTOR (CONTINUED)

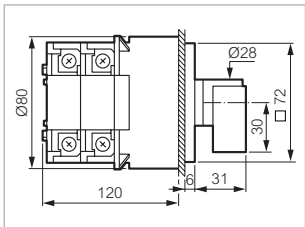
**PR 63 - 63 A (AC21)**

**2-screw panel mount - interval: 50 mm**

**Cat. No.**



IZ52BQ7



**Designation**

Grey/black medium handle  
 □ 72 aluminium plate and frame  
 P= 22 kW in 400 V

8 contacts



PR63 9552 B4 E Q72MN

IZ52BQ7

8 contacts



PR63 9552 C4 E Q72MN

IZ52CQ7

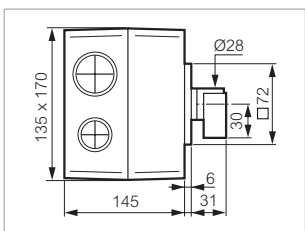
**PR 63 - 63 A (AC21)**

**Enclosure**

**Cat. No.**



IZ52BDQ



**Designation**

Grey/black medium handle  
 □ 72 aluminium plate and frame  
 P= 22 kW in 400 V

8 contacts



PR63 9552 B4 BCF Q72MN

IZ52BDQ

8 contacts



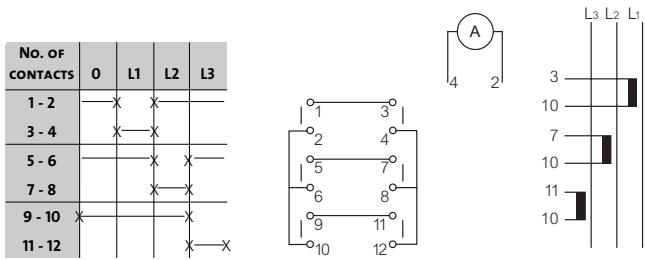
PR63 9552 C4 BCF Q72MN

IZ52CDQ

# Cam switches

 Characteristics (p. 213)

► AMMETER SWITCH, 3 CTS WITH COMMON POINT



**MINI CAM SWITCH - 10 A (AC21)**

Ø 16 or 22 single hole front mounting

Cat. No.



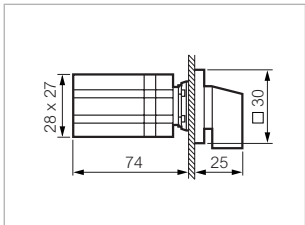
- 30 aluminium plate and frame
- 1 network, 3 wires, 1 ammeter

6 contacts



**223529**

223529



# Cam switches



Characteristics (p. 213)

## ▶ AMMETER SWITCH, 3 CTS WITH COMMON POINT (CONTINUED)

PR 12 - 16 A (AC21)

2-screw panel mount – interval: 30 mm

Cat. No.



NY11AQ1

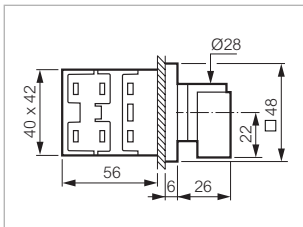
Grey/black small handle  
 □ 48 aluminium plate and frame  
 1 network, 3 wires, 1 ammeter  
 6 contacts



**Designation**

PR12 8151 A4 E Q48PN

**NY11AQ1**



PR 12 - 16 A (AC21)

∅ 22 single hole front mounting

Cat. No.



NY11AX80

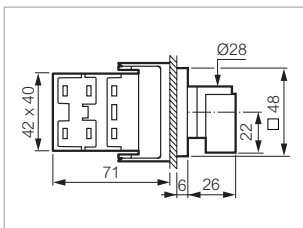
Grey/black small handle  
 □ 48 aluminium plate and frame  
 1 network, 3 wires, 1 ammeter  
 6 contacts



**Designation**

PR12 8151 A4 E N48MD50

**NY11AX80**





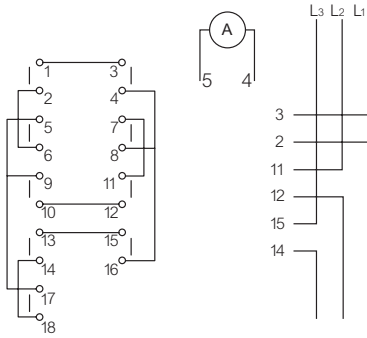
# Cam switches



Characteristics (p. 213)

## ► AMMETER SWITCH, WITHOUT CT

No. of contacts	0	L1	L2	L3
1 - 2	X	X		
3 - 4	X	X		
5 - 6	X	X		
7 - 8		X	X	
9 - 10		X	X	
11 - 12		X	X	
13 - 14	X			
15 - 16			X	X
17 - 18			X	X



### PR 12 - 16 A (AC21)

2-screw panel mount – interval: 30 mm

Cat. No.



NY14AQ1

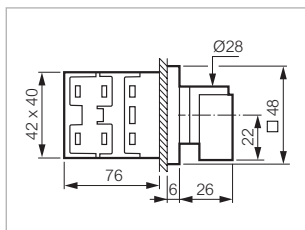
**Designation**  
 Grey/black small handle  
 □ 48 aluminium plate and frame  
 1 network, 3 wires, 1 ammeter

9 contacts



PR12 8164 A4 E Q48PN

NY14AQ1



### PR 12 - 16 A (AC21)

Ø 22 single hole front mounting

Cat. No.



NY14AX80

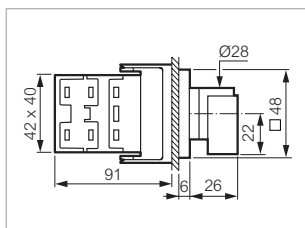
**Designation**  
 Grey/black small handle  
 □ 48 aluminium plate and frame  
 1 network, 3 wires, 1 ammeter

9 contacts



PR12 8164 A4 E N48MD50

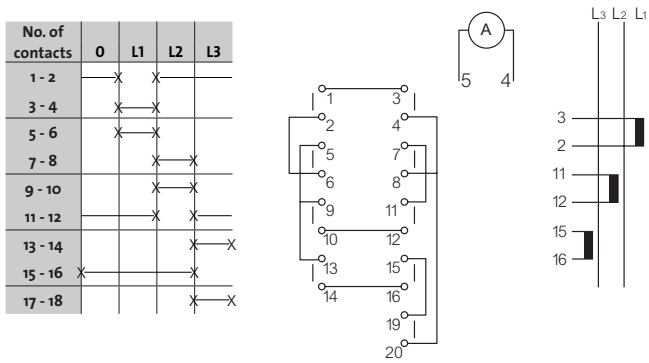
NY14AX80



# Cam switches

 Characteristics (p. 213)

## ▶ AMMETER SWITCH WITHOUT COMMON POINT



**PR 12 - 16 A (AC21)**

2-screw panel mount – interval: 30 mm

Cat. No.



NY17AQ1

**Designation**

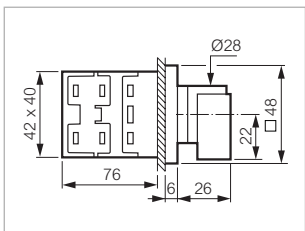
Grey/black small handle  
 □ 48 aluminium plate and frame  
 1 network, 3 wires, 1 ammeter

9 contacts



PR12 8157 A4 E Q48PN

**NY17AQ1**



**PR 12 - 16 A (AC21)**

∅ 22 single hole front mounting

Cat. No.



NY17AX80

**Designation**

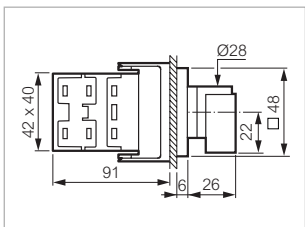
Grey/black small handle  
 □ 48 aluminium plate and frame  
 1 network, 3 wires, 1 ammeter

9 contacts



PR12 8157 A4 E N48MD50

**NY17AX80**

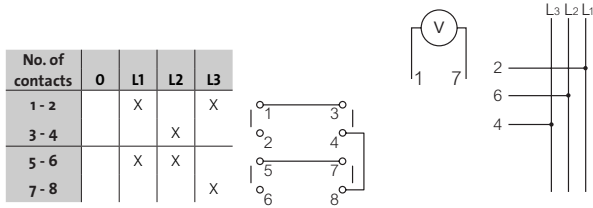


Catalogue No. in bold: normally in stock at distribution outlets

# Cam switches

 Characteristics (p. 213)

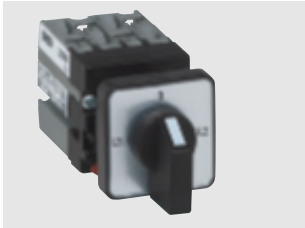
## ▶ VOLTMETER SWITCH, WITHOUT NEUTRAL



**MINI CAM SWITCH - 10 A (AC21)**

**∅ 16 or 22 single hole front mounting**

Cat. No.



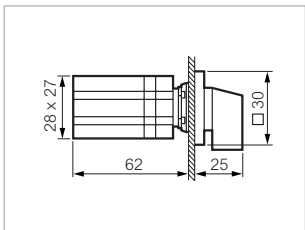
- 30 aluminium plate and frame
- 1 network, 3-phase without neutral
- 1 voltmeter

4 contacts



**223527**

223527



# Cam switches



Characteristics (p. 213)

## ▶ VOLTMETER SWITCH, WITHOUT NEUTRAL (CONTINUED)

PR 12 - 16 A (AC21)

2-screw panel mount – interval: 30 mm

Cat. No.



NY31AQ1

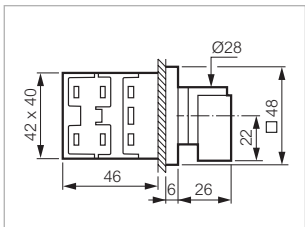
**Designation**  
 Grey/black small handle  
 □ 48 aluminium plate and frame  
 1 network, 3-phase without neutral  
 1 voltmeter

4 contacts



PR12 8351 A4 E Q48PN

**NY31AQ1**



PR 12 - 16 A (AC21)

∅ 22 single hole front mounting

Cat. No.



NY31AX80

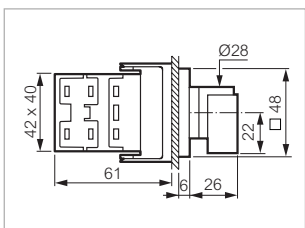
**Designation**  
 Grey/black small handle  
 □ 48 aluminium plate and frame  
 1 network, 3-phase without neutral  
 1 voltmeter

4 contacts




PR12 8351 A4 E N48MD50

**NY31AX80**

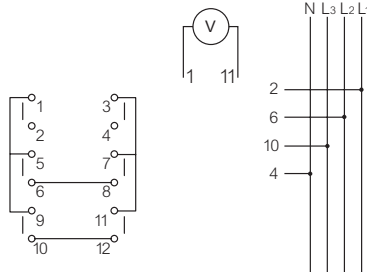


# Cam switches

 Characteristics (p. 213)

## ► VOLTMETER SWITCH, WITH NEUTRAL

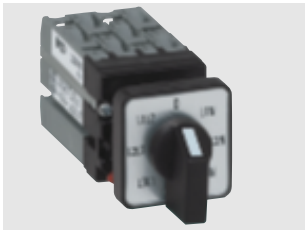
No. of contacts	L3 L1	L2 L2	L1 L3	0 0	L1 N	L2 N	L3 N
1 - 2	X		X		X		
3 - 4					X	X	X
5 - 6		X				X	
7 - 8			X				
9 - 10							X
11 - 12	X	X					



### MINI CAM SWITCH - 10 A (AC21)

Ø 16 or 22 single hole front mounting

Cat. No.



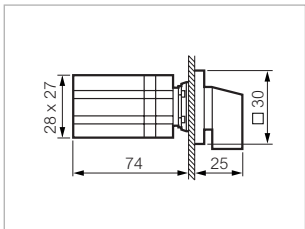
223528

30 aluminium plate and frame  
1 network, 3-phase with neutral,  
1 voltmeter

6 contacts



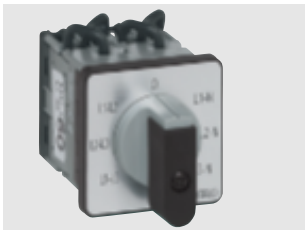
**223528**



### PR 12 - 16 A (AC21)

2-screw panel mount – interval: 30 mm

Cat. No.



NY37GQ1

#### Designation

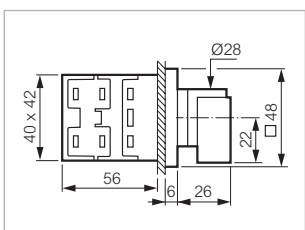
Grey/black small handle  
 48 aluminium plate and frame  
1 network, 3-phase with neutral,  
1 voltmeter

6 contacts



PR12 8357 C8 E Q48PN

**NY37GQ1**



# Cam switches



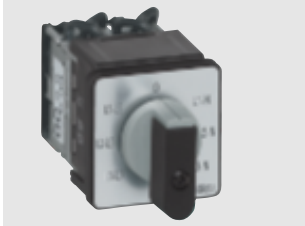
Characteristics (p. 213)

## ► VOLTMETER SWITCH, WITH NEUTRAL (CONTINUED)

PR 12 - 16 A (AC21)

Ø22 single hole front mounting

Cat. No.



NY37GX80

Grey/black small handle  
 □ 48 aluminium plate and frame  
 1 network, 3-phase with neutral,  
 1 voltmeter

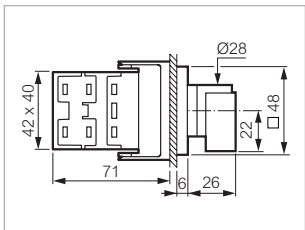
6 contacts



### Designation

PR12 8357 C8 E N48MD50

**NY37GX80**



PR 12 - 16 A (AC21)

Modular in panel DIN rail mounting

Cat. No.



NDF03

Small grey handle  
 1 network, 3-phase with neutral,  
 1 voltmeter

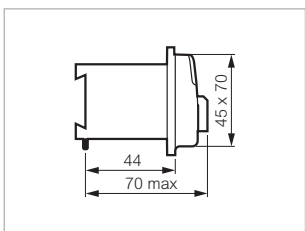
6 contacts



### Designation

PR12 8357 C8 DF

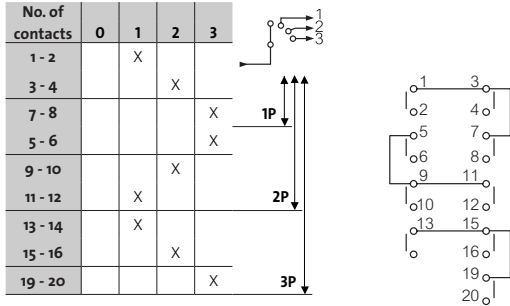
**NDF03**



# Cam switches

 Characteristics (p. 213)

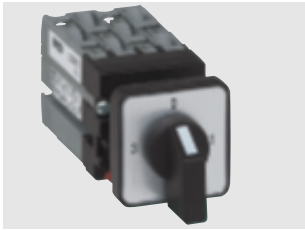
## ► 3-WAY SWITCHES WITH “OFF” POSITION



**MINI CAM SWITCH - 10 A (AC21)**

∅ 16 or 22 single hole front mounting

Cat. No.



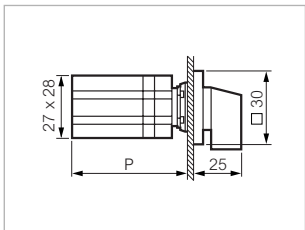
223522

30 aluminium plate and frame

1P -3 contacts  
2P -6 contacts  
3P -9 contacts



**223521**  
**223522**  
**223523**




**Dimensions in mm**

\*P: 62 (3 CONTACTS)  
74 (6 CONTACTS)  
95 (9 CONTACTS)

\*P = Depth

# Cam switches

 Characteristics (p. 213)

## ▶ 3-WAY CAM SWITCHES WITH “OFF” POSITION (CONTINUED)

PR 12 - 16 A (AC21)

2-screw panel mount – interval: 30 mm

Cat. No.



**Designation**

Grey/black small handle  
 □ 48 aluminium plate and frame

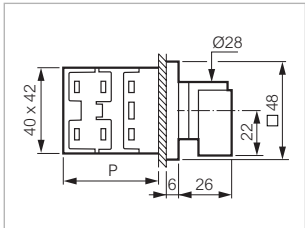
1P - 3 contacts  
 2P - 6 contacts  
 3P - 9 contacts



PR12 2301 A4 E Q48PN  
 PR12 2302 A4 E Q48PN  
 PR12 2303 A4 E Q48PN

**ND01AQ1**  
**ND02AQ1**  
**ND03AQ1**

ND03AQ1



**Dimensions in mm**  
 \*P: 46 (3 CONTACTS)  
 56 (6 CONTACTS)  
 76 (9 CONTACTS)

PR 12 - 16 A (AC21)

∅ 22 single hole front mounting

Cat. No.



**Designation**

Grey/black small handle  
 □ 48 aluminium plate and frame

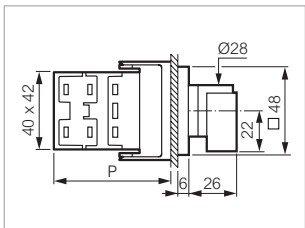
1P - 3 contacts  
 2P - 6 contacts  
 3P - 9 contacts



PR12 2301 A4 E N48MD50  
 PR12 2302 A4 E N48MD50  
 PR12 2303 A4 E N48MD50

**ND01AX80**  
**ND02AX80**  
**ND03AX80**

ND02AX80



**Dimensions in mm**  
 \*P: 61 (3 CONTACTS)  
 71 (6 CONTACTS)  
 91 (9 CONTACTS)

\*P = Depth



# Cam switches



Characteristics (p. 213)

## ▶ 3-WAY CAM SWITCHES WITH “OFF” POSITION (CONTINUED)

PR 12 - 16 A (AC21)

∅ 22 single hole front mounting

Cat. No.



ND01AC113

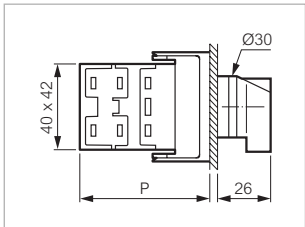
**Designation**  
With selector switch style handle  
Matt chrome plastic bezel

1P - 3 contacts  
2P - 6 contacts  
3P - 9 contacts



PR12 2301 A4 E C21RA03  
PR12 2302 A4 E C21RA03  
PR12 2303 A4 E C21RA03

ND01AC113  
ND02AC113  
ND03AC113

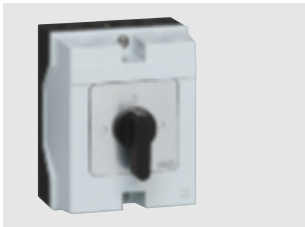


**Dimensions in mm**  
\*P: 61 (3 CONTACTS)  
71 (6 CONTACTS)  
91 (9 CONTACTS)

PR 12 - 16 A (AC21)

Enclosure

Cat. No.



ND02AXQ

Black small handle  
□ 64 aluminium plate

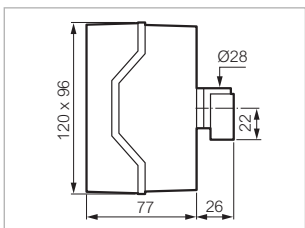
1P - 3 contacts  
2P - 6 contacts  
3P - 9 contacts



**Designation**

PR12 2301 A4 BCQ3  
PR12 2302 A4 BCQ3  
PR12 2303 A4 BCQ3

ND01AXQ  
ND02AXQ  
ND03AXQ



**Dimensions in mm**  
\*P: 77 (3 TO 6 CONTACTS)  
101 (9 CONTACTS)

\*P = Depth

# Cam switches



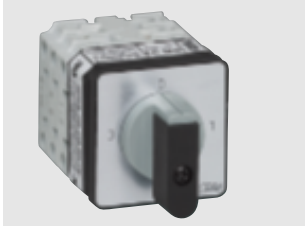
Characteristics (p. 213)

## ▶ 3-WAY CAM SWITCHES WITH “OFF” POSITION (CONTINUED)

PR 17 - 20 A (AC21)

2-screw panel mount – interval: 30 mm

Cat. No.



SD03AQ1

Grey/black small handle  
□ 48 aluminium plate and frame

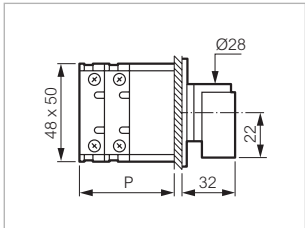
### Designation

1P - 3 contacts  
2P - 6 contacts  
3P - 9 contacts



PR17 2301 A4 E Q48PN  
PR17 2302 A4 E Q48PN  
PR17 2303 A4 E Q48PN

SD01AQ1  
SD02AQ1  
SD03AQ1



### Dimensions in mm

\*P: 45 (3 CONTACTS)  
57 (6 CONTACTS)  
81 (9 CONTACTS)

PR 17 - 20 A (AC21)

Enclosure

Cat. No.



SD02AXQ

Black small handle  
□ 64 aluminium plate

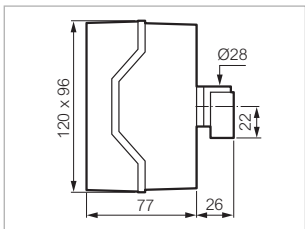
### Designation

1P - 3 contacts  
2P - 6 contacts  
3P - 9 contacts



PR17 2301 A4 BCQ3  
PR17 2302 A4 BCQ3  
PR17 2303 A4 BCQ3

SD01AXQ  
SD02AXQ  
SD03AXQ



### Dimensions in mm

\*P: 77 (3 TO 6 CONTACTS)  
101 (9 CONTACTS)

\*P = Depth

# Cam switches



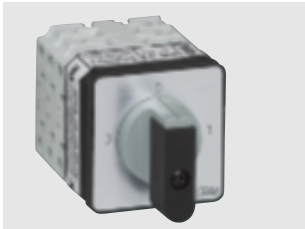
Characteristics (p. 213)

## ► 3-WAY CAM SWITCHES WITH “OFF” POSITION (CONTINUED)

PR 21 - 25 A (AC21)

2-screw panel mount – interval: 30 mm

Cat. No.



### Designation

Grey/black small handle  
□ 48 aluminium plate and frame

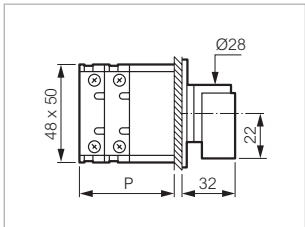
1P - 3 contacts  
2P - 6 contacts  
3P - 9 contacts



PR21 2301 A4 E Q48PN  
PR21 2302 A4 E Q48PN  
PR21 2303 A4 E Q48PN

TD01AQ1  
TD02AQ1  
TD03AQ1

TD02AQ1



### Dimensions in mm

\*P: 45 (3 CONTACTS)  
57 (6 CONTACTS)  
81 (9 CONTACTS)

PR 21 - 25 A (AC21)

Enclosure

Cat. No.



### Designation

Black small handle  
□ 64 aluminium plate

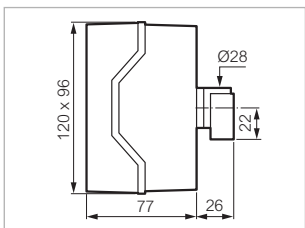
1P - 3 contacts  
2P - 6 contacts  
3P - 9 contacts



PR21 2301 A4 BCQ3  
PR21 2302 A4 BCQ3  
PR21 2303 A4 BCQ3

TD01AXQ  
TD02AXQ  
TD03AXQ

TD01AXQ



### Dimensions in mm

\*P: 77 (3 TO 6 CONTACTS)  
101 (9 CONTACTS)

\*P = Depth

# Cam switches



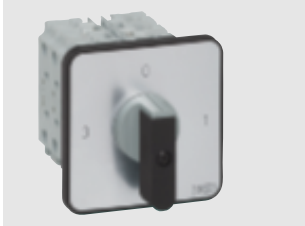
Characteristics (p. 213)

## ► 3-WAY CAM SWITCHES WITH “OFF” POSITION (CONTINUED)

PR 26 - 32 A (AC21)

2-screw panel mount – interval: 30 mm

Cat. No.



### Designation

Grey/black medium handle  
 72 aluminium plate and frame

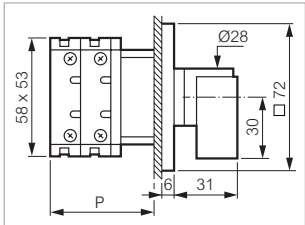
1P -3 contacts  
 2P - 6 contacts  
 3P - 9 contacts



PR26 2301 A4 E Q72MN  
 PR26 2302 A4 E Q72MN  
 PR26 2303 A4 E Q72MN

ZD01AQ7  
 ZD02AQ7  
 ZD03AQ7

ZD02AQ7



### Dimensions in mm

\*P: 51 (3 CONTACTS)  
 66 (6 CONTACTS)  
 96 (9 CONTACTS)

PR 26 - 32 A (AC21)

Enclosure

Cat. No.



### Designation

Black small handle  
 64 aluminium plate

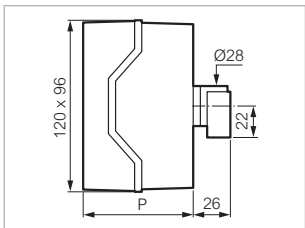
1P -3 contacts  
 2P - 6 contacts



PR26 2301 A4 BCQ3  
 PR26 2302 A4 BCQ3

ZD01AXQ  
 ZD02AXQ

ZD01AXQ



### Dimensions in mm

\*P: 77 (3 CONTACTS)  
 101 (6 CONTACTS)

\*P = Depth

# Cam switches



Characteristics (p. 213)

## ► 3-WAY CAM SWITCHES WITH “OFF” POSITION (CONTINUED)

PR 40 - 50 A (AC21)

2-screw panel mount - interval: 50 mm

Cat. No.



### Designation

Grey/black medium handle  
□ 72 aluminium plate and frame

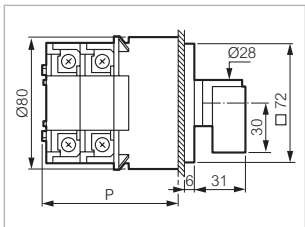
1P - 3 contacts  
2P - 6 contacts  
3P - 9 contacts



PR40 2301 A4 E Q72MN  
PR40 2302 A4 E Q72MN  
PR40 2303 A4 E Q72MN

HD01AQ7  
HD02AQ7  
HD03AQ7

HD02AQ7



### Dimensions in mm

\*P: 80 (3 CONTACTS)  
100 (6 CONTACTS)  
140 (9 CONTACTS)

PR 40 - 50 A (AC21)

Enclosure

Cat. No.



### Designation

Grey/black medium handle  
□ 72 aluminium plate and frame

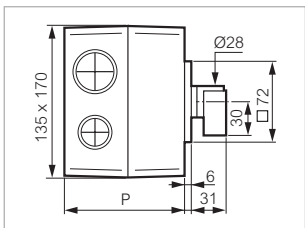
1P - 3 contacts  
2P - 6 contacts



PR40 2301 A4 BCF Q72MN  
PR40 2302 A4 BCF Q72MN

HD01ABQ  
HD02ACQ

HD01ABQ



### Dimensions in mm

\*P: 107 (3 CONTACTS)  
145 (6 CONTACTS)

\*P = Depth

# Cam switches

 Characteristics (p. 213)

## ► 3-WAY CAM SWITCHES WITH “OFF” POSITION (CONTINUED)

**PR 63 - 63 A (AC21)**

**2-screw panel mount - interval: 50 mm**

Cat. No.



ID01AQ7

Grey/black medium handle  
 72 aluminium plate and frame

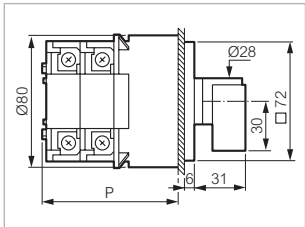
1P - 3 contacts  
 2P - 6 contacts  
 3P - 9 contacts



**Designation**

PR63 2301 A4 E Q72MN  
 PR63 2302 A4 E Q72MN  
 PR63 2303 A4 E Q72MN

ID01AQ7  
 ID02AQ7  
 ID03AQ7



**Dimensions in mm**  
 \*P: 80 (3 CONTACTS)  
 100 (6 CONTACTS)  
 140 (9 CONTACTS)

**PR 63 - 63 A (AC21)**

**Enclosure**

Cat. No.



ID01ABQ

Grey/black medium handle  
 72 aluminium plate and frame

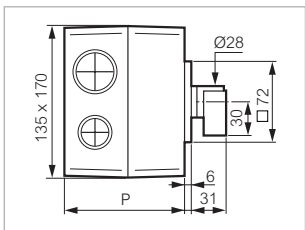
1P - 3 contacts  
 2P - 6 contacts



**Designation**

PR63 2301 A4 BCF Q72MN  
 PR63 2302 A4 BCF Q72MN

ID01ABQ  
 ID02ACQ



**Dimensions in mm**  
 \*P: 107 (3 CONTACTS)  
 145 (6 CONTACTS)

\*P = Depth

# Cam switches



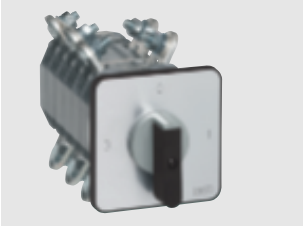
Characteristics (p. 213)

## ► 3-WAY CAM SWITCHES WITH “OFF” POSITION (CONTINUED)

**PR 125 - 160 A (AC21)**

2-screw panel mount - interval: 50 mm

Cat. No.



**Designation**

Grey/black large handle  
□ 96 aluminium plate and frame

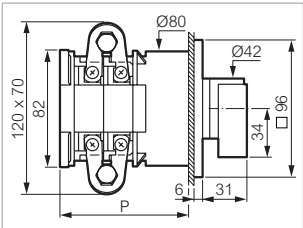
1P - 3 contacts  
2P - 6 contacts  
3P - 9 contacts



PR125 2301 A4 E Q96GN  
PR125 2302 A4 E Q96GN  
PR125 2303 A4 E Q96GN

LD01AQ9  
LD02AQ9  
LD03AQ9

LD02AQ9



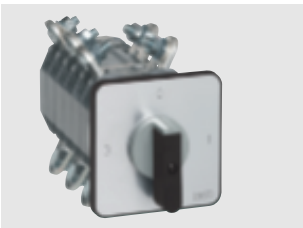
**Dimensions in mm**

\*P: 120 (3 CONTACTS)  
160 (6 CONTACTS)  
240 (9 CONTACTS)

**PR 160 - 200 A (AC21)**

2-screw panel mount - interval: 50 mm

Cat. No.



**Designation**

Grey/black large handle  
□ 96 aluminium plate and frame

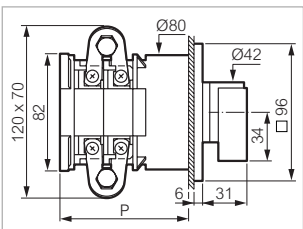
1P - 3 contacts  
2P - 6 contacts  
3P - 9 contacts



PR160 2301 A4 E Q96GN  
PR160 2302 A4 E Q96GN  
PR160 2303 A4 E Q96GN

MD01AQ9  
MD02AQ9  
MD03AQ9

MD01AQ9



**Dimensions in mm**

\*P: 120 (3 CONTACTS)  
160 (6 CONTACTS)  
240 (9 CONTACTS)

\*P = Depth

# Cam switches

 Characteristics (p. 213)

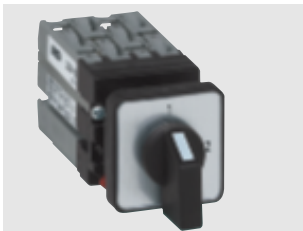
## ► 3-WAY CAM SWITCHES WITHOUT “OFF” POSITION

No. of contacts	1	2	3
1 - 2	X		
3 - 4		X	
7 - 8			X
5 - 6			X
9 - 10		X	
11 - 12	X		
13 - 14	X		
15 - 16		X	
19 - 20			X

### MINI CAM SWITCH - 10 A (AC21)

∅ 16 or 22 single hole front mounting

Cat. No.



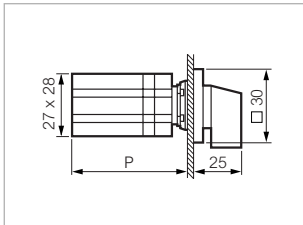
223516

30 aluminium plate and frame

1P -3 contacts  
2P -6 contacts  
3P -9 contacts



**223515**  
**223516**  
**223517**



**Dimensions in mm**

\*P: 50 (3 CONTACTS)  
74 (6 CONTACTS)  
95 (9 CONTACTS)

### PR 12 - 16 A (AC21)

2-screw panel mount – interval: 30 mm

Cat. No.



ND51EQ1

**Designation**

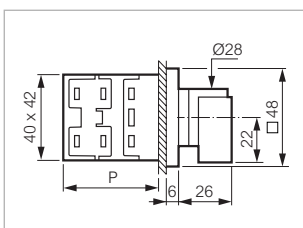
Grey/black small handle  
 48 aluminium plate and frame

1P -3 contacts  
2P -6 contacts  
3P -9 contacts



PR12 2351 A8 E Q48PN  
PR12 2352 A8 E Q48PN  
PR12 2353 A8 E Q48PN

**ND51EQ1**  
**ND52EQ1**  
**ND53EQ1**



**Dimensions in mm**

\*P: 46 (3 CONTACTS)  
56 (6 CONTACTS)  
76 (9 CONTACTS)

\*P = Depth

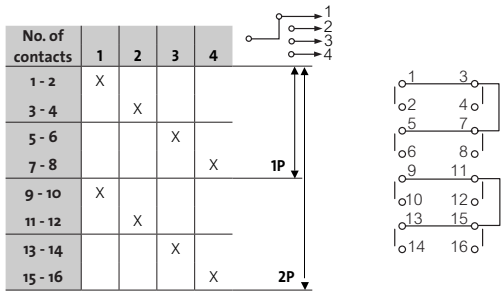
Catalogue No. in bold: normally in stock at distribution outlets



# Cam switches

 Characteristics (p. 213)

## ► 4-WAY CAM SWITCHES WITHOUT “OFF” POSITION



### MINI CAM SWITCH - 10 A (AC21)

∅ 16 or 22 single hole front mounting

Cat. No.



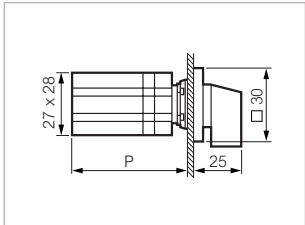
223525

30 aluminium plate and frame

1P -4 contacts  
2P -8 contacts



**223525**  
**223526**



**Dimensions in mm**  
\*P: 62 (4 CONTACTS)  
86 (8 CONTACTS)

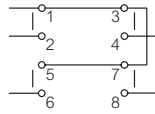
\*P = Depth

# Cam switches

 Characteristics (p. 213)

► CODING SWITCH WITH “OFF”

No. of contacts	Positions											
	0	1	2	3	4	5	6	7	8	9	10	11
1 - 2		X		X		X		X		X		X
3 - 4			X	X			X	X			X	X
5 - 6					X			X				
7 - 8									X			X



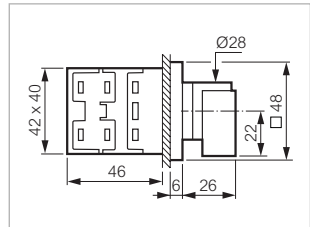
PR 12 - 16 A (AC21)

2-screw panel mount – interval: 30 mm

Cat. No.



NR51UQ1



**Designation**

Grey/black small handle  
□ 48 aluminium plate and frame

4 contacts



PR12 6501 A1 E Q48PN

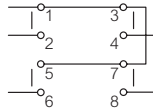
NR51UQ1

# Cam switches

 Characteristics (p. 213)

## ► CODING SWITCH WITHOUT “OFF”

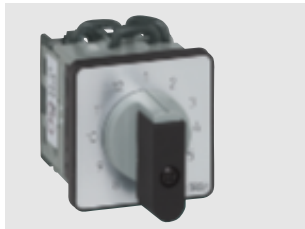
No. of contacts	Positions											
	1	2	3	4	5	6	7	8	9	10	11	12
1 - 2	X		X		X		X		X		X	
3 - 4		X	X			X	X			X	X	
5 - 6				X				X				X
7 - 8								X				X



**PR 12 - 16 A (AC21)**

2-screw panel mount – interval: 30 mm

Cat. No.



NR52UQ1

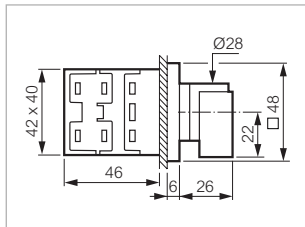
**Designation**  
 Grey/black small handle  
 □ 48 aluminium plate and frame

4 contacts



PR12 6502 A1 E Q48PN

**NR52UQ1**

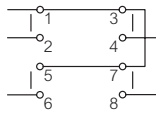


# Cam switches

 Characteristics (p. 213)

► CODING SWITCH (COMPLEMENTARY BCD CODE, 0 TO 9)

No. of contacts	Positions									
	0	1	2	3	4	5	6	7	8	9
1 - 2		X		X		X		X		X
3 - 4			X	X			X	X		
5 - 6					X			X		
7 - 8									X	X



PR 12 - 16 A (AC21)

2-screw panel mount – interval: 30 mm

Cat. No.



NR53UQ1

**Designation**

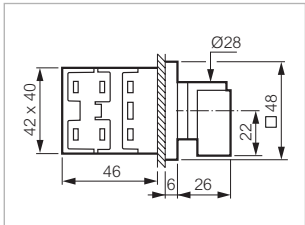
- Grey/black small handle
- 48 aluminium plate and frame
- With complete rotation possible

4 contacts



PR12 6503 A1 E Q48PN

NR53UQ1



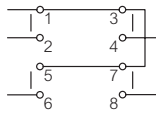
# Cam switches



Characteristics (p. 213)

► COMPLEMENTARY BCD CODE, 0 TO 9

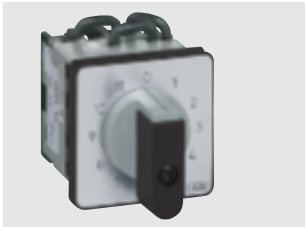
No. of contacts	Positions									
	0	1	2	3	4	5	6	7	8	9
1 - 2	X		X		X		X		X	
3 - 4	X	X			X	X			X	X
5 - 6	X			X					X	X
7 - 8	X						X			



PR 12 - 16 A (AC21)

2-screw panel mount – interval: 30 mm

Cat. No.



NR54UQ1

**Designation**

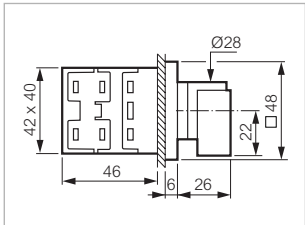
Grey/black small handle  
 □ 48 aluminium plate and frame  
 With complete rotation possible

4 contacts



PR12 6504 A1 E Q48PN

NR54UQ1

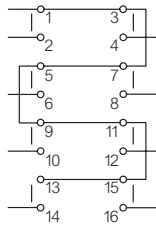


# Cam switches

 Characteristics (p. 213)

► BCD CODE, 0 TO 9, + COMPLEMENTARY BCD CODE

No. of contacts	Positions									
	0	1	2	3	4	5	6	7	8	9
1 - 2		X		X		X		X		X
3 - 4			X	X			X	X		
5 - 6					X			X		
7 - 8									X	X
9 - 10	X		X		X		X		X	
11 - 12	X	X			X	X			X	X
13 - 14	X			X					X	X
15 - 16	X						X			



PR 12 - 16 A (AC21)

2-screw panel mount – interval: 30 mm

Cat. No.



NR55UQ1

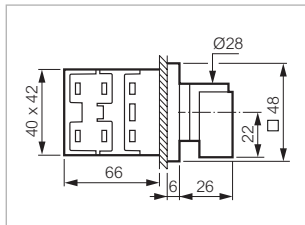
Designation  
 Grey/black small handle  
 □ 48 aluminium plate and frame  
 With complete rotation possible

8 contacts



PR12 6505 A1 E Q48PN

NR55UQ1



# Cam switches

[Characteristics \(p. 213\)](#)

## ▶ ACCESSORIES

### FIXING TOOL

Cat. No.



For mini cam switches

223520

223520

### FIXING TOOL

Cat. No.

Fixing tool for PR 12 cam switches  
ø 22 single hole front mounting**LWA0234**

LWA0234

# Technical characteristics

## ▶ MINI CAM SWITCHES

Characteristics	Data
▶ Thermal current I <sub>th</sub>	10 A
▶ Rated operating current I <sub>e</sub>	
- in AC 21	10 A
- in AC 15	2.5 A
▶ Motor performance in AC-3	
- 3 x 230 V	1.8 kW
- 3 x 400 V	2.2 kW
▶ Motor performance in AC-23	
- 1 x 230 V	0.75 kW
- 1 x 400 V	1.1 kW
- 3 x 230 V	1.8 kW
- 3 x 400 V	3 kW
▶ Rated insulation voltage U <sub>i</sub> (V)	500 V
▶ Rated operating current in DC-1 L/R < 1ms	
- 24 V DC	10 A
- 40 V DC	6 A
- 60 V DC	2.5 A
- 110 V DC	0.7 A
- 220 V DC	0.3 A
▶ Rated conditional short-circuit current	3 kA
▶ Max. fuse rating	10 A
▶ Degree of protection	IP 65 IP 2x at the rear of the panel
▶ Wire size (flexible and rigid)	2 x 1.5 mm <sup>2</sup> max. 1 x 0.5 mm <sup>2</sup> min.
▶ Operating temperature	- 20°C to + 50°C
▶ Standards	IEC 60947-1 IEC 60947-3 CSA 22.2 UL 508

## ▶ CAM SWITCHES

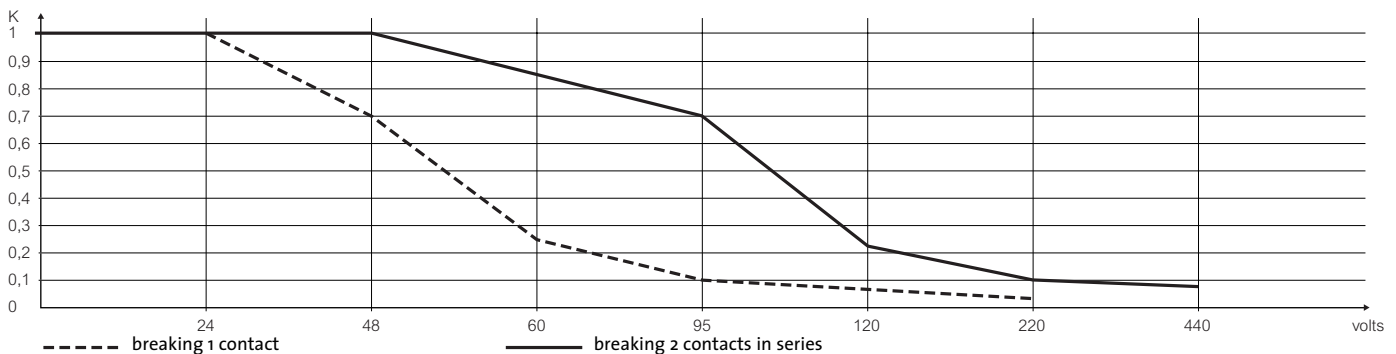
Characteristics	PR 12	PR 17	PR 21	PR 26	PR 40	PR 63	PR 125	PR 160
▶ For thermal current I <sub>th</sub> I <sub>c</sub> (A)	20	25	32	40	63	63	200	250
▶ Rated operating current for AC-21 A I <sub>e</sub> (A) (IEC 60 947-3)								
Switching of resistive loads including moderate overloads	16	20	25	32	50	63	160	200
▶ Rated operating current for AC-15 A I <sub>e</sub> (A) at 230V AC (IEC 60 947-3)								
Control of electromagnetic loads	6	8	10	12	-	-	-	-



# Technical characteristics

## ► SELECTOR SWITCHES

Characteristics	PR 12	PR 17	PR 21	PR 26	PR 40	PR 63	PR 125	PR 160
<b>► Performance in AC 23 (kW)</b> (IEC 60 947-3) Switching of motors or other highly inductive loads								
- 3 x 230 V	4	5.5	7.5	11	15	18.5	-	-
- 3 x 400 V	7.5	11	11	11	22	25	-	-
- 3 x 500 V	5.5	11	11	11	25	25	-	-
- 3 x 690 V	4	10	10	11	18.5	22	-	-
<b>► Performance in AC 3</b> (IEC 60 947-3) Control of squirrel-cage motors starting and switching off motors while running								
- In kW								
- 3 x 230 V	3	4	4	5.5	11	15	-	-
- 3 x 400 V	4	7.5	7.5	11	18.5	22	-	-
- 3 x 500 V	5.5	7.5	7.5	11	18.5	22	-	-
- 3 x 690 V	3	7.5	7.5	11	18.5	22	-	-
- In HP (for reference)								
- 3 x 230 V	4	5.5	5.5	7.5	15	20	-	-
- 3 x 400 V	5.5	10	10	15	25	30	-	-
- 3 x 500 V	7.5	10	10	15	25	30	-	-
- 3 x 690 V	4	10	10	15	25	30	-	-
<b>► Rated insulation voltage Ui (V)</b>	690	690	690	690	690	690	690	690
- Max. rated voltage Ue(v) IEC	690	690	690	690	690	690	690	690
- CSA (Canada)	600	600	600	600	600	600	600	600
- UL (USA)	600	600	600	600	600	600	600	600
<b>► Rated short time withstand current Icw (A) for 1 sec</b>	300	400	420	800	1200	1500	2400	3000
<b>► Maximum wire size (mm<sup>2</sup>)</b>								
- rigid	4	6/4 <sup>(1)</sup>	6/4 <sup>(1)</sup>	6	16	16	ø 8 screw for eyelet	
- flexible	2.5	4	4	6	16	16	ø 8 screw for eyelet	
(1): These values correspond to terminals with jumpers								
<b>► Mechanical durability</b>	1,250,000 operations, maximum rate 150 operations per hour							
<b>► Operating temperature limits</b>	- 20°C to + 70°C (beyond these limits consult us)							
<b>► Rated operating current in DC-1 low inductive loads (&lt; 1 ms)</b>								
Rated operating current Ie (A) 24 V DC	16	20	25	32	50	63	-	-
Ie (A): rated current for breaking 1 contact. For higher voltages you must use a reduction coefficient K in the following graph								



reduction coefficient K for rated operating current in DC-1 continuous current

# Separate cam switches

To order your cam switch, it is essential to follow the 5-step procedure (see presentation on p. 127)  
Mini cam switches are only available in standard versions.

## ► I - CHOICE OF SWITCH SIZE

### TECHNICAL CHARACTERISTICS

The choice of switch size depends on the type of load to be switched  
Cam switches are devices designed mainly for use with AC current  
When using with DC current, you must use a reduction coefficient (see previous page)

### PRICE LIST CODE

The price list code allows you (if necessary) to determine the price of the chosen switch by referring to the current price list

RATING	PR 12	PR 17	PR 21	PR 26	PR 40	PR 63	PR 125	PR 160
PRICE LIST CODE	N	S	T	Z	H	I	L	M

### EXAMPLE

1 You are looking for a switch to control motors (3x230 V) with a power rating of 18.5 kW, what you need is a **PR 63**.

Characteristics	PR 12	PR 17	PR 21	PR 26	PR 40	PR 63	PR 125	PR 160
► Performance in AC 23 (kW) (IEC 60 947-3) Switching of motors or other highly inductive loads								
- 3 x 230 V	4	5.5	7.5	11	15	18.5	-	-
- 3 x 400 V	7.5	11	11	11	22	25	-	-
- 3 x 500 V	5.5	11	11	11	25	25	-	-
- 3 x 690 V	4	10	10	11	18.5	22	-	-

2 For a PR 63 the price list code is: I

RATING	PR 12	PR 17	PR 21	PR 26	PR 40	PR 63	PR 125	PR 160
PRICE LIST CODE	N	S	T	Z	H	I	L	M

# Separate cam switches

To order your cam switch, it is essential to follow the 5-step procedure (see presentation on p. 127)  
Mini cam switches are only available in standard versions.

## ► II - CHOICE OF FUNCTION (DIAGRAM AND SWITCHING ANGLE)

### FUNCTIONS

The electrical circuit diagram for separate switches can be:

► A standard diagram (see p. 207 to 238).

Examples:



► A special diagram to your own requirement (complete the form on p. 277)



### EXAMPLE

1 The reference of the diagram for a 1-2 contact switch (p. 208) is: **1101**, and its price list code is: **A01Z**

#### DIAGRAM (REFERENCE AND PRICE LIST CODE)

Contact Nos.	Positions						No. of poles	No. of contacts	Connection terminals + links	Diagram reference	Diagram price list code
	0	1	-	-	-	-					
1 - 2	X						1	1	$\begin{matrix} \circ_1 & & 3^\circ \\   & &   \\ \circ_2 & & 4^\circ \end{matrix}$	1101	A01Z
3 - 4	X						2	2	$\begin{matrix} \circ_5 & & 7^\circ \\   & &   \\ \circ_6 & & 8^\circ \end{matrix}$	1102	A02Z
5 - 6	X						3	3	$\begin{matrix} \circ_9 & & 11^\circ \\   & &   \\ \circ_{10} & & 12^\circ \end{matrix}$	1103	A03Z
7 - 8	X						4	4		1104	A04Z
9 - 10	X						5	5		1105	A05Z
11 - 12	X						6	6		1106	A06Z

2 For a switch, the reference of the 90° switching angle with spring return is: **AR10**, and the price list code is: **Y640**

#### SWITCHING ANGLE (REFERENCE AND PRICE LIST CODE)

30°	45°	60°	90°	90°	Spring return	Spring return
Cat. No. A1	A8	A6	A4	M4	<b>AR10*</b>	VR11*

Spring return extra charge	Number of spring return contacts
* Y652 (PR12)	≤ 4 (PR12 25)
Y639 (PR17 26)	≤ 2 (PR40 63)
<b>Y640 (PR40 63)</b>	

3 The full catalogue number for the function is **1101 - AR10**, and its price list code is **(I)A01Z - Y640**

# Separate cam switches

To order your cam switch, it is essential to follow the 5-step procedure (see presentation on p. 127)  
Mini cam switches are only available in standard versions.

## ► II - CHOICE OF FUNCTION (DIAGRAM AND SWITCHING ANGLE)

FUNCTIONS	Diagram	Page
<p>► <b>Switches</b> From 1 to 24 poles, each pole being a path for the current, the circuit being open at starting position 0, and closed at position 1</p>		218
<p>► <b>2 way change-over switches without off position</b> From 1 to 12 poles, each pole having 2 current paths, one path is closed at position 1, the other at position 2 The two paths can be joined by a common point (link)</p>		219
<p>► <b>2 way change-over switches with off position</b> From 1 to 12 poles, each pole having 2 current paths, one path is closed at position 1, the other at position 2. Both paths can be open at position 0 and joined by a common point (link)</p>		220
<p>► <b>3 to 8-way cam switches</b> Each pole having respectively 3 to 8 paths for the current, the number of poles multiplied by the number of ways must be 24 or less The starting position is either 0 (diagram with OFF) or 1 (diagram without OFF) The current paths of the same pole are connected together by links</p>		221
<p>► <b>Grouping switches</b> From 2 to 4 ways with or without starting position at 0, each pole having respectively 2 to 4 current paths which close consecutively and remain closed on the following positions, thus grouping 2 to 4 elements The current paths of the same pole are connected together by links</p>		233
<p>► <b>Instrument switches</b> For ammeters wired without a CT or with several CTs connected on the corresponding circuits The CTs can be mounted in series, with a common point or independently, they are always short-circuited when not feeding the ammeters</p>		236
<p>For voltmeters wired into 3-phase networks with or without neutral</p>		238
<p>► <b>Motor control switches</b> For 3-phase asynchronous motors with Y - ▲ starting, with several speeds, with or without reversing</p>		239
<p>► <b>Switches for coupling 2 or 3 resistors</b></p>		245
<p>► <b>Coding switches</b> Code BCD and additional BCD</p>		247

# Separate cam switches

► SWITCHES

DIAGRAM (REFERENCE AND PRICE LIST CODE)

Contact Nos.	Positions								No. of poles	No. of contacts	Connection terminals + links	Diagram reference	Diagram price list code
	0	1	-	-	-	-	-	-					
1 - 2	X								1	1	1 <sub>1</sub>	1101	A01Z
3 - 4	X								2	2	2 <sub>2</sub>	1102	A02Z
5 - 6	X								3	3	3 <sub>3</sub>	1103	A03Z
7 - 8	X								4	4	4 <sub>4</sub>	1104	A04Z
9 - 10	X								5	5	5 <sub>5</sub>	1105	A05Z
11 - 12	X								6	6	6 <sub>6</sub>	1106	A06Z
13 - 14	X								7	7	7 <sub>7</sub>	1107	A07Z
15 - 16	X								8	8	8 <sub>8</sub>	1108	A08Z
17 - 18	X								9	9	9 <sub>9</sub>	1109	A09Z
19 - 20	X								10	10	10 <sub>10</sub>	1110	A10Z
21 - 22	X								11	11	11 <sub>11</sub>	1111	A11Z
23 - 24	X								12	12	12 <sub>12</sub>	1112	A12Z
25 - 26	X								13	13	13 <sub>13</sub>	1113	A13Z
27 - 28	X								14	14	14 <sub>14</sub>	1114	A14Z
29 - 30	X								15	15	15 <sub>15</sub>	1115	A15Z
31 - 32	X								16	16	16 <sub>16</sub>	1116	A16Z
33 - 34	X								17	17	17 <sub>17</sub>	1117	A17Z
35 - 36	X								18	18	18 <sub>18</sub>	1118	A18Z
37 - 38	X								19	19	19 <sub>19</sub>	1119	A19Z
39 - 40	X								20	20	20 <sub>20</sub>	1120	A20Z
41 - 42	X								21	21	21 <sub>21</sub>	1121	A21Z
43 - 44	X								22	22	22 <sub>22</sub>	1122	A22Z
45 - 46	X								23	23	23 <sub>23</sub>	1123	A23Z
47 - 48	X								24	24	24 <sub>24</sub>	1124	A24Z

SWITCHING ANGLE (REFERENCE AND PRICE LIST CODE)

	30°	45°	60°	90°	90°	Spring return	Spring return
Cat. No.	A1	A8	A6	A4	M4	AR10*	VR11*
Cat. No.	B1	B8	B6	B4			
Cat. No.		V8		D4			

Spring return extra charge	Number of spring return contacts
* V652 (PR12)	≤ 4 (PR12 26)
Y639 (PR17 26)	≤ 2 (PR40 63)
Y640 (PR40 63)	

# Separate cam switches

## ► 2-WAY CHANGE-OVER SWITCHES WITHOUT OFF

### DIAGRAM (REFERENCE AND PRICE LIST CODE) (with link for common point)

Contact Nos.	Positions 1 2	No. of poles	No. of contacts	Connection terminals* + links	Diagram* reference	Diagram price list code
1 - 2 3 - 4	X X	1	2		2251	A02Z
5 - 6 7 - 8	X X	2	4		2252	A04Z
9 - 10 11 - 12	X X	3	6		2253	A06Z
13 - 14 15 - 16	X X	4	8		2254	A08Z
17 - 18 19 - 20	X X	5	10		2255	A10Z
21 - 22 23 - 24	X X	6	12		2256	A12Z
25 - 26 27 - 28	X X	7	14		2257	A14Z
29 - 30 31 - 32	X X	8	16		2258	A16Z
33 - 34 35 - 36	X X	9	18		2259	A18Z
37 - 38 39 - 40	X X	10	20		2260	A20Z
41 - 42 43 - 44	X X	11	22		2261	A22Z
45 - 46 47 - 48	X X	12	24		2262	A24Z

\*For diagrams without a link, replace number 2 by number 1 at the beginning of the diagram reference.

### SWITCHING ANGLE (REFERENCE AND PRICE LIST CODE)

	30°	45°	60°	90°	90°	Spring return	Spring return
Cat. No.	A1	A8	A6	A4	D4	AR10*	VR11*
Cat. No.	B1	B8	B6	B4			
Cat. No.	V8			M4			

Spring return extra charge	Number of spring return contacts
* Y652 (PR12)	≤ 4 (PR12 → 26)
Y639 (PR17 → 26)	≤ 2 (PR40 → 63)
Y640 (PR40 → 63)	

# Separate cam switches

## ► 2-WAY CHANGE-OVER SWITCHES WITH OFF

DIAGRAM (REFERENCE AND PRICE LIST CODE) (with link for common point)

Contact Nos.	Positions												No. of poles	No. of contacts	Connection terminals* + links	Diagram* reference	Diagram price list code	
	0	1	2	-	-	-	-	-	-	-	-	-						
1 - 2 3 - 4	X													1	2		2201	A02Z
5 - 6 7 - 8	X													2	4		2202	A04Z
9 - 10 11 - 12	X													3	6		2203	A06Z
13 - 14 15 - 16	X													4	8		2204	A08Z
17 - 18 19 - 20	X													5	10		2205	A10Z
21 - 22 23 - 24	X													6	12		2206	A12Z
25 - 26 27 - 28	X													7	14		2207	A14Z
29 - 30 31 - 32	X													8	16		2208	A16Z
33 - 34 35 - 36	X													9	18		2209	A18Z
37 - 38 39 - 40	X													10	20		2210	A20Z
41 - 42 43 - 44	X													11	22		2211	A22Z
45 - 46 47 - 48	X													12	24		2212	A24Z

\*For diagrams without a link, replace number 2 by number 1 at the beginning of the diagram reference.

## SWITCHING ANGLE (REFERENCE AND PRICE LIST CODE)

	30°	45°	60°	90°	Misc	Spring return	Spring return	Spring return	Spring return	Spring return
Cat. No.	A1	A8	A6	A4	J4	AR23*	AR25*	AR32*	BR19*	CR12*
Cat. No.	B1	B8	B6	B4	M6	CR13*	CR14*	CR19*		
Cat. No.	C1	C8	C6	C4	V8	CR20*	VR12*	VR13*		

Spring return extra charge	Number of spring return contacts
* Y652 (PR12)	≤ 4 (PR12 → 26)
Y639 (PR17 → 26)	≤ 2 (PR40 → 63)
Y640 (PR40 → 63)	

# Separate cam switches

## ▶ 3-WAY SWITCHES WITHOUT OFF

### DIAGRAM (REFERENCE AND PRICE LIST CODE) (with link for common point)

Contact Nos.	Positions			No. of poles	No. of contacts	Connection terminals* + links	Diagram* reference	Diagram price list code
	1	2	3					
1-2 3-4 7-8	X	X		1	3		2351	A03Z
5-6 9-10 11-12		X	X	2	6		2352	A06Z
13-14 15-16 19-20	X	X		3	9		2353	A09Z
17-18 21-22 23-24		X	X	4	12		2354	A12Z
25-26 27-28 31-32	X	X		5	15		2355	A15Z
29-30 33-34 35-36		X	X	6	18		2356	A18Z
37-38 39-40 43-44	X	X		7	21		2357	A21Z
41-42 45-46 47-48		X	X	8	24		2358	A24Z

\*For diagrams without a link, replace number 2 by number 1 at the beginning of the diagram reference.

### SWITCHING ANGLE (REFERENCE AND PRICE LIST CODE)

	30°	45°	60°	90°	60°	Spring return	Spring return	Spring return
Cat. No.	A1	A8	A6	A4	M6	AR23*	AR25*	
Cat. No.	B1	B8	B6	B4		BR19*		
Cat. No.	C1	C8	C6			CR12*	CR13*	CR14*

Spring return extra charge	Number of spring return contacts
* Y652 (PR12)	≤ 4 (PR12 → 26)
Y639 (PR17 → 26)	≤ 2 (PR40 → 63)
Y640 (PR40 → 63)	



# Separate cam switches

## ▶ 3-WAY SWITCHES WITH OFF

DIAGRAM (REFERENCE AND PRICE LIST CODE) (with link for common point)

Contact Nos.	Positions										No. of poles	No. of contacts	Connection terminals* + links	Diagram* reference	Diagram price list code
	0	1	2	3	-	-	-	-	-	-					
1-2 3-4 7-8	X										1	3		2301	A03Z
5-6 9-10 11-12		X									2	6		2302	A06Z
13-14 15-16 19-20	X										3	9		2303	A09Z
17-18 21-22 23-24		X									4	12		2304	A12Z
25-26 27-28 31-32	X										5	15		2305	A15Z
29-30 33-34 35-36		X									6	18		2306	A18Z
37-38 39-40 43-44	X										7	21		2307	A21Z
41-42 45-46 47-48		X									8	24		2308	A24Z

\*For diagrams without a link, replace number 2 by number 1 at the beginning of the diagram reference.

## SWITCHING ANGLE (REFERENCE AND PRICE LIST CODE)

	30°	45°	60°	90°	45°	Spring return	Spring return
Cat. No.	A1	A8	A6	A4	V8	BR15*	VR16*
Cat. No.	B1	B8	B6	B4			
Cat. No.	M8	J6					

Spring return extra charge	Number of spring return contacts
* Y652 (PR12)	≤ 4 (PR12 → 26)
Y639 (PR17 → 26)	≤ 2 (PR40 → 63)
Y640 (PR40 → 63)	

# Separate cam switches

## ► 4-WAY SWITCHES WITHOUT OFF

### DIAGRAM (REFERENCE AND PRICE LIST CODE) (with link for common point)

Contact Nos.	Positions				No. of poles	No. of contacts	Connection terminals* + links	Diagram* reference	Diagram price list code
	1	2	3	4					
1-2 3-4 5-6 7-8	X	X			1	4		2451	Ao4Z
9-10 11-12 13-14 15-16	X	X			2	8		2452	Ao8Z
17-18 19-20 21-22 23-24	X	X			3	12		2453	A12Z
25-26 27-28 29-30 31-32	X	X			4	16		2454	A16Z
33-34 35-36 37-38 39-40	X	X			5	20		2455	A20Z
41-42 43-44 45-46 47-48	X	X			6	24		2456	A24Z

\*For diagrams without a link, replace number 2 by number 1 at the beginning of the diagram reference.

### SWITCHING ANGLE (REFERENCE AND PRICE LIST CODE)

	30°	45°	60°	90°	45°	Spring return	Spring return
Cat. No.	A1	A8	A6	A4	V8	AR30*	
Cat. No.	B1	B8	B6	B4	BR15*	BR41*	
Cat. No.	V1	M8			VR16*	VR28*	

Spring return extra charge	Number of spring return contacts
* Y652 (PR12)	≤ 4 (PR12 → 26)
Y639 (PR17 → 26)	≤ 2 (PR40 → 63)
Y640 (PR40 → 63)	

# Separate cam switches

## ► 4-WAY SWITCHES WITH OFF

### DIAGRAM (REFERENCE AND PRICE LIST CODE) (with link for common point)

Contact Nos.	Positions	No. of poles	No. of contacts	Connection terminals* + links	Diagram* reference	Diagram price list code
	0 1 2 3 4 - - - - -					
1-2 3-4 5-6 7-8	X: X: X: X:	1	4		2401	Ao4Z
9-10 11-12 13-14 15-16	X: X: X: X:	2	8		2402	Ao8Z
17-18 19-20 21-22 23-24	X: X: X: X:	3	12		2403	A12Z
25-26 27-28 29-30 31-32	X: X: X: X:	4	16		2404	A16Z
33-34 35-36 37-38 39-40	X: X: X: X:	5	20		2405	A20Z
41-42 43-44 45-46 47-48	X: X: X: X:	6	24		2406	A24Z

\*For diagrams without a link, replace number 2 by number 1 at the beginning of the diagram reference.

### SWITCHING ANGLE (REFERENCE AND PRICE LIST CODE)

	30°	45°	60°	45°	Spring return	Spring return	Spring return
Cat. No. A1	A8	A6	J8	AR38*			
Cat. No. B1	B8	B6					
Cat. No. C1	C8	C6	CR27*	CR34*	CR40*		

Spring return extra charge	Number of spring return contacts
* Y652 (PR12)	≤ 4 (PR12 → 26)
Y639 (PR17 → 26)	≤ 2 (PR40 → 63)
Y640 (PR40 → 63)	

# Separate cam switches

## ► 5-WAY SWITCHES WITHOUT OFF

### DIAGRAM (REFERENCE AND PRICE LIST CODE) (with link for common point)

Contact Nos.	Positions					No. of poles	No. of contacts	Connection terminals* + links	Diagram* reference	Diagram price list code
	1	2	3	4	5					
1-2 3-4 5-6 7-8 9-10	X	X				1	5		2551	A05Z
11-12 13-14 15-16 17-18 19-20	X	X	X			2	10		2552	A10Z
21-22 23-24 25-26 27-28 29-30	X	X	X	X		3	15		2553	A15Z
31-32 33-34 35-36 37-38 39-40	X	X	X	X	X	4	20		2554	A20Z

\*For diagrams without a link, replace number 2 by number 1 at the beginning of the diagram reference.

### SWITCHING ANGLE (REFERENCE AND PRICE LIST CODE)

	30°	45°	60°	Spring return
Cat. No.	A1	A8	A6	
Cat. No.	B1	B8	B6	BR27*
Cat. No.	V8			

Spring return extra charge	Number of spring return contacts
* Y652 (PR12)	≤ 4 (PR12 → 26)
Y639 (PR17 → 26)	≤ 2 (PR40 → 63)
Y640 (PR40 → 63)	

# Separate cam switches

## ► 5-WAY SWITCHES WITH OFF

DIAGRAM (REFERENCE AND PRICE LIST CODE) (with link for common point)

Contact Nos.	Positions 0 1 2 3 4 5 - - - - -	No. of poles	No. of contacts	Connection terminals* + links	Diagram* reference	Diagram price list code
1-2 3-4 5-6 7-8 9-10	X X X X X	1	5		2501	A05Z
11-12 13-14 15-16 17-18 19-20	X X X X X	2	10		2502	A10Z
21-22 23-24 25-26 27-28 29-30	X X X X X	3	15		2503	A15Z
31-32 33-34 35-36 37-38 39-40	X X X X X	4	20		2504	A20Z

\*For diagrams without a link, replace number 2 by number 1 at the beginning of the diagram reference.

## SWITCHING ANGLE (REFERENCE AND PRICE LIST CODE)

	30°	45°	60°
Cat. No.	A1	A8	A6
Cat. No.	B1	B8	B6
Cat. No.	M1	V6	

# Separate cam switches

## ► 6-WAY SWITCHES WITHOUT OFF

### DIAGRAM (REFERENCE AND PRICE LIST CODE) (with link for common point)

Contact Nos.	Positions						No. of poles	No. of contacts	Connection terminals* + links	Diagram* reference	Diagram price list code
	1	2	3	4	5	6					
1-2 3-4 5-6 7-8 9-10 11-12	X						1	6		2651	Ao6Z
13-14 15-16 17-18 19-20 21-22 23-24	X						2	12		2652	A12Z
25-26 27-28 29-30 31-32 33-34 35-36	X						3	18		2653	A18Z
37-38 39-40 41-42 43-44 45-46 47-48	X						4	24		2654	A24Z

\*For diagrams without a link, replace number 2 by number 1 at the beginning of the diagram reference.

### SWITCHING ANGLE (REFERENCE AND PRICE LIST CODE)

	30°	45°	60°
Cat. No.	A1	A8	A6
Cat. No.	B1	B8	B6
Cat. No.	M1		

# Separate cam switches

► 6-WAY SWITCHES WITH OFF

DIAGRAM (REFERENCE AND PRICE LIST CODE) (with link for common point)

Contact Nos.	Positions o 1 2 3 4 5 6 - - - -	No. of poles	No. of contacts	Connection terminals* + links	Diagram* reference	Diagram price list code
1 -2 3 -4 5 -6 7 -8 9 -10 11 -12	X: X: X: X: X: X:	1	6		2601	Ao6Z
13 -14 15 -16 17 -18 19 -20 21 -22 23 -24	X: X: X: X: X: X:	2	12		2602	A12Z
25 -26 27 -28 29 -30 31 -32 33 -34 35 -36	X: X: X: X: X: X:	3	18		2603	A18Z
37 -38 39 -40 41 -42 43 -44 45 -46 47 -48	X: X: X: X: X: X:	4	24		2604	A24Z

\*For diagrams without a link, replace number 2 by number 1 at the beginning of the diagram reference.

SWITCHING ANGLE (REFERENCE AND PRICE LIST CODE)

	30°	45°
Cat. No.	A1	A8
Cat. No.	B1	B8
Cat. No.	J1	C8

# Separate cam switches

## ► 7-WAY SWITCHES WITHOUT OFF

### DIAGRAM (REFERENCE AND PRICE LIST CODE) (with link for common point)

Contact Nos.	Positions							No. of poles	No. of contacts	Connection terminals* + links	Diagram* reference	Diagram price list code
	1	2	3	4	5	6	7					
1-2 3-4 5-6 7-8 9-10 11-12 15-16	X							1	7		2751	A07Z
13-14 17-18 19-20 21-22 23-24 25-26 27-28						X		2	14		2752	A14Z
29-30 31-32 33-34 35-36 37-38 39-40 43-44	X							3	21		2753	A21Z
41-42 45-46 47-48												

\*For diagrams without a link, replace number 2 by number 1 at the beginning of the diagram reference.

### SWITCHING ANGLE (REFERENCE AND PRICE LIST CODE)

30°

45°



Cat. No. A1

A8



Cat. No. B1

B8



Cat. No.

C8



# Separate cam switches

► 7-WAY SWITCHES WITH OFF

DIAGRAM (REFERENCE AND PRICE LIST CODE) (with link for common point)

Contact Nos.	Positions							No. of poles	No. of contacts	Connection terminals +* links	Diagram* reference	Diagram price list code	
	0	1	2	3	4	5	6						7
1-2 3-4 5-6 7-8 9-10 11-12 15-16	X								1	7		2701	A07Z
13-14 17-18 19-20 21-22 23-24 25-26 27-28							X		2	14		2702	A14Z
29-30 31-32 33-34 35-36 37-38 39-40 43-44	X								3	21		2703	A21Z
41-42 45-46 47-48													

\*For diagrams without a link, replace number 2 by number 1 at the beginning of the diagram reference.

SWITCHING ANGLE (REFERENCE AND PRICE LIST CODE)

	30°	45°
Cat. No.	A1	A8
Cat. No.	B1	B8

# Separate cam switches

## ► 8-WAY SWITCHES WITHOUT OFF

### DIAGRAM (REFERENCE AND PRICE LIST CODE) (with link for common point)

Contact Nos.	Positions								No. of poles	No. of contacts	Connection terminals* + links	Diagram* reference	Diagram price list code	
	1	2	3	4	5	6	7	8						
1-2 3-4 5-6 7-8 9-10 11-12 13-14 15-16	X									1	8		2851	A08Z
17-18 19-20 21-22 23-24 25-26 27-28 29-30 31-32	X	X								2	16		2852	A16Z
33-34 35-36 37-38 39-40 41-42 43-44 45-46 47-48	X	X	X							3	24		2853	A24Z

\*For diagrams without a link, replace number 2 by number 1 at the beginning of the diagram reference.

### SWITCHING ANGLE (REFERENCE AND PRICE LIST CODE)

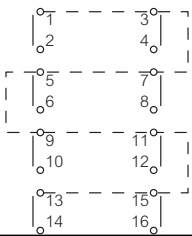
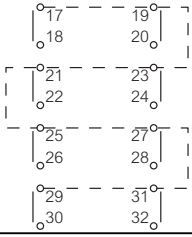
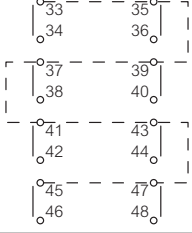
	30°	45°
Cat. No.	A1	A8
Cat. No.	B1	B8

For more than 8 ways, please contact us.

# Separate cam switches

► 8-WAY SWITCHES WITH OFF

DIAGRAM (REFERENCE AND PRICE LIST CODE) (with link for common point)

Contact Nos.	Positions								No. of poles	No. of contacts	Connection terminals* + links	Diagram* reference	Diagram price list code	
	0	1	2	3	4	5	6	7						8
1-2 3-4 5-6 7-8 9-10 11-12 13-14 15-16		X								1	8		2801	Ao8Z
17-18 19-20 21-22 23-24 25-26 27-28 29-30 31-32		X	X							2	16		2802	A16Z
33-34 35-36 37-38 39-40 41-42 43-44 45-46 47-48		X	X	X						3	24		2803	A24Z

\*For diagrams without a link, replace number 2 by number 1 at the beginning of the diagram reference.

SWITCHING ANGLE (REFERENCE AND PRICE LIST CODE)

30°



Cat. No. A1



Cat. No. B1



Cat. No. C1

For more than 8 ways, please contact us.

# Separate cam switches

## ► GROUPING SWITCHES FOR 2 ELEMENTS

### DIAGRAM (REFERENCE AND PRICE LIST CODE)

Contact Nos.	Positions										No. of poles	No. of contacts	Connection terminals + links	Diagram reference		Diagram price list code	
	0	1	2	-	-	-	-	-	-	-				with off	without off		
1-2 3-4	X	X										1	2		5201	5251	A02Z
5-6 7-8	X	X										2	4		5202	5252	A04Z
9-10 11-12	X	X										3	6		5203	5253	A06Z
13-14 15-16	X	X										4	8		5204	5254	A08Z
17-18 19-20	X	X										5	10		5205	5255	A10Z
21-22 23-24	X	X										6	12		5206	5256	A12Z
25-26 27-28	X	X										7	14		5207	5257	A14Z
29-30 31-32	X	X										8	16		5208	5258	A16Z
33-34 35-36	X	X										9	18		5209	5259	A18Z
37-38 39-40	X	X										10	20		5210	5260	A20Z
41-42 43-44	X	X										11	22		5211	5261	A22Z
45-46 47-48	X	X										12	24		5212	5262	A24Z

### SWITCHING ANGLE (REFERENCE AND PRICE LIST CODE)

Diagram with off position

Diagram without off position

Diagram with off position				Diagram without off position			
30°	45°	60°	90°	30°	45°	60°	90°
Cat. No. A1	A8	A6	A4	A1	A8	A6	A4
Cat. No. B1	B8	B6	B4	B1	B8	B6	B4
Cat. No. V8	M6						

# Separate cam switches

## ► GROUPING SWITCHES FOR 3 ELEMENTS

### DIAGRAM (REFERENCE AND PRICE LIST CODE)

Contact Nos.	Positions										No. of poles	No. of contacts	Connection terminals + links	Diagram reference		Diagram price list code	
	0	1	2	3	-	-	-	-	-	-				with off	without off		
1-2 3-4 7-8	X	X										1	3		5301	5351	A03Z
5-6 9-10 11-12		X										2	6		5302	5352	A06Z
13-14 15-16 17-18	X	X										3	9		5303	5353	A09Z
19-20 21-22 23-24		X										4	12		5304	5354	A12Z
25-26 27-28 29-30	X	X										5	15		5305	5355	A15Z
31-32 33-34 35-36		X										6	18		5306	5356	A18Z
37-38 39-40 41-42	X	X										7	21		5307	5357	A21Z
43-44 45-46 47-48		X										8	24		5308	5358	A24Z

### SWITCHING ANGLE (REFERENCE AND PRICE LIST CODE)

Diagram with off position

Diagram without off position

Diagram with off position				Diagram without off position			
30°	45°	60°	90°	30°	45°	60°	90°
Cat. No. A1	A8	A6	A4	A1	A8	A6	A4
Cat. No. B1	B8	B6	B4	B1	B8	B6	B4
Cat. No. V8 (45°)	M8			V8	M6		

# Separate cam switches

## ► GROUPING SWITCHES FOR 4 ELEMENTS

### DIAGRAM (REFERENCE AND PRICE LIST CODE)

Contact Nos.	Positions								No. of poles	No. of contacts	Connection terminals + links	Diagram reference		Diagram price list code
	0	1	2	3	4	-	-	-				with off	without off	
1-2 3-4 5-6 7-8	X			X					1	4		5401	5451	Ao4Z
9-10 11-12 13-14 15-16	X			X					2	8		5402	5452	Ao8Z
17-18 19-20 21-22 23-24	X			X					3	12		5403	5453	A12Z
25-26 27-28 29-30 31-32	X			X					4	16		5404	5454	A16Z
33-34 35-36 37-38 39-40	X			X					5	20		5405	5455	A20Z
41-42 43-44 45-46 47-48	X			X					6	24		5406	5456	A24Z

### SWITCHING ANGLE (REFERENCE AND PRICE LIST CODE)

Diagram with off position

Diagram without off position

Diagram with off position			Diagram without off position			
30°	45°	60°	30°	45°	60°	90°
Cat. No. A1	A8	A6	A1	A8	A6	A4
Cat. No. B1	B8	B6	B1	B8	B6	B4

For more than 4 elements, please contact us.

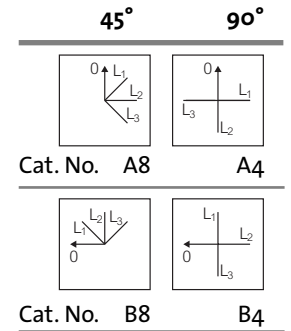
# Separate cam switches

## ► INSTRUMENT SWITCHES: AMMETER

### MEASUREMENT ON 3 CIRCUITS L<sub>1</sub>-L<sub>2</sub>-L<sub>3</sub> WITH 1 AMMETER AND 3 CTS WITH COMMON POINT

### SWITCHING ANGLE

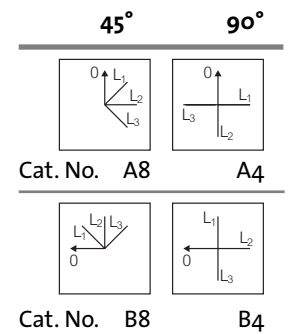
Contact Nos.	Positions o: L <sub>1</sub> : L <sub>2</sub> : L <sub>3</sub> : - - - - -	No. of contacts	Connection terminals + links	Diagram reference	Diagram price list code
1-2 3-4 5-6 7-8 9-10 11-12	X X X X X X X X X X X X	6		8151	Ao6Z



### MEASUREMENT ON 3 CIRCUITS L<sub>1</sub>-L<sub>2</sub>-L<sub>3</sub> WITH 1 AMMETER AND 3 CTS WITHOUT COMMON POINT

### SWITCHING ANGLE

Contact Nos.	Positions o: L <sub>1</sub> : L <sub>2</sub> : L <sub>3</sub> : - - - - -	No. of contacts	Connection terminals + links	Diagram reference	Diagram price list code
1-2 3-4 5-6 7-8 9-10 11-12 13-14 15-16 19-20	X X X X X X X X X X X X X X X X X X	9		8157	Ao9Z



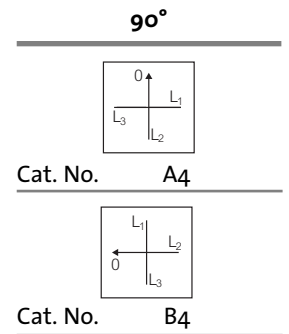
# Separate cam switches

► INSTRUMENT SWITCHES: AMMETER (CONTINUED)

MEASUREMENT ON 3 CIRCUITS L<sub>1</sub>-L<sub>2</sub>-L<sub>3</sub> WITH 1 AMMETER, DIRECT READING WITHOUT CT

SWITCHING ANGLE

Contact Nos.	Positions o : L <sub>1</sub> : L <sub>2</sub> : L <sub>3</sub> : - : - : - : -	No. of contacts	Connection terminals + links	Diagram reference	Diagram price list code
1-2	X X	9		8164	A09Z
3-4	X X				
5-6	X X				
7-8	X X				
9-10	X X				
11-12	X X				
13-14	X X				
15-16	X X				
17-18	X X				





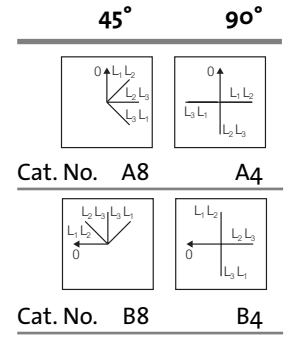
# Separate cam switches

► INSTRUMENT SWITCHES: VOLTMETER

MEASUREMENT ON 3-PHASE CIRCUIT WITH 1 VOLTMETER, READING BETWEEN PHASES

SWITCHING ANGLE

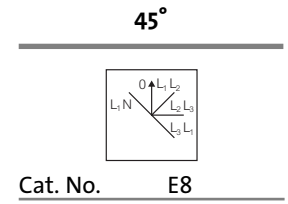
Contact Nos.	Positions						No. of contacts	Connection terminals + links	Diagram reference	Diagram price list code
	0	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	-	-				
1-2	X							8351	Ao4Z	
3-4		X								
5-6	X	X								
7-8			X							



MEASUREMENT ON 3-PHASE CIRCUIT WITH 1 VOLTMETER, READING BETWEEN PHASES + BETWEEN 1 PHASE AND NEUTRAL

SWITCHING ANGLE

Contact Nos.	Positions							No. of contacts	Connection terminals + links	Diagram reference	Diagram price list code
	0	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	-	-	L <sub>1</sub> N				
1-2	X		X				X		8356	Ao5Z	
3-4		X									
5-6	X	X									
7-8			X								
9-10	X						X				

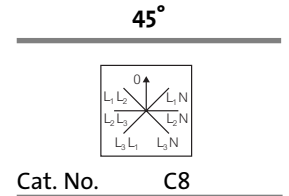


# Separate cam switches

## ► INSTRUMENT SWITCHES: VOLTMETER (CONTINUED)

MEASUREMENT ON 3-PHASE CIRCUIT WITH 1 VOLTMETER, READING BETWEEN PHASES AND BETWEEN PHASES AND NEUTRAL SWITCHING ANGLE

Contact Nos.	Positions						No. of contacts	Connection terminals + links	Diagram reference	Diagram price list code
	0	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	L <sub>1</sub>	L <sub>2</sub>				
1-2	X				X		6		8357	Ao6Z
3-4	X	X	X							
5-6	X					X				
7-8						X				
9-10		X				X				
11-12				X	X					

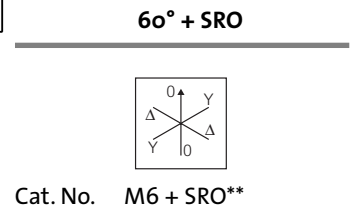
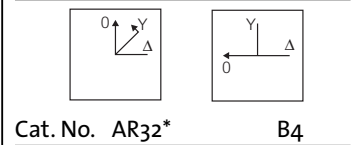
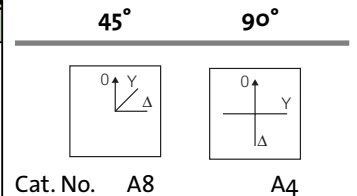


## ► 1 SPEED STARTER, 1 WAY - 3 PHASE MOTOR

Y Δ STARTER, ONE WAY, FOR SINGLE SPEED MOTOR

SWITCHING ANGLE

Contact Nos.	Positions						No. of contacts	Connection terminals + links	Diagram reference	Diagram price list code
	0	Y	Δ	-	-	-				
1-2	X	X					8		9551	Ao8Z
3-4		X								
5-6	X	X								
7-8	X	X								
9-10		X								
11-12		X								
13-14	X	X								
15-16	X	X								



\* Y652, PR12  
Y639, PR17 → 26  
Y640, PR40 → 160

\*\* Y649, PR12  
Y642, PR17 → 26  
Y643, PR40 → 160

# Separate cam switches

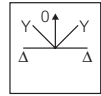
## ▶ 3-PHASE, 1-SPEED MOTOR CONTROL SWITCHES (CONTINUED)

### 1 SPEED STARTER, FORWARD/REVERSE - 3 PHASE MOTOR

SWITCHING ANGLE

Contact Nos.	FWD Positions o: Y Δ - - - Δ: Y	REV - - - Δ: Y	No. of contacts	Connection terminals + links	Diagram reference	Diagram price list code
1-2	X: X:		10		9153	A10Z
3-4		X: X:				
5-6		X: X:				
7-8	X: X:					
9-10	X: X:	X: X:				
11-12	X: X:	X: X:				
13-14	X: X:	X: X:				
15-16	X: X:	X: X:				
17-18	X: X:	X: X:				
19-20	X: X:	X: X:				

45°



Cat. No. C8

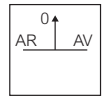
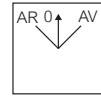
### 3 PHASE MOTOR SWITCH, FORWARD/REVERSE, 1 SPEED

\*SWITCHING ANGLE

Contact Nos.	Positions o: FWD - - - - REV	No. of contacts	Connection terminals + links	Diagram reference	Diagram price list code
1-2		5		9151	A05Z
3-4	X				
5-6	X				
7-8					
9-10	X				

45°

90°



Cat. No. C8

C4

\* AR = REV  
AV = FWD

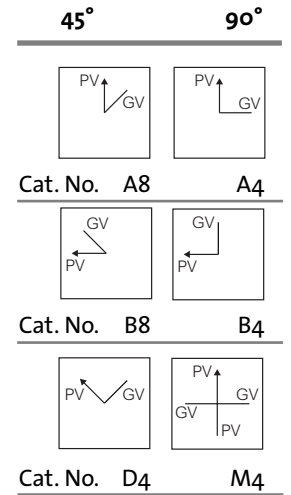
# Separate cam switches

## ▶ 3-PHASE, 2-SPEED MOTOR CONTROL SWITCHES

2 SPEEDS, 1 WAY WITHOUT OFF - 3 PHASE DALHANDER MOTOR (not suitable as starter)

\* SWITCHING ANGLE

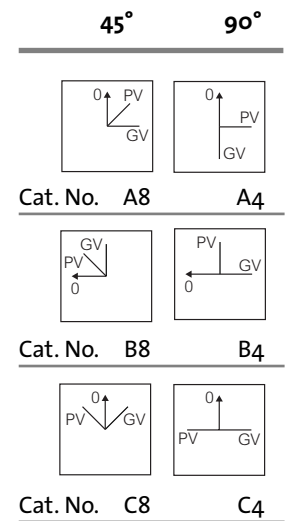
Contact Nos.	Positions						No. of contacts	Connection terminals + links	Diagram reference	Diagram price list code
	Δ	YY	-	-	-	-				
1-2	X						8		9354	Ao8Z
3-4	X									
5-6	X									
7-8	X									
9-10	X									
11-12	X									
13-14	X									
15-16	X									



2 SPEEDS, 1 WAY WITH OFF - 3 PHASE DALHANDER MOTOR

\* SWITCHING ANGLE

Contact Nos.	Positions						No. of contacts	Connection terminals + links	Diagram reference	Diagram price list code
	o	Δ	YY	-	-	-				
1-2	X						8		9552	Ao8Z
3-4	X									
5-6	X									
7-8	X									
9-10	X									
11-12	X									
13-14	X									
15-16	X									



\* Δ = PV  
YY = GV

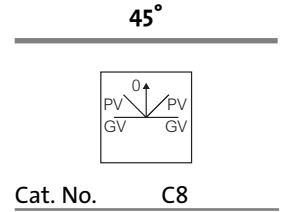
# Separate cam switches

## ▶ 3-PHASE, 2-SPEED MOTOR CONTROL SWITCHES (CONTINUED)

### 2 SPEEDS, FORWARD/REVERSE - 3 PHASE DALHANDER MOTOR

\* SWITCHING ANGLE

Contact Nos.	FWD Positions	REV	No. of contacts	Connection terminals + links	Diagram reference	Diagram price list code
1-2	X	X	12		9154	A12Z
3-4		X				
5-6		X				
7-8	X					
9-10	X					
11-12	X					
13-14	X	X				
15-16	X	X				
17-18	X	X				
19-20	X	X				
21-22	X	X				
23-24	X	X				

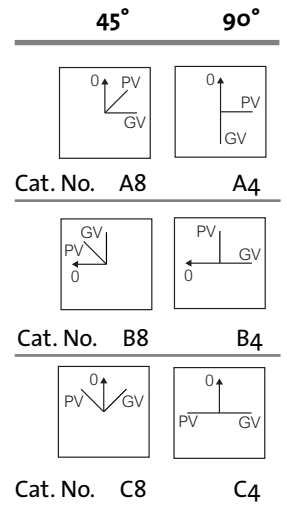


\* Δ = PV  
YY = GV

### STARTER, 2 SPEEDS, 1 WAY - 2 COILS ΔA, ΔB OPEN

\* SWITCHING ANGLE

Contact Nos.	Positions	No. of contacts	Connection terminals + links	Diagram reference	Diagram price list code
1-2	X	8		9553	Ao8Z
3-4	X				
5-6	X				
7-8	X				
9-10	X				
11-12	X				
13-14	X				
15-16	X				



\* PV = LS  
GV = HS

# Separate cam switches

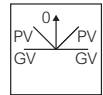
## ▶ 3-PHASE, 2-SPEED MOTOR CONTROL SWITCHES (CONTINUED)

STARTER, FORWARD/REVERSE, FOR 2 SPEED MOTOR, 2 COILS ΔA, ΔB OPEN

\* SWITCHING ANGLE

Contact Nos.	FWD Positions O : LS : HS : - : - : -	REV HS : LS	No. of contacts	Connection terminals + links	Diagram reference	Diagram price list code
1 - 2	X - X		12		9156	A12Z
3 - 4		X - X				
5 - 6		X - X				
7 - 8	X - X					
9 - 10	X	X				
11 - 12	X	X				
13 - 14	X	X				
15 - 16	X	X				
17 - 18	X	X				
19 - 20	X	X				
21 - 22	X	X				
23 - 24	X	X				

45°



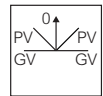
Cat. No. C8

STARTER, FORWARD/REVERSE, FOR 2 SPEED MOTOR, 2 COILS YA, YB OPEN

\* SWITCHING ANGLE

Contact Nos.	FWD Positions O : LS : HS : - : - : -	REV HS : LS	No. of contacts	Connection terminals + links	Diagram reference	Diagram price list code
1 - 2	X - X		10		9163	A10Z
3 - 4		X - X				
5 - 6		X - X				
7 - 8	X - X					
9 - 10	X	X				
11 - 12	X	X				
13 - 14	X	X				
15 - 16	X	X				
17 - 18	X	X				
19 - 20	X	X				

45°



Cat. No. C8

For function  
1 way,  
see page 210,  
ref. diagram 2203,  
diagram price list code  
Ao6Z

\* AR = REV  
AV = FWD

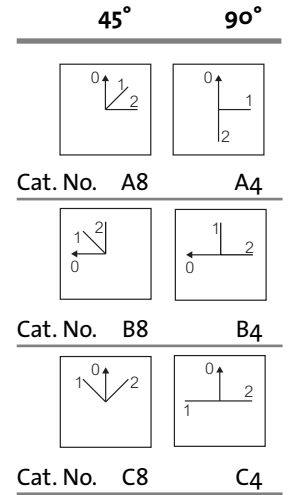
# Separate cam switches

## ► MOTOR CONTROL SWITCHES - D.C. CURRENT OR SINGLE PHASE

### POLARITY OR PHASE CHANGE-OVER WITH OFF POSITION (D.C. current)

### SWITCHING ANGLE

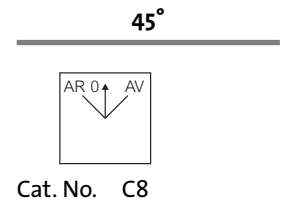
Contact Nos.	Positions	No. of contacts	Connection terminals + links	Diagram reference	Diagram price list code
1-2 3-4 5-6 7-8	o 1 2 - - - - -	4		9051	Ao4Z



### FORWARD/REVERSE SWITCH WITH OFF POSITION FOR 1-SPEED SINGLE PHASE MOTOR WITH PERMANENT CONDENSER (4 WIRES)

### SWITCHING ANGLE

Contact Nos.	Positions	No. of contacts	Connection terminals + links	Diagram reference	Diagram price list code
1-2 3-4 5-6 7-8 9-10 11-12	o FWD - - - - - REV	6		9057C8	Ao6Z



\* AR = REV  
AV = FWD

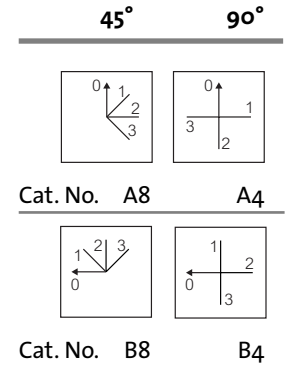
# Separate cam switches

## SWITCHES FOR COUPLING 2 RESISTORS

### COUPLING OF 2 RESISTORS WITH COMMON POINT, 2-POLE SWITCHING

### SWITCHING ANGLE

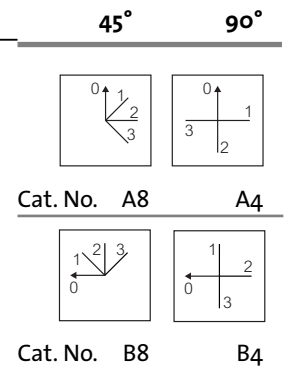
Contact Nos.	Positions							No. of contacts	Connection terminals + links	Diagram reference	Diagram price list code														
	o	1	2	3	-	-	-																		
1-2	X	X						4		7202	Ao4Z														
3-4			X																						
5-6		X	X																						
7-8	X																								
<table border="0"> <tr> <td>Pos.</td> <td>a</td> <td>b</td> </tr> <tr> <td>o</td> <td>off</td> <td>off</td> </tr> <tr> <td>1</td> <td>R<sub>1</sub></td> <td>R<sub>1</sub>+R<sub>2</sub> series</td> </tr> <tr> <td>2</td> <td>R<sub>2</sub></td> <td>R<sub>2</sub></td> </tr> <tr> <td>3</td> <td>R<sub>1</sub>+R<sub>2</sub> series</td> <td>R<sub>1</sub></td> </tr> </table>									Pos.	a	b	o	off	off	1	R <sub>1</sub>	R <sub>1</sub> +R <sub>2</sub> series	2	R <sub>2</sub>	R <sub>2</sub>	3	R <sub>1</sub> +R <sub>2</sub> series	R <sub>1</sub>		
Pos.	a	b																							
o	off	off																							
1	R <sub>1</sub>	R <sub>1</sub> +R <sub>2</sub> series																							
2	R <sub>2</sub>	R <sub>2</sub>																							
3	R <sub>1</sub> +R <sub>2</sub> series	R <sub>1</sub>																							



### COUPLING OF 2 RESISTORS WITH COMMON POINT, 2-POLE SWITCHING

### SWITCHING ANGLE

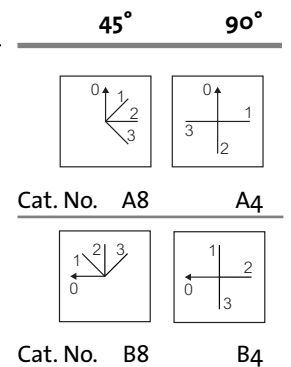
Contact Nos.	Positions							No. of contacts	Connection terminals + links	Diagram reference	Diagram price list code														
	o	1	2	3	-	-	-																		
1-2	X	X	X					4		7204	Ao4Z														
3-4			X																						
5-6		X	X																						
7-8	X																								
<table border="0"> <tr> <td>Pos.</td> <td>a</td> <td>b</td> </tr> <tr> <td>o</td> <td>off</td> <td>off</td> </tr> <tr> <td>1</td> <td>R<sub>1</sub>+R<sub>2</sub> series</td> <td>R<sub>1</sub></td> </tr> <tr> <td>2</td> <td>R<sub>1</sub></td> <td>R<sub>1</sub>+R<sub>2</sub> series</td> </tr> <tr> <td>3</td> <td>R<sub>1</sub>+R<sub>2</sub> //</td> <td>R<sub>2</sub></td> </tr> </table>									Pos.	a	b	o	off	off	1	R <sub>1</sub> +R <sub>2</sub> series	R <sub>1</sub>	2	R <sub>1</sub>	R <sub>1</sub> +R <sub>2</sub> series	3	R <sub>1</sub> +R <sub>2</sub> //	R <sub>2</sub>		
Pos.	a	b																							
o	off	off																							
1	R <sub>1</sub> +R <sub>2</sub> series	R <sub>1</sub>																							
2	R <sub>1</sub>	R <sub>1</sub> +R <sub>2</sub> series																							
3	R <sub>1</sub> +R <sub>2</sub> //	R <sub>2</sub>																							



### FUNCTION: COUPLING OF 2 RESISTORS WITHOUT COMMON POINT, 2-POLE SWITCHING

### SWITCHING ANGLE

Contact Nos.	Positions							No. of contacts	Connection terminals + links	Diagram reference	Diagram price list code									
	o	1	2	3	-	-	-													
1-2	X		X					4		7207	Ao4Z									
3-4		X	X																	
5-6	X		X																	
7-8		X	X																	
<table border="0"> <tr> <td>Pos.</td> <td>Function</td> </tr> <tr> <td>o</td> <td>off</td> </tr> <tr> <td>1</td> <td>R<sub>1</sub></td> </tr> <tr> <td>2</td> <td>R<sub>2</sub></td> </tr> <tr> <td>3</td> <td>R<sub>1</sub>+R<sub>2</sub> //</td> </tr> </table>									Pos.	Function	o	off	1	R <sub>1</sub>	2	R <sub>2</sub>	3	R <sub>1</sub> +R <sub>2</sub> //		
Pos.	Function																			
o	off																			
1	R <sub>1</sub>																			
2	R <sub>2</sub>																			
3	R <sub>1</sub> +R <sub>2</sub> //																			





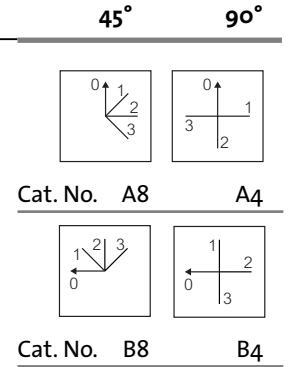
# Separate cam switches

## SWITCHES FOR COUPLING 3 RESISTORS

### COUPLING OF 3 RESISTORS WITHOUT COMMON POINT, 2-POLE SWITCHING

SWITCHING ANGLE

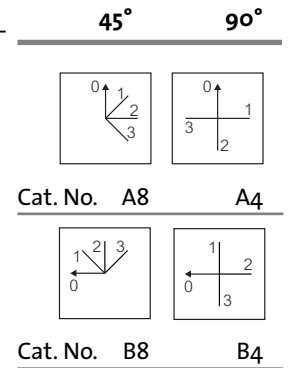
Contact Nos.	Positions						No. of contacts	Connection terminals + links	Diagram reference	Diagram price list code
	0	1	2	3	-	-				
1-2	X	X	X				<p>Pos. Function</p> <ul style="list-style-type: none"> <li>0 off</li> <li>1 R<sub>1</sub></li> <li>2 R<sub>1</sub>+R<sub>2</sub>//</li> <li>3 R<sub>1</sub>+R<sub>2</sub>+R<sub>3</sub>//</li> </ul>	7211	Ao6Z	
3-4		X	X							
5-6			X							
7-8	X	X	X							
9-10		X	X							
11-12			X							



### COUPLING OF 3 RESISTORS, 3-PHASE NETWORK, TOTAL CUT-OFF AT OFF

SWITCHING ANGLE

Contact Nos.	Positions						No. of contacts	Connection terminals + links	Diagram reference	Diagram price list code
	0	1	2	3	-	-				
1-2	X	X	X				<p>Pos. Function</p> <ul style="list-style-type: none"> <li>0 off</li> <li>1 R<sub>1</sub> (L<sub>1</sub>/L<sub>2</sub>)</li> <li>2 R<sub>1</sub> (L<sub>1</sub>/L<sub>2</sub>), R<sub>2</sub> (L<sub>2</sub>/L<sub>3</sub>)</li> <li>3 R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub> in ?</li> </ul>	7607	Ao4Z	
3-4		X	X							
5-6	X	X	X							
7-8		X	X							

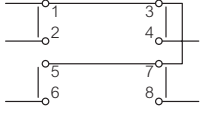


# Separate cam switches

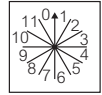
## ► CODING SWITCHES

### CODING SWITCH WITH OFF

SWITCHING ANGLE

Contact Nos.	Positions											No. of contacts	Connection terminals + links	Diagram reference	Diagram price list code	
	0	1	2	3	4	5	6	7	8	9	10					11
1-2	X	X	X	X	X	X	X	X	X	X	X	X	4		6501	Ao4Z
3-4			X-X			X-X			X-X							
5-6				X	X	X	X									
7-8							X	X		X	X					

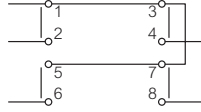
30°



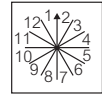
Cat. No. A1

### CODING SWITCH WITHOUT OFF

SWITCHING ANGLE

Contact Nos.	Positions												No. of contacts	Connection terminals + links	Diagram reference	Diagram price list code
	1	2	3	4	5	6	7	8	9	10	11	12				
1-2	X	X	X	X	X	X	X	X	X	X	X	X	4		6502	Ao4Z
3-4		X-X			X-X			X-X								
5-6			X	X	X	X				X						
7-8							X	X		X	X					

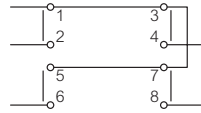
30°



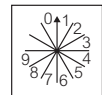
Cat. No. A1

### CODING SWITCH, BCD CODE, 0 TO 9 (with complete rotation possible)

SWITCHING ANGLE

Contact Nos.	Positions											No. of contacts	Connection terminals + links	Diagram reference	Diagram price list code
	0	1	2	3	4	5	6	7	8	9	-				
1-2	X	X	X	X	X	X	X	X	X	X	X	4		6503	Ao4Z
3-4			X-X			X-X			X-X						
5-6				X	X	X	X								
7-8							X-X		X-X						

30°



Cat. No. A1

# Separate cam switches

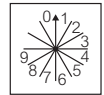
► CODING SWITCHES (CONTINUED)

COMPLEMENTARY BCD CODE, 0 to 9 (with complete rotation possible)

SWITCHING ANGLE

Contact Nos.	Positions										No. of contacts	Connection terminals + links	Diagram reference	Diagram price list code
	0	1	2	3	4	5	6	7	8	9				
1 - 2	X	X	X	X	X								6504	Ao4Z
3 - 4	X-X			X-X				X-X						
5 - 6	X		X						X-X					
7 - 8	X						X							

30°



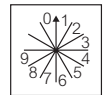
Cat. No. A1

BCD CODE, 0 to 9 + COMPLEMENTARY BCD CODE (with complete rotation possible)

SWITCHING ANGLE

Contact Nos.	Positions										No. of contacts	Connection terminals + links	Diagram reference	Diagram price list code
	0	1	2	3	4	5	6	7	8	9				
1 - 2	X	X	X	X	X								6505	Ao8Z
3 - 4			X-X			X-X								
5 - 6					X		X							
7 - 8									X-X					
9 - 10	X	X	X	X	X									
11 - 12	X-X				X-X				X-X					
13 - 14	X		X							X-X				
15 - 16	X						X							

30°







Cat. No. A1

# Separate cam switches

To order your cam switch, it is essential to follow the 5-step procedure (see presentation on p. 126)  
Mini cam switches are only available in standard formats.

## ► III - CHOICE OF MOUNTING

	Image	Page
<b>► 2-screw panel mount</b> Intervals 30 or 50 Intervals 35 or 36, 48, 54, 68		250 250 250
<b>► Single hole mounting Ø 22</b> With plate frame and handle With key with selector switch		251 251 251 252
<b>► Single hole mounting Ø 30</b> One-piece with handle One-piece with key		253 253 253
<b>► Rear mounting</b> Intervals 48 or 68 On DIN rail		254 254 254
<b>► Dimensions</b>		255
Front and rear mounting (E and S)		255
Front mounting (EZ)		257
Single hole mounting Ø 22 (E N48MD50)		259
Single hole mounting Ø 22 (E C21XXXX)		259
Single hole mounting Ø 30 (E 30PN)		260
Single hole mounting Ø 30 (E 30C)		261
Rear mounting on DIN rail (SX)		262

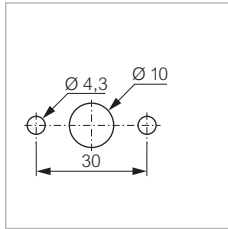
# Separate cam switches

Dimensions (p. 255)

## ▶ FRONT MOUNTING

### 2 SCREWS - 30 OR 50 MM INTERVAL

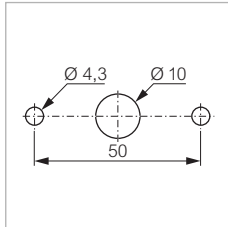
Cat. No.



For PR 12 to PR 160

Price list code

PR 12	-	E
PR 17	-	E
PR 21	-	E
PR 26	-	E

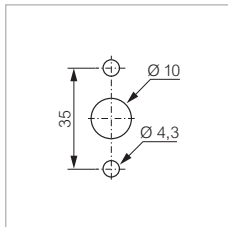


PR 40	-	E
PR 63	-	E
PR 125	-	E
PR 160	-	E

For foolproof shaft profile, add D to the type of mounting code (ED)

### 2 SCREWS - 35 MM INTERVAL OR □ 36, 48, 54 OR 68

Cat. No.



For PR 12 to PR 160

Price list code

35 mm interval

PR 12	Y533	EZ35
PR 17	Y523	EZ35
PR 21	Y524	EZ35
PR 26	Y525	EZ35

□ 36, 48, or 54 interval (see end of code)

PR 12	Y654	EZ36
PR 17	Y523	EZ36 or EZ48
PR 21	Y524	EZ36 or EZ48
PR 26	Y525	EZ36 or EZ54

□ 68 mm interval

PR 40	Y527	EZ68
PR 63	Y528	EZ68
PR 125	Y531	EZ68
PR 160	Y532	EZ68

For foolproof shaft profile, add D to the type of mounting code (eg: EZD35)

# Separate cam switches

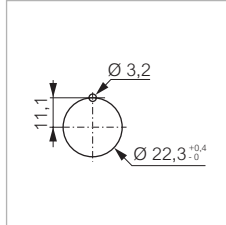
Dimensions (p. 259)

## ▶ ONE-HOLE MOUNTING Ø 22

### WITH PLATE, FRAME AND HANDLE

For PR 12

Cat. No.



Max. number of contacts accepted: 12

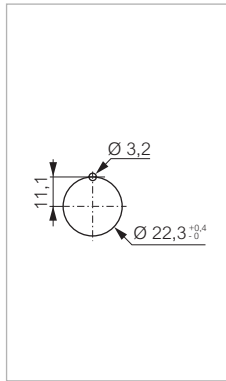
**Price list code**

<input type="checkbox"/> 48 legend plate with handle	N48MD50	N48MD50
<input type="checkbox"/> 48 legend plate with standard handle and aluminium legend plate	N480MD50	N480MD50

### SELECTOR SWITCH WITH KEY

For PR 12

Cat. No.



Supplied with 2 keys n° 455  
Max. number of contacts accepted: 8  
Legend plate can be used (p. 281)

**Price list code**

**Key lock 90/45° for □ 5 mm shaft**

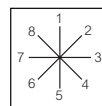
Key free in:

1-3-5-7	C21RC00	C21RC00
3-7	C21RD00	C21RD00
1-5	C21RE00	C21RE00
2-4-6-8	C21RF00	C21RF00
2-6	C21RG00	C21RG00
4-8	C21RH00	C21RH00



48 plate, key free in:

1-3-5-7	C21RC48	C21RC48
3-7	C21RD48	C21RD48
1-5	C21RE48	C21RE48
2-4-6-8	C21RF48	C21RF48
2-6	C21RG48	C21RG48
4-8	C21RH48	C21RH48



**Key lock 60/30° for □ 5 mm shaft**

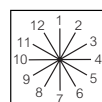
Key free in:

1-3-5-7-9-11	C21RJ00	C21RJ00
1-7	C21RK00	C21RK00
3-9	C21RQ00	C21RQ00
5-11	C21RR00	C21RR00
2-4-6-8-10-12	C21RL00	C21RL00
4-10	C21RM00	C21RM00
2-8	C21RS00	C21RS00
6-12	C21RT00	C21RT00



48 plate, key free in:

1-3-5-7-9-11	C21RJ48	C21RJ48
1-7	C21RK48	C21RK48
3-7	C21RQ48	C21RQ48
5-11	C21RR48	C21RR48
2-4-6-8-10-12	C21RL48	C21RL48
4-10	C21RM48	C21RM48
2-8	C21RS48	C21RS48
6-12	C21RT48	C21RT48



- For other bezels, replace 21 in the reference and the price list code with:

- 22 - black plastic
- 23 - grey plastic
- 24 - brilliant chromed brass
- 25 - brilliant chromed plastic

# Separate cam switches

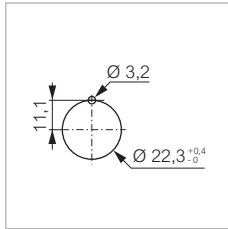
Dimensions (p. 259)

## ▶ ONE-HOLE MOUNTING Ø 22 (CONTINUED)

### WITH SELECTOR SWITCH

For PR 12

Cat. No.



Max. number of contacts accepted: 12

**Price list code**

**Handle**

- Red
- Green
- Black
- Grey

- C21RA01
- C21RA02
- C21RA03
- C21RA08

- C21RA01
- C21RA02
- C21RA03
- C21RA08

**Long handle**

- Red
- Green
- Black
- Grey

- C21RB01
- C21RB02
- C21RB03
- C21RB08

- C21RB01
- C21RB02
- C21RB03
- C21RB08

- For other bezels, replace 21 in the reference and the price list code with:

- 22 - black plastic
- 23 - grey plastic
- 24 - brilliant chromed brass
- 25 - brilliant chromed plastic
- 26 - matt anodised aluminium

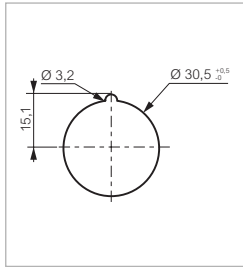
# Separate cam switches

Dimensions (p. 260-261)

## ► SINGLE HOLE MOUNTING Ø 30

### ONE-PIECE SELECTOR SWITCH

Cat. No.



The block consists of:  
 - 1 head and a plastic bezel enabling single hole  $\varnothing$  30 mounting  
 - a grey/black small handle  
 Max. number of contacts accepted: 24

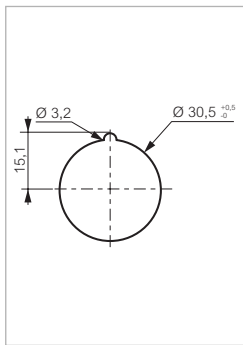
**Price list code**

PR 17	302PN	30PN
PR 21	303PN	30PN
PR 26	304PN	30PN

Extra charge for chrome brass bezel (instead of plastic) Y644<sup>(1)</sup> TO BE SPECIFIED

<sup>(1)</sup> To be added at the end of the reference and price list code

### ONE-PIECE KEY OPERATED



The block consists of:  
 - 1 head and a plastic bezel enabling single hole  $\varnothing$  30 mounting  
 - 2 keys no. 455 or 1424 A to be stated on order

The key acts as an operating handle  
 The key is always captive:  
 in positions 2-4-6-8  
 The key is free:  
 in positions 1-3-5-7 (form p. 287)  
 The key can be captive:  
 in positions 1 + 5 or 3 + 7  
 The serrated edge of the key acts as an indicator of the switch position

Max. number of contacts accepted: 8

**Price list code**

PR 17		30C2	30C
PR 21		30C3	30C
PR 26		30C4	30C

**Extra charges**

Key with plastic grip (recommended for more than 4 contacts)	Y646	30CM
Chrome brass bezel	Y644 <sup>(1)</sup>	TO BE SPECIFIED
Other key (other than 455 or 1424)	Y645 <sup>(1)</sup>	TO BE SPECIFIED

<sup>(1)</sup> To be added at the end of the reference and price list code



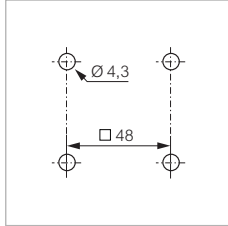
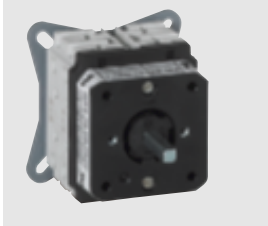
# Separate cam switches

Dimensions (p. 255)

## ► REAR MOUNTING

### 2 SCREWS - INTERVAL □ 48 OR 68

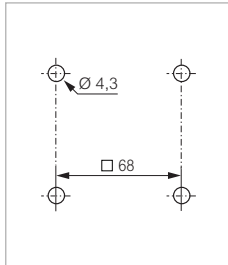
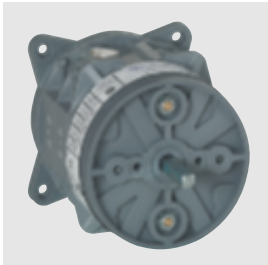
Cat. No.



For PR 12 to PR 160

**Price list code**

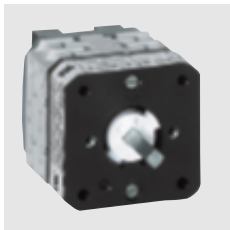
PR 12	Y513	S
PR 17	Y503	S
PR 21	Y504	S
PR 26	Y505	S



PR 40	Y507	S
PR 63	Y508	S
PR 125	Y511	S
PR 160	Y517	S

### ON DIN RAIL

Cat. No.



For PR 12 to PR 26

**Price list code**

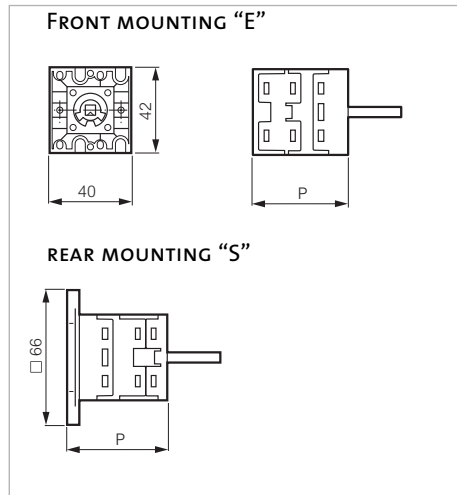
Max. number of contacts accepted: 8

PR 12	Y553	SX
PR 17	Y543	SX
PR 21	Y544	SX
PR 26	Y545	SX

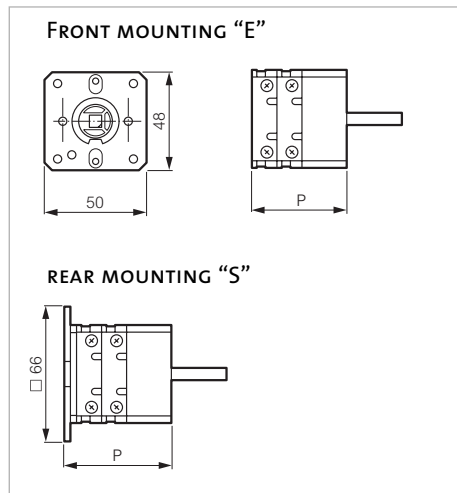
# Separate cam switches

## ► DIMENSIONS

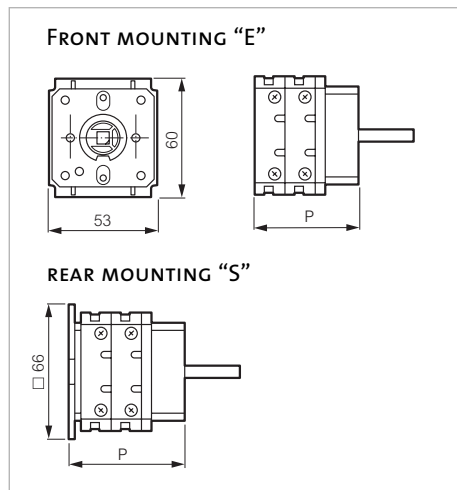
### FRONT AND REAR MOUNTING (E AND S)



PR 12	No. of contacts	Front mounting P*	Rear mounting P*
	1-2	36	42
	3-4	46	52
	5-6	56	62
	7-8	66	72
	9-10	76	82
	11-12	86	92
	13-14	122	128
	15-16	132	138
	17-18	142	148
	19-20	152	158
	21-22	162	168
	23-24	172	178



PR 17/21	No. of contacts	Front mounting P*	Rear mounting P*
	1-2	33	39
	3-4	45	51
	5-6	57	63
	7-8	69	75
	9-10	81	87
	11-12	93	99
	13-14	105	111
	15-16	117	123
	17-18	129	135
	19-20	141	147
	21-22	153	159
	23-24	165	171



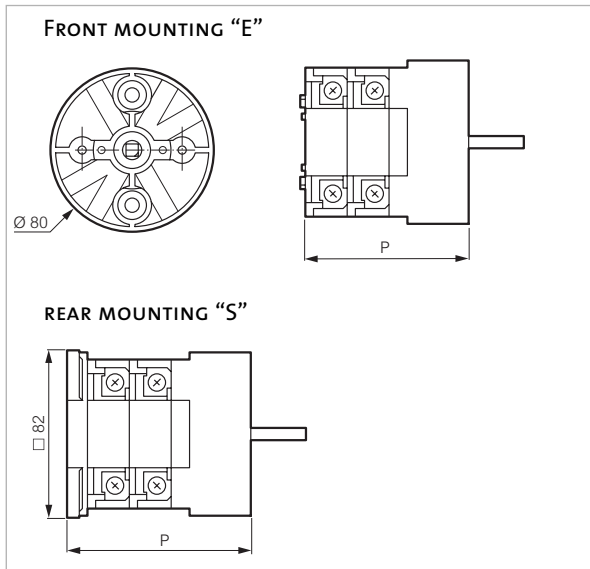
PR 26	No. of contacts	Front mounting P*	Rear mounting P*
	1-2	36	42
	3-4	51	57
	5-6	66	72
	7-8	81	87
	9-10	96	102
	11-12	111	117
	13-14	126	132
	15-16	141	147
	17-18	156	162
	19-20	171	177
	21-22	186	192
	23-24	201	207

\* P = Depth

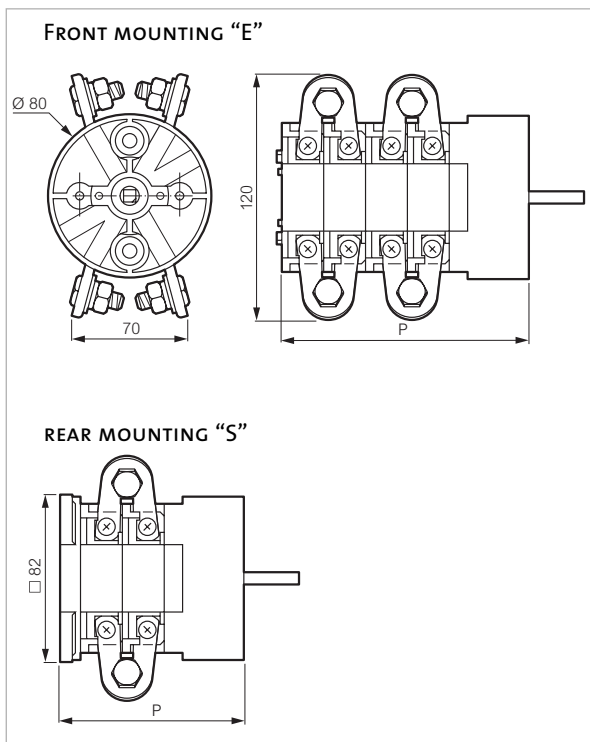
# Separate cam switches

► DIMENSIONS (CONTINUED)

FRONT AND REAR MOUNTING (E AND S)



PR 40/63	No. of contacts	Front mounting P*	Rear mounting p*
	1-2	60	70
	3-4	80	90
	5-6	100	110
	7-8	120	130
	9-10	140	150
	11-12	160	170
	13-14	180	190
	15-16	200	210
	17-18	220	230
	19-20	240	250
	21-22	260	270
	23-24	280	290



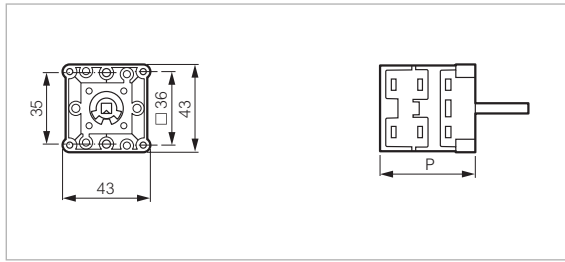
PR 125/160	No. of contacts	Front mounting P*	Rear mounting p*
	1-2	80	90
	3-4	120	130
	5-6	160	170
	7-8	200	210
	9-10	240	250
	11-12	280	290

\* P = Depth

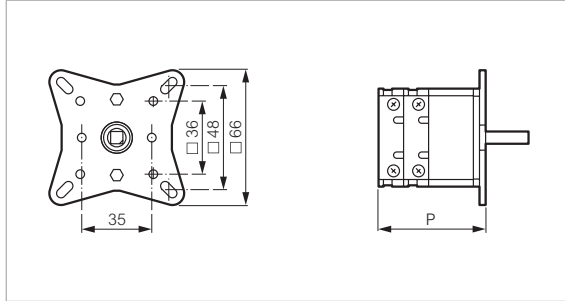
# Separate cam switches

► DIMENSIONS (CONTINUED)

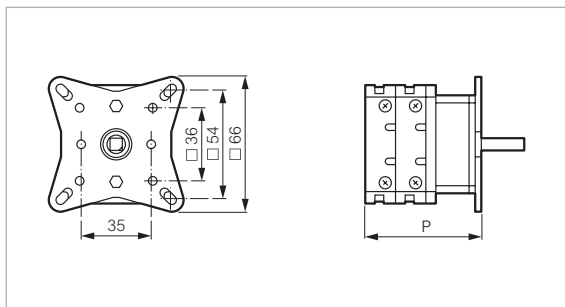
**FRONT MOUNTING (EZ)**



PR 12	No. of contacts	P*
	1-2	36
	3-4	46
	5-6	56
	7-8	66
	9-10	76
	11-12	86
	13-14	122
	15-16	132
	17-18	142
	19-20	152
	21-22	162
	23-24	172



PR 17/21	No. of contacts	P*
	1-2	39
	3-4	51
	5-6	63
	7-8	75
	9-10	87
	11-12	99
	13-14	111
	15-16	123
	17-18	135
	19-20	147
	21-22	159
	23-24	171



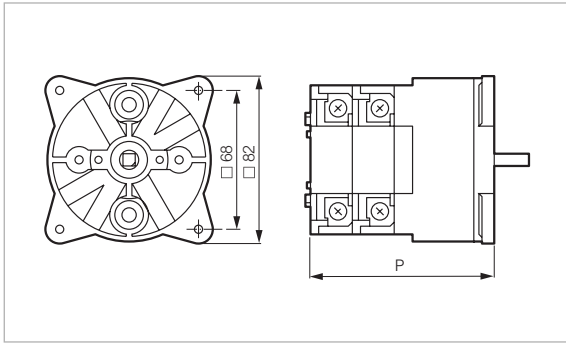
PR 26	No. of contacts	P*
	1-2	42
	3-4	57
	5-6	72
	7-8	87
	9-10	102
	11-12	117
	13-14	132
	15-16	147
	17-18	162
	19-20	177
	21-22	192
	23-24	207

\* P = Depth

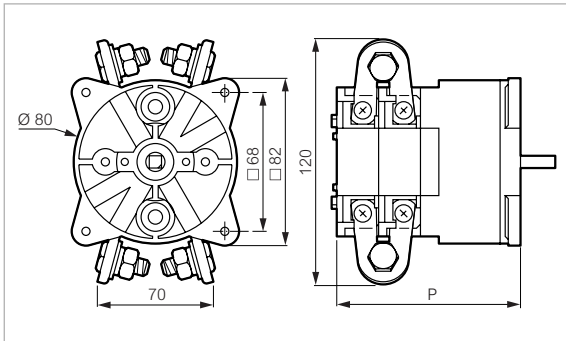
# Separate cam switches

► DIMENSIONS (CONTINUED)

FRONT MOUNTING (EZ)



PR 40/63	No. of contacts	P*
	1-2	60
	3-4	80
	5-6	100
	7-8	120
	9-10	140
	11-12	160
	13-14	180
	15-16	200
	17-18	220
	19-20	240
	21-22	260
	23-24	280



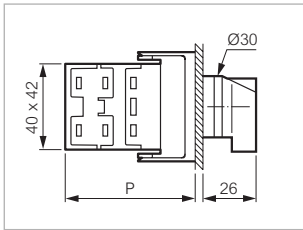
PR 125/160	No. of contacts	P*
	1-2	80
	3-4	120
	5-6	160
	7-8	200
	9-10	240
	11-12	280

\* P = Depth

# Separate cam switches

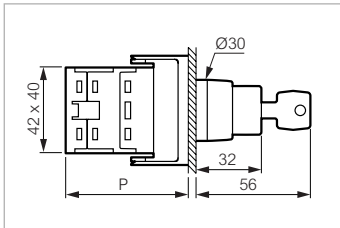
► DIMENSIONS (CONTINUED)

**SINGLE HOLE MOUNTING Ø 22 (E N48MD50)**

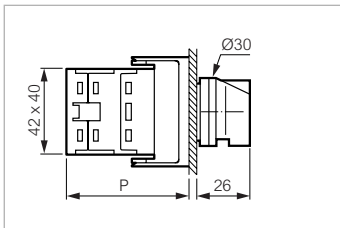


PR 12	No. of contacts	P*
	1-2	51
	3-4	61
	5-6	71
	7-8	81
	9-10	91
	11-12	101

**SINGLE HOLE MOUNTING Ø 22 (E C21XXXX)**



PR 12	No. of contacts	P*
With key		
	1-2	51
	3-4	61
	5-6	71
	7-8	81



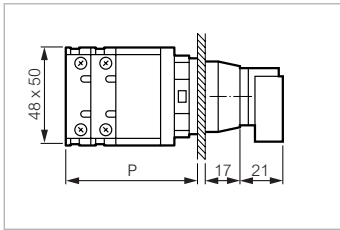
With handle/long handle		
	1-2	51
	3-4	61
	5-6	71
	7-8	81
	9-10	91
	11-12	101

\* P = Depth

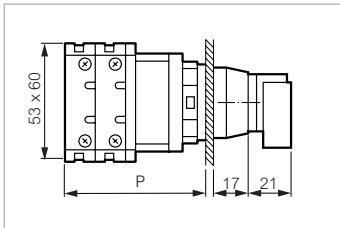
# Separate cam switches

► DIMENSIONS (CONTINUED)

SINGLE HOLE MOUNTING Ø 30 (E 30PN)



PR 17/21	No. of contacts	P*
	1-2	47.5
	3-4	59.5
	5-6	71.5
	7-8	83.5
	9-10	95.5
	11-12	107.5
	13-14	119.5
	15-16	131.5
	17-18	143.5
	19-20	155.5
	21-22	167.5
	23-24	179.5



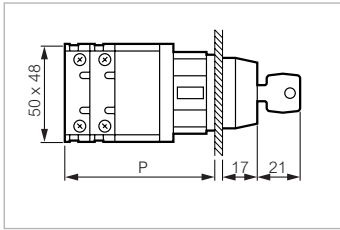
PR 26	No. of contacts	P*
	1-2	50.5
	3-4	65.5
	5-6	80.5
	7-8	95.5
	9-10	110.5
	11-12	125.5
	13-14	140.5
	15-16	155.5
	17-18	170.5
	19-20	185.5
	21-22	200.5
	23-24	215.5

\* P = Depth

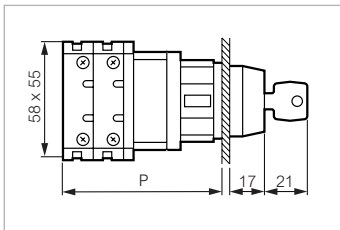
# Separate cam switches

► DIMENSIONS (CONTINUED)

SINGLE HOLE MOUNTING  $\varnothing 30$  (E 30C)



PR 17/21	No. of contacts	P*
	1-2	56.5
	3-4	68.5
	5-6	80.5
	7-8	92.5
	9-10	104.5
	11-12	116.5
	13-14	128.5
	15-16	140.5
	17-18	152.5
	19-20	164.5
	21-22	176.5
	23-24	188.5



PR 26	No. of contacts	P*
	1-2	59.5
	3-4	74.5
	5-6	89.5
	7-8	104.5
	9-10	119.5
	11-12	134.5
	13-14	149.5
	15-16	164.5
	17-18	179.5
	19-20	194.5
	21-22	209.5
	23-24	224.5

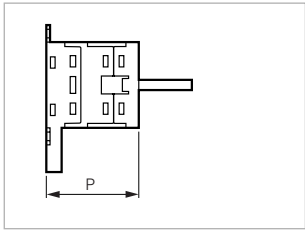
\* P = Depth



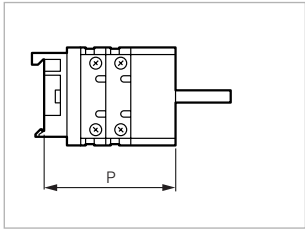
# Separate cam switches

► DIMENSIONS (CONTINUED)

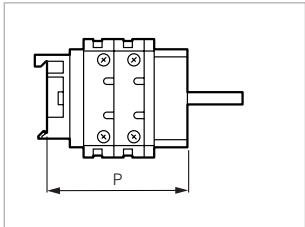
REAR MOUNTING ON DIN RAIL (SX)



PR 12	No. of contacts	P*
	1-2	36
	3-4	46
	5-6	56
	7-8	66



PR 17/21	No. of contacts	P*
	1-2	49
	3-4	61
	5-6	73
	7-8	85











PR 26	No. of contacts	P*
	1-2	52
	3-4	67
	5-6	82
	7-8	97

\* P = Depth

# Separate cam switches

To order your cam switch, it is essential to follow the 5-step procedure (see presentation on p. 126)  
Mini cam switches are only available in standard formats.

## ► IV - CHOICE OF PRESENTATION

		Page
► <b>Complete plate, frame and handle</b> PR 12 to PR 16o		264 264
► <b>Plate, frame and handle: other combinations</b> Plate and frame for PR 12 to PR 16o Handles for PR 12 to PR 16o		265 265 266
► <b>Padlockable</b> Plate, frame and handle for PR 12 to PR 16o Clutch drive without door interlock for PR 12 to PR 16o		267 267 268
► <b>Enclosure</b> Compact size BPR for PR 12 Normal type BC for PR 12 to PR 26 Normal type BCF for PR 40 to PR 63		270 270 271 272
► <b>With key locking</b> Plate, frame and handle for PR 12 to PR 16o		274 274
► <b>Parallel coupling of 2 switches</b> With handle PR 12 to PR 16o		275 275
► <b>Serial coupling of 2 switches</b> With handle PR 12 to PR 16o		276 276
► <b>Dual-voltage device</b> With plate, frame and handle PR 12 to PR 26		277 277

# Separate cam switches

Standard engraving (p. 286)

## ▶ PLATE, FRAME AND HANDLE



Type

Cat. No.

For PR 12 to PR 160

Aluminium plate + grey/black handle/long handle  
Blank label  
The price for the presentation includes engraving of the usual texts and symbols (engraving to be specified)

Price list code

**PR 12 to PR 26**

- 48 plate and frame**
- + small handle
- + duty label + small handle
- + small lever
- + Duty label + small lever

Q48PN	Q48PN50
Q480PN	Q480PN50
Q48PC	Q48PC50
Q480PC	Q480PC50

- 64 plate and frame**
- + small handle
- + duty label + small handle
- + small lever
- + Duty label + small lever

Q64PN	Q64PN50
Q640PN	Q640PN50
Q64PC	Q64PC50
Q640PC	Q640PC50

**PR 40 to PR 160**

- 64 plate and frame**
- + medium handle
- + duty label + medium handle
- + small lever
- + small lever

Q64MN	Q64MN60
Q640MN	Q640MN60
Q64PC	Q64PC60
Q640PC	Q640PC60

- 72 plate and frame**
- + medium handle
- + duty label + medium handle
- + small lever
- + Duty label + small lever

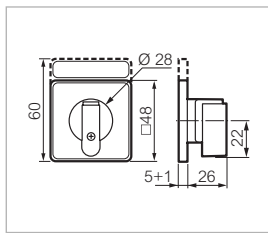
Q72MN	Q72MN60
Q720MN	Q720MN60
Q72PC	Q72PC60
Q720PC	Q720PC60

- 96 plate and frame**
- + large handle
- + large lever

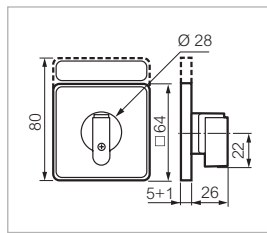
Q96GN	Q96GN60
Q96GC	Q96GC60

**Extra charges**

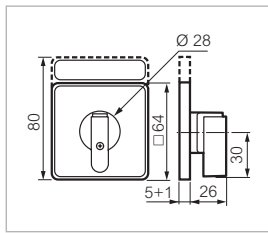
Standard engraving	Y000
Customised engraving	Y100



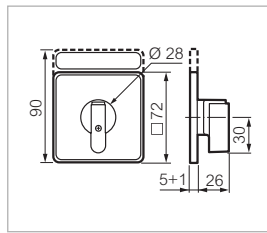
Q48PN



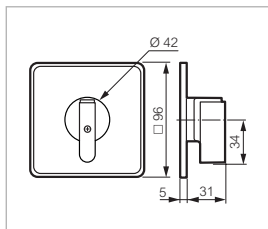
Q64PN



Q64MN



Q72MN



Q96GN

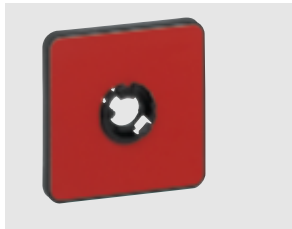
# Separate cam switches

Standard engraving (p. 286)

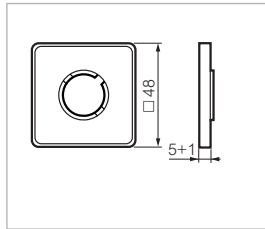
## ▶ PLATE AND FRAME

### Other combinations

Cat. No.



Q61



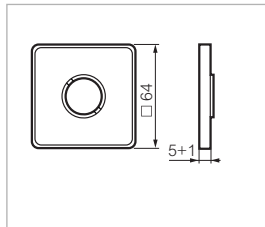
□ 48

For PR 12 to PR 160

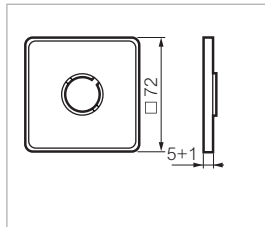
For complete presentation, add handle  
The price for the presentation includes engraving of standard texts and symbols (p. 286)  
Other engraving (form p. 287)  
Duty label with aluminium plate



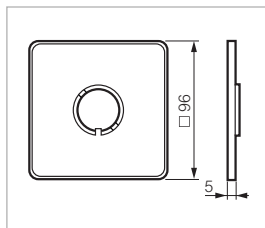
Q780



□ 64



□ 72



□ 96

#### □ 48 plate (PR 12 to PR 26)

- Red
- Red with duty label
- Black
- Black with duty label
- Yellow
- Yellow with duty label
- Aluminium
- Aluminium with duty label

#### □ 64 plate (PR 12 to PR 160)

- Red
- Red with duty label
- Black
- Black with duty label
- Yellow
- Yellow with duty label
- Aluminium
- Aluminium with duty label

#### □ 72 plate (PR 12 to PR 160)

- Red
- Red with duty label
- Black
- Black with duty label
- Yellow
- Yellow with duty label
- Aluminium
- Aluminium with duty label

#### □ 96 plate (PR 40 to PR 160)

- Red
- Black
- Yellow
- Aluminium

### Price list code

Q41	Q41
Q410	Q410
Q43	Q43
Q430	Q430
Q45	Q45
Q450	Q450
Q48	Q48
Q480	Q480
Q61	Q61
Q610	Q610
Q63	Q63
Q630	Q630
Q65	Q65
Q650	Q650
Q64	Q64
Q640	Q640
Q71	Q71
Q710	Q710
Q73	Q73
Q730	Q730
Q75	Q75
Q750	Q750
Q72	Q72
Q720	Q720
Q91	Q91
Q93	Q93
Q95	Q95
Q96	Q96

# Separate cam switches

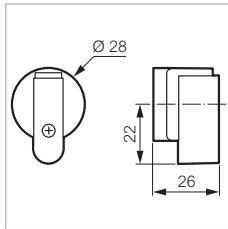
## ▶ HANDLES

### Other combinations

Cat. No.



MN61



PN

For PR 12 to PR 160

For complete products, add plate + handle

### Price list code

#### PR 12 to PR 26

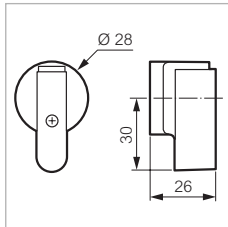
- Red - small handle
- Black - small handle
- Red - medium handle
- Black - medium handle
- Red - large handle
- Black - large handle
- Red - small lever
- Black - small lever

- PN51
- PN53
- MN51
- MN53
- GN51
- GN53
- PC51
- PC53

- PN51
- PN53
- MN51
- MN53
- GN51
- GN53
- PC51
- PC53



GN63



MN

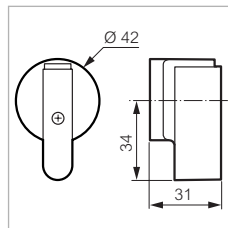
#### PR 40 to PR 160

- Red - medium handle
- Black - medium handle
- Red - large handle
- Black - large handle
- Red - small lever
- Black - small lever
- Red - large lever
- Black - large lever

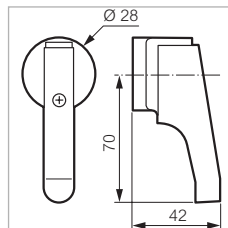
- MN61
- MN63
- GN61
- GN63
- PC61
- PC63
- GC61
- GC63

- MN61
- MN63
- GN61
- GN63
- PC61
- PC63
- GC61
- GC63

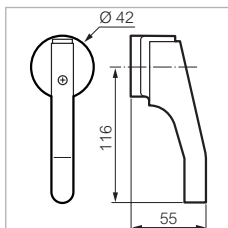
Version with foolproofing and other colours (see p. 279/280)



GN



PC



GC

# Separate cam switches

Standard engraving (p. 286)

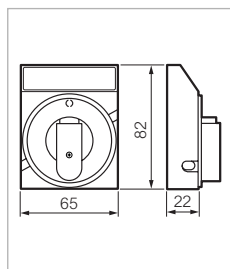
## ► PADLOCKABLE PRESENTATION

### Other combinations

Cat. No.



J48PN51



For PR 12 to PR 160

Yellow presentation, red handle  
for up to 4 padlocks

Price list code

#### PR 12 to PR 26 - Mounting 30 mm interval

small frame □ 48,

Without engraving	J48PN51	J48PN51
With engraving (state requirement)	J480PN51	J480PN51
With engraving (Inter principal)	J481PN51	J481PN51
With engraving (Hauptschalter)	J482PN51	J482PN51
With engraving (Main switch)	J483PN51	J483PN51

Medium frame □ 72,

Without engraving	J72MN51	J72MN51
With engraving (state requirement)	J720MN51	J720MN51
With engraving (Inter principal)	J721MN51	J721MN51
With engraving (Hauptschalter)	J722MN51	J722MN51
With engraving (Main switch)	J723MN51	J723MN51

#### PR 40 to PR 160 - Mounting 50 mm interval

Medium frame □ 72,  
medium red handle

Without engraving	J72MN61	J72MN61
With engraving (state requirement)	J720MN61	J720MN61
With engraving (Inter principal)	J721MN61	J721MN61
With engraving (Hauptschalter)	J722MN61	J722MN61
With engraving (Main switch)	J723MN61	J723MN61

Large frame □ 96,

Without engraving	J96GN61	J96GN61
With engraving (state requirement)	J960GN61	J960GN61
With engraving (Inter principal)	J961GN61	J961GN61
With engraving (Hauptschalter)	J962GN61	J962GN61
With engraving (Main switch)	J963GN61	J963GN61

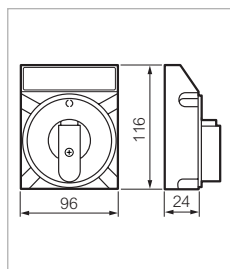
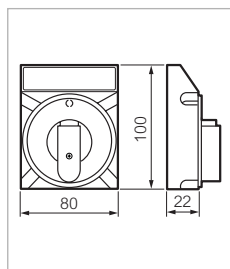
#### Extra charges

Standard engraving	Y000
Customised engraving	Y100
IP 65 version	Y661

If the switching angle is different from 60°, replace J with H



V723MN



- For version with grey plate, grey/black handle,  
replace the letter J with the letter V in the  
reference and delete the last 2 two digits (51 or 61)

- If the switching angle is different from 60°  
replace V with G in the reference

- For difference mounting intervals, the addition of an  
adaptor plate allows intervals EZ 35, EZ 36/48/68 (see  
p. 257/258)

The reference then becomes:

J44/440 for □ 48

J74/740 for □ 72

J940 for □ 96

# Separate cam switches

Standard engraving (p. 286)

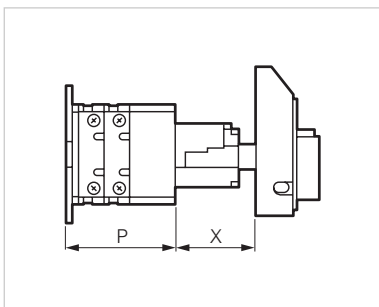
## ► PADLOCKABLE PRESENTATION (CONTINUED)

With clutch drive and without door interlock

Cat. No.



R5J48PN61



S mounting method (see p. 255)  
 X = 45 to 65 mm (+ 31, 62 or 93 mm  
 with extension piece)

For PR 12 to PR 160

Yellow presentation, red handle  
 for up to 4 padlocks

Rear mounting

Price list code

### PR 12 to PR 26

Small frame □ 48,  
 Front mounting possible  
 (A, C or D see p. 269)

Without engraving

R5J48PN61

R5J48PN61

With engraving (state requirement)

R5J480PN61

R5J480PN61

With engraving (Inter principal)

R5J481PN61

R5J481PN61

With engraving (Hauptschalter)

R5J482PN61

R5J482PN61

With engraving (Main switch)

R5J483PN61

R5J483PN61

Medium frame □ 72,  
 Front mounting possible  
 (A, C, D or E see p. 269)

Without engraving

R5J72MN61

R5J72MN61

With engraving (state requirement)

R5J720MN61

R5J720MN61

With engraving (Inter principal)

R5J721MN61

R5J721MN61

With engraving (Hauptschalter)

R5J722MN61

R5J722MN61

With engraving (Main switch)

R5J723MN61

R5J723MN61

If the switching angle is different from 60°:  
 Replace J with H

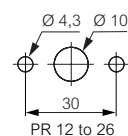
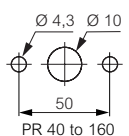
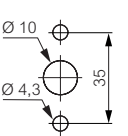
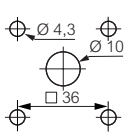
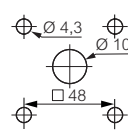
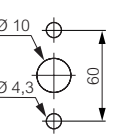
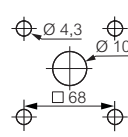
# Separate cam switches

Standard engraving (p. 286)

## ▶ PADLOCKABLE PRESENTATION (CONTINUED)

With clutch drive and without door interlock

Cat. No.

<b>A</b>		<b>B</b>		For PR 12 to PR 160	
				Yellow presentation, red handle for up to 4 padlocks	
				Rear mounting	
					<b>Price list code</b>
<b>C</b>		<b>D</b>		<b>PR 40 to PR 160</b>	
				Medium frame □ 72, Front mounting possible (B, C, D or E)	
				Without engraving	R6J72MN61
				With engraving (state requirement)	R6J720MN61
				With engraving (Inter principal)	R6J721MN61
				With engraving (Hauptschalter)	R6J722MN61
				With engraving (Main switch)	R6J723MN61
<b>E</b>		<b>F</b>		Large frame □ 96, Front mounting possible (B, C, D, E, or G)	
				With engraving (state requirement)	R6J960GN61
				With engraving (Inter principal)	R6J961GN61
				With engraving (Hauptschalter)	R6J962GN61
				With engraving (Main switch)	R6J963GN61
				<b>Extra charges</b>	
				Extra charge for standard engraving	Y000
				Extra charge for customised engraving	Y100
				Extra charge for IP 65 version	Y662
<b>G</b>				<b>Accessories</b>	
				Adjusting clips for door alignment	WR01
				Extension piece 31 mm, for control shaft (max. 3 per switch)	WR02
				Relay terminals 16 mm <sup>2</sup> (pair)	WR03
				Operating key, when door open	WR04

- For version with grey plate, grey/black handle  
replace the letter J with the letter V in the  
reference and delete 61

- For clutch drive with door interlock  
replace the letter R with V in the reference

If the switching angle is different from 60°:  
Replace J with H



# Separate cam switches

Standard engraving (p. 286)

## ► ENCLOSURE

### TYPE BPR

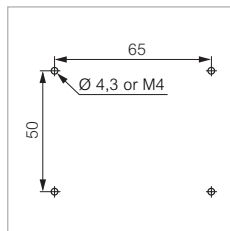
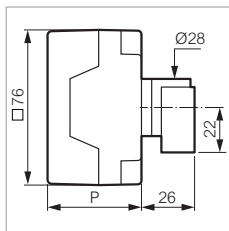
### Compact size

Cat. No.



PR 12 for mounting in enclosure, special version with inverted terminals

Base mounting PR 12  
Enclosure in light grey, self-extinguishing thermoplastic  
IP 40  
4 knock-out  $\varnothing$  19 cable entries for Pg 11 with nut  
The price for the presentation includes engraving of the standard texts and symbols



P *	Price list code	Contacts
46	BPR01	1-2 CONTACTS
58	BPR02	3-4 CONTACTS

P \* = Depth

#### - for other legend plate colours

replace Q48 (in the reference and price list code) with:

- Q41 -  $\square$  48 red legend plate
- Q43 -  $\square$  48 black legend plate
- Q45 -  $\square$  48 yellow legend plate

#### - for other handle colours

replace PN (in the reference) with:  
PN51 - small red handle  
PN53 - small black handle

#### PR 12 - 1 or 2 contacts

- 48 plate and frame
- Aluminium, small grey/black handle
- Yellow, padlockable presentation small red handle
- Grey, padlockable presentation, small grey-black handle

#### Price list code

BPR01Q48	BPRQ48PN
BPR01J	BPRJ48PN51
BPR01V	BPRV48PN

#### PR 12 - 3 or 4 contacts

- 48 plate and frame
- Aluminium, small grey/black handle
- Yellow, padlockable presentation small red handle
- Grey, padlockable presentation, small grey-black handle

BPR02Q48	BPRQ48PN
BPR02J	BPRJ48PN51
BPR02V	BPRV48PN

#### Accessories

Cable gland Pg11 with nut	CM10P	CM10P
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#### Extra charges

Standard engraving	Y000
Customised engraving	Y100
IP 65 version	Y632

Foolproofing (see p. 291)

# Separate cam switches

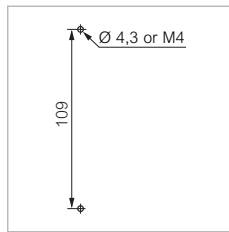
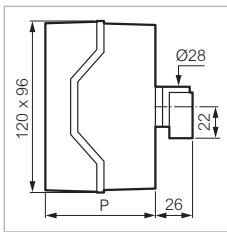
Standard engraving (p. 286)

## ► ENCLOSURE

### TYPE BC

### Standard size enclosure

Cat. No.



PR 12 to PR 26

Version with base mounted cam switch  
Enclosure in self-extinguishing thermoplastic  
black base, light grey cover  
IP 40  
4 knock-out  $\varnothing$  23 cable entries for Pg 16 with nut  
The price for the presentation includes engraving  
standard texts and symbols

P *	Price list code	Contacts
77	BC21-23	1-6 CONTACTS (1-4 PR26)
101	BC22-24	7-10 CONTACTS (5-8 PR26)

P \* = Depth

#### - for other colours, legend plates and handles

replace Q<sub>3</sub> (in the reference and price list code with:

- Q<sub>1</sub> - aluminium legend plate, red handle
- R<sub>1</sub> - red legend plate, red handle
- J<sub>1</sub> - red legend plate, yellow handle
- N<sub>3</sub> - black legend plate, black handle

#### Price list code

#### PR 12 - 1 to 6 contacts

<input type="checkbox"/> 64 plate and frame		
● Aluminium, black handle	BC21Q3	BCQ3
<input type="checkbox"/> 48 plate and frame		
● Yellow, padlockable presentation red handle	BC21J48	BCJ48
● Grey, padlockable presentation, grey/black handle	BC21V48	BCV48

#### PR 12 - 7 to 10 contacts

<input type="checkbox"/> 64 plate and frame		
● Aluminium, black handle	BC22Q3	BCQ3
<input type="checkbox"/> 48 plate and frame		
● Yellow, padlockable presentation red handle	BC22J48	BCJ48
● Grey, padlockable presentation, grey/black handle	BC22V48	BCV48

#### PR 17-21 - 1 to 6 contacts

#### PR 26 - 1 to 4 contacts

<input type="checkbox"/> 64 plate and frame		
● Aluminium, black handle	BC23Q3	BCQ3
<input type="checkbox"/> 48 plate and frame		
● Yellow, padlockable presentation red handle	BC23J48	BCJ48
● Grey, padlockable presentation, grey/black handle	BC23V48	BCV48

#### PR 17-21 - 7 to 10 contacts

#### PR 26 - 5 to 8 contacts

<input type="checkbox"/> 64 plate and frame		
● Aluminium, black handle	BC24Q3	BCQ3
<input type="checkbox"/> 48 plate and frame		
● Yellow, padlockable presentation red handle	BC24J48	BCJ48
● Grey, padlockable presentation, grey/black handle	BC24V48	BCV48

#### Accessories

Cable gland Pg16 with nut	CM14P	CM14P
Relay terminals (pair)	WR03	WR03
Tamperproof screw (pair)	WR05	WR05

#### Extra charges

Standard engraving	Y000
Customised engraving	Y100
IP 65 version	Y663

# Separate cam switches

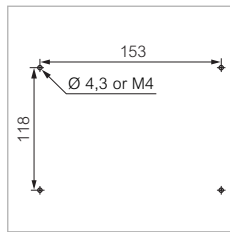
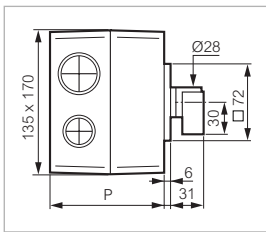
Standard engraving (p. 286)

## ► ENCLOSURE

### TYPE BCF

### Standard size enclosure

Cat. No.



PR 40 to PR 63

Version with base mounted cam switch  
Enclosure in light grey, self-extinguishing thermoplastic

IP 40

10 knock-out cable entries:

6 x  $\varnothing$  29 for Pg 21

(2 above and below, 1 on each side)

4 x  $\varnothing$  38 for Pg 29 (1 on each side)

The price for the presentation includes engraving of the standard texts and symbols

#### Price list code

#### PR 40-63 - 1 and 2 contacts

Without presentation

72 plate and frame

● Aluminium, medium grey/black handle

● Yellow, padlockable presentation

medium red handle

96 plate and frame

● Aluminium, large grey/black handle

BCF140

BCF

BCF140Q72

BCFQ72MN

BCF140J72

BCFJ72MN61

BCF140Q96

BCFQ96GN

#### PR 40-63 - 3 and 4 contacts

Without presentation

72 plate and frame

● Aluminium, medium grey/black handle

● Yellow, padlockable presentation

medium red handle

96 plate and frame

● Aluminium, large grey/black handle

BCF240

BCF

BCF240Q72

BCFQ72MN

BCF240J72

BCFJ72MN61

BCF240Q96

BCFQ96GN

P	Price list code	Contacts
107	BCF140-240	1-4 CONTACTS
145	BCF340-440	5-8 CONTACTS

P \* = Depth

# Separate cam switches

Standard engraving (p. 286)

► ENCLOSURE

TYPE BCF (continued)

Standard size enclosure

Cat. No.



**PR 40-63 - 5 and 6 contacts**

Without presentation

□ 72 plate and frame

● Aluminium,  
medium grey/black handle

● Yellow, padlockable presentation  
medium red handle

□ 96 plate and frame

● Aluminium,  
large grey/black handle

**Price list code**

BCF340

BCF

BCF340Q72

BCFQ72MN

BCF340J72

BCFJ72MN61

BCF340Q96

BCFQ96GN

**PR 40-63 - 7 and 8 contacts**

Without presentation

□ 72 plate and frame

● Aluminium,  
medium grey/black handle

● Yellow, padlockable presentation  
medium red handle

□ 96 plate and frame

● Aluminium,  
large grey/black handle

BCF440

BCF

BCF440Q72

BCFQ72MN

BCF440J72

BCFJ72MN61

BCF440Q96

BCFQ96GN

**Accessories**

Cable gland Pg 21 with nut

Cable gland Pg 29 with nut

CM18P

CM18P

CM24P

CM24P

**Extra charges**

Standard engraving

Customised engraving

IP 55 version

Y000

Y100

Y647

# Separate cam switches

Standard engraving (p. 286)

## ▶ KEYLOCKING DEVICE

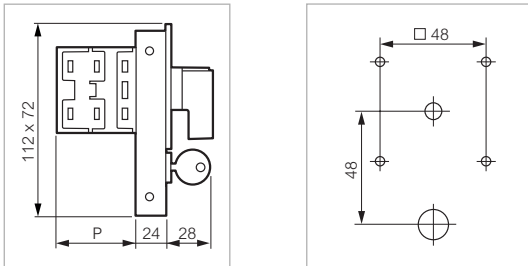
### Plate and frame (quadral)

Cat. No.



For PR 12 to PR 160  
For switch in front mounting mode  
With keylocking

Handle locked in all positions  
key no. 455  
(or 1424A, state requirement on order, no extra charge)  
Key can be withdrawn in locked and unlocked positions  
On request, the handle can be:  
- locked in certain positions (to be stated on order)  
The key can be:  
- withdrawn in locked position only (to be stated on order)



P \*: front mounting E (p. 255)

\* P = Depth

### Price list code

#### PR 12 to PR 160

- 64 plate and frame
  - Aluminium, medium grey/black handle
- 72 plate and frame
  - Aluminium, medium grey/black handle

Q64MNC Q64MNC

Q72MNC Q72MNC

#### Extra charges

Other combinations Y645

Foolproofing and special shaft (see p. 291)

#### - for other plate colours

- replace (in the reference and price list code)

Q64 with:

- Q61 - red plate
- Q63 - black plate
- Q65 - yellow plate

- replace (in the reference and price list code)

Q72 with:

- Q71 - red plate
- Q73 - black plate
- Q75 - yellow plate

#### - for other medium handle colours PR 12 to PR 26

- replace (in the reference and price list code)

MN with:

- MN51 - red medium handle
- MN53 - black medium handle

#### - for other handle colours PR 40 to PR 160

- replace (in the reference and price list code)

MN with:

- MN61 - red medium handle
- MN63 - black medium handle

# Separate cam switches

Standard engraving (p. 286)

## ▶ PARALLEL COUPLING OF 2 SWITCHES

### Plate and frame (quadral)

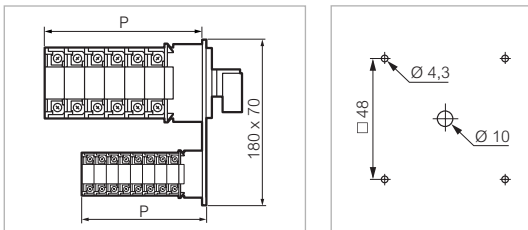
Cat. No.



For PR 12 to PR 160  
For switch in front mounting mode

Applications:  
- For diagrams requiring more contacts than the maximum number possible  
- where there is limited depth available

There is a driving switch actuated by the handle, and a driven switch actuated by a gear train  
Both switches have the same switching angle and number of positions



P\*: front mounting E (p. 255)

\* P = Depth

- for other plate colours, replace (in the reference and the price list code)

Q64 with:

- Q61 - red plate
- Q63 - black plate
- Q65 - yellow plate

Q72 with:

- Q71 - redplate
- Q73 - blackplate
- Q75 - yellow plate

Q96 with:

- Q91 - red plate
- Q93 - black plate
- Q95 - yellow plate

- for other handle colours, replace (in reference and price list code)

For PR 12 to PR 26, MN or PC with:

- MN51 or PC51 - red medium handle / small lever
- MN53 or PC53 - black medium handle / small lever

lever

For PR40 to PR 160, MN or PC with:

- MN61 or PC61 - red medium handle / small lever
- MN63 or PC63 - black medium handle / small lever

For PR40 to PR 160, GN or GC with:

- GN61 or GC61 - red large handle / large lever
- GN63 or GC63 - black large handle / large lever

### Price list code

#### PR 12 to PR 160

Driving switch presentation

- 64 plate and frame
  - Aluminium, medium grey/black handle
- 72 plate and frame
  - Aluminium, medium grey/black handle
- 96 plate and frame
  - Aluminium, large grey/black handle

Q64MNAP

Q64MNAP

Q72MNAP

Q72MNAP

Q96GNAP

Q96GNAP

### Extra charges

Foolproofing and special shaft (see p. 291)

### Possibility of coupling 2 cam switches in parallel:

Driven switch	Driving switch				
	PR 12	PR 17 - PR 21	PR 26	PR 40 - PR 63	PR 125 - PR 160
PR 12	X	X	X	X	X
PR 17 - PR 21		X	X	X	X
PR 26			X	X	X
PR 40 - PR 63				X	

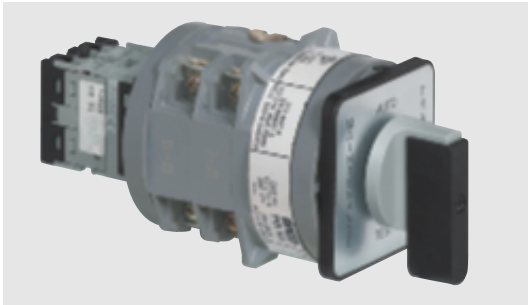
# Separate cam switches

Standard engraving (p. 286)

## ► SERIAL COUPLING OF 2 SWITCHES

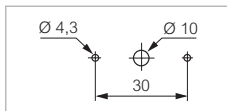
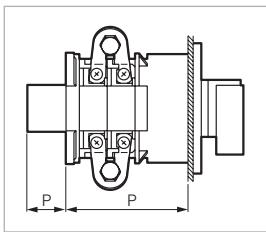
### Plate and frame (quadral)

Cat. No.

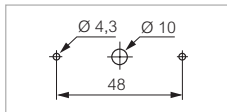


For PR 12 to PR 160  
For switch in front mounting mode

Applications:  
- for very different current circuits  
- limited to 12 contact stages in total  
(1 PR stage 125-160 = 2 stages)  
There is a driving switch actuated by the handle,  
and a driven switch  
Both switches have the same switching angle and number of positions



PR 12 to PR 26



PR 40 to PR 160

P\*: see front mounting E (p. 255)

\* P = Depth

- for other plate colours, replace (in the reference and the price list code)

Q64 with:

- Q61 - red plate
- Q63 - black plate
- Q65 - yellow plate

Q72 with:

- Q71 - red plate
- Q73 - blackplate
- Q75 - yellow plate

Q96 with:

- Q91 - red plate
- Q93 - black plate
- Q95 - yellow plate

- for other handle colours, replace (in reference and price list code)

For PR 12 to PR 26, MN or PC with:

- MN51 or PC51 - red medium handle / small lever
- MN53 or PC53 - black medium handle / small lever

lever

For PR40 to PR 160, MN or PC with:

- MN61 or PC61 - red medium handle / small lever
- MN63 or PC63 - black medium handle / small lever

For PR40 to PR 160, GN or GC with:

- GN61 or GC61 - red large handle / large lever
- GN63 or GC63 - black large handle / large lever

### Price list code

#### PR 12 to PR 160

Driving switch presentation

- 64 plate and frame
  - Aluminium, medium grey/black handle
- 72 plate and frame
  - Aluminium, medium grey/black handle
- 96 plate and frame
  - Aluminium, large grey/black handle

Q64MNAS

Q64MNAS

Q72MNAS

Q72MNAS

Q96GNAS

Q96GNAS

### Extra charges

Foolproofing and special shaft (see p. 291)

### Possibility of coupling 2 cam switches in series:

Driven switch	Driving switch				
	PR 12	PR 17 - PR 21	PR 26	PR 40 - PR 63	PR 125 - PR 160
PR 12		X	X	X	X
PR 17 - PR 21			X	X	X
PR 26				X	X
PR 40 - PR 63					X

# Separate cam switches

Standard engraving (p. 286)

## ► DUAL-VOLTAGE DEVICE

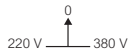
Plate and frame (quadral)

Cat. No.

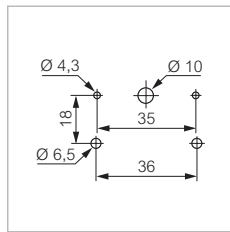
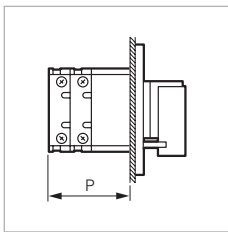


For PR 12 to PR 26  
For switch in front mounting mode

Applications:  
For locking the handle in the right or left position,  
to prevent wrong switching



Example: Off position in the middle  
and max. 90° rotation  
to right or left



P\*: see front mounting E (p. 255)

\* P = Depth

- for other plate colours, replace (in the reference and the price list code)

EZS64 with:

- EZS61 - red plate
- EZS63 - black plate
- EZS65 - yellow plate

EZS72 with:

- EZS71 - red plate
- EZS73 - black plate
- EZS75 - yellow plate

- for other medium handle colours, replace (in reference and price list code)

MN with:

- MN51 - red medium handle
- MN53 - black medium handle

### Price list code

#### PR 12

Dual-voltage device  
with □ 64 plate and frame  
● Aluminium,  
medium grey/black handle

EZS64MN

EZS64MN

#### PR 17-21 and PR 26

Dual-voltage device  
with □ 72 plate and frame  
● Aluminium,  
medium grey/black handle

EZS72MN

EZS72MN

#### Extra charges





Foolproofing and special shaft (see p. 291)



# Separate cam switches

To order your cam switch, it is essential to follow the 5-step procedure (see presentation on p. 126)  
Mini cam switches are only available in standard formats.

## ► V - OPTIONS AND COMPONENTS

FUNCTIONS	Page
► <b>Handles and levers</b>	<b>279</b>
Handles PR 12 to PR 26	279
Handles PR 40 to PR 160	279
Levers PR 12 to PR 26	280
Levers PR 40 to PR 160	280
	
► <b>Plates</b>	<b>281</b>
Quadral type	281
Duty label	282
Frame	282
	
► <b>Plate and frame</b>	<b>283</b>
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Terminal covers	284
	
► <b>Rear protective shroud</b>	<b>285</b>
For PR 12 to PR 63	285
	
► <b>Engraving</b>	<b>286</b>
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► <b>Empty enclosures (for local assembly)</b>	<b>292</b>
BPR type	292
BC type	292
BCF type	292

# Separate cam switches

## ▶ HANDLES

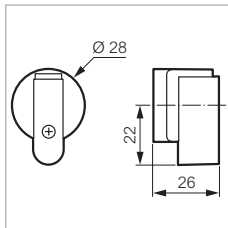
### HANDLES

FOR PR 12 TO PR 26

Cat. No.



PN50



PN

For □ 5 shaft

#### Small handle

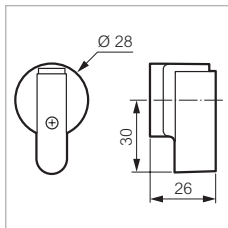
- Grey-black, without foolproofing
- Grey-black, with foolproofing
- Red, without foolproofing
- Red, with foolproofing
- Black, without foolproofing
- Black, with foolproofing

#### Price list code

PN50	PN50
PND50	PND50
PN51	PN51
PND51	PND51
PN53	PN53
PND53	PND53



MN51

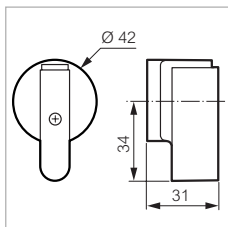


MN

#### Medium handle

- Grey-black, without foolproofing
- Grey-black, with foolproofing
- Red, without foolproofing
- Red, with foolproofing
- Black, without foolproofing
- Black, with foolproofing

MN50	MN50
MND50	MND50
MN51	MN51
MND51	MND51
MN53	MN53
MND53	MND53



GN

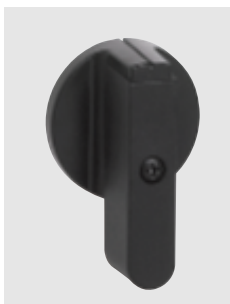
#### Large handle

- Grey-black, without foolproofing
- Grey-black, with foolproofing
- Red, without foolproofing
- Red, with foolproofing
- Black, without foolproofing
- Black, with foolproofing

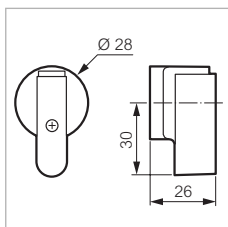
GN50	GN50
GND50	GND50
GN51	GN51
GND51	GND51
GN53	GN53
GND53	GND53

FOR PR 40 TO PR 160

Cat. No.



GN63



MN

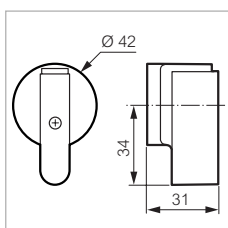
For □ 6 shaft

#### Medium handle

- Grey-black, without foolproofing
- Grey-black, with foolproofing
- Red, without foolproofing
- Red, with foolproofing
- Black, without foolproofing
- Black, with foolproofing

#### Price list code

MN60	MN60
MND60	MND60
MN61	MN61
MND61	MND61
MN63	MN63
MND63	MND63



GN

#### Large handle

- Grey-black, without foolproofing
- Grey-black, with foolproofing
- Red, without foolproofing
- Red, with foolproofing
- Black, without foolproofing
- Black, with foolproofing

GN60	GN60
GND60	GND60
GN61	GN61
GND61	GND61
GN63	GN63
GND63	GND63

# Separate cam switches

## ▶ LEVERS

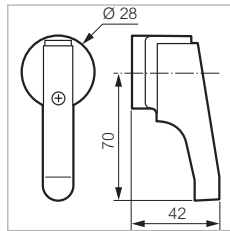
### LEVERS

For PR 12 to PR 40

Cat. No.



PC50



PC

For □ 5 shaft

#### Small levers

- Grey-black, without foolproofing
- Grey-black, with foolproofing
- Red, without foolproofing
- Red, with foolproofing
- Black, without foolproofing
- Black, with foolproofing

#### Price list code

Price list code	Cat. No.
PC50	PC50
PCD50	PCD50
PC51	PC51
PCD51	PCD51
PC53	PC53
PCD53	PCD53

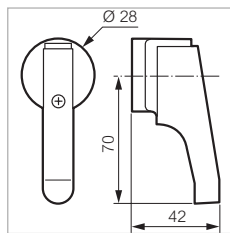
### LEVERS

For PR 40 to PR 160

Cat. No.



PC60



PC

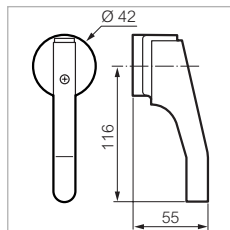
For □ 6 shaft

#### Small levers

- Grey-black, without foolproofing
- Grey-black, with foolproofing
- Red, without foolproofing
- Red, with foolproofing
- Black, without foolproofing
- Black, with foolproofing

#### Price list code

Price list code	Cat. No.
PC60	PC60
PCD60	PCD60
PC61	PC61
PCD61	PCD61
PC63	PC63
PCD63	PCD63



GC

#### Large levers

- Grey-black, without foolproofing
- Grey-black, with foolproofing
- Red, without foolproofing
- Red, with foolproofing
- Black, without foolproofing
- Black, with foolproofing

Price list code	Cat. No.
GC60	GC60
GCD60	GCD60
GC61	GC61
GCD61	GCD61
GC63	GC63
GCD63	GCD63

# Separate cam switches

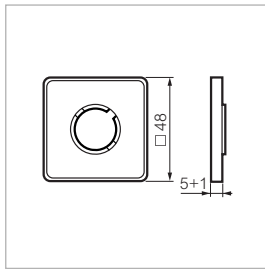
Standard engraving (p. 286)

▶ PLATES

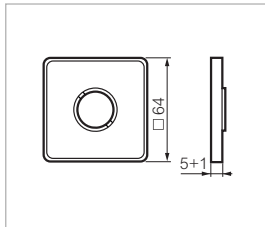
Cat. No.



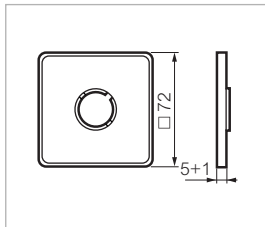
WE70000



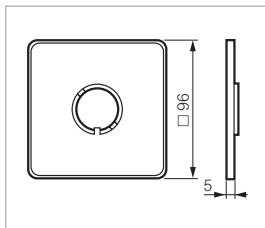
□ 48



□ 64



□ 72



□ 96

Fit onto frame and onto one-hole mounting  $\varnothing$  22 head (except □ 96)

Price list code

□ 48

- Aluminium
- Red
- Black
- Yellow
- Transparent

WE40	WE40
WE41	WE41
WE43	WE43
WE45	WE45
WE47	WE47

- Aluminium - with engraving
- Red - with engraving
- Black - with engraving
- Yellow - with engraving
- Transparent - with engraving

WE40000	WE40000
WE41000	WE41000
WE43000	WE43000
WE45000	WE45000
WE47000	WE47000

□ 64

- Aluminium
- Red
- Black
- Yellow
- Transparent

WE60	WE60
WE61	WE61
WE63	WE63
WE65	WE65
WE67	WE67

- Aluminium - with engraving
- Red - with engraving
- Black - with engraving
- Yellow - with engraving
- Transparent - with engraving

WE60000	WE60000
WE61000	WE61000
WE63000	WE63000
WE65000	WE65000
WE67000	WE67000

□ 72

- Aluminium
- Red
- Black
- Yellow
- Transparent

WE70	WE70
WE71	WE71
WE73	WE73
WE75	WE75
WE77	WE77

- Aluminium - with engraving
- Red - with engraving
- Black - with engraving
- Yellow - with engraving
- Transparent - with engraving

WE70000	WE70000
WE71000	WE71000
WE73000	WE73000
WE75000	WE75000
WE77000	WE77000

□ 96

- Aluminium
- Red
- Black
- Yellow

WE90	WE90
WE91	WE91
WE93	WE93
WE95	WE95

- Aluminium - with engraving
- Red - with engraving
- Black - with engraving
- Yellow - with engraving

WE90000	WE90000
WE91000	WE91000
WE93000	WE93000
WE95000	WE95000

For version with engraving see form (p. 287)

# Separate cam switches

Standard engraving (p. 286)

## ▶ PLATES, DUTY LABELS AND FRAMES

### PLATES

Cat. No.



UF36

For single hole mounting  $\varnothing$  30  
Aluminium legend

**48**

- Black plate
- Black plate - with engraving

**64**

- Black plate
- Black plate - with engraving

**Price list code**

UF36	UF36
UF36000	UF36000
UF38	UF38
UF38000	UF38000

### DUTY LABELS

Cat. No.



Q072

To be used with frame

**48**

**64**

**72**

- Transparent insert  
(only for Qo48)
- Aluminium insert  
(only for Qo48)

**Price list code**

Q048	Q048
Q064	Q064
Q072	Q072
IF7	IF7
IF9	IF9

### FRAMES

Cat. No.



CQ64

**Frame**

**48**

**64**

**72**

**96**

**Price list code**

CQ48	CQ48
CQ64	CQ64
CQ72	CQ72
CQ96	CQ96

# Separate cam switches

Standard engraving (p. 286)  
Dimensions (p. 265)

▶ PLATES + FRAMES


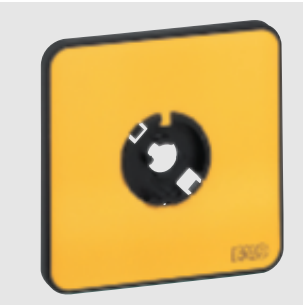

	Plate + frame		Cat. No.
 <p>Q61</p>	<p>□ 48</p> <ul style="list-style-type: none"> <li>● Aluminium</li> <li>● Red</li> <li>● Black</li> <li>● Yellow</li> </ul> <p>□ 64</p> <ul style="list-style-type: none"> <li>● Aluminium</li> <li>● Red</li> <li>● Black</li> <li>● Yellow</li> </ul>	<p><b>Price list code</b></p>	Q48
			Q41
 <p>Q95</p>	<ul style="list-style-type: none"> <li>● Black</li> <li>● Yellow</li> </ul> <p>□ 72</p> <ul style="list-style-type: none"> <li>● Aluminium</li> <li>● Red</li> <li>● Black</li> <li>● Yellow</li> </ul> <p>□ 96</p> <ul style="list-style-type: none"> <li>● Aluminium</li> <li>● Red</li> <li>● Black</li> <li>● Yellow</li> </ul>	<p>Q64</p> <p>Q61</p> <p>Q63</p> <p>Q65</p> <p>Q72</p> <p>Q71</p> <p>Q73</p> <p>Q75</p> <p>Q96</p> <p>Q91</p> <p>Q93</p> <p>Q95</p>	Q43
			Q45
			Q48
			Q41
			Q43
			Q45
			Q64
			Q61
			Q63
			Q65
			Q72
			Q71
			Q73
			Q75
			Q96
			Q91
			Q93
			Q95

	Plate + frame + duty label		Cat. No.
 <p>Q720</p>	<p>With aluminium duty label</p> <p>□ 48</p> <ul style="list-style-type: none"> <li>● Aluminium</li> <li>● Red</li> <li>● Black</li> <li>● Yellow</li> </ul> <p>□ 64</p> <ul style="list-style-type: none"> <li>● Aluminium</li> <li>● Red</li> <li>● Black</li> <li>● Yellow</li> </ul> <p>□ 72</p> <ul style="list-style-type: none"> <li>● Aluminium</li> <li>● Red</li> <li>● Black</li> <li>● Yellow</li> </ul>	<p><b>Price list code</b></p>	Q480
			Q410
			Q430
			Q450
			Q480
			Q410
			Q430
			Q450
			Q640
			Q610
			Q630
			Q650
			Q640
			Q610
			Q630
			Q650
			Q720
			Q710
			Q730
			Q750
			Q720
			Q710
			Q730
			Q750

# Separate cam switches

## ▶ PLATE + FRAME + DUTY LABEL

### Ø 22 MOUNTING

#### Frame + legend plate

Cat. No.



N480

**With aluminium duty label**  
 Plate and frame for single hole mounting Ø 22 presentation  
 Max. panel thickness: 1.5 mm

#### Price list code

48

Aluminium

N480

N480

## ▶ TERMINAL COVERS

Cat. No.



CB4

For PR 12 to PR 160  
 Insulating material for switch with 4 contacts max.  
 Transparent material for PR 12 to PR 63  
 Opaque material for PR 125-160

With rear mounting the terminal cover is fixed in S mode (p. 254) with:

- for PR 12 to PR 26: 2 screws
- for PR 40 to PR 160: 2 screws

With front mounting, the terminal cover is fixed in E mode (p. 250) with:

- for PR 12: 2 screws supplied
- for PR 17 to PR 63: 2 special nuts supplied
- for PR 125 and PR 160: 2 H4 nuts supplied

#### Price list code

PR 12	CB4N	CB4
PR 17	CB3D	CB3
PR 21	CB3F	CB3
PR 26	CB3E	CB3
PR 40	CB5H	CB5
PR 63	CB5I	CB5
PR 125-160	CB6L	CB6

#### Terminal covers

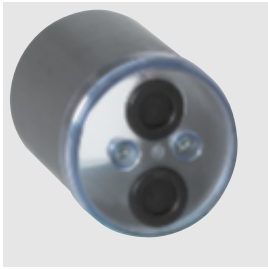
PR 40-63 CB8 CB8

Pair of terminal covers in insulating material providing IP 20 protection of 2 electrical contacts located on 1 coil (provide the same number of pairs of terminal covers as coils)  
 Clip into place after electrical connection of the terminals

# Separate cam switches

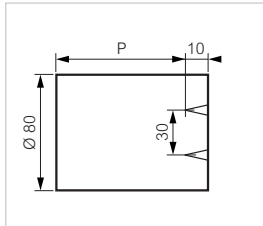
## ► REAR PROTECTIVE SHROUD

Cat. No.

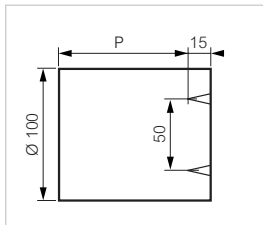


CA41N \*

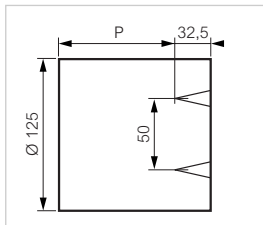
\* Length of shroud to be stated when ordering the cam switch only



PR 12



PR 17 to PR 26



PR 40 to PR 63

For PR 12 to PR 63

Composition:

- Grey insulating body
- Transparent insulating cover
- IP 40 - protection against direct finger contact
- IP 55 - protection against splashing water
- PR 12 - the shroud fits on 1 standard type E switch
- PR 17 to PR 63 - the shroud must be specified when ordering the switch (rear mounting on a special plate)

**Price list code**

**PR 12 - 1 to 12 contacts**

IP 40  
IP 55

CA41N	CA41N
CAE41N	CAE41N

**PR 12 - 13 to 24 contacts**

IP 40  
IP 55

CA42N	CA42N
CAE42N	CAE42N

**PR 17-21 - 1 to 12 contacts**

IP 40  
IP 55

CA10D	CA10D
CAE10D	CAE10D

**PR 17-21 - 13 to 24 contacts**

IP 40  
IP 55

CA11D	CA11D
CAE11D	CAE11D

**PR 26 - 1 to 12 contacts**

IP 40  
IP 55

CA20F	CA20F
CAE20F	CAE20F

**PR 26 - 13 to 24 contacts**

IP 40  
IP 55

CA21F	CA21F
CAE21F	CAE21F

**PR 40-63 - 1 to 12 contacts**

IP 40  
IP 55

CA30I	CA30I
CAE30I	CAE30I

**PR 40-63 - 13 to 24 contacts**

IP 40  
IP 55

CA31I	CA31I
CAE31I	CAE31I

**Plastic cable gland**

Pg 16 for PR 12 to PR 21  
Pg 21 for PR 26  
Pg 29 for PR 40-63

CM14P	CM14P
CM18P	CM18P
CM24P	CM24P

Number of contacts	Depth (P)					
	PR 12	PR 17	PR 21	PR 26	PR 40	PR 63
1-2	42	45	45	48	74	74
3-4	52	57	57	63	94	94
5-6	62	69	69	78	114	114
7-8	72	81	81	93	134	134
9-10	82	93	93	108	154	154
11-12	92	105	105	123	174	174
13-14	128	117	117	138		
15-16	138	129	129	153		
17-18	148	141	141	168		
19-20	158	153	153	183		
21-22	168	165	165	198		
23-24	178	177	177	213		



# Separate cam switches

To order engravings, fill in the form (p. 287)  
 To price a switch with customised engraving, please contact us

## ▶ ENGRAVING

### STANDARD ENGRAVING

These are engraving according to switching angle (as illustrated plates on p. 216)  
 These standard engravings are not invoiced, the charge is included in the price for the plate or duty label

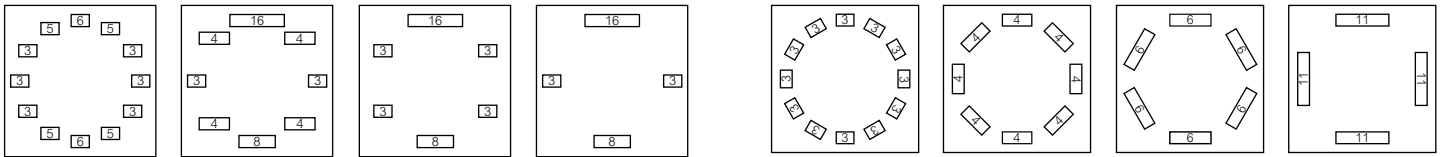
### CUSTOMISED ENGRAVING

These are all the alphanumeric engravings (excluding logos, drawings, symbols) which are defined by the following parameters



- For square legend plates:** type WE40 to WE95 (p. 281)  
type UF36, UF38 (p. 284)
- For square legend plates:** type Q41 to Q96 (p. 281)

- Maximum number of alphanumeric characters per position:



- Character height:

- 48 : 3 mm;  64: 4 mm;  72: 4.5 mm;  96: 6 mm

The engraving is laser-etched or silk-screen printed according to type

- Colour of engraving:

Black on aluminium and yellow plate  
 White on red and black plate

- For duty labels:** type Q048, Q064 and Q072 (p. 282)

- Maximum number of characters:

per line: 13

Maximum number of lines: 2

- Character height

- 48 : 3 mm ;  64: 4 mm ;  72: 4.5 mm

- Colour of engraving:

Black on aluminium plate

Special engravings:

These are engravings not covered by the technical parameters used for creating standard engravings and which therefore require a special execution.

This applies to all alphanumeric engravings outside the limits defined above, and also logos, drawings or symbols



# Request form for specific cam switch

Fill in one form for each type of switch

## ▶ APPLICATION

- Load switching
  - resistive  electromagnetic

Rated voltage ..... AC/DC

Rated current ..... A

- Control of motors
  - Starting/Switching off a running motor

- Reverse direction of rotation

Motor rating ..... A/CV/kW

## ▶ DIAGRAM

(Fill in the grid below using the appropriate symbols)

- Closed contact
- Closed contact, 2 positions without cut-off
- Overlapping: second contact closes before first contact opens (not possible with 30° switching angle)
- Impulse contact, closes momentarily when switching from one position to next
- Spring return

Contact Nos. Terminals	Position No.												connection + links
	1	2	3	4	5	6	7	8	9	10	11	12	
1-2													○1 3 ○
3-4													○2 4 ○
5-6													○5 7 ○
7-8													○6 8 ○
9-10													○9 11 ○
11-12													○10 12 ○
13-14													○13 15 ○
15-16													○14 16 ○
17-18													○17 19 ○
19-20													○18 20 ○
21-22													○21 23 ○
23-24													○22 24 ○
25-26													○25 27 ○
27-28													○26 28 ○
29-30													○29 31 ○
31-32													○30 32 ○
33-34													○33 35 ○
35-36													○34 36 ○
37-38													○37 39 ○
39-40													○38 40 ○
41-42													○41 43 ○
43-44													○42 44 ○
45-46													○45 47 ○
47-48													○46 48 ○

## ▶ SWITCHING ANGLE

- 90°  60°  45°  30°
- (indicate positions in boxes)
- Blocking-off between ..... and ..... position
- One-way rotation:  right  left

## ▶ MOUNTING

- Front  One-hole
- Rear  DIN rail
- Enclosure

## ▶ STANDARD PRESENTATION

- Handle:  small  medium  large
- Lever:  small  large
- Colour:  grey  black  red
- Selector switch style handle
- With key
- Choice of key:  455  1424 A  other.....

## ▶ LEGEND PLATE AND ENGRAVING

- Choice of legend plate:
- 48  64  72  96
  - Alu  Black  Red  Yellow

## ▶ SWITCHING ANGLE

- Engraving: (use opposite box to specify your engravings)
  - linear
  - polygonal

- Duty label (2 x 13 characters):
- .....
- .....

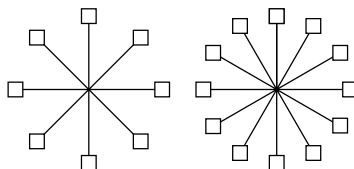
## ▶ PADLOCKABLE PRESENTATION

- Colour:  yellow/red  grey
- Size:  48  72  96

## ▶ OPTIONS

- Foolproof handle
- IP rating:  IP 40 (standard)  IP 55  IP 65
- Terminal covers
- Tropicalised version

## ▶ MARKING OF POSITIONS



## YOUR DETAILS

Company: .....

.....

.....

Name and surname:.....

.....

Address: .....

.....

E-mail : .....

Tel:.....

Fax: .....

## COMMENTS

## YOUR ENGRAVINGS

# Separate cam switches

Please specify the spring return on the form (p. 287)

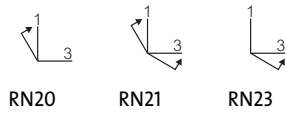
## ▶ AUTOMATIC SPRING RETURN

### REDUCED TYPE RN

Cat. No.



For PR 12  
This device makes it possible to incorporate spring returns without extra charge and without increasing switch dimension  
Number of spring return contacts per position: max. 2



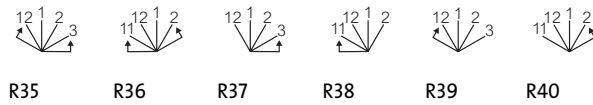
Price list code

PR 12	-	RNxx(1)
(1) Complete according to spring return chosen opposite		

### NORMAL TYPE R

Cat. No.

#### 30°



For PR 12 to PR 63  
This device makes it possible to incorporate spring returns without increasing switch dimensions  
The maximum number of contacts per spring return position varies according to the rating  
The spring return positions are always at 30°  
The switching angle is at 30°-45°-90° (for PR 12 to PR 26)  
The switching angle is at 45°-90° (for PR 40 and PR 63)

#### 45°

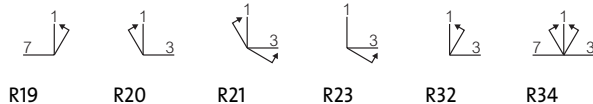


Price list code

PR 12 (4 spring return contacts)	Y652	Rxx(1)
PR 17 (4 spring return contacts)	Y639	Rxx(1)
PR 21 (4 spring return contacts)	Y639	Rxx(1)
PR 26 (4 spring return contacts)	Y639	Rxx(1)
PR 40 (2 spring return contacts)	Y640	Rxx(1)
PR 63 (2 spring return contacts)	Y640	Rxx(1)

(1) Complete according to spring return chosen opposite

#### 90°



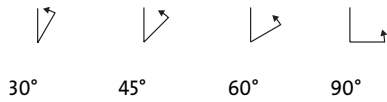
# Separate cam switches

Please specify the spring return on the form (p. 287)

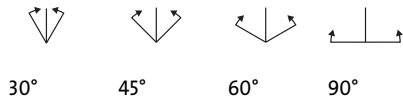
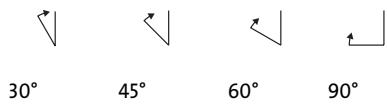
## ► AUTOMATIC SPRING RETURN (CONTINUED)

### SPECIAL REINFORCED TYPE RS

Cat. No.



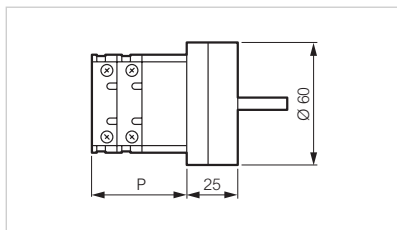
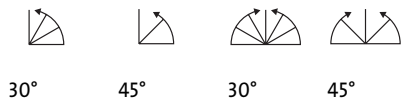
For PR 12 to PR 26  
For E or S mounting  
Modified sizing  
Enables greater number of spring return contacts per position than with standard "R" spring return  
Spring returns possible with pass-through contact



PR 12 to PR 26

**Price list code**

Y626 RS

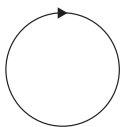


E and S mounting methods (see p. 255)

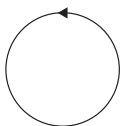
## ► MISCELLANEOUS VERSIONS

### ONE-WAY ROTATION (SRO)

Cat. No.



SRO to the right



SRO to the left

For PR 12 to PR 160  
This device makes it impossible to turn the handle in the opposite direction to the one stipulated  
Available for switching angles 90°, 60° and 45°  
No change to switch dimensions

**Price list code**

PR 12	Y649	(1)
PR 17 to PR 26	Y642	(1)
PR 40 to PR 160	Y643	(1)

(1) No reference, write "direction of rotation to xxx" in the designation

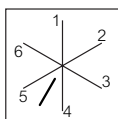
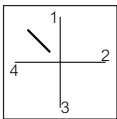
# Separate cam switches

## ► MISCELLANEOUS VERSIONS (CONTINUED)

### BLOCKING-OFF BETWEEN 2 POSITIONS

Cat. No.

Examples



For PR 12 to PR 160  
 This device prevents the switch being turned between 2 consecutive positions.  
 Indicate which positions (see form on p. 287)  
 Available for switching angles 90° and 60°  
 No change to switch dimensions  
 Not compatible with one-way rotation device (SRO)

	<b>Price list code</b>	
PR 12	-	(1)
PR 17 to PR 26	Y634	(1)
PR 40 to PR 160	Y635	(1)

(1) No reference, write “blocking-off between X and X” in the designation

### TROPICALISED VERSION

Cat. No.

For PR 12 to PR 160  
 (standard on the PR 12)  
 The cost of this version is calculated as a fixed charge per switch and a variable extra charge (multiplied by the number of contacts)

	<b>Price list code</b>	
PR 12	-	-
PR 17	Y 562 + (Y563 x no. of contacts)	(1)
PR 21	Y 564 + (Y565 x no. of contacts)	(1)
PR 26	Y 566 + (Y567 x no. of contacts)	(1)
PR 40	Y 570 + (Y571 x no. of contacts)	(1)
PR 63	Y 572 + (Y573 x no. of contacts)	(1)
PR 125	Y 578 + (Y579 x no. of contacts)	(1)
PR 160	Y 580 + (Y581 x no. of contacts)	(1)

(1) No reference, write “tropicalised” in the designation

### FASTON TERMINALS

Cat. No.

For PR 12 to PR 26  
 Terminals 6.35 (and/or 2 x 2.8 for PR 12)  
 Multiply the extra charge by the number of terminals

	<b>Price list code</b>	
PR 12	Y653 (per terminal)	(1)
PR 17 to PR 26	Y620 (per terminal)	(1)

(1) No reference, write out the text and the terminal positions in full in the designation

# Separate cam switches

## ► MISCELLANEOUS VERSIONS (CONTINUED)

### REINFORCED IP RATING

Cat. No.

Standard IP rating - IP 40

**Price list code**

**IP 55**

For PR 12	Y651	(1)
For PR 17 to PR 160	Y627	(1)
For PR 40-63 (in BCF enclosure)	Y647	(1)

**IP 65**

For PR 12 to PR 160	Y632	(1)
For PR 12 (in BPR enclosure)	Y632	(1)
For PR 12 to PR 26 (in BC enclosure)	Y663	(1)
For PR 12 to PR 160 (with padlockable presentation)	Y661	(1)
For PR 12 to PR 160 (clutch drive + frame)	Y662	(1)
For PR 12 (∅ 22 mounting)	Y667	(1)

(1) No reference, write:  
"IPxx" in the designation

### SPECIAL SHAFTS

Cat. No.

**Price list code**

**Shaft with foolproof profile** 

For PR 12 (E-EZ mounting) ≤ 12 contacts foolproofed shaft	-	D
For PR 17 to PR 160 and PR 12 (other mounting than those below)	Y613	D

**Special dimension shaft**

Standard dimension - PR 12 to PR 26 = 26 mm - PR 40 to PR 160 = 27 mm		
For PR 12 to PR 160	Y617	(1)

(1) No reference, write:  
"shaft dimension xx"  
(size of projection in mm)

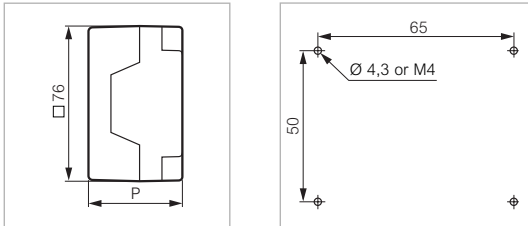
# Separate cam switches

## ▶ EMPTY ENCLOSURES

### TYPE BPR

For PR12\*

Cat. No.



Technical specifications (p. 270)  
Delivered with blank aluminium plate  
Possibility to use a padlockable presentation

**Price list code**

For PR 12 -1-2 contacts  
For PR 12 -3-4 contacts

BPR01  
BPR02

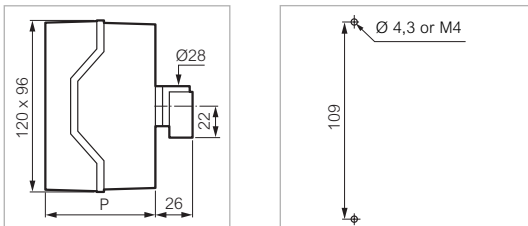
BPR01  
BPR02

P *	Price list code	Contacts
46	BPR01	1-2 CONTACTS
58	BPR02	3-4 CONTACTS

P \* = Depth

### TYPE BC

Cat. No.



Technical specifications (p. 271)  
With a 64 blank aluminium plate and a black handle  
(see p. 271 for enclosure customisation)  
for PR 12\* to PR 26 mounting, bare shaft version

**Price list code**

For PR 12 -1-2 contacts  
For PR 12 -3-6 contacts  
For PR 12 - 7-10 contacts  
For PR 17-21 -1-2 contacts  
For PR 17-21 -3-6 contacts  
For PR 17-21 - 7-10 contacts  
For PR 26 -1-2 contacts  
For PR 26 -3-4 contacts  
For PR 26 -5-6 contacts  
For PR 26 - 7-8 contacts

BC05Q3  
BC06Q3  
BC07Q3  
BC11Q3  
BC12Q3  
BC13Q3  
BC14Q3  
BC15Q3  
BC16Q3  
BC13Q3

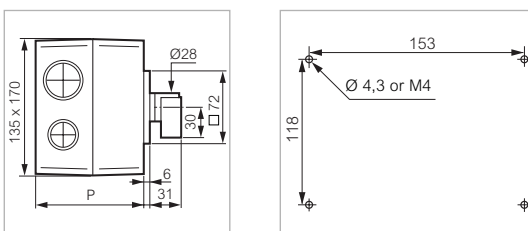
P *	Price list code	Contacts
77	BC01-02-0-06 11-12-14-15	1-6 CONTACTS (1-4 PR26)
101	BC03-04-07 13-16	7-10 CONTACTS (5-8 PR26)

P \* = Depth

\* Switch version with terminals reversed

### TYPE BCF

Cat. No.



For PR40-63  
Technical specifications (p. 272)  
Delivered with a complete  
72-96 plate and frame  
or padlockable presentation

**Price list code**

For PR 40-63 -1-2 contacts  
For PR 40-63 -3-4 contacts  
For PR 40-63 -5-6 contacts  
For PR 40-63 - 7-8 contacts

BCF140  
BCF240  
BCF340  
BCF440

P *	Price list code	Contacts
107	BCF140-240	1-4 CONTACTS
145	BCF340-440	5-8 CONTACTS

P \* = Depth

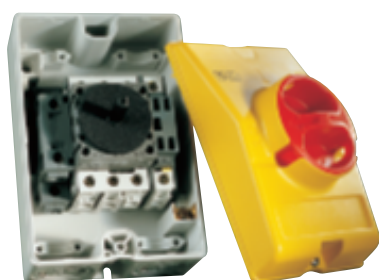
# Switch disconnectors

A modular and flexible range



Contact gap  
**7 mm**  
(norm >5.5 mm)

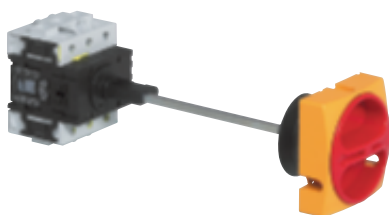
**Reversible  
terminal feature**



## ► IN ENCLOSURE

- Degree of protection: up to IP 66
- For 25A to 100A size switches (see lthe (A) p. 316)
- Cable entries with pre-formed knockouts
- Tamper-proof cover with padlockable handle
- Recessed area for optional plate
- A wide choice of associated contact blocks and enclosures versions available

Pages 299 and 305



## ► WITH CLUTCH DRIVE

- Metal cuttable shafts
- With or without door interlock system
- Short or long metal shaft available

Pages 298 and 303



# Complete switch disconnectors 20 A

IP 40 as standard, IP 65 on request



Characteristics (p. 316)

## FRONT MOUNTING

### PADLOCKABLE PRESENTATION

Cat. No.



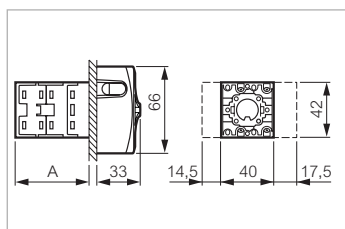
172921

#### 20 A - non-reversible terminals

- 3P
- 3P+NC/NO(1)
- 4P

- 172901**
- 172911**
- 172921**

(1) Padlock with  $\varnothing$  6 to 8 mm



#### Dimensions

- A: 46 (3P/4P)
- 56 (3P+NC/NO)

### ACCESSORIES

Cat. No.



172945

#### IP65 seal kit

For front mounting with screws

**172945**

#### Terminal covers

For front mounting with screws

**172965**

# Complete switch disconnectors 25 to 100 A

IP 40 as standard, IP 65 on request

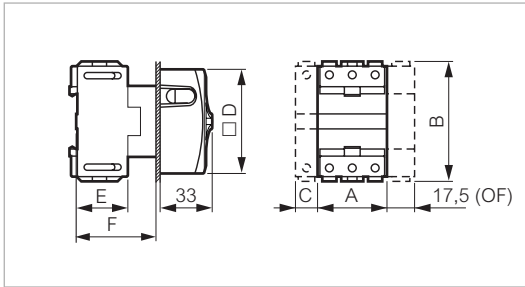


Characteristics (p. 316)

## FRONT MOUNTING

### PADLOCKABLE PRESENTATION

Cat. No.



Safety switch to disconnect and isolate poles.  
 IP 20 "finger safe"  
 Double break type load switching  
 Red padlockable handle on yellow plate  
 Actual position (ON or OFF) clearly visible  
 Conform to standards:  
 IEC EN 60947-3  
 Approved by UL - cUL – Suitable as motor disconnect



172001

Dimensions	
A:	44
B:	75.4
C:	14.5
D:	□ 66
E:	36
F:	50

#### 25 A

3P  
 3P+NC/NO (1)  
 4P neutral on left

**172001**  
**172011**  
**172021**

#### 32 A

3P  
 4P neutral on left

**172101**  
**172121**



172201

Dimensions	
A:	53.6
B:	85
C:	17.9
D:	□ 66
E:	50.3
F:	60

#### 50 A

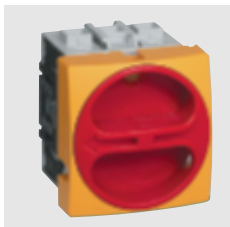
3P  
 4P neutral on left

**172201**  
**172221**

#### 63 A

3P  
 4P neutral on left

**172301**  
**172321**



172401

Dimensions	
A:	71.8
B:	93
C:	26.8
D:	□ 86
E:	63.8
F:	70

#### 80 A

3P  
 4P neutral on left

**172401**  
**172421**

#### 100 A

3P

**172501**

(1) Padlock: ø 6 to 8 mm

# Complete switch disconnectors 25 to 100 A

IP 40 as standard, IP 65 on request

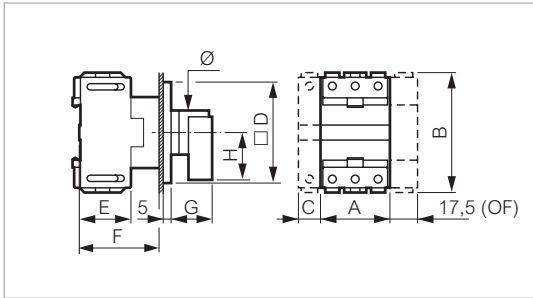


Characteristics (p. 316)

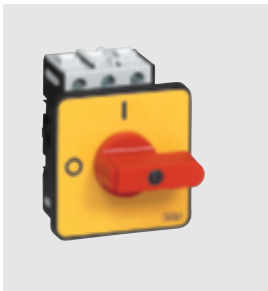
## FRONT MOUNTING

### WITH PLATE, FRAME AND HANDLE

Cat. No.



Safety switch to disconnect and isolate poles.  
 IP 20 "finger safe"  
 Double break type load switching  
 Red handle on yellow plate  
 Actual position (ON or OFF) clearly visible  
 Conform to standards:  
 IEC EN 60947-3  
 Approved by UL - cUL – Suitable as motor disconnect



172002

Dimensions	
A:	44
B:	75.4
C:	14.5
D:	□ 64
E:	36
F:	50
G:	26
H:	22
Ø:	28

**25 A**

3P

**172002**

**32 A**

3P

**172102**



172202

Dimensions	
A:	53.6
B:	85
C:	17.9
D:	□ 72
E:	50.3
F:	60
G:	26
H:	30
Ø:	28

**50 A**

3P

**172202**

**63 A**

3P

**172302**



172402

Dimensions	
A:	71.8
B:	93
C:	26.8
D:	□ 96
E:	63.8
F:	70
G:	31
H:	34
Ø:	42

**80 A**

3P

**172402**

**100 A**

3P

**172502**

# Complete switch disconnectors 25 to 100 A

IP 65

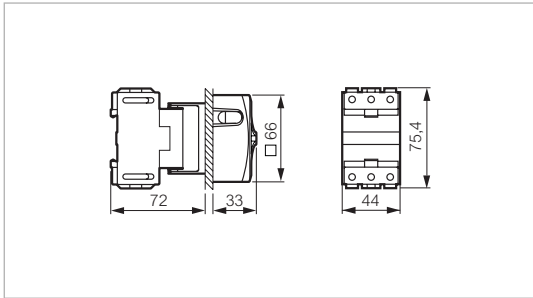


Characteristics (p. 316)

## ▶ FRONT MOUNTING

### PADLOCKABLE PRESENTATION Ø 22 SINGLE-HOLE MOUNTING

Cat. No.



Safety switch to disconnect and isolate poles.  
 IP 20 "finger safe"  
 Double break type load switching  
 Red handle on yellow plate  
 Actual position (ON or OFF) clearly visible  
 Conform to standards:  
 IEC EN 60947-3  
 Approved by UL - cUL – Suitable as motor disconnect



172003

**25 A**

3P

**172003**

**32 A**

3P

**172103**

# Complete switch disconnectors 25 to 100 A

IP 40 as standard, IP 65 on request

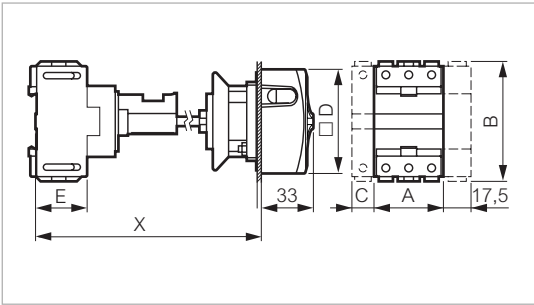


Characteristics (p. 316)

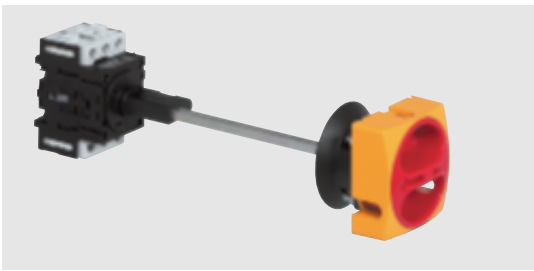
## ► REAR MOUNTING WITH CLUTCH DRIVE

### PADLOCKABLE PRESENTATION

Cat. No.



Safety switch to disconnect and isolate poles.  
 IP 20 "finger safe"  
 With clutch drive and door interlock  
 Double break type load switching  
 Red handle on yellow plate  
 Actual position (ON or OFF) clearly visible  
 Conform to standards:  
 IEC EN 60947-3  
 Approved by UL - cUL – Suitable as motor disconnect



165009

#### 25 A

3P (short shaft)

**165009**

#### 32A

3P (short shaft)

**165109**

#### 25 and 32 A dimensions

A: 44  
 B: 75.4  
 C: 14.5  
 D: □ 66  
 E: 31.5  
 X: 125 to 250 (short shaft)  
 250 to 400 (long shaft)

#### 50 and 63 A dimensions

A: 53.6  
 B: 85  
 C: 17.9  
 D: □ 66  
 E: 42.2  
 X: 135 to 260 (short shaft)  
 260 to 410 (long shaft)

#### 50 A

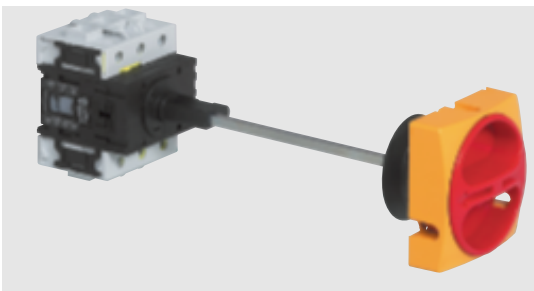
3P (short shaft)

**165209**

#### 63 A

3P (short shaft)

**165309**



165409

#### 80 A

3P (long shaft)

**165409**

#### 100 A

3P (long shaft)

**165509**

#### 80 and 100 A dimensions

A: 71.8  
 B: 93  
 C: 26.8  
 D: □ 86  
 E: 52.6  
 X: 145 to 270 (short shaft)  
 270 to 420 (long shaft)

# Complete switch disconnectors 25 to 100 A

IP 40 as standard, IP 65 on request  
and IP 66 on enclosure version with integral handle version

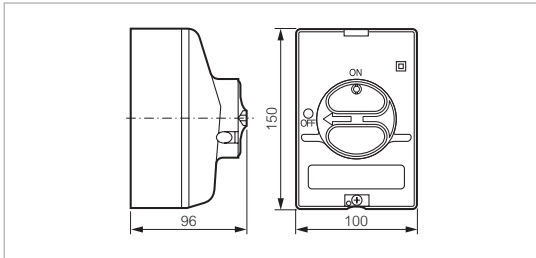


Characteristics (p. 316)

## ► ENCLOSURES

### INTEGRAL PADLOCKABLE PRESENTATION

Cat. No.



Safety switch to disconnect and isolate poles.  
IP 20 "finger safe"  
With clutch drive and door interlock  
Double break type load switching  
Red handle on yellow plate  
Actual position (ON or OFF) clearly visible  
Conform to standards:  
IEC EN 60947-3



172061

#### IP 66 - IK 07

##### 20 A

3P

3P+NC/NO <sup>(1)</sup>

4P

**172961**

**172971**

**172981**

##### 25 A

3P

3P+NC/NO <sup>(1)</sup>

**172061**

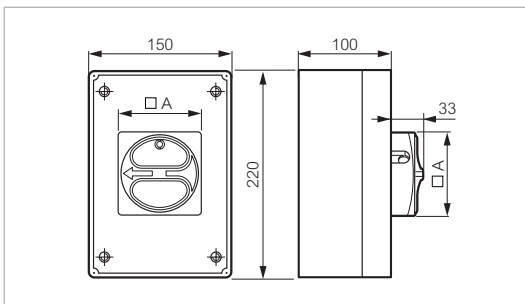
**172071**

##### 32 A

3P

**172161**

### PADLOCKABLE PRESENTATION



#### IP 40 <sup>(2)</sup>

##### 50 A

3P

**172261**

##### 63 A

3P

**172361**

##### 80 A

3P

**172461**

##### 100 A

3P

**172561**

<sup>(1)</sup> Padlock: Ø 6 to 8 mm

<sup>(2)</sup> IP 65 seal kit ref. 172267 (50 to 63 A)

172277 (80 to 100 A)



172261

#### 50 and 63 A dimensions

A:  66

#### 80 and 100 A dimensions

A:  86

# Complete switch disconnectors 20 A

IP 40 as standard, IP 65 on request  
Grey presentation



Characteristics (p. 316)

## ▶ FRONT MOUNTING

### PADLOCKABLE PRESENTATION

Cat. No.

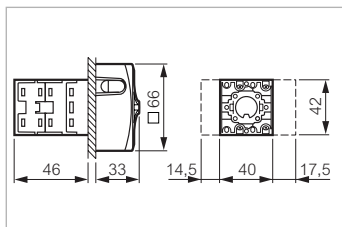


174901

**20 A - non-reversible terminals**

3P

**174901**



### ACCESSORIES

Cat. No.



172945

**IP 65 seal kit**

For front mounting with screws

**172945**

**Terminal covers**

For front mounting with screws

**172965**

# Complete switch disconnectors 25 to 100 A

IP 40 as standard, IP 65 on request  
Grey presentation

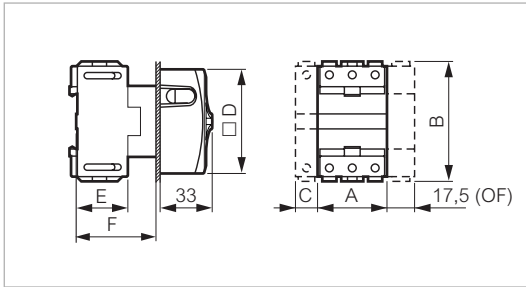


Characteristics (p. 316)

## FRONT MOUNTING

### PADLOCKABLE PRESENTATION

Cat. No.



Safety switch to disconnect and isolate poles.  
IP 20 "finger safe"  
Double break type load switching  
Grey padlockable handle on grey plate  
Actual position (ON or OFF) clearly visible  
Conform to standards:  
IEC EN 60947-3  
Approved by UL - cUL – Suitable as motor disconnect



**Dimensions**

A: 44  
B: 75.4  
C: 14.5  
D: □ 66  
E: 36  
F: 50

**25 A**

3P

**174001**

174001



**Dimensions**

A: 53.6  
B: 85  
C: 17.9  
D: □ 66  
E: 50.3  
F: 60

**32 A**

3P

**174101**

174301



**Dimensions**

A: 71.8  
B: 93  
C: 26.8  
D: □ 86  
E: 63.8  
F: 70

**50 A**

3P

**174201**

174401

**63 A**

3P

**174301**

**80 A**

3P

**174401**

(1) Padlock:  $\varnothing$  6 to 8 mm

**100 A**

3P

**174501**



# Complete switch disconnectors 25 to 100 A

IP 40 as standard, IP 65 on request  
Grey presentation

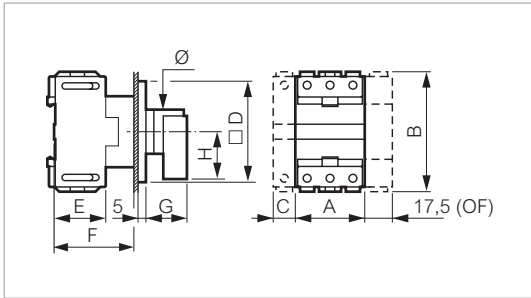


Characteristics (p. 316)

## FRONT MOUNTING

### WITH PLATE, FRAME AND HANDLE

Cat. No.



Safety switch to disconnect and isolate poles.  
IP 20 "finger safe"  
Double break type load switching  
Black handle on aluminium plate  
Actual position (ON or OFF) clearly visible  
Conform to standards:  
IEC EN 60947-3  
UL - cUL approved – Suitable as motor disconnect



#### Dimensions

A: 44  
B: 75.4  
C: 14.5  
D: □ 64  
E: 36  
F: 50  
G: 26  
H: 22  
Ø: 28

**25 A**

3P

**174002**

**32 A**

3P

**174102**

174002



#### Dimensions

A: 53.6  
B: 85  
C: 17.9  
D: □ 72  
E: 50.3  
F: 60  
G: 26  
H: 30  
Ø: 28

**50 A**

3P

**174202**

**63 A**

3P

**174302**

174202



#### Dimensions

A: 71.8  
B: 93  
C: 26.8  
D: □ 96  
E: 63.8  
F: 70  
G: 31  
H: 34  
Ø: 42

**80 A**

3P

**174402**

**100 A**

3P

**174502**

174402

# Complete switch disconnectors 25 to 100 A

IP 40 as standard, IP 65 on request  
Grey presentation

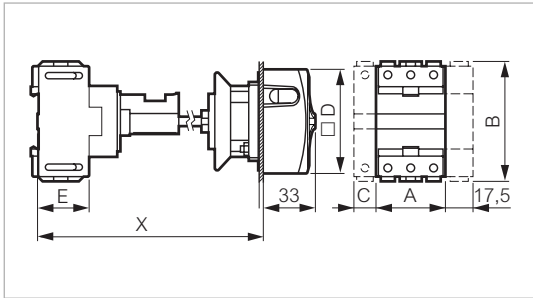


Characteristics (p. 316)

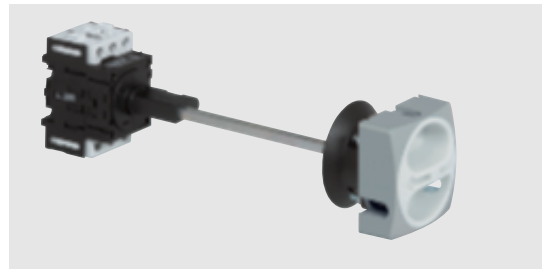
## ► REAR MOUNTING

### PADLOCKABLE PRESENTATION

Cat. No.



Safety switch to disconnect and isolate poles.  
IP 20 "finger safe"  
With clutch drive and door interlock  
Double break type load switching  
Grey padlockable handle on grey plate  
Actual position (ON or OFF) clearly visible  
Conform to standards:  
IEC EN 60947-3  
Approved by UL - cUL – Suitable as motor disconnect

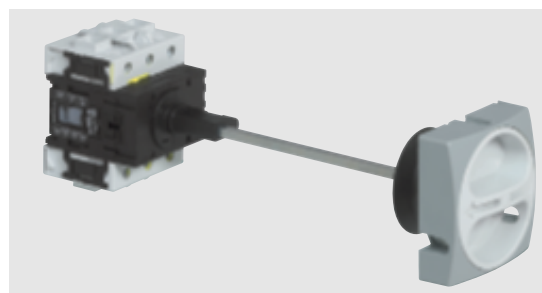


165009

- 25 A**  
3P (short shaft) **168009**
- 32A**  
3P (short shaft) **168109**

25 and 32 A dimensions	50 and 63 A dimensions
A: 44	A: 53.6
B: 75.4	B: 85
C: 14.5	C: 17.9
D: □ 66	D: □ 66
E: 31.5	E: 42.2
X: 125 to 250 (short shaft) 250 to 400 (long shaft)	X: 135 to 260 (short shaft) 260 to 410 (long shaft)

- 50 A**  
3P (short shaft) **168209**
- 63 A**  
3P (short shaft) **168309**



165409

- 80 A**  
3P (long shaft) **168409**
- 100 A**  
3P (long shaft) **168509**

80 and 100 A dimensions
A: 71.8
B: 93
C: 26.8
D: □ 86
E: 42.6
X: 145 to 270 (short shaft) 270 to 420 (long shaft)

# Complete switch disconnectors 25 to 100 A

IP 40 as standard, IP 65 on request  
Grey presentation

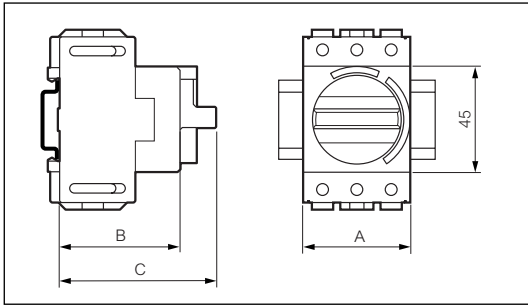


Characteristics (p. 316)

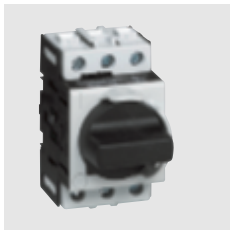
## REAR MOUNTING

### MODULAR IN-PANEL PRESENTATION

Cat. No.



Safety switch to disconnect and isolate poles.  
IP 20 "finger safe"  
Double break type load switching  
Black handle on grey plate  
Actual position (ON or OFF) clearly visible  
Conform to standards:  
IEC EN 60947-3  
Approved by UL - cUL – Suitable as motor disconnect



<b>Dimensions</b> A: 44 B: 53 C: 79
--

**25 A**  
3P **174005**

**32 A**  
3P **174105**

174005



<b>Dimensions</b> A: 53.6 B: 63 C: 89
--

**50 A**  
3P **174205**

**63 A**  
3P **174305**

174205



<b>Dimensions</b> A: 71.8 B: 73 C: 99
--

**80 A**  
3P **174405**

**100 A**  
3P **174505**

174405

# Complete switch disconnectors 25 to 100 A

IP 40 as standard, IP 65 on request and  
IP66 on enclosure version with integral handle version  
Grey presentation

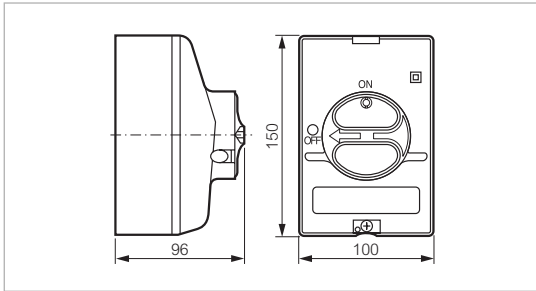


Characteristics (p. 316)

## ► ENCLOSURES

### INTEGRAL PADLOCKABLE PRESENTATION

Cat. No.



Safety switch to disconnect and isolate poles.  
IP 20 "finger safe"  
With clutch drive and door interlock  
Double break type load switching  
Grey padlockable handle  
Actual position (ON or OFF) clearly visible  
Conform to standards:  
IEC EN 60947-3

**IP 66 - IK 07**

**25 A**  
3P

**174061**

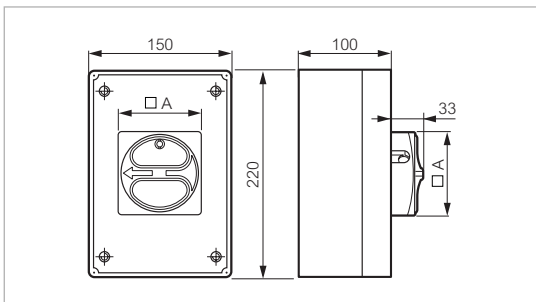
**32 A**  
3P

**174161**



174061

### PADLOCKABLE PRESENTATION



**IP 40 (1)**

**50 A**  
3P

**174261**

**63 A**  
3P

**174361**

**80 A**  
3P

**174461**

**100 A**  
3P

**174561**

(1) IP 65 with seal ref. 172267 (50 to 63 A)  
172277 (80 to 100 A)



174261

**50 and 63 A dimensions**  
A: □ 66

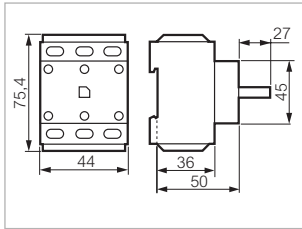
**80 and 100 A dimensions**  
A: □ 86

# Separate switch disconnectors - 25 and 32 A

 Characteristics (p. 316)

► BLOCKS

Cat. No.

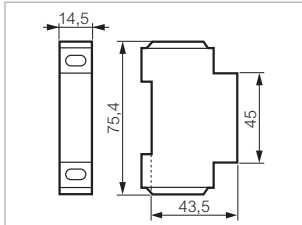
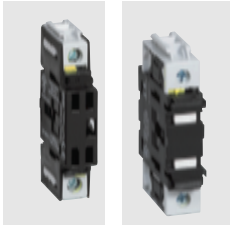


**3-pole switch body without presentation**

25 A  
32 A

**172000**  
**172100**

172000



**Additional pole**  
(for use in enclosure only)

25 A  
32 A

**172075**  
**172175**

172065

172185

**Additional pole without rear screw**  
(Rear mounting only)

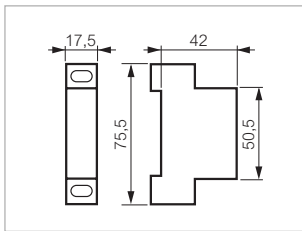
32 A

**172174**

**Neutral pole**

25 A  
32 A

**172065**  
**172165**



**Junction block**

 or N

**172185**

**Auxiliary contact**

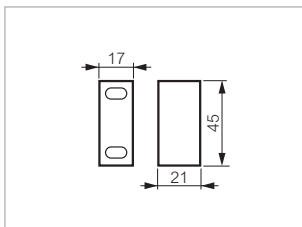
NC/NO

**172179**

1 pole early break

**172195**

172179



172195

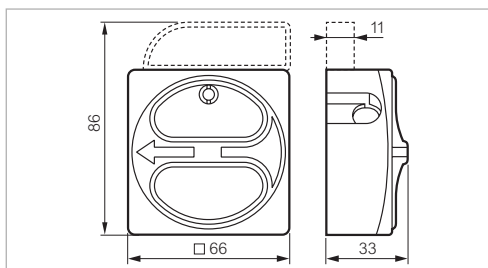
# Separate switch disconnectors - 25 and 32 A



Characteristics (p. 316)

## PRESENTATION

Cat. No.



### Padlockable presentation

Padlock with  $\varnothing 6$  to 8 mm

- 66 - Yellow/Red
- 66 - Grey
- 66 -  $\varnothing 22$  single-hole-mounting - Yellow/Red

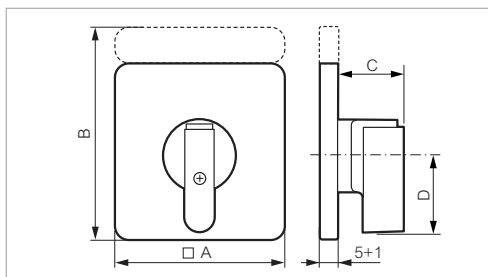
**172601**

**174601**

**172603**



172601



### With plate, frame and handle

- 64 - Yellow/Red
- 48 -  $\varnothing 22$  single-hole-mounting - Yellow/Red

**172602**

**172604**



172602

#### Dim. Ref. 172 602

A:  $\square 64$

B: 80

#### Dim. ref. 172 604

A:  $\square 48$

B: 65

# Separate switch disconnectors - 25 and 32 A

 Characteristics (p. 316)

## ▶ EMPTY ENCLOSURES

### PADLOCKABLE PRESENTATION

Cat. No.



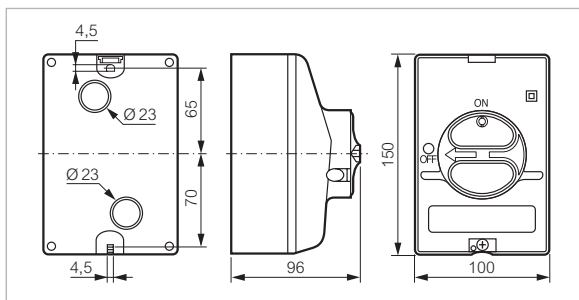
172399

Dimensions 150 x 100 x 96 mm  
 Supplied with padlockable handle,  
 weatherproof seal and relay terminal  
 For 3 and 4-pole switches  
 with and without NC/NO

IP66-IK07

Grey base - yellow cover - red handle  
 Grey base - grey cover - grey handle

**172399**  
**174399**

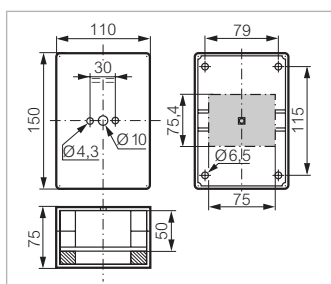


### WITHOUT PRESENTATION

Cat. No.



172549



Grey - Up to 4 poles + auxiliary contact  
 150 x 110 x 75 mm

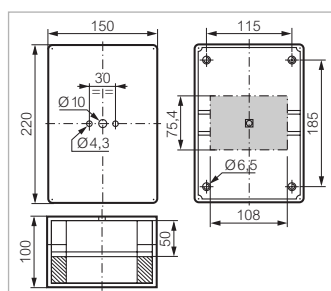
**172549**

### PADLOCKABLE OR WITHOUT PRESENTATION

Cat. No.



172559



Grey - Up to 6 poles + auxiliary contact  
 220 x 150 x 100 mm



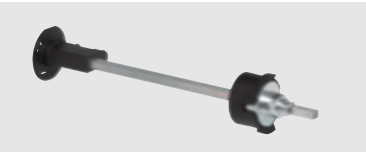

**172559**

# Separate switch disconnectors - 25 and 32 A



Characteristics (p. 316)

## ▶ ACCESSORIES

	Cat. No.
 <p>172167</p>	<p><b>Terminal covers</b></p> <p>For 3-pole body switch <b>172167</b>            For additional pole, neutral pole or junction block <b>172177</b>            For auxiliary contact NC/NO (pair) <b>172189</b>            For early break auxiliary contact <b>172199</b></p>
 <p>174569</p>	<p><b>Connection terminal kit</b></p> <p>Terminal connection for ground or neutral <b>174449</b></p>
 <p>174189</p>	<p><b>Self-adhesive plates (for enclosures)</b></p> <p>Blank <b>174599</b>            Engraved INTER PRINCIPAL <b>174559</b>            Engraved MAIN SWITCH <b>174569</b></p>
 <p>172177</p>	<p><b>Duty labels</b></p> <p>Blank <b>172629</b>            Engraved INTER PRINCIPAL <b>172639</b>            Engraved MAIN SWITCH <b>172649</b></p>
	<p><b>Kit for clutch drive presentation</b></p> <p>Short shaft without door interlock <b>174189</b>            Long shaft without door interlock <b>174199</b>            Without shaft and without door interlock <b>174179</b></p>
	<p><b>Kit for door interlock</b> <b>174249</b></p>
	<p><b>IP 65 seal kit</b></p> <p><b>For front mounting switches and enclosures</b></p> <p>Padlockable <input type="checkbox"/> 66            or plate and frame <input type="checkbox"/> 64 or <input type="checkbox"/> 72 <b>172267</b>            Padlockable <input type="checkbox"/> 86            or plate and frame <input type="checkbox"/> 96 <b>172277</b></p> <p><b>For rear mounting switches with clutch drive</b></p> <p>Padlockable <input type="checkbox"/> 66            or plate and frame <input type="checkbox"/> 64 or <input type="checkbox"/> 72 <b>174259</b>            Padlockable <input type="checkbox"/> 86            or plate and frame <input type="checkbox"/> 96 <b>174269</b></p>


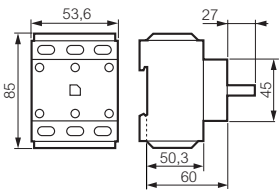

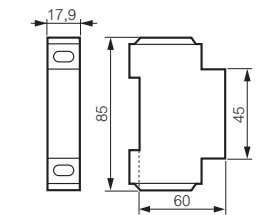


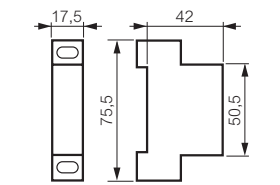

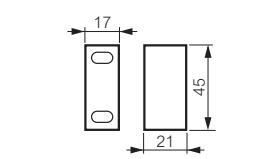


# Separate switch disconnectors - 50 and 63 A

 Characteristics (p. 316)

► BLOCKS

Cat. No.

		<p><b>3-pole body switch without presentation</b> 50 A 63 A</p>	<p><b>172200</b> <b>172300</b></p>
		<p><b>Additional pole</b> (for use in enclosure only) 50 A 63 A</p> <p><b>Neutral pole</b> 50 A 63 A</p>	<p><b>172275</b> <b>172375</b></p> <p><b>172265</b> <b>172365</b></p>
<p>172375      172385</p>		<p><b>Junction block</b>  or N</p>	<p><b>172385</b></p>
		<p><b>Auxiliary contact</b> NC/NO  1 pole early break</p>	<p><b>172179</b>  <b>172395</b></p>
<p>172179</p>			
			
<p>172395</p>			

# Separate switch disconnectors - 50 and 63 A

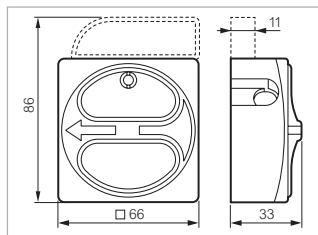
 Characteristics (p. 316)

## PRESENTATION

Cat. No.



172061



### Padlockable presentation

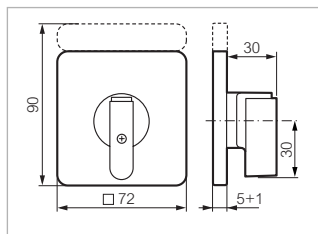
Padlock:  $\varnothing$  6 to 8 mm

- 66 - Yellow/Red
- 66 - Grey

**172601**  
**174601**



172612



### With plate, frame and handle

- 72 - Yellow/Red

**172612**

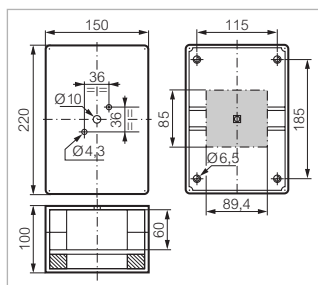
## EMPTY ENCLOSURES

### WITHOUT PRESENTATION

Cat. No.



172569

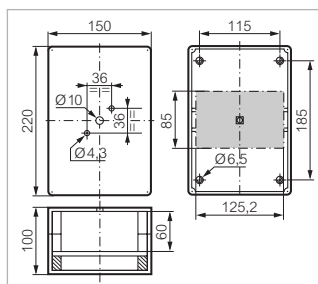


Grey - Up to 4 poles + auxiliary contact  
220 x 150 x 100 mm

**172569**



172579



Grey - Up to 6 poles + auxiliary contact  
220 x 150 x 100 mm



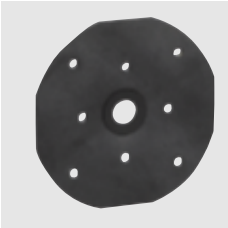
**172579**

# Separate switch disconnectors - 50 and 63 A



Characteristics (p. 316)

## ▶ ACCESSORIES

	Cat. No.
 <p>172367</p>	<p><b>Terminal covers</b></p> <p>For 3-pole switch <b>172367</b>                      For additional pole, neutral pole or junction block <b>172377</b>                      For NC/NO auxiliary contact (pair) <b>172189</b>                      For early break auxiliary contact <b>172199</b></p>
 <p>172649</p>	<p><b>Duty labels</b></p> <p>Blank <b>172629</b>                      Engraved INTER PRINCIPAL <b>172639</b>                      Engraved MAIN SWITCH <b>172649</b></p>
 <p>172267</p>	<p><b>Kit for clutch drive presentation</b></p> <p>Short shaft without door interlock <b>174189</b>                      Long shaft without door interlock <b>174199</b>                      Without shaft and without door interlock <b>174179</b></p>
	<p><b>kit for door interlock</b> <b>174249</b></p>
	<p><b>IP 65 seal kit</b></p> <p><b>For front mounting switches and enclosures</b></p> <p>Padlockable <input type="checkbox"/> 66                      or plate and frame <input type="checkbox"/> 64 or <input type="checkbox"/> 72 <b>172267</b>                      Padlockable <input type="checkbox"/> 86                      or plate and frame <input type="checkbox"/> 96 <b>172277</b></p> <p><b>For rear mounting with clutch drive</b></p> <p>Padlockable <input type="checkbox"/> 66                      or plate and frame <input type="checkbox"/> 64 or <input type="checkbox"/> 72 <b>174259</b>                      Padlockable <input type="checkbox"/> 86                      or plate and frame <input type="checkbox"/> 96 <b>174269</b></p>

# Separate switch disconnectors - 80 and 100 A


 Characteristics (p. 316)

► BLOCKS

Cat. No.

		<p><b>3-pole body switch without presentation</b> 80 A 100 A</p>	<p><b>172400</b> <b>172500</b></p>
		<p><b>Additional pole</b> (for use in enclosure only) 80 A 100 A</p>	<p><b>172475</b> <b>172575</b></p>
		<p><b>Neutral pole</b> 80 A 100 A</p>	<p><b>172465</b> <b>172565</b></p>
		<p><b>Junction block</b> ⏏ or N</p>	<p><b>172585</b></p>
		<p><b>Auxiliary contact</b> NC/NO 1 pole early break</p>	<p><b>172179</b> <b>172595</b></p>
			

# Separate switch disconnectors - 80 and 100 A

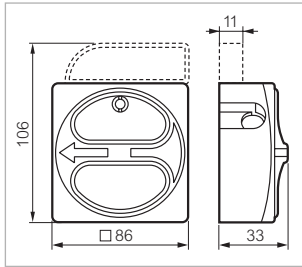
 Characteristics (p. 316)

## ► PRESENTATION

Cat. No.



172621



### Padlockable presentation

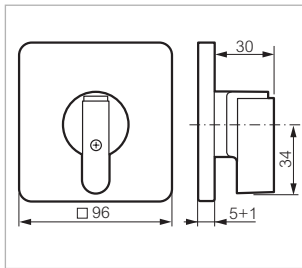
Padlock:  $\varnothing$  6 to 8 mm

- 86 - Yellow/Red
- 86 - Grey

**172621**  
**174621**



172622



### With plate, frame and handle

- 96 - Yellow/Red

**172622**

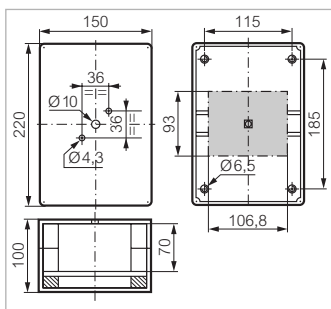
## ► EMPTY ENCLOSURES

### WITHOUT PRESENTATION

Cat. No.



172589

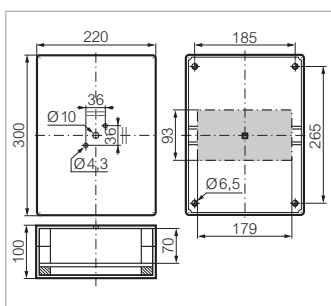


Grey - Up to 3 poles + auxiliary contact  
220 x 150 x 100 mm

**172589**



172599



Grey - Up to 6 poles + auxiliary contact  
300 x 200 x 100 mm




**172599**

# Separate switch disconnectors - 80 and 100 A



Characteristics (p. 316)

## ▶ ACCESSORIES

	Cat. No.
 <p>172567</p>	<p><b>Terminal covers</b></p> <p>For 3-pole body switch <b>172567</b>                      For additional pole, neutral pole or junction block <b>172577</b>                      For NC/NO auxiliary contact (pair) <b>172189</b>                      For early break auxiliary contact <b>172199</b></p>
 <p>172649</p>	<p><b>Duty labels</b></p> <p>Blank <b>172629</b>                      Engraved INTER PRINCIPAL <b>172639</b>                      Engraved MAIN SWITCH <b>172649</b></p>
 <p>172267</p>	<p><b>Kit for clutch drive presentation</b></p> <p>Short shaft without door interlock <b>174189</b>                      Long shaft without door interlock <b>174199</b>                      Without shaft and without door interlock <b>174179</b></p> <p><b>kit for door interlock</b> <b>174249</b></p> <p><b>IP 65 seal kit</b></p> <p><b>For front mounting switches and enclosures</b></p> <p>Padlockable <input type="checkbox"/> 66 or plate and frame <input type="checkbox"/> 64 or <input type="checkbox"/> 72 <b>172267</b>                      Padlockable <input type="checkbox"/> 86 or plate and frame <input type="checkbox"/> 96 <b>172277</b></p> <p><b>For rear mounting with clutch drive</b></p> <p>Padlockable <input type="checkbox"/> 66 or plate and frame <input type="checkbox"/> 64 or <input type="checkbox"/> 72 <b>174259</b>                      Padlockable <input type="checkbox"/> 86 or plate and frame <input type="checkbox"/> 96 <b>174269</b></p>

# Technical characteristics

## ► GENERAL

Characteristics	20 A	25 A	32 A	50 A	63 A	80 A	100 A
► Rated insulation voltage $U_i$ (V)	690	690	690	690	690	690	690
► Conventional free air thermal current $I_{th}$							
Uninterrupted rated current $I_u$ (A)	20	25	32	50	63	80	100
► Conventional enclosed thermal current $I_{the}$ (A)	16	20	25	40	50	63	80
► Rated impulse withstand voltage (overvoltage category III - pollution degree 3) $U_{imp}$ (kV)	4	6	6	6	6	6	6
► Rated operating current $I_e$ (A) AC - 21 A/22 A Conform to IEC 60947-3	16	25	32	50	63	80	100
► Rated operating power (kW)							
AC 23 A 3 x 230 V	4	5.5	5.5	15	15	18.5	22
3 x 400 V	7.5	7.5	11	18.5	22	30	37
3 x 500 V	5.5	7.5	11	22	30	37	45
3 x 690 V	4	7.5	11	18.5	22	22	30
AC 3 3 x 230 V	3	4	4	7.5	11	15	18.5
3 x 400 V	4	5.5	7.5	15	18.5	22	30
3 x 500 V	5.5	5.5	7.5	15	22	30	37
3 x 690 V	3	5.5	7.5	15	18.5	18.5	22
► <b>Make - break characteristics (<math>A_{eff}/400</math> V)</b>							
Rated make capacity	-	710	710	1270	1270	1970	1970
Rated break capacity	-	330	330	800	800	800	800
► <b>Short circuit characteristics</b>							
Rated short term withstand current $I_{cw}$ ( $A_{eff}/400$ V/1 s)	250	350	430	500	760	1100	1500
Rated short circuit make capacity $I_{cm}$ (kA peak/400 V)	-	1	1	1.8	1.8	2.8	2.8
Short circuit current (kA $eff/400$ V)	6	10	10	10	10	10	10
with fuse gI/gG (A)	16	25	32	50	63	80	100
► Mechanical life AC 20 (million)	1	0.1	0.1	0.04	0.04	0.04	0.04
► Connections							
Stranded wire + (min/max) cap (mm <sup>2</sup> )	0.75/2.5	0.75/6	0.75/6	1.5/16	1.5/16	2.5/35	2.5/35
Solid wire (mm <sup>2</sup> )	4	10	10	25	25	50	50
► Storage temperature	-30°C TO +70 °C						
► Operating temperature	- 30°C TO +70 °C						
► Protection rating	rear of panel: IPxxB front of panel IP 40 in standard version (IP 65 on request)						
► Conformity to standards	IEC 60947-3, UL508, CSA22.2						
► Approvals	UL - cUL (USA - Canada) suitable as motor disconnect. CB certification						
► Climatic resistance							
Tropical atmosphere according to	IEC 60068-2-30 Cyclic damp heat						

# Technical characteristics

## ▶ AUXILIARY CONTACTS

Characteristics	20 A	25 A	32 A	50 A	63 A	80 A	100 A
▶ Rated insulation voltage $U_i$ (V)	400	400	400	400	400	400	400
▶ Conventional free air thermal current $I_{th}$							
Continuous rated current $I_u$ (A)	20	10	10	10	10	10	10
▶ Rated operating current $I_e$ (A)							
AC 15							
230 V	6	6	6	6	6	6	6
400 V	-	4	4	4	4	4	4
▶ PROTECTION AGAINST SHORT CIRCUIT BY FUSE GG (A)	16	10	10	10	10	10	10
▶ Max. connection stranded wire (mm <sup>2</sup> )	2 x 2.5	2 x 2.5	2 x 2.5	2 x 2.5	2 x 2.5	2 x 2.5	2 x 2.5

## ▶ ENCLOSURES

Characteristics	150x100x96	220x150x100	220x150x100	220x150x100	220x150x100	300x200x100
▶ Rating	20, 25 and 32 A	25 and 32 A	50 and 63 A	50 and 63 A	80 and 100 A	80 et 100 A
+NC/NO	3P to 4P +NC/NO 20 A - 6P	6P and 6P +NC/NO	3P to 4P +NC/NO	6P and 6P +NC/NO	3P and 3P +NC/NO	4P to 6P
▶ Cable inputs	2 x 2 Pg 16 OR 2 x 2 M25	2 x 2 Pg 21	2 x 2 Pg 21	2 x 2 Pg 29	2 x 2 Pg 29	2 x 2 Pg 21 and 2 x 2 Pg 29
▶ Ø knockouts (mm)	Pg 16: 22.5 ISO M25: 25	28.5	28.5	37.5	37.5	37.5 and 28.5
▶ No. of knockouts (top and bottom)	2	2	2	2	2	4
▶ Panel mount	by 2 screws	by 4 screws				
▶ Base/cover assembly	by 1 screws self-tapping stainless steel	by 4 screws self-tapping stainless steel				by 6 screws self-tapping stainless steel
▶ Switch/base assembly	on 35 mm DIN rail (this rail is notched for positioning the switch)					
▶ Handles mounting	screwing on shaft pre-pierced cover					
▶ Insulation	Class II installed (provided that the correct insulation plugs are used with the enclosure)					
▶ Impact withstand	IK07					
▶ Flameproof	650°C					
▶ Protection rating	IP 66	IP 40 (IP 65 upon request)				
▶ Contact operating diagram						
▶ Switch padlocking	In general: up to 3 padlocks $\varnothing$ 4 to 8 mm Switch with 1 auxiliary contact NC/NO: up to 3 padlocks $\varnothing$ 6 to 8 mm Modular presentation: 1 padlock $\varnothing$ 6 to 8 mm					



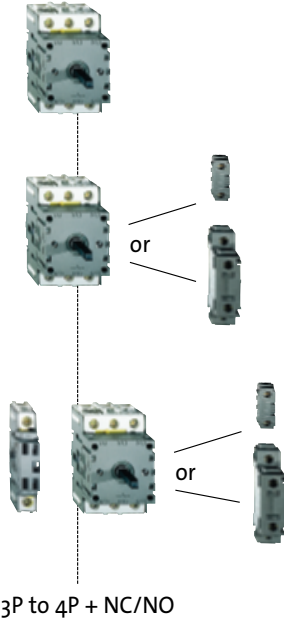
# Enclosure selection guide

► 25 AND 32 A

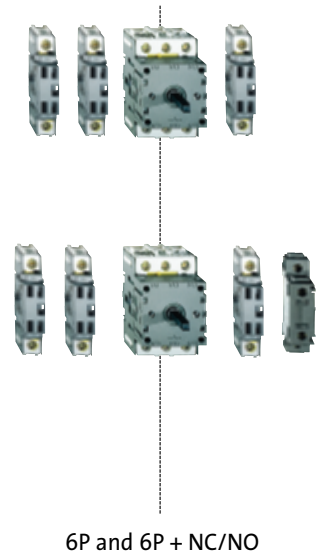


Example: switch disconnecter 32 A  
Enclosed 4 poles,  
padlockable presentation

Enclosure 150 x 100 x 96 mm



Enclosure 220 x 150 x 100 mm

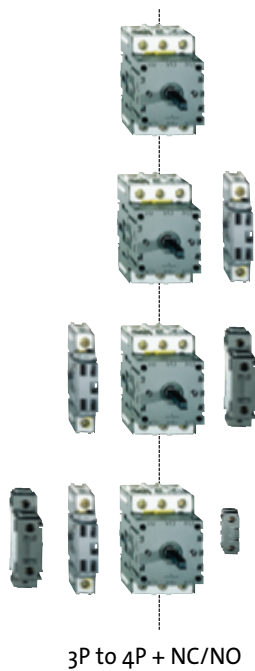


► 50 AND 63 A

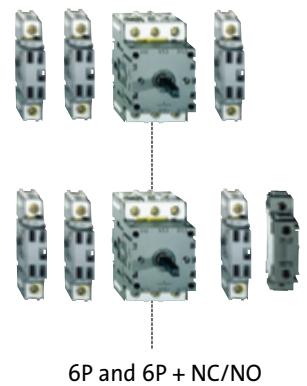


Example: switch disconnecter 50 A  
Enclosed 6 poles,  
Plate, frame and handle presentation

Enclosure 220 x 150 x 100mm



Enclosure 220 x 150 x 100 mm



# Enclosure selection guide

▶ 80 AND 100 A



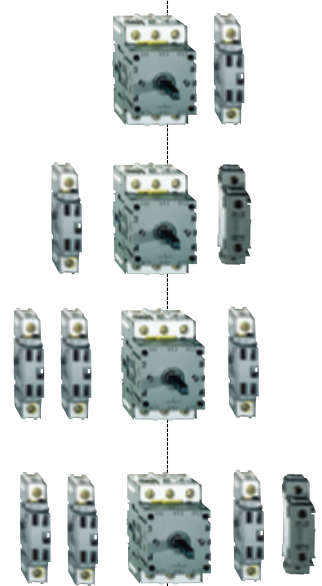
Example: switch disconnecter 100 A  
Enclosed 4 poles,  
padlockable presentation

Enclosure 220 x 150 x 100 mm



3P and 3P + NC/NO

Enclosure 300 x 220 x 100 mm



4P and 6P + NC/NO

## LEGEND



basic 3-pole block



additional pole  
additional neutral pole  
junction block

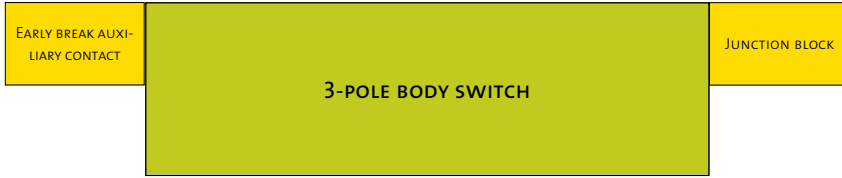


Auxiliary contact NC/NO

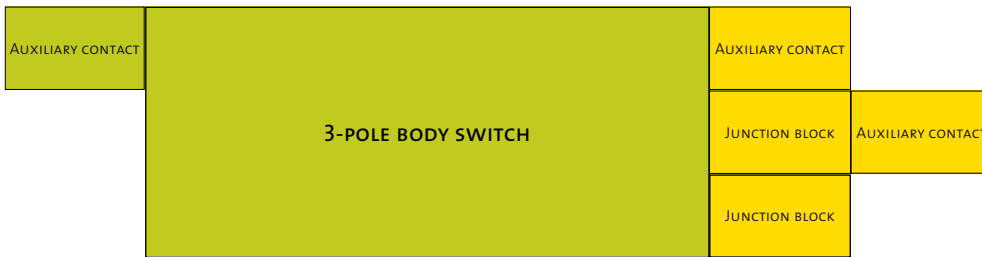


early break auxiliary contact

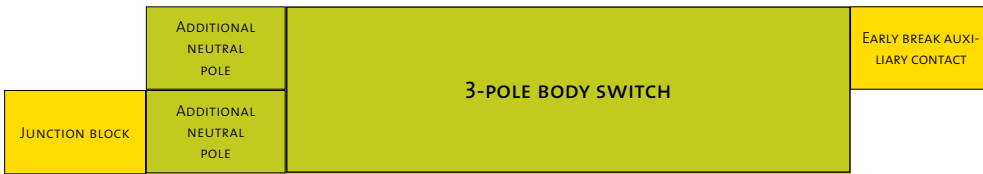
# Possible configurations



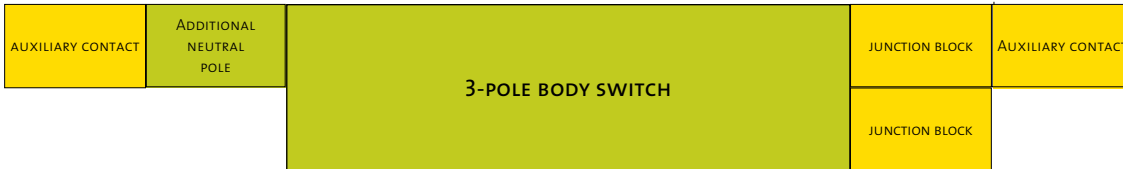
OR



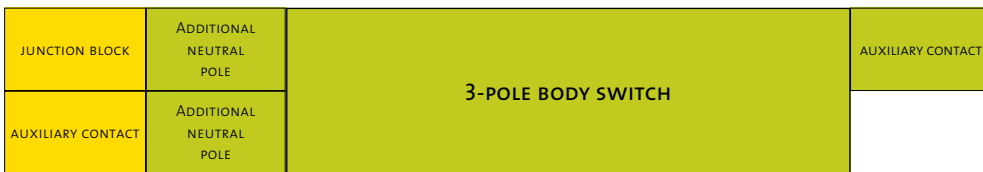
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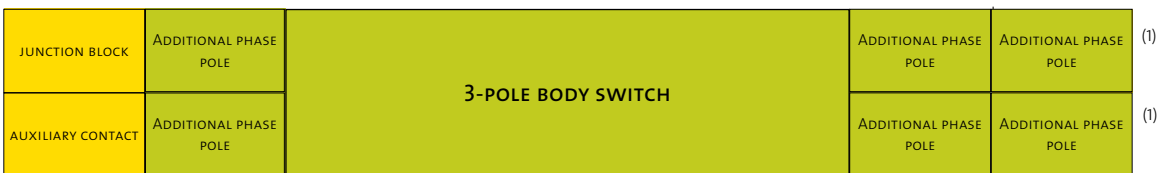
OR



OR



OR



(1) version with enclosure only

- Complete switch disconnecter p. 284 to 295
- Permitted auxiliaries

# Protection class

The IP (Ingress Protection) rating system is published by the IEC (International Electrotechnical Commission) and classifies the degree of protection against solid objects and liquids in order to operate the electrical equipment.

**IP XX**  
1 2

1 Protection Against Solid Objects

2 Protection Against Liquids

## First digit of IP-Codes

1.digit		Meaning	
ISO 20653	IEC 60529	Protection against objects	Effective against
0	0	No protection	No protection
1	1	Solid objects $\geq 50\text{mm}$	Any large surface of the body, such as the back of a hand, but no protection against deliberate contact with a body part
2	2	Solid objects $\geq 12.5\text{mm}$	Fingers or similar objects
3	3	Solid objects $\geq 2.5\text{mm}$	Tools, thick wires, etc.
4	4	Solid objects $\geq 1\text{mm}$	Most wires, screws, etc.
5K	5	Dust protected	Ingress of dust is not entirely prevented, but it must not enter in sufficient quantity to interfere with the satisfactory operation of the equipment; complete protection against contact
6K	6	Dust tight	No ingress of dust; complete protection against contact

## Second digit of IP-Codes

2.digit		Meaning
ISO 20653	IEC 60529	Protection against water
0	0	No protection
1	1	Dripping water (vertically falling drops) shall have no harmful effect.
2	2	Vertically dripping water shall have no harmful effect when the enclosure is tilted at an angle up to $15^\circ$ from its normal position.
3	3	Water falling as a spray at any angle up to $60^\circ$ from the vertical shall have no harmful effect.
4	4	Water splashing against the enclosure from any direction shall have no harmful effect.
5	5	Water projected by a nozzle (6.3 mm) against enclosure from any direction shall have no harmful effects.
6	6	Water projected in powerful jets (12.5 mm nozzle) against the enclosure from any direction shall have no harmful effects.
7	7	Ingress of water in harmful quantity shall not be possible when the enclosure is immersed in water under defined conditions of pressure and time (up to 1 m of submersion).
8	8	The equipment is suitable for continuous immersion in water under conditions which shall be specified by the manufacturer. Normally, this will mean that the equipment is hermetically sealed. However, with certain types of equipment, it can mean that water can enter but only in such a manner that it produces no harmful effects.
	9	Protected against close-range high pressure, high temperature spray downs.
9K		Protected against close-range high pressure, high temperature spray downs, specific for cars.



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