

Technical data

Compliance with standards

IEC 947.5.1 - VDE 0660 - NFC 63140
IEC/EN 60947.5.1 - UTE - BSI - NEMA
CENELEC EN 50007

Approvals

cUL U.S. - RINA - CE - GOST R - Lloyd's Register of Shipping - Bureau Veritas - Germanischer Lloyd

Climatic protections

The standard versions are suitable for use in the following climates:

| | |
|----------------------|------------------------|
| Temperate climate | cat. 23/50 (DIN 50014) |
| Wet climate | cat. 23/83 (DIN 50015) |
| Hot wet climate | cat. 40/92 (DIN 50015) |
| Variable wet climate | FW24 (DIN 50016) |

Temperature ranges

| | |
|-----------|-------------------|
| Operation | -25 °C to + 70 °C |
| Storage | -40 °C to + 70 °C |

Protection degree of the operators

IP66 according to CENELEC EN 60529 when they are mounted into enclosures with the same or a higher degree of protection.

Suitable for using into enclosures type NEMA 1-3-3R-3S-4-4X-12-13 according to UL 508.

Protection degree of the terminals

IP2x according to CENELEC EN 60529.

Shock resistance (acc. to MIL 202 B method 202 A)

1/2 sinusoid 11 ms:

No damage or disassembling at 100 g for all devices, except for the illuminated operators with transformer 38 g.

Vibration resistance (according to IEC 68-2-6)

16 g with frequency range from 40 to 500 Hz and maximum shifting 0.75 mm (peak-to-peak).

Rated insulation voltage

690V according to EN 60947.1

Impulse withstand voltage

4 kV according to EN 60947.1

Insulation class

Groep C according VDE 0110

Electrical shocks protection (acc. IEC 536)

| | |
|-------------------|---------------------------------|
| Metal operators | Class I |
| Plastic operators | Class II (double insulation) |

Short-circuit protection

With fuses 16A gG according to IEC 269.1 and 269.3.

Performances of the contacts

- Slow acting
- Self-cleaning sliding
- NC forced breaking
- Double movable bridge
- Four switching points
- Double break

Electrical resistance of the contact

≤ 25 m Ω according to IEC 255, cat. 3

Identification of the terminals

According CENELEC EN 50013

Electrical performances

Rated thermal current I_{th} = 10 A

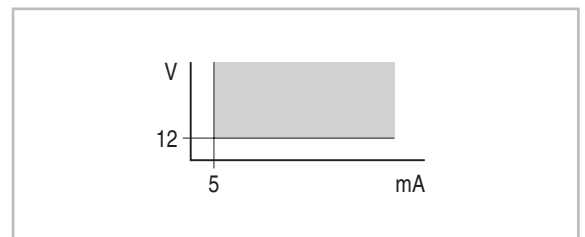
Performances according IEC 947.5.1

| Categorie AC 15 | | | | | | | | | |
|-----------------|--------|-----|-----|----|------|------|-----|-----|-----|
| Voltage | Ue (V) | 24 | 48 | 60 | 110 | 220 | 380 | 500 | 600 |
| Current | Ie (A) | 10 | 10 | 10 | 6 | 3 | 2 | 1.5 | 1.2 |
| Categorie DC 13 | | | | | | | | | |
| Voltage | Ue (V) | 24 | 48 | 60 | 110 | 220 | 300 | | |
| Current | Ie (A) | 2.5 | 1.4 | 1 | 0.55 | 0.27 | 0.2 | | |

Performances according to CSA and UL

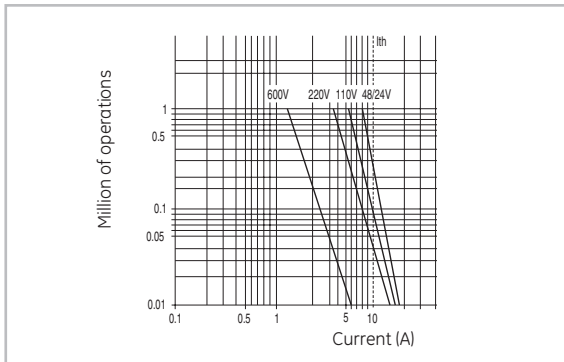
| | |
|------------------|--------|
| AC Heavy Duty | (A600) |
| DC Standard Duty | (Q300) |

Operating range

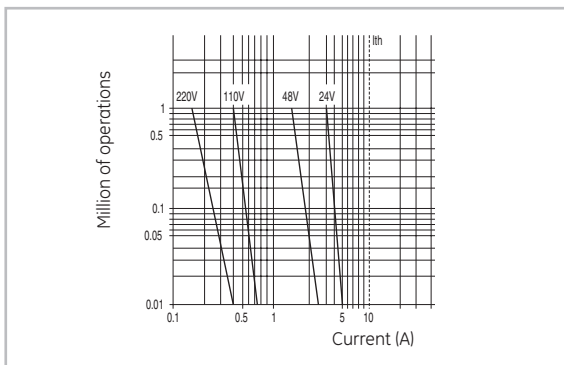


Electrical endurance

Alternative current 50/60 Hz cat. AC 15



Direct current cat. DC 13



Mechanical endurance

| | |
|---|--------------|
| Locking emergency | |
| Mushroom head push-buttons 3 positions | 0.3 Mil./op. |
| Illuminated mushroom head push-buttons 3 pos. | |
| Joysticks | |
| Key push-buttons | |
| Toggle switches | 0.5 Mil./op. |
| Illuminated selector switches | |
| Push-on push-off device | |
| Standard selector switches | |
| Key selector switches | |
| Illuminated push-buttons | 1 Mil./op |
| Selector push-buttons | |
| Emergency lever | |
| Standard push-buttons | 3 Mil./op. |
| Mushroom head push-buttons | |

Rear panel modularity

The P9 series is composed with 10 mm or a multiple of 10 mm modular units, fitted side by side on a proper mounting flange. The standard operators are supplied with a three position flange with a capacity of 3 units of 10 mm or 1 of 10 mm and 1 of 20 mm or 1 of 30 mm.

When the three position flange is not enough to satisfy the applications needs, the five position flange is required to add two more units of 10 mm mounted side by side.

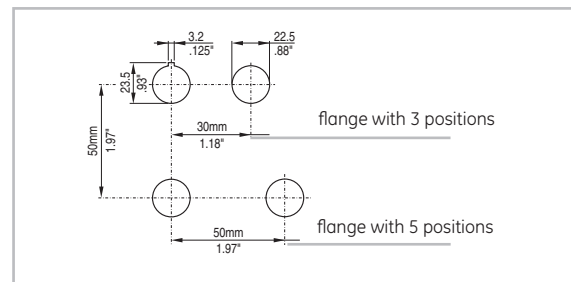
Using the five position flange take into account the bigger with (50 mm instead of 30 mm).

Number of electrical contacts

| | Flange | |
|--|-------------------------|-------------------------|
| | standard 3 positions | optional 5 positions |
| Standard push-buttons | | |
| Mushroom head push-buttons | max 6 | max 8 |
| Emergency lever | | |
| Standard selectors | max 4 | max 8 |
| Key selector switches | | |
| Joysticks | | |
| Key push-buttons | max 4 | - |
| Selector push-buttons | | |
| Toggle switches | | |
| Mushroom head with lock | max 4 | - |
| Mushroom head push-buttons 3 pos. | max 2 | |
| Illuminated push-buttons | | |
| Illuminated mushroom head push-buttons | max 4 | max 4 |
| Illuminated selector switches | | |
| Illuminated mush. push-buttons with lock | max 2 | max 2 |
| Illuminated mush. push-buttons 3 pos. | | |

Mounting

Fitted for panels 1 to 6 mm. thick with holes drilled according to CENELEC EN 50007 standards.



A

B

C

D

E

F

G

H

I

X

Complete devices

| Description | Contact-block | Power supply | Cap colour | Cat. no. | | Ref. no. | | |
|---|--|--|------------|----------|------------|----------|------------|--------|
| | | | | Metal | Plastic | | | |
| Momentary push-buttons (head + contact block)  | Standard flush | 1 NO  | Black | ○ | P9MPN53007 | 153007 | P9XPN52007 | 152007 |
| | | | | ● | P9MPN53006 | 153006 | P9XPN52002 | 152002 |
|  | Standard raised | 1 NC  | Red | | P9MPN53061 | 153061 | P9XPN52061 | 152061 |
| | | | | | | | | |
| Mushroom/Emergency push-buttons (head + contact block)  | Mushroom head momentary | 1 NC  | Red Ø 40 | | P9MEM53111 | 153111 | P9XEM52111 | 152111 |
| | Mush.with latch pull to release | 1 NC  | Red Ø 40 | | P9MET53121 | 153121 | P9XET52121 | 152121 |
| | Mush.with latch turn to release | | | | P9MER53161 | 153161 | P9XER52161 | 152161 |
| | Mush.with latch key to release (key 3095) | | | | P9MEC53130 | 153130 | P9XEC52130 | 152130 |
| | | | | | | | | |
| Knob selector switch (knob head + contact block)  | 2 fixed positions  | 1 NO  | Black | | P9MSM53293 | 153293 | P9XSM52293 | 152293 |
| | 3 fixed positions  | 2 NO  | Black | | P9MSM53391 | 153391 | P9XSM52391 | 152321 |
| | | | | | | | | |
| Knob selector switch (knob head + contact block)  | 2 fixed positions  | 1 NO  | Key 3095 | | P9MSC53435 | 153435 | P9XSC52435 | 152435 |
| | 3 fixed positions  | 2 NO  | Key 3095 | | P9MSC53497 | 153497 | P9XSC52497 | 152497 |

A

B

C

D

E

F

G






H

I

X



Complete devices

| | Description | Contact-block | Power supply | Cap colour | Cat. no. | | Ref. no. | |
|--|---|---------------|---|------------|---|---------|---|--------|
| | | | | | Metal | Plastic | | |
| Illuminated push-buttons (Head + Standard full voltage power supply+ contact blocks) | Momentary flush (bulb not included) | 1NO |  | Green |  P9MPL53502 | 153501 |  P9XPL52502 | 152502 |
| | | | | | P9MPL53511 | 153511 | P9XPL52511 | 152511 |
| | | | | | P9MPL53514 | 153514 | P9XPL52514 | 152514 |
| | | | | | P9MPL53515 | 153515 | P9XPL52515 | 152515 |
| Pilot lights | Standard diffused lens- Full voltage Power supply | |  | Green | P9MLD53610 | 153610 | P9XLD52610 | 152610 |
| | | | | Red | P9MLD53611 | 153611 | P9XLD52611 | 152611 |
| | | | | Green | P9MLD53620 | 153623 | P9XLD52620 | 152620 |
| | | | | Red | P9MLD53621 | 153621 | P9XLD52621 | 152621 |
| Double functions push-buttons (Head + contact block & power supply when indicated) | Flush both caps | 1 NO + 1NC |  | Green-red | | | P9DPL54700 | 154700 |
| | | | | | P9DPL54720 | 154720 | | |
| | | | | | P9DPL54701 | 154701 | | |
| | | | | | P9DPL54721 | 154721 | | |



Panel mounting

- A
- B
- C
- D
- E
- F
- G
- H
- I
- X



Control and signalling units Ø 22 mm

Notes

Grid area for notes

A

B

C

D

E

F

G

H

I

X



Push-buttons

| Standard / Momentary | | Description | Cat. no. | | Ref. no. | | Cat. no. | | Ref. no. | |
|--|----------------------------------|---|------------------|------------------|------------------|--------------------|-----------------|-------------------|------------|----------------|
| | | | see bottom | | see bottom | | see bottom | | see bottom | |
| | | | Metal | Plastic | Plastic | | | | | |
| | | | | | | | | | | |
| | | With flush cap | P9MPN●G | P9XPN●G | P9SPN●G | | | | | |
| | | With raised cap | P9MPN●S | P9XPN●S | P9SPN●S | | | | | |
| | | Recessed | P9MPN●E | | | | | | | |
| Mushroom head / Momentary | | | | | | | | | | |
| | | Mushroom head Ø 28 mm | P9MEM3●N | P9XEM3●N* | | | | | | |
| | | Mushroom head Ø 40 mm | P9MEM4●N | P9XEM4●N* | | | | | | |
| | | Mushroom head Ø 60 mm | P9MEM6●N | | | | | | | |
| | | Mushroom head ∇ 30 mm | | | | | P9SEM3RN | | 186031 | |
| | | | | | | | | | | * Color N or R |
| Mushroom head / Emergency with latch | | | | | | | | | | |
| Standard | Push-pull to release | Mushroom head Ø40 mm | P9MET4●N1 | P9XET4●N1 | | | P9SET4R | | 186061 | |
| | Push-twist to release | Red mushroom head Ø28 mm | P9MER3RN | 184070 | P9XER3RN | 185070 | | | | |
| | | Red mushroom head Ø40 mm | P9MER4RN | 184071 | P9XER4RN | 185071 | | | | |
| | Push-key to release | Red mushroom head Ø40 mm | P9MEC4RN▲ | | P9XEC4RN▲ | | | | | |
| Positive break in accordance with EN 418 | Push-twist to release | Red mushroom head Ø40 mm | | | P9XER4RAN | 185077 | P9SER4RA | | 186072 | |
| | Push-twist to release | Red mushroom head Ø40 mm with status indication | | | P9XER4RAW | 185078 | | | | |
| | Push-key to release | Red mushroom head Ø40 mm with key code 3095 | | | | P9XEC4RA95N | 185079 | P9SEC4RA95 | | 186073 |
| Mushroom head / 3 positions | | | | | | | | | | |
| | | Ø40 mm 1-0 fixed. 2 transient | P9MET4●N2 | | | | | | | |
| | | Ø40 mm 0 fixed. 1-2 transient | P9MET4●N3 | | | | | | | |
| With keylock ⁽¹⁾ | | | | | | | | | | |
| Key withdrawable in position I & II | Locking | normal | P9MPCN1K▲ | | | | | | | |
| | | depressed | P9MPCN2K▲ | | | | | | | |
| | | normal & depressed | P9MPCN3K▲ | | | | | | | |
| Key withdrawable position III | Lockable position Locking | normal | P9MPCN1E▲ | | | | | | | |
| | | depressed | P9MPCN2E▲ | | | | | | | |
| | | normal & depressed | P9MPCN3E▲ | | | | | | | |

(1) Keys on E.14

The catalogue numbers in **bold** are available from stock.

| Colours | | black | red | green | yellow | brown | blue | white | grey | without cap |
|----------------|---|----------|----------|----------|----------|----------|----------|-------|------|-------------|
| Caps | ● | N | R | V | G | M | L | B | H | 0 |
| Mushroom heads | ● | N | R | V | G | - | L | - | - | - |

Remark: To complete the catalogue number, substitute the symbol ● by a letter for the choice of the colour and the symbol ▲ by a number for the type of the key.





























For reference numbers, see chapter X, pg. X.8



Panel mounting

- A
- B
- C
- D
- E
- F
- G
- H
- I
- X

Selector switches with knob

| 2 positions | | Function (1) | Cat. no. | Ref. no. see bottom | Cat. no. | Ref. no. see bottom | Cat. no. | Ref. no. see bottom |
|---|---|---|---|---|---|------------------------|-----------------|------------------------|
| Fixed | Metal | | Plastic | Plastic | | | | |
| |  | |  |  | | | | |
|    | Fixed |  D | P9MSMD0● | | P9XSMD0N | 185110 | P9SSMD0N | 186110 |
| | |  I | P9MSMI0● | | P9XSMI0N | 185120 | P9SSMI0N | 186120 |
| | With spring return |  H | P9MSMH0● | | | | | |
| | |  D | P9MSMD5● | | P9XSMD5N | 185150 | P9SSMD5N | 186140 |
| | |  I | P9MSMI5● | | | | P9SSMI5N | 186150 |
| | |  H | P9MSMH1● | | | | | |
| 3 positions | | Function (1) | Cat. no. | Ref. no. see bottom | Cat. no. | Ref. no. see bottom | Cat. no. | Ref. no. see bottom |
| Fixed | E | | L | U | Z, B | | | |
| |  | |  |  |  | | | |
|    | Fixed | E | P9MSME0● | | | | P9SSME0N | 186170 |
| | | L | P9MSML0● | | | | | |
| | With spring return | U | P9MSMU0● | | P9XSMU0N | 185190 | P9SSMU0N | 186190 |
| | | Z, B | P9MSMZ0● | | P9XSMZ0N | 185200 | P9SSMZ0N | 186200 |
| | | E | P9MSME1● | | | | P9SSME1N | 186210 |
| | | L | P9MSML1● | | | | | |
| U | P9MSMU1● | | | P9XSMU1N | 186230 | P9SSMU1N | 186230 | |
| Z, B | P9MSMZ1● | | P9XSMZ1N | 185240 | P9SSMZ1N | 186240 | | |
|   | Fixed | E | P9MSME5● | | | | | |
| | | L | P9MSML5● | | | | | |
| | U | P9MSMU5● | | | | | | |
| | Z, B | P9MSMZ5● | | P9XSMZ5N | 185280 | P9SSMZ5N | 186280 | |
|  | Fixed | E | P9MSME3● | | | | | |
| | | L | P9MSML3● | | | | | |
| | U | P9MSMU3● | | | | | | |
| | Z, B | P9MSMZ3● | | P9XSMZ3N | 185320 | P9SSMZ3N | 186320 | |
| 4 positions | | Function (1) | Cat. no. | Ref. no. see bottom | Cat. no. | Ref. no. see bottom | Cat. no. | Ref. no. see bottom |
| Fixed | X | | | | | | | |
| |  | | | | | | | |
|  | Fixed | X | P9MSMX0● | | P9XSMX0N | 185330 | P9SSMX0N | 186330 |
| | | With spring return | X | P9MSMX5● | | | | |
|  | With spring return | | X | P9MSMX5● | | | | |
| | | 5 positions | | Function (1) | Cat. no. | Ref. no. see bottom | Cat. no. | Ref. no. see bottom |
| Fixed | X | W | | | | | | |
| |  |  | | | | | | |
|  | Fixed | X | P9MSMY0● | | | | | |
| | | W | P9MSMW0● | | | | | |

(1) Electrical diagrams, see E.22

































The catalogue numbers in **bold** are available from stock.

| | | | | | | |
|---------------------|-------|-----|-------|--------|------|---|
| Colours round shape | black | red | green | yellow | blue | |
| Knobs | ● | N | R | V | G | L |

For reference numbers, see chapter X, pg. X.8



Selector switches with lever

| 2 positions | | Function (1) | Cat. no. | Ref. no. see bottom | Cat. no. | Ref. no. see bottom |
|---|---|---|----------|------------------------|----------|------------------------|
| | | | Metal | | Plastic | |
|   | Fixed |  | D | P9MSVD0 | | P9XSVD0N 185370 |
| | |  | I | P9MSVI0 | | P9XaSVI0N 185371 |
| | |  | H | P9MSVH0 | | |
| | With spring return |  | D | P9MSVD5 | | P9XSVD5N 185373 |
| | |  | I | P9MSVI5 | | |
| | |  | H | P9MSVH1 | | |
| 3 positions | | | | | | |
|   | Fixed |  | E | P9MSVE0 | | |
| | |  | L | P9MSVL0 | | |
| | |  | U | P9MSVU0 | | |
| | |  | Z, B | P9MSVZ0 | | P9XSVD0N 185379 |
| | With spring return |  | E | P9MSVE1 | | |
| | |  | L | P9MSVL1 | | |
| | |  | U | P9MSVU1 | | |
| | |  | Z, B | P9MSVZ1 | | |
| | With spring return |  | E | P9MSVE5 | | |
| | |  | L | P9MSVL5 | | |
| | |  | U | P9MSVU5 | | |
| | |  | Z, B | P9MSVZ5 | | |
| 4 positions | Fixed |  | X | P9MSVX0 | | P9XSVDX0N 185392 |
| | |  | X | P9MSVX5 | | |
| | With spring return |  | X | P9MSVX5 | | |
| | |  | X | P9MSVX5 | | |
| | |  | X | P9MSVX5 | | |
| | |  | X | P9MSVX5 | | |
| | |  | X | P9MSVX5 | | |
| | |  | X | P9MSVX5 | | |
| 5 positions | | | | | | |
| Fixed |  | X | P9MSVY0 | | | |
| |  | W | P9MSVW0 | | | |

(1) Electrical diagrams, see E.22

The catalogue numbers in **bold** are available from stock.

| | | | | | | |
|---------|---|-------|-----|-------|--------|------|
| Colours | ● | black | red | green | yellow | blue |
| Levers | ● | N | R | V | G | L |

For reference numbers, see chapter X, pg. X.8



Panel mounting

- A
- B
- C
- D
- E**
- F
- G
- H
- I
- X

Selector switches with key

| 2 positions | | Function (1) | Key removal | Cat. no. | Ref. no. see bottom | Cat. no. | Ref. no. see bottom | Cat. no. | Ref. no. see bottom | | |
|-------------|------------------|--------------|-------------|------------------|------------------------|-------------------|------------------------|-------------------|------------------------|-------------------|--------|
| Fixed | Metal | | | Plastic | Plastic (1) | | | | | | |
| | | | | | | D | I | P9MSCD0A▲ | | P9XSCD0A95 | 185400 |
| II | P9MSCD0E▲ | | | | P9XSCD0E95 | | 185401 | | | | |
| I-II | P9MSCD0K▲ | | | | P9XSCD0K95 | | 185402 | | | | |
| | I | | 0 | P9MSCI0C▲ | | | | | | | |
| | | | I | P9MSCI0E▲ | | | | | | | |
| | | | 0-I | P9MSCI0N▲ | | | | | | | |
| | H | | I | P9MSCHOA▲ | | | | | | | |
| | | | 0 | P9MSCH0C▲ | | | | | | | |
| | | | I-0 | P9MSCH0H▲ | | | | | | | |
| | D | I | | P9MSCD5A▲ | | P9XSCD5A95 | 185409 | P9SSCD5A95 | 186409 | | |
| | | | | I | 0 | P9MSCI5C▲ | | P9XSCI5C95 | 185410 | P9SSCI5C95 | 186410 |
| | | | | | I | | | | | | |
| | H | 0 | | P9MSCH1C▲ | | | | | | | |

| 3 positions | | Function (1) | Key removal | Cat. no. | Ref. no. see bottom | Cat. no. | Ref. no. see bottom | Cat. no. | Ref. no. see bottom |
|-------------|------------------|--------------|-------------------|-----------|------------------------|----------|------------------------|-----------|------------------------|
| Fixed | Metal | | | Plastic | Plastic (1) | | | | |
| | | | | | | E | I | P9MSCE0A▲ | |
| 0 | P9MSCE0C▲ | | | | | | | | |
| II | P9MSCE0E▲ | | | | | | | | |
| I-0 | P9MSCE0H▲ | | | | | | | | |
| I-II | P9MSCE0K▲ | | | | | | | | |
| 0-II | P9MSCE0N▲ | | | | | | | | |
| | L | | I | P9MSCL0A▲ | | | | | |
| | | | 0 | P9MSCL0C▲ | | | | | |
| | | | II | P9MSCL0E▲ | | | | | |
| | | | I-0 | P9MSCL0H▲ | | | | | |
| | | | I-II | P9MSCL0K▲ | | | | | |
| | | | 0-II | P9MSCL0N▲ | | | | | |
| | U | | I | P9MSCU0A▲ | | | | | |
| | | | 0 | P9MSCU0C▲ | | | | | |
| | | | II | P9MSCU0E▲ | | | | | |
| | | | I-0 | P9MSCU0H▲ | | | | | |
| | | | I-II | P9MSCU0K▲ | | | | | |
| | | | 0-II | P9MSCU0N▲ | | | | | |
| | Z, B | I | P9MSCZ0A▲ | | P9XSCZ0A95 | 185433 | | | |
| | | 0 | P9MSCZ0C▲ | | P9XSCZ0C95 | 185434 | | | |
| | | II | P9MSCZ0E▲ | | P9XSCZ0E95 | 185435 | | | |
| | | I-0 | P9MSCZ0H▲ | | | | | | |
| | | I-II | P9MSCZ0K▲ | | | | | | |
| | | 0-II | P9MSCZ0N▲ | | | | | | |
| I-0-II | P9MSCZ0T▲ | | P9XSCZ0T95 | 185439 | P9SSCZ0T95 | 186439 | | | |

(1) Electrical diagrams, see E.22 The catalogue numbers in bold are available from stock.

Keys for round metal shape










| | | | | | | | | | | | |
|--------|---------------------------------------|--------|-------|-----|------|--------|----|----|----|----|------------|
| | Standard version number | ▲ | 95 | | | | | | | | |
| | Standard version with specific number | ▲ | 01 | 02 | 03 | 04 | 05 | 10 | 16 | 19 | 55 (Ronis) |
| | FIAT version number | ▲ | 33 | 34 | 37 | 38 | 40 | | | | |
| Colour | | yellow | black | red | blue | orange | | | | | |

(1) Key for square shape and round plastic shape, only standard version 95

For reference numbers, see chapter X, pg. X.8



Selector switches with key

| 3 positions | | Function (1) | Key removal | Cat. no. | Ref. no. see bottom | | Cat. no. | Ref. no. see bottom | | |
|---|---|---|------------------|-------------------|---------------------|-------------------|-------------------|---------------------|--|--|
| | | | | | Metal | Plastic | | Plastic (1) | | |
|  <p>With spring return</p> |  | E | 0 | P9MSCE1C▲ | | | | | | |
| | | | II | P9MSCE1E▲ | | | | | | |
| | | | 0-II | P9MSCE1N▲ | | | | | | |
| | | L | 0 | P9MSSL1C▲ | | | | | | |
| | | | II | P9MSSL1E▲ | | | | | | |
| | | | 0-II | P9MSSL1N▲ | | | | | | |
| | U | 0 | P9MSCU1C▲ | | | | | | | |
| | | II | P9MSCU1E▲ | | | | | | | |
| | | 0-II | P9MSCU1N▲ | | | | | | | |
| | Z; B | 0 | P9MSCZ1C▲ | | | | | | | |
| | | II | P9MSCZ1E▲ | | | | | | | |
| | | 0-II | P9MSCZ1N▲ | | | | | | | |
| |  <p>With spring return</p> |  | E | I | P9MSCE5A▲ | | | | | |
| | | | | 0 | P9MSCE5C▲ | | | | | |
| | | | | I-0 | P9MSCE5H▲ | | | | | |
| | | L | I | P9MSSL5A▲ | | | | | | |
| | | | 0 | P9MSSL5C▲ | | | | | | |
| | | | I-0 | P9MSSL5H▲ | | | | | | |
| U | | I | P9MSCU5A▲ | | | | | | | |
| | | 0 | P9MSCU5C▲ | | | | | | | |
| | | I-0 | P9MSCU5H▲ | | | | | | | |
| Z, B | I | P9MSCZ5A▲ | | P9XSCZ5A95 | 185461 | P9SSCZ5A95 | 186461 | | | |
| | 0 | P9MSCZ5C▲ | | P9XSCZ5C95 | 185462 | | | | | |
| | I-0 | P9MSCZ5H▲ | | P9XSCZ5H95 | 185463 | | | | | |
|  | E | 0 | P9MSC3C▲ | | | | | | | |
| | L | 0 | P9MSSL3C▲ | | | | | | | |
| | U | 0 | P9MSCU3C▲ | | | | | | | |
| | Z, B | 0 | P9MSCZ3C▲ | | P9XSCZ3C95 | 185467 | P9SSCZ3C95 | 186467 | | |
| 4 positions | |  | X | I | P9MSCX0A▲ | | | | | |
|  <p>Fixed</p> | II | | | | P9MSCX0B▲ | | | | | |
| | III | P9MSCX0D▲ | | | | | | | | |
| | IV | P9MSCX0E▲ | | | | | | | | |
| | I-II | P9MSCX0F▲ | | | | | | | | |
| | I-III | P9MSCX0J▲ | | | | | | | | |
| | I-IV | P9MSCX0K▲ | | | | | | | | |
| | II-III | P9MSCX0L▲ | | | | | | | | |
| | II-IV | P9MSCX0M▲ | | | | | | | | |
| | III-IV | P9MSCX0P▲ | | | | | | | | |
| | I-II-III | P9MSCX0R▲ | | | | | | | | |
| | I-II-IV | P9MSCX0S▲ | | | | | | | | |
| | I-III-IV | P9MSCX0U▲ | | | | | | | | |
| | II-III-IV | P9MSCX0V▲ | | | | | | | | |
| | I-II-III-IV | P9MSCX0Z▲ | | | | | | | | |
| |  <p>With spring return</p> |  | X | I | P9MSCX5A▲ | | | | | |
| | | | | | II | P9MSCX5B▲ | | | | |
| | | | | | III | P9MSCX5D▲ | | | | |
| | | | | | I-II | P9MSCX5F▲ | | | | |
| I-III | | | | | P9MSCX5J▲ | | | | | |
| II-III | | | | | P9MSCX5L▲ | | | | | |
| I-II-III | | | | | P9MSCX5R▲ | | | | | |

(1) Electrical diagrams, see E.22

The catalogue numbers in bold are available from stock.

Keys for round metal shape

| | | | | | | | | | | |
|---------------------------------------|---|--------|-------|-----|------|--------|----|----|----|------------|
| Standard version number | ▲ | 95 | | | | | | | | |
| Standard version with specific number | ▲ | 01 | 02 | 03 | 04 | 05 | 10 | 16 | 19 | 55 (Ronis) |
| FIAT version number | ▲ | 33 | 34 | 37 | 38 | 40 | | | | |
| Colour | | yellow | black | red | blue | orange | | | | |

(1) Key for square shape and round plastic shape, only standard version 95





For reference numbers, see chapter X, pg. X.8

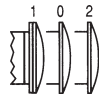


Panel mounting






- A
- B
- C
- D
- E
- F
- G
- H
- I
- X

Illuminated push-buttons






| | | Cat. no. | Ref. no. | Cat. no. | Ref. no. | Cat. no. | Ref. no. |
|---|------------------------|--|---|---|------------|------------------|------------|
| | | Metal | Plastic | Plastic | see bottom | see bottom | see bottom |
|  | |  |  |  | | | |
| Standard / Momentary | | | | | | | |
| | With diffused lens: | | | | | | |
| | Flush | P9MPL●GD | | P9XPL●GD | | P9SPL●GD | |
| | Raised | P9MPL●SD | | P9XPL●SD | | P9SPL●SD | |
| | Recessed | P9MPL●ED | | | | | |
| Mushroom head / Momentary | | | | | | | |
| | Mushroom head Ø40 mm | P9MEM4●L | | P9XEM4●L* | | | |
| | Mushroom head 30 mm | | | | | P9SEM3RL | 186551 |
| Mushroom head / With latch | | | | | | | |
| | Push-pull to release | | | | | | |
| | Mushroom head Ø40 mm | P9MET4●L1 | | P9XET4●L1* | | P9SET4RL1 | 186561 |
| | | | | * Color R, V or G | | | |
| Mushroom head / 3 positions | | | | | | | |
| | With mushroom Ø40 mm | | | | | | |
| | 1-0 fixed, 2 transient | P9MET4●L2 | | P9XET4RL2 | 185571 | | |
| | 0 transient, 1-2 fixed | P9MET4●L3 | | | | | |



Illuminated selector switches with knob

| | | Function (1) | | | |
|---------------------------|---|--------------|-----------------|-----------------|-----------------|
| 2 positions | | | | | |
| Fixed |  | D | P9MSLD0● | P9XSLD0● | P9SSLD0● |
| 3 positions | | | | | |
| Fixed |  | Z, B | P9MSLZ0● | P9XSLZ0● | P9SSLZ0● |
| With spring return |  | Z, B | P9MSLZ1● | | |
| |  | Z, B | P9MSLZ5● | | |
| |  | Z, B | P9MSLZ3● | | |

Illuminated selector switches with lever

| | | Function (1) | | | |
|---------------------------|---|--------------|-----------------|--|--|
| 2 positions | | | | | |
| Fixed |  | D | P9MSAD0● | | |
| 3 positions | | | | | |
| Fixed |  | Z, B | P9MSAZ0● | | |
| With spring return |  | Z, B | P9MSAZ1● | | |
| |  | Z, B | P9MSAZ5● | | |
| |  | Z, B | P9MSAZ3● | | |

(1) Electrical diagrams, see E.22








The catalogue numbers **in bold** are available from stock.

| | | | | | | | | |
|---------------|---|----------|----------|----------|----------|----------|----------|----------|
| Colours | | red | green | yellow | orange | blue | white | clear |
| Lens | ● | R | V | G | A | L | B | I |
| Mushroomheads | ● | R | V | G | A | L | B | I |
| Knob/lever | ● | R | V | G | A | L | B | I |





For reference numbers, see chapter X, pg. X.8











Selector push-buttons (black coloured)

| | Function (1) | Cat. no. | Ref. no. | Cat. no. | Ref. no. | Cat. no. | Ref. no. |
|---|--------------|---|----------|---|---|---|----------|
| | | | | Metal | Plastic | Plastic | |
| | | | |  |  |  | |
| 2 positions | | | | | | | |
|  | Fixed |  | 201 | P9MPS21G | 184690 | | |
| | | | 231 | P9MPS22G | 184691 | | |
| | | | 235 | P9MPS23G | 184692 | | |
| 3 positions | | | | | | | |
|  | Fixed |  | 301 | P9MPS34G | 184693 | | |
| | | | 323 | P9MPS35G | 184694 | | |

Toggle switches (black coloured)

| 2 positions | | | | | | | | | |
|---|----------------|---|---|--------------|--------|--------------|--------|--------------|--------|
|  | Fixed position |  | D | P9MCD | 184695 | P9XCD | 185695 | P9SCD | 186695 |
| | | | | | | | | | |
| 3 positions | | | | | | | | | |
|  | Fixed position |  | B | P9MCB | 184696 | | | | |
| | | | B | P9MCC | 184697 | | | | |

Joysticks (black coloured)

| 2 positions + central zero position ⁽¹⁾ | | | | | | | |
|---|-------------------|---|---------------------------------|----------------|--------|----------------|--------|
|  | Without interlock |  | fixed positions | P9MMN2F | 184700 | P9XMN2F | 185700 |
| | | | transient positions | P9MMN2T | 184701 | P9XMN2T | 185701 |
| | | | 1 transient - 3 fixed positions | P9MMN2A | 184702 | | |
| | | | 1 fixed - 3 transient positions | P9MMN2B | 184703 | | |
|  | With interlock |  | fixed positions | P9MMB2F | 184710 | P9XMB2F | 185710 |
| | | | transient positions | P9MMB2T | 184711 | P9XMB2T | 185711 |
| | | | 1 transient - 3 fixed positions | P9MMB2A | 184712 | P9XMB2A | 185712 |
| | | | 1 fixed - 1 transient positions | P9MMB2B | 184713 | P9XMB2B | 185713 |
| 4 positions + central zero position ⁽¹⁾ | | | | | | | |
|  | Without interlock |  | fixed positions | P9MMN4F | 184720 | P9XMN4F | 185720 |
| | | | transient positions | P9MMN4T | 184721 | P9XMN4T | 185721 |
|  | With interlock |  | fixed positions | P9MMB4F | 184740 | P9XMB4F | 185740 |
| | | | transient positions | P9MMB4T | 184741 | P9XMB4T | 185741 |

(1) Electrical diagrams, see E.22

The catalogue numbers in **bold** are available from stock.

Panel mounting

A

B

C

D

E

F

G

H

I

X



A

B

C

D

E

F





G

H

I

X


Emergency lever

| | Cat. no. | Ref. no. | Cat. no. | Ref. no. | Cat. no. | Ref. no. |
|---|--|----------|---|----------|---|----------|
| | Metal | | Plastic | | Plastic | |
| |  | |  | |  | |
|  Red lever | P9MWR | 184770 | | | | |


Reset push-button

| | | | | | | |
|---|-------|--------|-------|--------|--|--|
|  White symbol on blue background | P9MRG | 184771 | P9XRG | 185771 | | |
|---|-------|--------|-------|--------|--|--|


Potentiometer operator (potentiometer not included)

| | | | | | | |
|--|------|--------|------|--------|------|--------|
|  Black knob | P9MZ | 184772 | P9XZ | 185772 | P9SZ | 186772 |
|--|------|--------|------|--------|------|--------|

Buzzer

| | | | | | | |
|---|--|--|----------------|------------------|----------------|------------------|
|  | Black coloured Bitonal sound Full voltage AC/DC Frequency: 2kHz Sound intensity: 80dB at 1 m Consumption: 3 to 9 mA 24 V 110-240 V | | | | | |
| | | | P9XBD P9XBM | 185773 185774 | P9SBD P9SBM | 186773 186774 |

Pilot lights

| | | | | | | | |
|---|---|----------------------------|--|----------|------------|--------|------------|
|  | Standard Diffused lens (for filament bulb) Refracted lens (for neon bulb) Glass lens | P9ML●D P9ML●R P9ML●V | see bottom see bottom see bottom | P9XL●D | see bottom | P9SL●D | see bottom |
| | Unibloc (complete pilot light) Full voltage AC/DC BA9S max 382 V - 2 W not included Diffused lens Refracted lens | | | P9XU●DDO | see bottom | | |
| | With resistor 220 V BA9S 110 V - 2 W included Diffused lens Refracted lens | | | P9XU●DRN | see bottom | | |



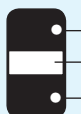
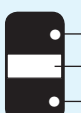

The catalogue numbers **in bold** are available from stock.

| | | | | | | | |
|---------|---|---|---|---|---|---|---|
| Colours |  |  |  |  |  |  |  |
| Lens | R | V | G | A | L | B | I |

For reference numbers, see chapter X, pg. X.8



Double function push-buttons ⁽¹⁾

| | Colours (2) | Plastic caps without symbols | | Plastic caps with symbols | |
|--|-------------------------|------------------------------|----------|---------------------------|----------|
| | | Cat. no. | Ref. no. | Cat. no. | Ref. no. |
|  | | | | | |
| IP40 protection (acc. to IEC 529) | | | | | |
|  <p>With white lens assembled for indicator light. Black insert for not illuminated function included in the packaging.</p> <div style="display: flex; align-items: center;">  <ul style="list-style-type: none"> A-flush lens B-flush </div> <div style="display: flex; align-items: center;">  <ul style="list-style-type: none"> A-flush lens B-raised </div> | A - Black B - Red | P9DPLNRG00 | 186880 | P9DPLNRG01 | 186890 |
| | A - Green B - Red | P9DPLVRG00 | 186881 | P9DPLVRG01 | 186891 |
| | A - Black B - Red | P9DPLNRS00 | 186882 | P9DPLNRS01 | 186892 |
| | A - Green B - Red | P9DPLVRS00 | 186883 | P9DPLVRS01 | 186893 |
| Clear cap (silicon rubber) | | | | | |
|  <p>IP66 protection (acc. to IEC 529)</p> | A - flush B - flush | 080CPDT | 173208 | 080CPDT | 173208 |
| | A - flush B - raised | P9ADCST | 187796 | P9ADCST | 187796 |

(1) With white lens assembled.
Black insert for not illuminated function included in the packaging.
(2) Integral caps, colours not replacable.

- A
- B
- C
- D
- E**
- F
- G
- H
- I
- X

A

B

C

D

E

F

G

H

I

X

Contact blocks

| | | Cat. no. | Ref. no. |
|---|-----------------------------|--|-----------------------|
| Logic Reed | Contact type | NC | P9B01FH 187014 |
| | | NO | P9B10FH 187015 |
| A new range of LOGIC REED contact blocks with faston terminals for use with power lower than 12V - 5mA. | Rated voltage | AC2 to 120V max. DC2 to 30V max. | |
| | Rated current | AC/DC - 0.001 to 0.15A max. | |
| | Rated power | AC - 8VA max. DC - 4.5W max. | |
| | Minimum centerline distance | 30x32 mm. | |
| | Mounting on operators | through specific bayonet flange adaptor. | P9ACFSM 187846 |
| | Full voltage power supply | | P9PDHF 187056 |



With screw



min. 1 of 22 AWG (0.32 mm²)
max. 2 of 12 AWG (3.3 mm²)



Faston



1 x (6.35 x 0.8 mm)
2 x (2.8 x 0.8 mm)





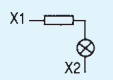
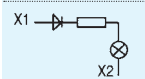
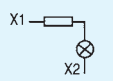
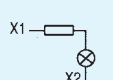


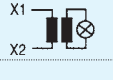

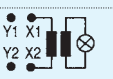



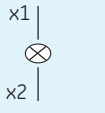
Terminal adapter
printed circuit board
adapter

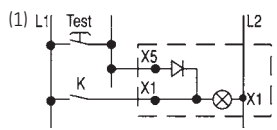
| | Contact type | Cat. no. | Ref. no. |
|--|------------------|----------------|----------|
| | | | |
| | NC+NO | P9B11VN | 187000 |
| | NC+NC | P9B02VN | 187008 |
| | NO+NO | P9B20VN | 187009 |
| | NC | P9B01VN | 187001 |
| | NO | P9B10VN | 187002 |
| | NC late opening | P9B01VR | 187003 |
| | NO early closing | P9B10VA | 187004 |
| | NC | P9B01FN | 187012 |
| | NO | P9B10FN | 187013 |
| | | P9ACA6 | 188804 |

The catalogue numbers in **bold** are available from stock.



Power supplies

| With screw  min. 1 of 22 AWG (0.32 mm ²) max. 2 of 12 AWG (3.3 mm ²) | Position on flange 2 3 1 | Contact type | Cat. no. | Ref. no. | |
|--|--|---|--|-----------------|---|
| | | | | |  |
|  |  | <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> | Full voltage ≅ IEC: BA9S max 380V-2W not included UL-CSA: BA9S max 250V-2W not included | P9PDNV0 | 187020 |
| | | | Logic Reed fullvoltage for low power | P9PDHF | 187056 |
| |  | <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> | Long life 110/120V ≅ BA9S 130V-2W included | P9PRLVJ | 187021 |
| |  | <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> | Resistor + Diode 220/240 V ~ BA9S 130V-2W included | P9PRDVN | 187022 |
| |  | <input checked="" type="checkbox"/> <input type="checkbox"/> | Resistor 110/120V ≅ BA9S 60V-1.2W included | P9PRNVJ | 187023 |
| | | | 220/240V ≅ BA9S 130V-2W included | P9PRNVN | 187024 |
| |  | <input checked="" type="checkbox"/> <input type="checkbox"/> | Resistor ENEL version BA9S 48V-2W included 110V ≅ | P9PREVJ | 187025 |
| | | | 125/127V ≅ | P9PREVL | 187026 |
| |  | <input checked="" type="checkbox"/> <input type="checkbox"/> | UL-CSA: BA9S max 250V-2W not included Test full voltage (1) ≅ IEC: BA9S max 380V-2W not included | P9PDTV0 | 187027 |
| |  | <input checked="" type="checkbox"/> <input type="checkbox"/> | Test resistor (1) 220/240 V ≅ BA9S 130V-2W included | P9PRTVN | 187028 |
| |  | <input checked="" type="checkbox"/> <input type="checkbox"/> | Transformer 50/60 Hz BA9S 6V-1.5W included | P9PTNV♦ | see bottom |
| |  | <input checked="" type="checkbox"/> | Multifunction (2) full voltage 24V ≅ BA9S 24V-2W included | P9PDMVD | 187040 |
| | | Multifunction (2) full voltage 110V ≅ BA9S 130V-2W included | P9PDMVJ | 187041 | |
|  | <input checked="" type="checkbox"/> | Multifunction (2) Transformer 50/60 Hz BA9S 6V-0.6W included | P9PTMV♦ | see bottom | |
|  Faston 1 x (6.35 x 0.8 mm) 2 x (2.8 x 0.8 mm) |  | <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> | Full voltage IEC: BA9S max 380V-2W not included UL-CSA: BA9S max 250V-2W not included | P9PDNF0 | 187055 |
| |  Integrated LED |  | <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> | Standard light | |
| 24V AC/DC | | | | P9PLNVD♦ | see bottom |
| 120V AC | | | | P9PLNVJ♦ | see bottom |
| 230V AC | | | | P9PLNVN♦ | see bottom |
| Flashing light | | | | | |
| 24V AC/DC | | | | P9PLFVD♦ | see bottom |
| 120V AC | P9PLFVJ♦ | see bottom | | | |
| 230V AC | P9PLFVN♦ | see bottom | | | |



(2) Y1 Y2 Do not connect for flashing light
 Y1 Y2 Link to external contact in order to have steady or flashing light
 L C C closed = Steady light
 L C C open = Flashing light

| | | | | | | |
|------------|----------|----------|----------|----------|----------|----------|
| LED colour | orange | white | yellow | blue | red | green |
| | A | B | G | L | R | V |

The catalogue numbers in **bold** are available from stock.

| | | | | | |
|---------|---------|----------|----------|----------|-------------------|
| Voltage | 110-120 | 220-250 | 380 | 415-440 | 480-500 |
| | ♦ | J | N | U | W Y |
| | : | J | N | U | - - |

For reference numbers, see chapter X, pg. X.8



Panel mounting

- A
- B
- C
- D
- E**
- F
- G
- H
- I
- X

A

B

C

D

E

F

G

H

I

X

Diagrams

Selector switches

| Positions | Function | Contacts | Position on flange 2 3 1 |
|-----------|----------|------------|-----------------------------|
| | D | B10 | |
| | D | B10 B01 | |
| | D | B11 | |
| | I | B11 | |
| | H | B11 B11 | |
| | B | B10 B10 | |
| | E | B11 | |
| | L | B11 | |
| | U | B11 B11 | |
| | Z | B11 B11 | |
| | Z | B10 B01 | |
| | X | B11 B11 | |
| | Y | B11 B11 | |
| | W | B11 B11 | |

Selector push-buttons

| Positions | Function | Contacts | Normal Depressed | Position on flange 2 3 1 |
|-----------|----------|------------|------------------|-----------------------------|
| | 201 | B11 B11 | | |
| | 231 | B11 B11 | | |
| | 235 | B11 B11 | | |
| | 301 | B11 B11 | | |
| | 323 | B11 B11 | | |

* Can not be depressed

Joysticks

| Positions | Contacts | Position on flange 2 3 1 |
|-----------|----------|-----------------------------|
| | B11 | |
| | B11 | |
| | B11 | |
| | B11 | |

Toggle switches


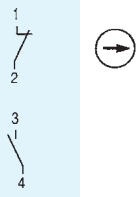
| Positions | Function | Contacts | Position on flange 2 3 1 |
|-----------|----------|----------|-----------------------------|
| | D | B11 | |
| | B | B11 | |

Mushroom head push-buttons 3 pos.





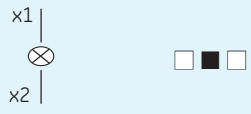
| Function | Contacts | Position on flange 2 3 1 |
|----------|-------------|-----------------------------|
| 2 | B01R B01 | |
| 3 | B11 | |



Contact blocks

| With screw | Contact type | Cat. no. | Ref. no. |
|------------|--------------|---|---|
| | |  <p>min. 1 of 22 AWG (0.32 mm²) max. 2 of 12 AWG (3.3 mm²)</p> |  |
| | NC | P9B01BN | 187017 |
| | NO | P9B10BN | 187018 |

Power supplies

| With screw | Position on flange 2 3 1 | Bulb power supply | Cat. no. | Ref. no. |
|---|---|---|---|------------|
|  <p>min. 1 of 22 AWG (0.32 mm²) max. 2 of 12 AWG (3.3 mm²)</p> |  | Full voltage ≅ IEC: BA9S max 380V-2W not included UL-CSA: BA9S max 250V-2W not included |  | |
| | | | P9PDNB0 | 187070 |
|  <p>Integrated LED</p> |  | Standard light | | |
| | | 24V AC/DC | P9PLNBD• | see bottom |
| | | 120V AC | P9PLNBJ• | see bottom |
| 230V AC | P9PLNBN• | see bottom | | |

The catalogue numbers **in bold** are available from stock.

| | | | | | | |
|-------------|--------|-------|--------|------|-----|-------|
| LED colour• | orange | white | yellow | blue | red | green |
| | A | B | G | L | R | V |

For reference numbers, see chapter X, pg. X.8



Base mounting


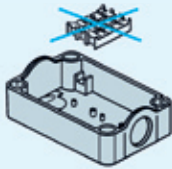
- A
- B
- C
- D
- E
- F
- G
- H
- I
- X

Push-button stations in thermoplastic (Light grey coloured RAL 7035)

For panel and base mounting

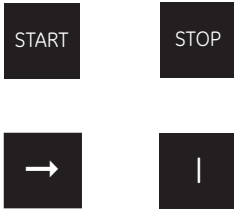
- IP66 according to IEC529, EN 60529
- Engineered thermoplastic covers, bases and screws
- Self extinguishing Class V0, according to UL 94
- Rust resistant (4X according to UL 508)
- Total insulation with all thermoplastic operators
- Contact blocks and power supplies for both base and front mounting

| Empty versions | Number of holes | Cat. no. | Ref. no. |
|---|------------------|----------------|----------|
| Cover with holes Knockouts conduit entry | 1 (yellow cover) | P9EPEG1 | 189000 |
| | 1 | P9EPE01 | 189001 |
| | 2 | P9EPE02 | 189002 |
| | 3 | P9EPE03 | 189003 |
| | 4 | P9EPE04 | 189004 |
| | 6 | P9EPE06 | 189005 |

For panel mounting



| Accessories | Description | Symbols | Cat. no. | Ref. no. |
|---|---------------------------|---------|---------------|---------------|
| Write-on plates Bilaminated, self adhesive, 20 x 20 mm Black background engravable for white texts | Without text | | P9AELN | 189030 |
| | Text in English (1) START | | P9AELN202 | 189031 |
| | STOP | | P9AELN201 | 189032 |
| | FORWARD | | P9AELN214 | 189033 |
| | REVERSE | | P9AELN215 | 189034 |
| | CLOSE | | P9AELN205 | 189035 |
| | OPEN | | P9AELN206 | 189036 |
| | UP | | P9AELN204 | 189037 |
| | DOWN | | P9AELN203 | 189038 |
| | LEFT | | P9AELN222 | 189152 |
| | RIGHT | | P9AELN224 | 189154 |
| | | → | P9AELN006 | 189041 |
| | | I | P9AELN028 | 189042 |
| | | 0 | P9AELN029 | 189043 |



Earth terminal clamp

P9AEMT 189029

| Equipped versions | Operators | Colour | Diagram | Name-plate | Cat. no. | Ref. no. |
|-------------------|--|--------|------------|------------|--------------------|----------|
| One unit | Flush push-button | green | 1/3 4 | I | P9EPA01Y02 | 189010 |
| | Flush push-button | white | 1/3 4 | I | P9EPA01Y03 | 189011 |
| | Emergency push-button with latch according to EN418 (yellow cover) | red | 1/1 2/1 | 0 | P9EPAG1Y0N | 189007 |
| | Emergency push-button with latch & status indicator according to EN418 (yellow cover) | red | 1/1 2/1 | 0 | P9EPAG1Y01W | 189008 |
| | Emergency push-button with latch according to EN418 - key to release (yellow cover) | red | 1/1 2/1 | 0 | P9EPAG1Y06N | 189009 |







(1) Other languages on request

The catalogue numbers **in bold** are available from stock.



Push-button stations in thermoplastic (continued)

| Equipped versions | | Operators | Colour | Diagram | Name-plate | Cat. no. | Ref. no. | |
|---|--------------------|---|--------|---|---|-------------------|-------------------|--------|
|  | Two units | Flush push-buttons | green | $\begin{array}{c} 13 \\ \diagdown \\ 4 \end{array}$ | I | P9EPA02Y01 | 189016 | |
| | | | red | $\begin{array}{c} 1L \\ \diagdown \\ 2 \end{array}$ | 0 | | | |
|   | Three units | Full voltage pilot light max 380V-2W not included | BA9S | white | $\begin{array}{c} \text{⊗} \times 1 \\ \text{⊗} \times 2 \end{array}$ | blank | P9EPA03Y01 | 189018 |
| | | Flush push-buttons | green | $\begin{array}{c} 13 \\ \diagdown \\ 4 \end{array}$ | I | | | |
| | | Flush push-buttons | red | $\begin{array}{c} 1L \\ \diagdown \\ 2 \end{array}$ | 0 | | | |
| | | Flush push-buttons | black | $\begin{array}{c} 13 \\ \diagdown \\ 4 \end{array}$ | ↑ | P9EPA03Y05 | | |
| Flush push-buttons | red | $\begin{array}{c} 1L \\ \diagdown \\ 2 \end{array}$ | 0 | | | | | |
| Flush push-buttons | black | $\begin{array}{c} 13 \\ \diagdown \\ 4 \end{array}$ | ↓ | | | | | |

The catalogue numbers in **bold** are available from stock.

A

B

C

D

E

F

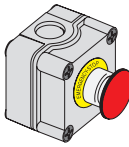
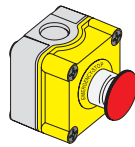
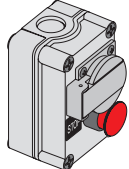
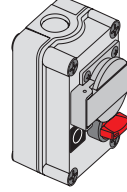
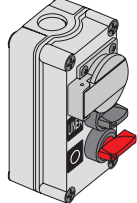
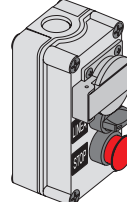
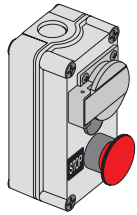
G

H

I

X

Equipped boxes

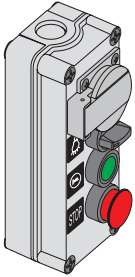
| | | Specially enclosures to use for shaft lifts (other versions, please contact us) | | | | | | | |
|---|---|--|----------------------|-------------------|----------|------|-------------------|--------|---|
| | | Composition | Individual operators | Cat. no. | Ref. no. | Pack | | | |
|  | One operator | Thermoplastic box, 1 element | P9EPE01 | P9EPC01X00 | 215432 | 1 | | | |
| | | Emergency push button mushroom head Ø40, push-pull to release | P9XET4RN1 | | | | | | |
| | 1NC contact block | P9B01VN | | | | | | | |
| | 1NO contact block | P9B10VN | | | | | | | |
| | Nameplate with inscription "EMERGENCY-STOP" | 080XTGR02 | | | | | | | |
| | PG16 packing gland | | | | | | | | |
|  | | Thermoplastic box, Yellow cover, 1 element | P9EPEG1 | P9EPC01X01 | 215433 | 1 | | | |
| | | Emergency push-button mushroom head Ø40, push-twist to release | P9XER4RN | | | | | | |
| | 1NC contact block | P9B01VN | | | | | | | |
| | Nameplate with inscription "EMERGENCY-STOP" | 080XTGR02 | | | | | | | |
|  | Two operators | Thermoplastic box, 2 elements | P9EPE02 | | | | P9EPL02X01 | 189136 | 1 |
| | | Emergency push-button mushroom head Ø28, push-twist to release | P9XER3RN | | | | | | |
| | | 1NC contact block | P9B01VN | | | | | | |
| | | Nameplate with inscription "STOP" | P9AELN201 | | | | | | |
| | 16A Schuko socket-outlet with cover | | | | | | | | |
|  | | Thermoplastic box, 2 elements | P9EPE02 | P9EPL02X02 | 189137 | 1 | | | |
| | | Selector switch, 2 positions, with red knob | P9XSMD0R | | | | | | |
| | | 1NC contact block | P9B01VN | | | | | | |
| | | Nameplate with inscription "O-I" | P9AELN039 | | | | | | |
| | 16A Schuko socket-outlet with cover | | | | | | | | |
|  | Three operators | Thermoplastic box, 3 elements | P9EPE03 | | | | P9EPL03X01 | 189138 | 1 |
| | | Selector switch, 2 positions, with black knob | P9XSMD0N | | | | | | |
| | | 1NC contact block | P9B01VN | | | | | | |
| | | 1NO contact block | P9B10VN | | | | | | |
| | | Nameplate with inscription "LINEA" | P9AELN523 | | | | | | |
| | | Selector switch, 2 positions, with red lever | P9XSVD0R | | | | | | |
| 1NO contact block | P9B10VN | | | | | | | | |
| | Nameplate with inscription "O-I" | P9AELN039 | | | | | | | |
| | 16A Schuko socket-outlet with cover | | | | | | | | |
|  | | Thermoplastic box, 3 elements | P9EPE03 | P9EPL03X02 | 189139 | 1 | | | |
| | | Selector switch, 2 positions, with black knob | P9XSMD0N | | | | | | |
| | | 1NC contact block | P9B01VN | | | | | | |
| | | 1NO contact block | P8B10VN | | | | | | |
| | | Nameplate with inscription "LINEA" | P9AELN523 | | | | | | |
| | | Emergency push-button mushroom head Ø28, push-twist to release | P9XER3RN | | | | | | |
| 1NC contact block | P9B01VN | | | | | | | | |
| | Nameplate with inscription "STOP" | P9AELN201 | | | | | | | |
| | 16A Schuko socket-outlet with cover | | | | | | | | |
|  | | Thermoplastic box, 3 elements | P9EPE03 | P9EPL03X03 | 189140 | 1 | | | |
| | | Emergency push-button mushroom head Ø40, push-twist to release | P9XER4RN | | | | | | |
| | | 1NC contact block | P9B01VN | | | | | | |
| | | Nameplate with inscription "STOP" | P9AELN201 | | | | | | |
| | | Round plug | P9ARHPR | | | | | | |
| | | 16A Schuko socket-outlet with cover | | | | | | | |



Equipped boxes (continued)

Specially enclosures to use for shaft lifts
(other versions, please contact us)

Four operators



| Composition | Individual operators | Cat. no. | Ref. no. | Pack |
|--|----------------------|------------|----------|------|
| Thermoplastic box, 4 elements | P9EPE04 | P9EPL04X01 | 189141 | 1 |
| Selector switch, 2 positions, with black knob | P9XSM00N | | | |
| 1NC contact block | P9B01VN | | | |
| 1NO contact block | P9B10VN | | | |
| Nameplate with "Light" symbol | P9AELN100 | | | |
| Standard/momentary push button with flush cap, green | P9XPNVG | | | |
| 1NO contact block | P9B10VN | | | |
| Nameplate with "Bell" symbol | P9AELN099 | | | |
| Emergency push-button mushroom head Ø28, push-twist to release | P9XER3RN | | | |
| 1NC contact block | P9B01VN | | | |
| Nameplate with inscription "STOP" | P9AELN201 | | | |
| 16A Schuko socket-outlet with cover | | | | |

Push-button stations

A

B

C

D

E

F



G

H

I

X

Push-button stations in aluminium (Grey coloured RAL 7012)

| For panel mounting | Protection | Number of holes | Type | Cat. no. | Ref. no. | | |
|--|--|--|--|----------------|----------|------------|--------|
|  <p>Cover with holes with conduit entry</p> | IP66 (according to IEC 529, EN 60529) | 1 | 1 | 080SP1 | 170801 | | |
| | | 1 | 1M (1) | 080SP1M | 170831 | | |
| | | 2 | 2 | 080SP2 | 170802 | | |
| | | 2 | 2M (1) | 080SP2M | 170832 | | |
| | | 3 | 3 | 080SP3 | 170803 | | |
| | | 4 | 4 | 080SP4 | 170804 | | |
| | | 4 | 4M (1) | 080SP4M | 170834 | | |
| | | 6 | 6 | 080SP6 | 170806 | | |
| | | 8 | 8 | 080SP8 | 170807 | | |
| | | 12 | 12 | 080SP12 | 170808 | | |
| | | 18 | 18 | 080SP18 | 170809 | | |
| | | 24 | 24 | 080SP24 | 170810 | | |
| | | 35 | 35 | 080SP35 | 170811 | | |
| | | <p>Cover with holes without conduit entry</p> | IP66 (according to IEC 529, EN 60529) | 1 | 1 | 080SP1SFE | 170836 |
| | | | | 1 | 1M (1) | 080SP1MSFE | 170839 |
| 2 | 2 | | | 080SP2SFE | 170842 | | |
| 2 | 2M (1) | | | 080SP2MSFE | 170845 | | |
| 3 | 3 | | | 080SP3SFE | 170848 | | |
| 4 | 4 | | | 080SP4SFE | 170850 | | |
| 4 | 4M (1) | | | 080SP4MSFE | 170851 | | |
| 6 | 6 | | | 080SP6SFE | 170852 | | |
| 8 | 8 | | | 080SP8SFE | 170854 | | |
| 12 | 12 | | | 080SP12SFE | 170857 | | |
| 18 | 18 | | | 080SP18SFE | 170860 | | |
| 24 | 24 | | | 080SP24SFE | 170862 | | |
| 35 | 35 | | | 080SP35SFE | 170864 | | |
|  <p>Cover without holes with conduit entry</p> | IP66 (according to IEC 529, EN 60529) | | | 1 | 1 | 080SP1SFC | 170835 |
| | | | | 1 | 1M (1) | 080SP1MSFC | 170838 |
| | | 2 | 2 | 080SP2SFC | 170841 | | |
| | | 2 | 2M (1) | 080SP2MSFC | 170844 | | |
| | | 3 | 3 | 080SP3SFC | 170847 | | |
| | | 4 | 4 | 080SP2SFC | 170841 | | |
| | | 4 | 4M (1) | 080SP2MSFC | 170844 | | |
| | | 6 | 6 | 080SP3SFC | 170847 | | |
| | | 8 | 8 | 080SP8SFC | 170853 | | |
| | | 12 | 12 | 080SP12SFC | 170856 | | |
| | | 18 | 18 | 080SP18SFC | 170859 | | |
| | | 24 | 24 | 080SP18SFC | 170859 | | |
| | | 35 | 35 | 080SP35SFC | 170863 | | |
| | | <p>Cover without holes without conduit entry</p> | IP66 (according to IEC 529, EN 60529) | 1 | 1 | 080SP1SF | 170837 |
| | | | | 1 | 1M (1) | 080SP1MSF | 170840 |
| 2 | 2 | | | 080SP2SF | 170843 | | |
| 2 | 2M (1) | | | 080SP2MSF | 170846 | | |
| 3 | 3 | | | 080SP3SF | 170849 | | |
| 4 | 4 | | | 080SP2SF | 170843 | | |
| 4 | 4M (1) | | | 080SP2MSF | 170846 | | |
| 6 | 6 | | | 080SP3SF | 170849 | | |
| 8 | 8 | | | 080SP8SF | 170855 | | |
| 12 | 12 | | | 080SP12SF | 170858 | | |
| 18 | 18 | | | 080SP18SF | 170861 | | |
| 24 | 24 | | | 080SP18SF | 170861 | | |
| 35 | 35 | | | 080SP35SF | 170865 | | |

(1) With deep socle

Accessories

| Description | Cat. no. | Ref. no. |
|---|----------------|----------|
| Kit of two hinges for types 18, 24, 35 with holes | 080KCSP | 170883 |

Overall dimensions, see E.41

The catalogue numbers **in bold** are available from stock.



Notes















Grid area for notes.

Push-button stations

- A
- B
- C
- D
- E
- F
- G
- H
- I
- X



Caps for standard push-buttons




| Colour | Cat. no. | Ref. no. | Cat. no. | Ref. no. | Cat. no. | Ref. no. | Cat. no. | Ref. no. | |
|---|---|--------------------|---|--------------------|---|--------------------|---|--------------------|--------|
| | Flush and recessed | | Raised | | Flush | | Raised | | |
| Neutral |  | |  | |  | |  | | |
| | P9ARBG ● | 18710 ■ | P9ARBS ● | 18720 ■ | P9ASBG ● | 18750 ■ | P9ASBS ● | 18760 ■ | |
| With symbols ⁽¹⁾ | | | | | | | | | |
| Stop  | Black | P9ARBGN 029 | 187150 | P9ARBSN 029 | 187250 | P9ASBGN 029 | 187550 | P9ASBSN 029 | 187650 |
| | Red | P9ARBGR 029 | 187110 | P9ARBSR 029 | 187210 | P9ASBGR 029 | 187510 | P9ASBSR 029 | 187610 |
| Start  | Black | P9ARBGN 028 | 187111 | P9ARBSN 028 | 187211 | P9ASBGN 028 | 187511 | P9ASBSN 028 | 187611 |
| | Green | P9ARBGV 028 | 187112 | P9ARBSV 028 | 187212 | P9ASBGV 028 | 187512 | P9ASBSV 028 | 187612 |
| | White | P9ARBGB 028 | 187151 | P9ARBSB 028 | 187251 | P9ASBGB 028 | 187551 | P9ASBSB 028 | 187651 |
| Continuous rectilinear motion  | Black | P9ARBGN 006 | 187117 | P9ARBSN 006 | 187217 | P9ASBGN 006 | 187517 | P9ASBSN 006 | 187617 |
| | Green | P9ARBGV 006 | 187118 | P9ARBSV 006 | 187218 | P9ASBGV 006 | 187518 | P9ASBSV 006 | 187618 |
| | White | P9ARBGB 006 | 187152 | P9ARBSB 006 | 187252 | P9ASBGB 006 | 187552 | P9ASBSB 006 | 187652 |
| Increase  | Black | P9ARBGN 017 | 187125 | | | | | | |
| Decrease  | Black | P9ARBGN 018 | 187127 | | | | | | |
| Reset  | Blue | P9ARBGL 037 | 187143 | | | P9ASBGL 037 | 187543 | P9ASBSL 037 | 187643 |
| Stop/Reset  | Red | P9ARBGR 036 | 187144 | | | | | | |
| Test  | Black | P9ARBGN 030 | 187145 | P9ARBSN 030 | 187245 | P9ASBGN 030 | 187545 | P9ASBSN 030 | 187645 |
| | Green | P9ARBGV 030 | 187146 | P9ARBSV 030 | 187246 | P9ASBGV 030 | 187546 | P9ASBSV 030 | 187646 |
| Stop  | Red | P9ARBGR 201 | 187147 | P9ARBSR 201 | 187247 | P9ASBGR 201 | 187547 | P9ASBSR 201 | 187647 |
| Start  | Black | P9ARBGN 202 | 187148 | P9ARBSN 202 | 187248 | P9ASBGN 202 | 187548 | P9ASBSN 202 | 187648 |
| | Green | P9ARBGV 202 | 187149 | P9ARBSV 202 | 187249 | P9ASBGV 202 | 187549 | P9ASBSV 202 | 187649 |
| | White | P9ARBGB 202 | 188909 | P9ARBSB 202 | 188978 | P9ASBGB 202 | 188959 | P9ASBSB 202 | 189928 |

(1) Other symbols on request

The catalogue numbers **in bold** are available from stock.

| | | | | | | | | | |
|---------|---|----------|----------|----------|----------|----------|----------|----------|----------|
| Colours | | black | red | green | yellow | brown | blue | white | grey |
| Caps | ● | N | R | V | G | M | L | B | H |

Diffusers/insert for illuminated units

| | | Cat. no. | Ref. no. | Cat. no. | Ref. no. | Cat. no. | Ref. no. |
|--|-------------------------------|---|----------|---|----------|---|----------|
| | | For pilot lights | | For illuminated push buttons | | For pilot lights and illuminated push buttons | |
| | |  | |  | |  | |
| | Neutral | P9ARDLS | 187300 | P9ARDPL | 187350 | 080QDF | 173220 |
| | With symbols ⁽¹⁾ | on white background | | | | | |
| | Stop | P9ARDLS029 | 187301 | P9ARDPL029 | 187351 | 080QDF029 | 187701 |
| | Start | P9ARDLS028 | 187302 | P9ARDPL028 | 187352 | 080QDF028 | 187702 |
| | Continuous rectilinear motion | P9ARDLS006 | 187305 | P9ARDPL006 | 187355 | 080QDF006 | 187705 |
| | Increase | P9ARDLS017 | 187309 | P9ARDPL017 | 187359 | 080QDF017 | 187709 |
| | Decrease | P9ARDLS018 | 187310 | P9ARDPL018 | 187360 | 080QDF018 | 187710 |
| | Auto cycle | P9ARDLS026 | 187311 | P9ARDPL026 | 187361 | 080QDF026 | 187711 |
| | Manual | P9ARDLS027 | 187312 | P9ARDPL027 | 187362 | 080QDF027 | 185788 |
| | Locking | P9ARDLS031 | 187313 | P9ARDPL031 | 187363 | 080QDF031 | 187713 |
| | Releasing | P9ARDLS032 | 187314 | P9ARDPL032 | 187364 | 080QDF032 | 187714 |
| | Coolant | P9ARDLS001 | 187315 | P9ARDPL001 | 187365 | 080QDF001 | 187715 |
| | Light | P9ARDLS002 | 187316 | P9ARDPL002 | 187366 | 080QDF002 | 187716 |
| | Test | P9ARDLS030 | 187318 | P9ARDPL030 | 187368 | 080QDF030 | 185789 |
| | Stop | P9ARDLS201 | 187319 | P9ARDPL201 | 187369 | 080QDF201 | 187719 |
| | Start | P9ARDLS202 | 187320 | P9ARDPL202 | 187370 | 080QDF202 | 187720 |

(1) Other symbols on request

The catalogue numbers in **bold** are available from stock.

A

B

C

D

E

F

G

H

I

X



A

B

C

D

E

F



G

H



I

X



Mushroom heads

| Description | Cat. no. | Ref. no. see bottom | Cat. no. | Ref. no. see bottom | | |
|---------------------|----------|------------------------|----------|------------------------|---|---|
| | | | | | Plastic | |
| | | | | |  |  |
| Momentary operators | Ø 28 mm | P9ARB3● | | | | |
| | Ø 40 mm | P9ARB4● | | | | |
| | Ø 60 mm | P9ARB6● | | | | |
| | ∩ 30 mm | | P9ASB3● | | | |
| Push-pull operators | Ø 40 mm | P9ACB4● | P9ACB4● | | | |



Knobs and levers

| Description | Cat. no. | Ref. no. see bottom | Cat. no. | Ref. no. see bottom | | |
|-----------------------------|----------|------------------------|----------|------------------------|---|---|
| | | | | | Plastic | |
| | | | | |  |  |
| Knob for selector switches | P9ACMN● | | P9ACMN● | | | |
| Lever for selector switches | P9ARMV● | | | | | |



Lenses

| Description | Cat. no. | Ref. no. see bottom | Cat. no. | Ref. no. see bottom | | |
|-----------------------------------|-------------------|------------------------|----------|------------------------|---|---|
| | | | | | Plastic | |
| | | | | |  |  |
| Pilot lights | diffused version | P9ARGLD● | P9ASGLD● | | | |
| | refracted version | P9ARGLR● | | | | |
| | glass version | P9ARGLV● | | | | |
| Illuminated push-buttons | diffused version | P9ARGPD● | P9ASGPD● | | | |
| Illuminated mushroom head push-b. | momentary Ø 40 mm | P9ARGP4● | | | | |
| | ∩ 30 mm | | | | | |
| | push-pull Ø 40 mm | P9ACGP4● | | | | |
| Illuminated selector switches | knob | P9ACGSL● | P9ACGSL● | | | |
| | lever | P9ARGSA● | | | | |

Rubber protective caps (IP66)

| Description | Cat. no. | Ref. no. see bottom | Cat. no. | Ref. no. see bottom | | |
|-----------------------------|----------------------------|------------------------|----------|------------------------|---|---|
| | | | | | Plastic | |
| | | | | |  |  |
| Standard flush push-buttons | coloured (nitrilic rubber) | 080CP● | P9ASCG● | | | |
| | clear (silicon rubber) | 080CPT | P9ASCGT | 170198 170790 | | |
| Raised push buttons | clear (silicon rubber) | P9ARCST | P9ASCST | 187490 187791 | | |

Spare boots for joysticks

| | | | | | |
|---|--|-----|----------|--------|--|
|  (a) | Standard rubber boot for joystick | (a) | P9ARSCMN | 188043 | |
|  (b) | Standard rubber boot for joystick with interlock | (a) | P9ARSCMB | 188044 | |
| | Silicone boot for joystick | (b) | P9ARSGMN | 187495 | |
| | Silicone boot for joystick with interlock | (b) | P9ARSGMB | 187496 | |

The catalogue numbers in **bold** are available from stock.

| Colours | | black | red | green | yellow | orange | blue | white | clear |
|-----------------|---|-------|-----|-------|--------|--------|------|-------|-------|
| Mushroom heads | ● | N | R | V | G | - | L | - | - |
| Knobs/lever | ● | N | R | V | G | - | L | - | - |
| Lenses | ● | - | R | V | G | A | L | B | I |
| Protective caps | ● | N | R | V | G | - | - | - | - |



Common accessories

| Plugs | Description | Cat. no. | Ref. no. | Cat. no. | Ref. no. |
|---|--|----------------|----------|----------------|----------|
| | | Plastic | | Plastic | |
|  | Round | P9ARHPR | 187491 | | |
| | Square 30 x 30 mm | | | P9ASHP3 | 187792 |
| | Rectangular 30 x 50 mm | | | P9ASHP5 | 187793 |
| Protections | | | | | |
|  | Collar for mushroom head push-buttons Ø40 mm. | P9ARRE4 | 187492 | | |
| | Protection cover padlockable for standard push-buttons, illuminated push-buttons, selector switches, illuminated selector switches with knob. | P9ACRCL | 187840 | P9ACRCL | 187840 |
| Flanges | | | | | |
|  | With three positions Centre distances 30 x 50 mm | P9ACFS3 | 187841 | P9ACFS3 | 187841 |
| | With five positions Centre distances 50 x 50 mm | P9ACFS5 | 187842 | P9ACFS5 | 187842 |
| | With two positions For Logic Reed contact blocks | P9ACFSM | 187846 | P9ACFSM | 187846 |
| Adapter screw plug-in terminal | | | | | |
| | Only for Logic Reed contact blocks and power supplies | P9ACAFV | 187847 | P9ACAFV | 187847 |
| Adapter | | | | | |
|  | Gives round control and signalling units a square appearance. Made in black thermoplastic. Can be used with nameplate for square operators P9ASTBS (see P.30). Excluded for mushroom flush buttons with positive break and types with 3 positions. | P9ARSN1 | 188805 | | |
| Push-on/push off | | | | | |
|  | Device for standard push-buttons and illuminated push-buttons. To be added only to single pole contact blocks. The NO-contacts must be early closing types. | P9ACDPP | 187843 | P9ACDPP | 187843 |
| Extended screw | | | | | |
|  | For reset push-buttons (setting min. 80, max. 170 mm) | P9ACVLR | 187844 | P9ACVLR | 187844 |
| Central contact driving plug | | | | | |
| | For standard momentary push-buttons and momentary mushroom head push-buttons. | | | P9ASHAC | 187794 |
| Tools | | | | | |
|  | Locking ring wrench | P9ACWAF | 187845 | P9ACWAF | 187845 |
| | Bulb extractor | 080ESL | 170212 | 080ESL | 170212 |
| | Extractor for caps and lenses | | | P9ASEBG | 187795 |

The catalogue numbers **in bold** are available from stock.

A

B

C

D

E

F




G

H

I




X

Spare keys

| Description | | Cat. no. | Ref. no. | |
|------------------|-------------|---|---|---|
| | | Plastic | | |
| | |  |  |  |
| Standard version | Code | | | |
| | 3095 | 077C3095 | 173095 | |
| | 9901 | 077C9901 | 173901 | |
| | 9902 | 077C9902 | 173902 | |
| | 9903 | 077C9903 | 173903 | |
| | 9904 | 077C9904 | 173904 | |
| | 9905 | 077C9905 | 173905 | |
| | 9910 | 077C9910 | 173910 | |
| | 9916 | 077C9916 | 173916 | |
| | 9919 | 077C9919 | 173919 | |
| | 3353 | 077C3353 | 173353 | |
| | (Ronis) 455 | 077CR455 | 173455 | |
| FIAT version | Colour | Code | | |
| | yellow | 73033 | 077CF73033 173033 | |
| | black | 73034 | 077CF73034 173034 | |
| | red | 73037 | 077CF73037 173037 | |
| | blue | 73038 | 077CF73038 173038 | |
| | orange | 73040 | 077CF73040 173040 | |






Bulbs BA9s

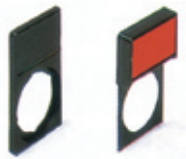
| Description | | | Cat. no. | Ref. no. | |
|---------------|----------------|----------|---|---|---|
| | | | Plastic | | |
| | | |  |  |  |
| Filament type | Vn | Vn | | | |
| | 6 | 0.6 | BA9S606 | 187850 | |
| | 6 | 1.5 | BA9S615 | 187851 | |
| | 12 | 2.0 | BA9S122 | 187852 | |
| | 24 | 2.0 | BA9S242 | 187853 | |
| | 30 | 2.1 | BA9S30 | 187854 | |
| | 48 | 2.0 | BA9S48 | 187855 | |
| | 60 | 1.2 | BA9S6012 | 187856 | |
| | 130 | 2.0 | BA9S130 | 187857 | |
| Neon type | | | | | |
| | 110 | 0.11 | BA9SN110 | 187860 | |
| | 220 | 0.33 | BA9SN220 | 187861 | |
| Mono LED | VN AC/DC ± 10% | | | | |
| | | 6 | BA9S6L● | see bottom | |
| | | 12 | BA9S12L● | see bottom | |
| | | 24 | BA9S24L● | see bottom | |
| | | 48 | BA9S48L● | see bottom | |
| | | 110 | BA9S110L● | see bottom | |
| | | (AC) 230 | BA9S230L● | see bottom | |



| Colours | red | green | yellow | blue | white |
|---------|-----|-------|--------|------|-------|
| ● | R | V | G | L | B |

Insert holders

| Description | | Cat. no. | Ref. no. | Cat. no. | Ref. no. |
|---|----------------------------------|---|---|---|----------|
| | | Plastic | | Plastic | |
| | |  |  |  | |
| Supplied with neutral insert engravable on both sides or transparent. | | | | | |
| Standard 30 x 50 mm | Background black/red, white text | P9ARTBS | 188000 | P9ASTBS | 188010 |
| | Background white, black text | P9ARTWS | 188005 | P9ASTWS | 188011 |
| | Transparent | P9ARTTS | 188012 | P9ASTTS | 188014 |
| Extended 45 x 50 mm | Background black/red, white text | P9ARTBM | 188001 | P9ARTWM | 188008 |
| | Background white, black text | P9ARTWM | 188008 | P9ARTWS | 188011 |
| | Transparent | P9ARTTM | 188019 | P9ASTTS | 188014 |



The catalogue numbers in **bold** are available from stock.

For reference numbers, see chapter X, pg. X.8

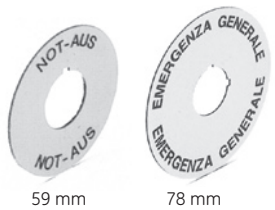


Rectangular inserts


| For insert holders 30 x 50 mm | | Neutral | | | | | | |
|-------------------------------|------------------|----------------------------------|-------------------|------------|------------------|-----------------|--------------------------|-------------------|
| | | Description | Cat. no. | Ref. no. | Description | Cat. no. | Ref. no. | |
| | | black/red background | P9ACPBS | 188015 | | | | |
| | | white background | P9ACPWS | 188017 | | | | |
| | | transparent | P9ACPTS | 188018 | | | | |
| | | English (1) | | | French (1) | | | |
| START | black background | START | P9ACPBS202 | 188202 | black background | MARCHE | P9ACPBS308 188308 | |
| | | STOP | P9ACPBS201 | 188201 | | ARRET | P9ACPBS301 188301 | |
| | | REVERSE | P9ACPBS215 | 188215 | | AVANT | P9ACPBS303 188303 | |
| | | CLOSE | P9ACPBS205 | 188205 | | ARRIERE | P9ACPBS302 188302 | |
| | | OPEN | P9ACPBS206 | 188206 | | FERMER | P9ACPBS309 188309 | |
| | | UP | P9ACPBS204 | 188204 | | OUVRIR | P9ACPBS316 188316 | |
| | | DOWN | P9ACPBS203 | 188203 | | MONTEE | P9ACPBS317 188317 | |
| | | LEFT | P9ACPBS222 | 188222 | | DESCENTE | P9ACPBS304 188304 | |
| | | RIGHT | P9ACPBS224 | 188224 | | GAUCHE | P9ACPBS306 188306 | |
| | | FAST | P9ACPBS208 | 188208 | | DROITE | P9ACPBS305 188305 | |
| | | SLOW | P9ACPBS207 | 188207 | | VITE | P9ACPBS324 188324 | |
| | | OPEN-CLOSE | P9ACPBS234 | 188234 | | LENT | P9ACPBS307 188307 | |
| | | HAND-AUTO | P9ACPBS243 | 188243 | | OUVERT-FERME | P9ACPBS335 188335 | |
| | | STOP-START | P9ACPBS232 | 188232 | | MAIN-AUTO | P9ACPBS336 188336 | |
| | MARCHE | | FORWARD-REVERSE | P9ACPBS231 | 188231 | | ARRET-MARCHE | P9ACPBS328 188328 |
| | | | OFF-ON | P9ACPBS233 | 188233 | | AVANT-ARRIERE | P9ACPBS332 188332 |
| | | AUTO-OFF-HAND | P9ACPBS258 | 188258 | | HORS-EN | P9ACPBS331 188331 | |
| | | FORWARD-0-REVERSE | P9ACPBS239 | 188239 | | AUTO-0-MAIN | P9ACPBS334 188334 | |
| | | 0-1 | P9ACPBS039 | 188030 | | AVANT-0-ARRIERE | P9ACPBS333 188333 | |
| | | | | | | 0-1 | P9ACPBS039 188030 | |
| For insert holders 45 x 50 mm | | Neutral | | | | | | |
| | | black/red background, white text | P9ARPBM | 188002 | | | | |
| | | white background, black text | P9ARPWM | 188028 | | | | |
| | | transparent | P9ARPTM | 188019 | | | | |

Round plates for emergency

| | | Diameter 59 mm | | | Diameter 78 mm | | |
|--------------|--------------------|--------------------|------------------|----------|--------------------|------------------|---------------|
| | | Description | Cat. no. | Ref. no. | Description | Cat. no. | Ref. no. |
| Without text | yellow background | | 080XTGR | 179514 | black background | 080XTG8 | 179515 |
| | With text | yellow background | | | black background | | |
| | EMERGENZA | EMERGENZA | 080XTGR01 | 179525 | EMERGENZA | 080XTG801 | 179535 |
| | EMERGENCY STOP | EMERGENCY STOP | 080XTGR02 | 179526 | EMERGENCY STOP | 080XTG802 | 179536 |
| | ARRET D'URGENCE | ARRET D'URGENCE | 080XTGR03 | 179510 | ARRET D'URGENCE | 080XTG803 | 179511 |
| | NOT - AUS | NOT - AUS | 080XTGR04 | 179527 | NOT - AUS | 080XTG804 | 179537 |
| | NOODSTOP | NOODSTOP | 080XTGR05 | 179528 | NOODSTOP | 080XTG805 | 179538 |
| | PARO EMERGENCIA | PARO EMERGENCIA | 080XTGR06 | 179529 | PARO EMERGENCIA | 080XTG806 | 179539 |
| | NOTSTOP | NOTSTOP | 080XTGR07 | 179530 | EMERGENZA GENERALE | 080XTG807 | 179540 |
| | PARAGEM EMERGENCIA | PARAGEM EMERGENCIA | 080XTGR08 | 179531 | PARAGEM EMERGENCIA | 080XTG808 | 179541 |



Neutral plate

| | | Description | Cat. no. | Ref. no. | | |
|----------------|---|---|----------|----------|--|--|
| Snap-on system |  | For identification of contact blocks and power supplies | P9ACPIU | 188016 | | |
| | | | | | | |

(1) Other languages on request. The catalogue numbers in **bold** are available from stock.

Push-button stations

A

B

C

D

E

F

G

H

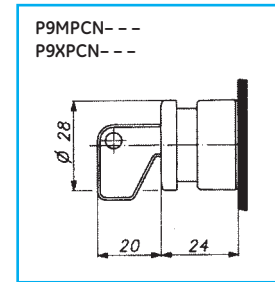
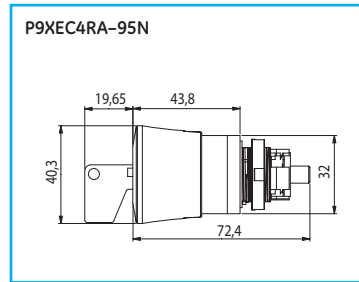
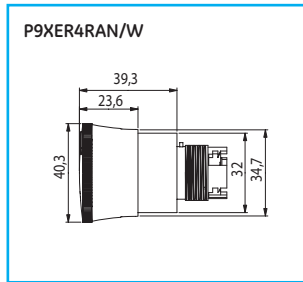
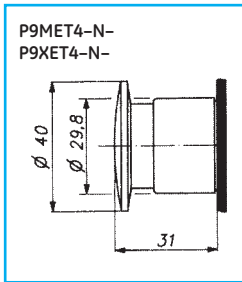
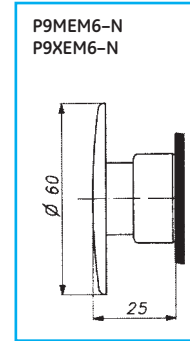
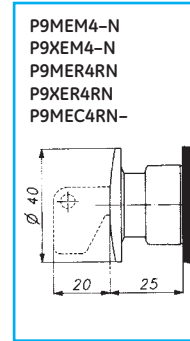
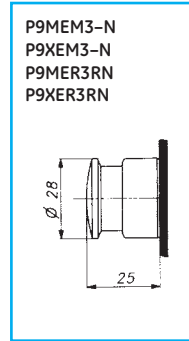
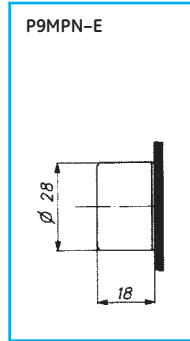
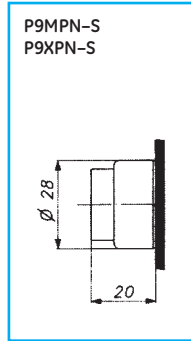
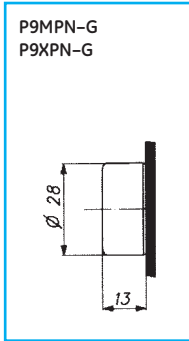
I

X

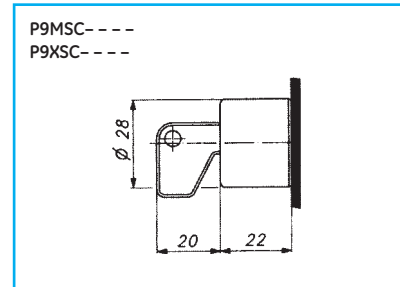
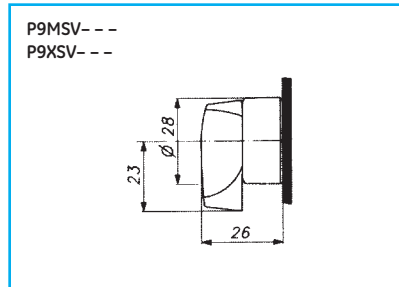
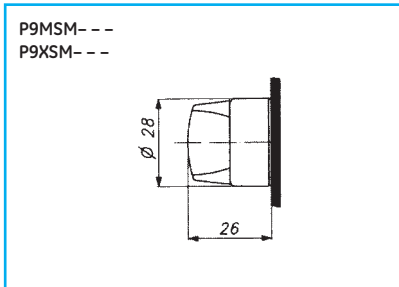


Dimensional drawings

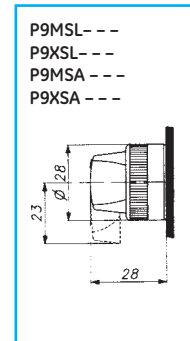
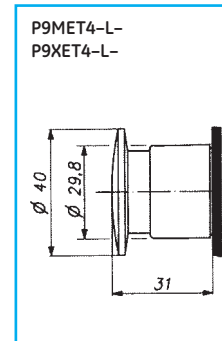
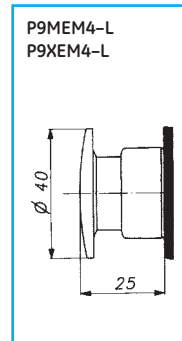
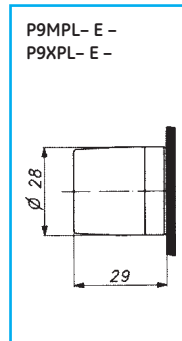
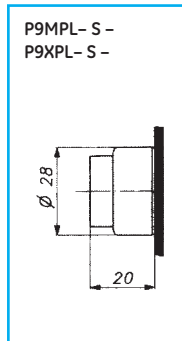
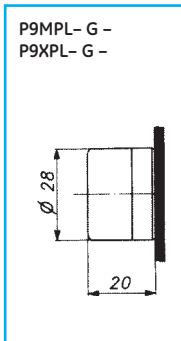
Round operators - Push-buttons



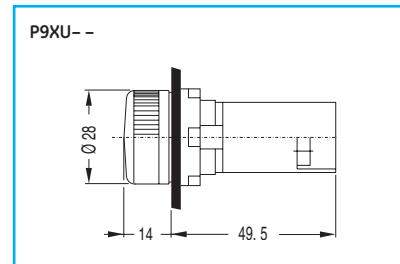
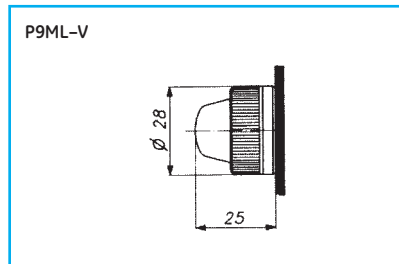
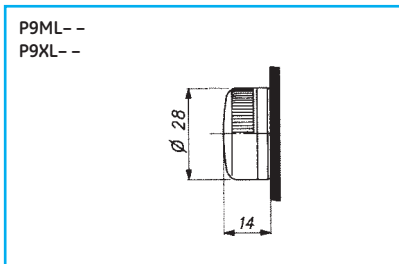
Round operators - Selector switches



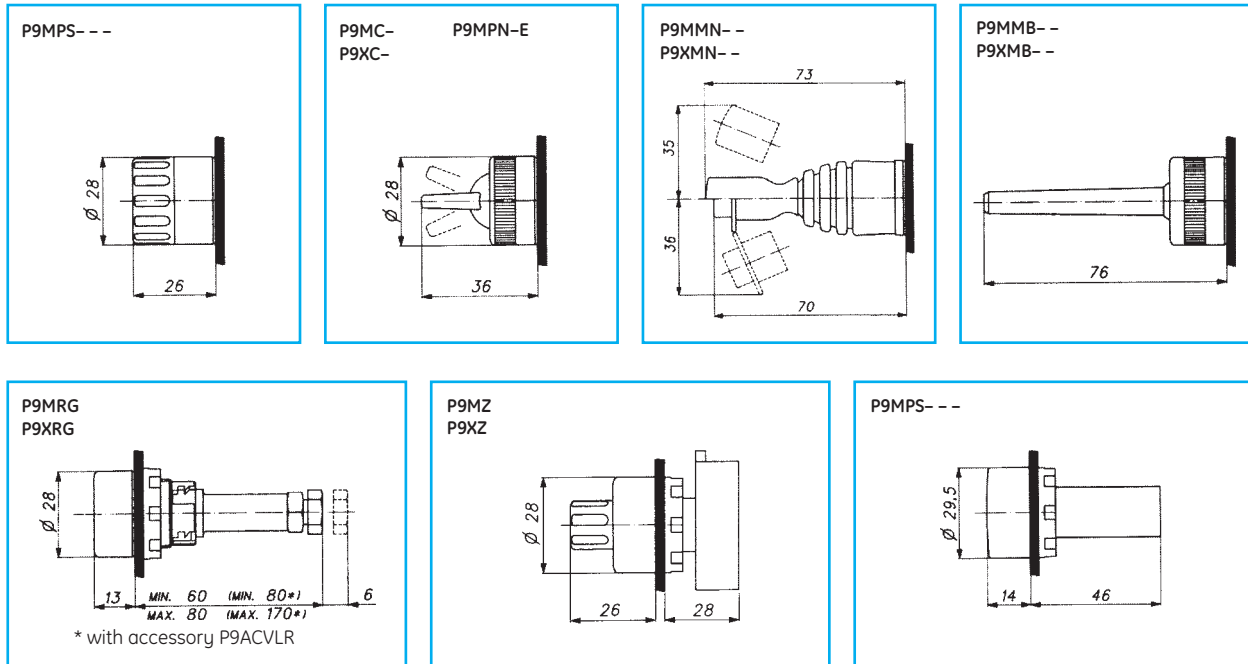
Round operators - Illuminated push-buttons and selector switches



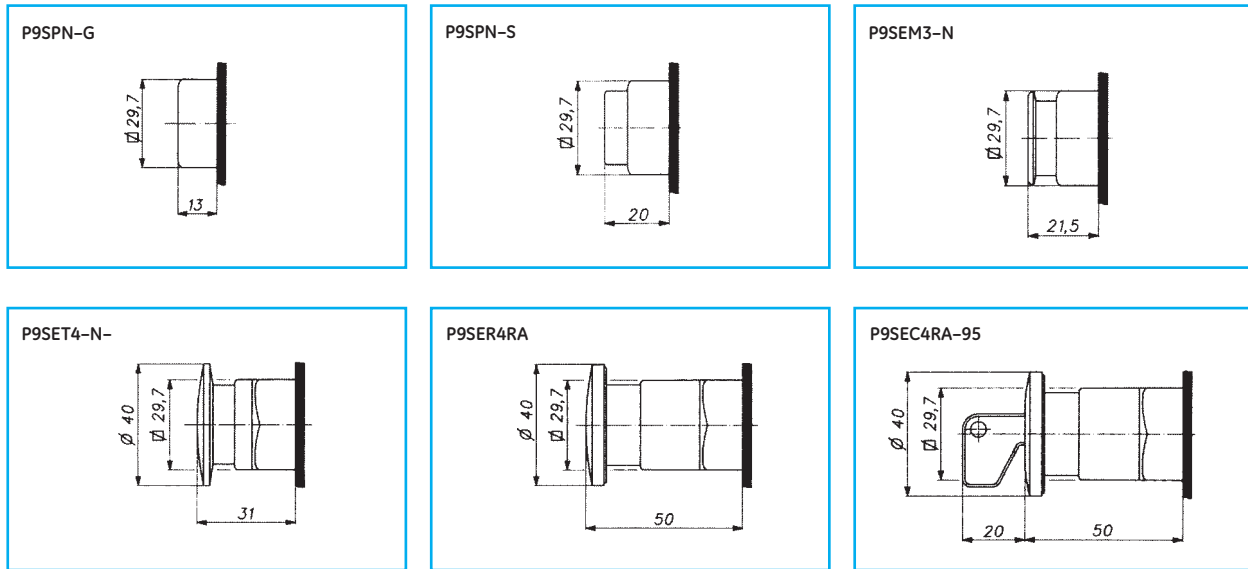
Round operators - Pilot lights



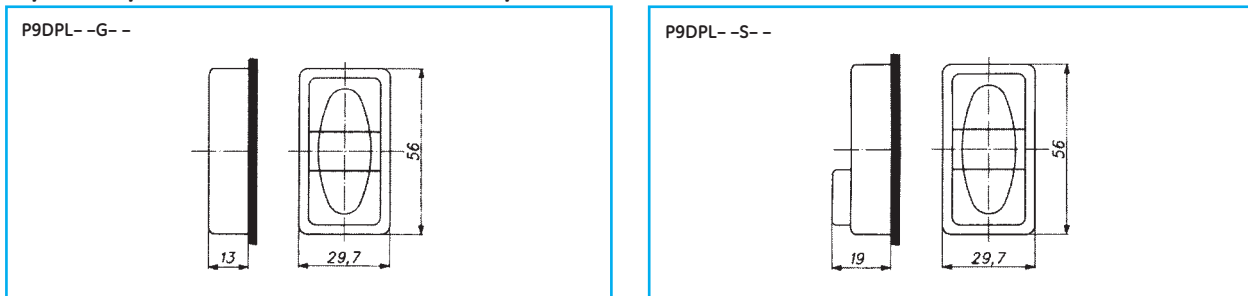
Round operators - Other devices



Square operators - Push-buttons

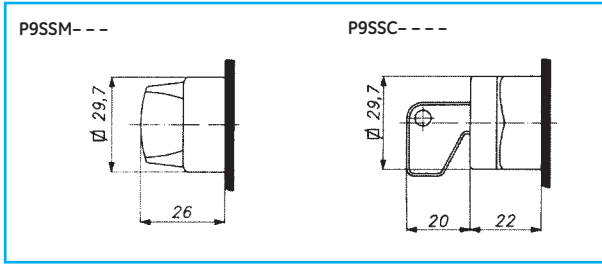


Square operators - Double function push-buttons

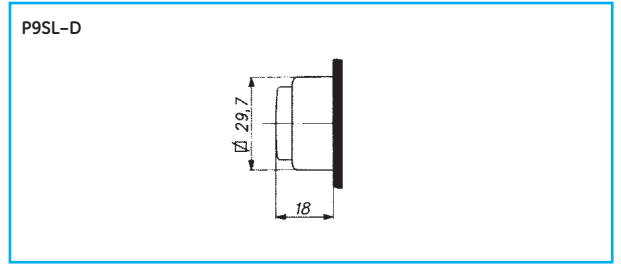


Dimensional drawings

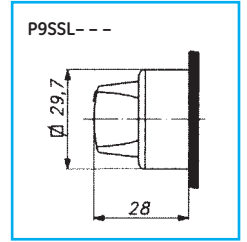
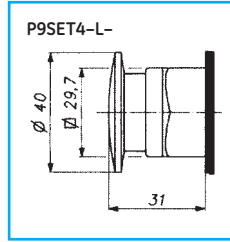
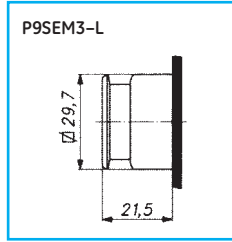
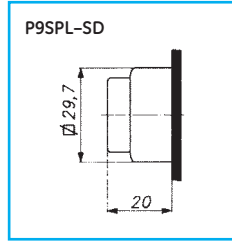
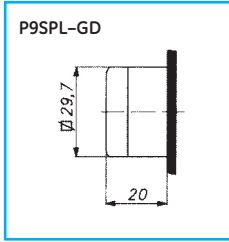
Square operators - Selector switches



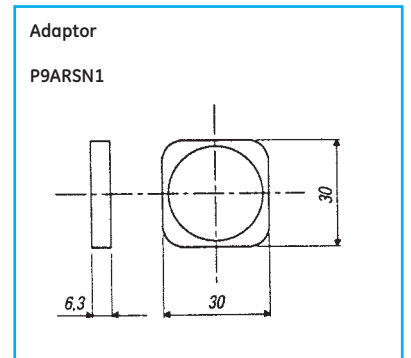
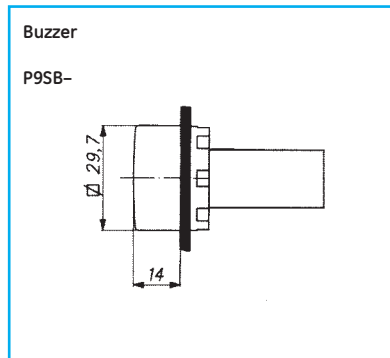
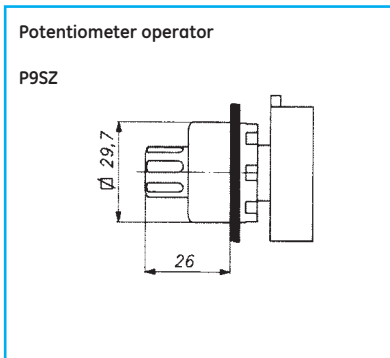
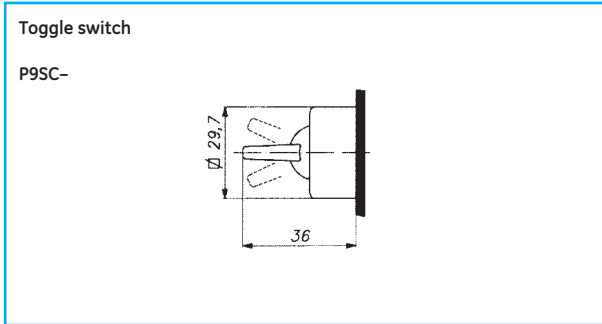
Square operators - Pilot lights



Square operators - Illuminated push-buttons and selector switches

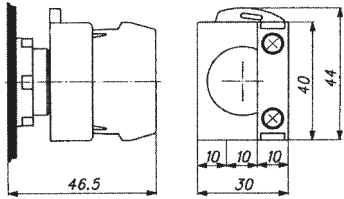


Square operators - Other devices

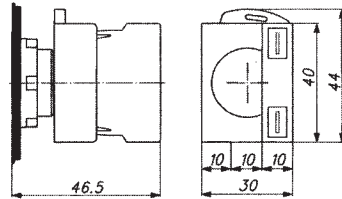


Contact blocks

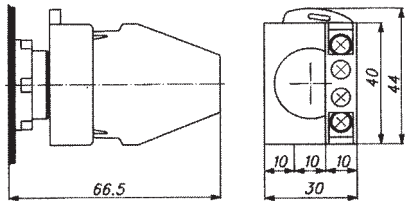
P9B01V- / P9B10V-



P9B01FN / P9B10FN

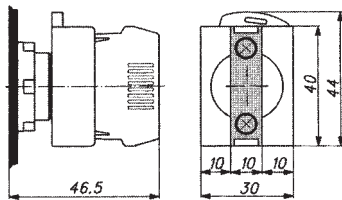


P9B011VN / P9B02VN / P9B20VN

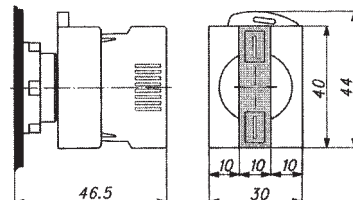


Power supplies

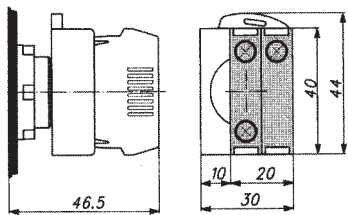
P9PDNV0 / P9PRLV- / P9PRDV-



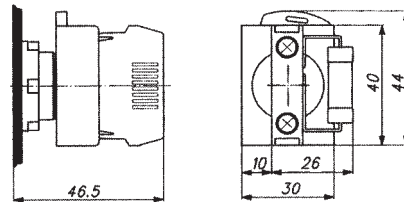
P9PDNF0



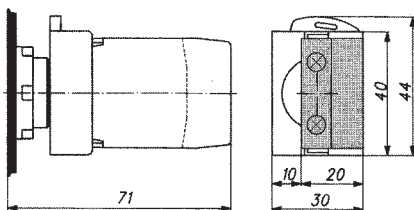
P9PRNV- / P9PDTV0 / P9PRTV-



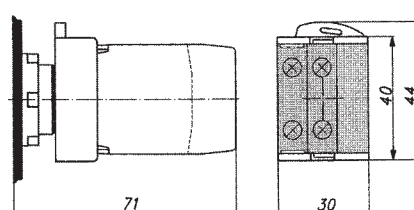
P9PREV-



P9PTNV-

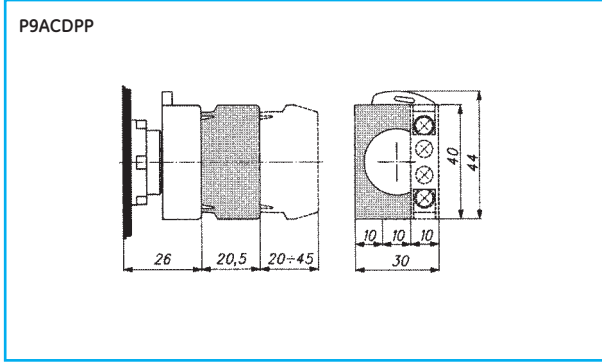


P9PDMV- / P9PTMV-

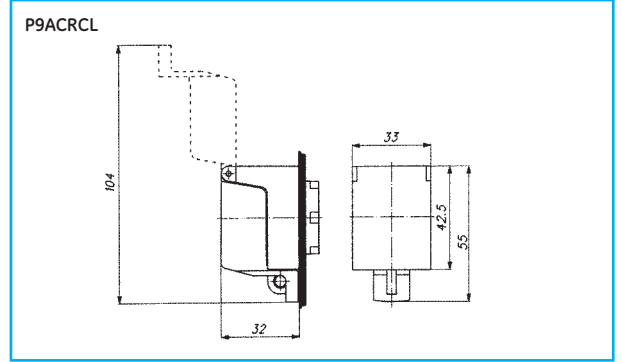


Dimensional drawings

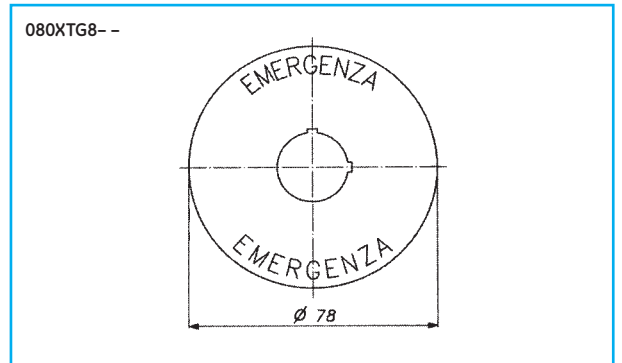
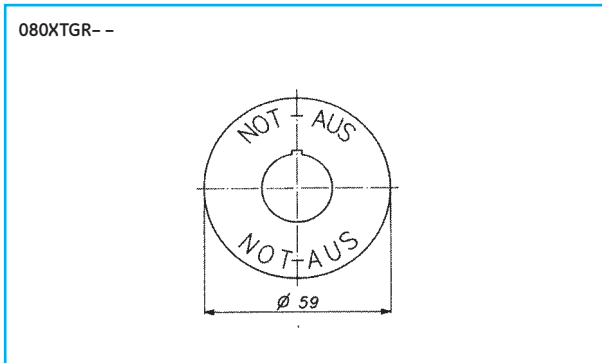
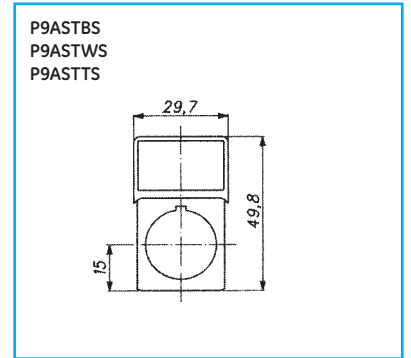
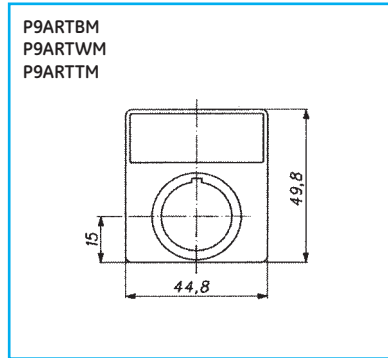
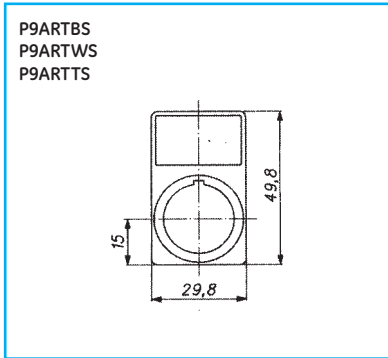
Push-on / push-off devices



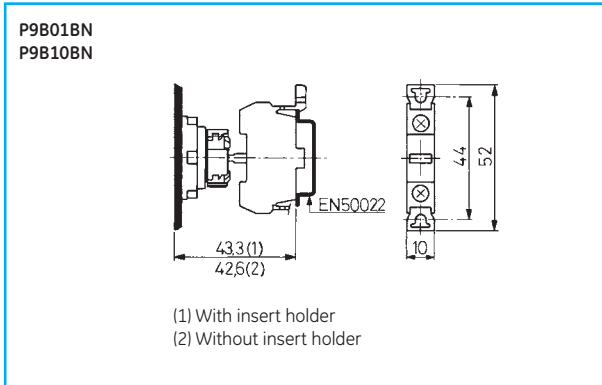
Protection cover



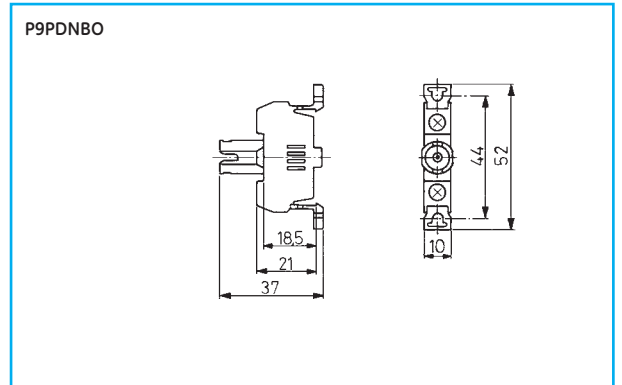
Insert holders and plates



Contact blocks



Power supplies



Overall dimensions

Enclosures for push-button stations in thermoplastic

| Holes | A | B | C | E1 | E2 | H |
|-------|-----|-----|------|-------------------|------|-----|
| 1 | 72 | 46 | 16.5 | 23 ⁽¹⁾ | 15.5 | 57 |
| 2 | 110 | 78 | 16.5 | 23 ⁽¹⁾ | 21.5 | 95 |
| 3 | 140 | 108 | 16.5 | 23 ⁽¹⁾ | 21.5 | 125 |
| 4 | 175 | 143 | 16.5 | 23 ⁽¹⁾ | 21.5 | 160 |
| 6 | 235 | 200 | 19.5 | 29 ⁽²⁾ | 23 | 220 |

(1) Suitable for cable gland, with locknut, PG16 or 1/2" NPT
 (2) Suitable for cable gland, with locknut, PG21 or 3/4" NPT
 (3) Flush push-button: 13
 Pilot light: 14
 Emergency push-button: 50
 Key selector switch: 22
 For customized versions see operator dimensions.

Enclosures for push-button stations in aluminium

| Type | Holes \varnothing 22 | | Dimensions | | | | | | Fixing templates | |
|------|------------------------|-----------|------------|--------|--------|--------|--------|-------|-----------------------------|-----------------------|
| | vertic. | horizont. | A (mm) | B (mm) | C (mm) | D (mm) | E (mm) | F | HxLx \varnothing max (mm) | position of the holes |
| 1 | 1 | - | 87 | 87 | 75 | 72 | 21.5 | PG 21 | 74x55x4 | 1-3 |
| 1M | 1 | - | 87 | 87 | 100 | 97 | 21.5 | PG 21 | 68x55x4 | 1-3 |
| 2 | 2 | - | 145 | 87 | 75 | 72 | 21.5 | PG 21 | 132x55x4 | 1-3 |
| 2M | 2 | - | 145 | 87 | 100 | 97 | 21.5 | PG 21 | 126x55x4 | 1-3 |
| 3 | 3 | - | 195 | 87 | 100 | 97 | 21.5 | PG 21 | 176x55x4 | 1-3 |
| 4 | 2 | 2 | 145 | 87 | 75 | 72 | 21.5 | PG 21 | 132x55x4 | 1-3 |
| 4M | 2 | 2 | 145 | 87 | 100 | 97 | 21.5 | PG 21 | 126x55x4 | 1-3 |
| 6 | 3 | 2 | 195 | 87 | 100 | 97 | 21.5 | PG 21 | 176x55x4 | 1-3 |
| 8 | 2 | 4 | 152 | 152 | 101.5 | 98.5 | 27 | PG 29 | 136x119x6 | 1-3 |
| 12 | 3 | 4 | 205 | 230 | 101.5 | 98.5 | 27 | PG 29 | 172x214x6 | 1-2-3-4 |
| 18 | 3 | 6 | 257 | 300 | 101.5 | 98.5 | 35 | PG 36 | 221x282x6 | 1-2-3-4 |
| 24 | 4 | 6 | 257 | 300 | 101.5 | 98.5 | 35 | PG 36 | 221x282x6 | 1-2-3-4 |
| 35 | 5 | 7 | 350 | 350 | 123 | 106.5 | 41 | PG 36 | 180x180x10 | 1-2-3-4 |

A

B

C

D

E

F

G

H

I

X

Technical data

Compliance with standards

IEC 947.5.1 - VDE 0660 - NFC 63140
 CEI EN 60947.5.1 - UTE - BSI - NEMA
 CENELEC EN 50007

Approvals

UL (U.S.A.) - CSA (Canada) - RINA - CE

Climatic protections

The standard versions are suitable for use in the following climates:

| | |
|----------------------|------------------------|
| Temperate climate | cat. 23/50 (DIN 50014) |
| Wet climate | cat. 23/83 (DIN 50015) |
| Hot wet climate | cat. 40/92 (DIN 50015) |
| Variable wet climate | FW24 (DIN 50016) |

Temperature ranges

| | |
|-----------|-------------------|
| Operation | -25 °C to + 70 °C |
| Storage | -40 °C to + 70 °C |

Protection degree of the operators

IP65 according to IEC 529 when they are mounted into enclosures with the same or a higher degree of protection.
 IP66 with appropriate protective caps.

Protection degree of the terminals

IP2x according to IEC 529.
 Fully integrated on signalling units, illuminated push-buttons and illuminated selector switches. With accessory on contact blocks for control units.

Rated insulation voltage

690V according to EN 60947.1

Impulse withstand voltage

4 kV according to EN 60947.1

Insulation class

Group C according to VDE 0110

Electric shocks protection

Class I according to IEC 536

Short-circuit protection

With fuses type gI of 10A according to IEC 947.5.1

Connection terminals

Connection terminals
 Screw type with retractable clamp.
 Clamping capacity of rigid and/or flexible conductors:
 - minimum 22 AWG (0.32 mm²)
 - maximum 12 AWG (3.3 mm²)

Performances of the contacts

- Slow acting
- Self-cleaning
- NC forced breaking
- Double break

Electrical performances

Rated thermal current I_{th} = 10 A

Performances according IEC 947.5.1

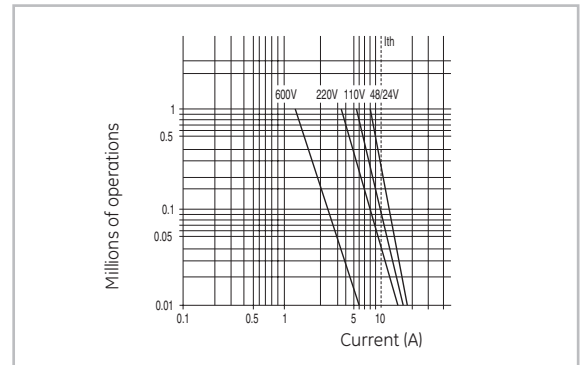
| Categorie AC 15 (A600) | | | | | | | | | |
|---|--------------------|-----|-----|----|------|------|-----|------|-----|
| Voltage | U _e (V) | 24 | 48 | 60 | 110 | 220 | 380 | 500 | 600 |
| Current | I _e (A) | 10 | 10 | 10 | 6 | 3 | 2 | 1.5 | 1.2 |
| Categorie DC 13 (P600) | | | | | | | | | |
| Voltage | U _e (V) | 24 | 48 | 60 | 110 | 220 | 300 | 500 | 600 |
| Current | I _e (A) | 5 | 2.7 | 2 | 1.1 | 0.55 | 0.3 | 0.22 | 0.2 |
| Categorie DC 13 (Q300) for illuminated push-buttons and illuminated selector switch | | | | | | | | | |
| Voltage | U _e (V) | 24 | 48 | 60 | 110 | 220 | 300 | | |
| Current | I _e (A) | 2.5 | 1.1 | 1 | 0.55 | 0.27 | 0.2 | | |

Performances according to CSA and UL

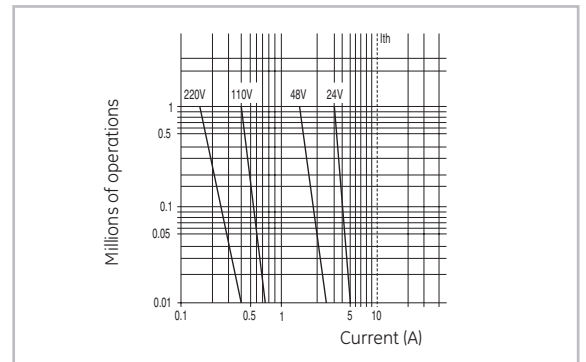
| | |
|-------------------------|--|
| AC Heavy Duty (A600) | |
| DC Standard Duty (Q300) | for illuminated push-buttons and illuminated selector switch |

Electrical endurance

Alternative current 50/60 Hz cat. AC 15



Direct current cat. DC 13



Mechanical endurance

| | |
|-------------------------------|---------------------------|
| Joysticks | 0.5 x 10 ⁶ op. |
| Key push-buttons | |
| Locking emergency | 1 x 10 ⁶ op. |
| Knob selector switches | |
| Lever selector switches | |
| Key selector switches | |
| Illuminated selector switches | |
| Selector push-buttons | |
| Timed push-buttons | |
| Illuminated push-buttons | 3 x 10 ⁶ op. |
| Momentary std push-buttons | |
| Momentary mush. push-buttons | |

Number of contact blocks

| | |
|---------------------------------|---|
| Momentary standard push-buttons | 4 double pole |
| Momentary mush. push-buttons | (8 single pole) |
| Key push-buttons | 4 double pole |
| Locking emergency | (4 single pole) |
| Selector switches | 6 double pole |
| (4 pos. types excl) | (6 single pole) |
| 4 pos. selector switches | 2 double pole |
| Selector push-buttons | 6 double pole |
| | (6 single pole) |
| Joysticks 2 and | 4 double pole |
| 4 positions | (4 single pole) |
| Illuminated push-buttons | For different contacts |
| Illuminated selector switches | configuration, contact our sales office |

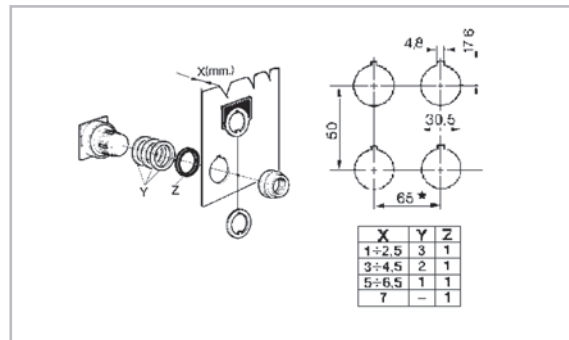
Fitting of units

The units of Series 077 are designed for fitting onto panels with a thickness between 1 and 7 mm., with holes of 30.5 mm. diameter, according to rules established by EN 60947.5.1.

A special metal ring supplied with each unit or one of the name plates included among the fittings, enables the unit to be exactly positioned.

All equipment is supplied with a set of spacing rings to adjust variations in the thickness of the panel thus ensuring a uniform front protrusion.

For a correct fitting, it needs to observe the diagram below and tables indications.



A

B

C

D

E

F

G

H

I

X

A

B

C

D

E

F






G

H

I

X

Push-buttons






| Standard/Momentary | Description | Contacts | Cat. no. | Ref. no. |
|---|---|-------------------------|-----------------|---------------|
|  | | NC+NO | 077P11 | 180019 |
| | | NC | 077P01 | 180039 |
| | | NO | 077P10 | 180029 |
| Standard/Time delayed ⁽¹⁾ | Contacts delayed at the release of the push button. Accuracy ± 5% Setting range: 0,1 - 30 sec. 10 - 180 sec. | NC+NO | 077P11T30 | 180120 |
|  | | NC+NO | 077P11T180 | 180121 |
| To complete by | Fixing kits With 4 coloured caps: black, red, green, yellow | Ring type with guard | 077GGBCN | 180020 |
|  | | without guard | 077GSBCN | 180010 |
| | With 4 coloured caps: brown, orange, blue, white | Ring type with guard | 077GGBCS | 180050 |
| | | without guard | 077GSBCS | 180040 |
|  | With 1 clear and 4 marking etched on both sides | Ring type with guard | 077GGBCF | 180137 |
| |  | without guard | 077GSBCF | 180136 |

(1) Not approved by RINA and Lloyd's Register

The catalogue numbers in **bold** are available from stock.

For reference numbers, see chapter X, pg. X.10

Push-buttons

| Mushroom head/Momentary | | Description | Contacts | Cat. no. | Ref. no. |
|--|--|--|--------------------------------------|-----------------|---------------|
|  | | | NC+NO | 077E11 | 180049 |
| | | | NC | 077E01 | 180069 |
| | | | NO | 077E10 | 180059 |
| Mushroom head/ Emergency with latch | | Push-twist to release | NC+NO | 077RE11 | 180079 |
|  | | | NC | 077RE01 | 180099 |
| | | | NO | 077RE10 | 180089 |
| | With keylock ⁽¹⁾ | | Key withdrawable in positions I & II | | |
|  |  <p>Locking (type G unlock)</p> | Lockable in position: normal & depressed | NC+NO | 077PC11C | 180100 |
| | | depressed without pre-setting ⁽²⁾ | NC+NO | 077PC11G | 180104 |
| | | | | | |
| To complete by | | Description | Diameter | Cat. no. | Ref. no. |
|  | Mushroom head caps | | | | |
| | For momentary push-button | Ø 35 mm | 077E● | see bottom | |
| | | Ø 60 mm | 077EE● | see bottom | |
| | For push-twist to release push-button | Red Ø 35 mm | 077RER | 180090 | |
| | | Red Ø 60 mm | 077ECR | 181602 | |
| For keylock push-button | Red Ø 60 mm | 077ECR | 181602 | | |

The catalogue numbers in **bold** are available from stock.

| Colours | black | red | yellow |
|---------|----------|----------|----------|
| ● | N | R | G |

- (1) Supplied with two standard keys 3095.
- (2) Combined with mushroom head 077ECR makes an emergency with latch push-key to release.

For reference numbers, see chapter X, pg. X.10



A

B

C

D

E

F

G

H

I

X

A

B

C

D

E

F







G

H









I

X

Selector switches with knob

| 2 positions | | | Function (1) | Contacts | Cat. no. | Ref. no. <i>see bottom</i> |
|---|--------------------|---|--------------|----------|-------------------|-------------------------------|
|  | Fixed |  | D | NC+NO | 077SDN11 | 180170 |
| | |  | H | NC+NO | 077SHN11 | 180180 |
| 3 positions | | | | | | |
|  | Fixed |  | B | NC+NO | 077SBN11 | 180230 |
| | | | U | 2NC+2NO | 077SUN22 | 180440 |
| | | | Z | 2NC+2NO | 077SZN22 | 180480 |
| | With spring return |  | B | NC+NO | 077SBN11SC | 180240 |
| | | | B | NC+NO | 077SBN11DC | 180250 |
| | | | B | NC+NO | 077SBN11RC | 180260 |
| 2NC + 2NO | 077SN22RC | 180510 | | | | |

Selector switches with lever



| 2 positions | | | Function (1) | Contacts | Cat. no. | Ref. no. |
|---|--------------------|---|--------------|----------|---|----------|
|  | Fixed |  | D | NC+NO | 077SLD11 | 180601 |
| | | | Metal | | | |
| 3 positions | | | | | | |
|  | Fixed |  | B | NC+NO | 077SLB11 | 180607 |
| | | | Z | 2NC+2NO | 077SLZ22 | 180623 |
| | With spring return |  | Z | 2NC+2NO | 077SLZ22DC | 180625 |
| | | | Z | 2NC+2NO | 077SLZ22RC | 180626 |
| | | | | |  | |
| 4 positions | | | | | | |
|  | Fixed |  | X | 2NC+2NO | 077SLX22 | 180606 |

The catalogue numbers in **bold** are available from stock.

(1) Electrical diagrams, see E.55



Selector switches with key ⁽¹⁾

| 2 positions | | Function (2) | Contacts | Key removal | Cat. no. | Ref. no. |
|---|--------------------|--------------|-------------------------|-----------------|---|----------------------------|
|  | Fixed | I II | NC+NO NC+NO NC+NO | I II I-II | 077SCD1101 077SCD1105 077SCD1109 | 180630 180631 180632 |
| | With spring return | 0 I | NC+NO | 0 | 077SCI11DC03 | 180640 |
| | | I 0 | NC+NO | 0 | 077SCH11SC03 | 180636 |
| 3 positions | | | | | | |
|  | Fixed | 0 I II | NC+NO | I-0-II | 077SCB1120 | 180843 |
| | With spring return | 0 I II | B | NC+NO | I-0 | 077SCB11DC07 |
| Z | | | 2NC+2NO | I | 077SCZ22DC01 | 180906 |
| I 0 II | | B | NC+NO | 0 | 077SCB11RC03 | 180853 |

The catalogue numbers in **bold** are available from stock.

- (1) Supplied with two standard keys 3095.
- (2) Electrical diagrams, see E.55

A

B

C

D

E

F

G

H









I

X

For reference numbers, see chapter X, pg. X.10



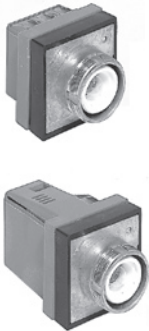


Joysticks

| 2 positions + central zero position | | Function ⁽¹⁾ | Contacts | Cat. no. | | Ref. no. | | |
|--|----------------------------------|-------------------------|----------|---------------------|----------------|----------------------|--------|--|
| | | | | Without interlock | With interlock | | | |
|   | Fixed position | N | 2NC+2NO | 077MTS2422 | 180910 | 077MTS2422B | 181000 | |
| | | R | 2NC+2NO | 077MTS2422R | 180912 | 077MTS2422RB | 181002 | |
| | Transient position | N | 2NC+2NO | 077MT24S22 | 180911 | 077MT24S22B | 181001 | |
| | | R | 2NC+2NO | 077MT24S22R | 180913 | 077MT24S22RB | 181003 | |
| 4 positions + central zero position | | | | | | | | |
|   | Fixed positions | N | 2NC+2NO | 077MTS123422 | 180914 | 077MTS123422B | 181004 | |
| | Transient positions | | 2NC+2NO | 077MT1234S22 | 180915 | 077MT1234S22B | 181005 | |
| | | | | | | | | |
| | | | | | | | | |
| 2+2 positions + central zero position | | | | | | | | |
|   | Fixed positions | X | 4NC+4NO | 077M2S2SX44 | 180918 | 077M2S2SX44B | 181008 | |
| | Transient positions | | 4NC+4NO | 077M2T2TX44 | 180919 | 077M2T2TX44B | 181009 | |
| | 4,8 transient -3,7 fixed | | 4NC+4NO | 077M2S2TX44 | 180921 | | | |
| | Transient positions | Y | 4NC+4NO | 077M2T2TY44 | 180923 | | | |
| | | | | | | | | |
| 4+4 positions + central zero position | | | | | | | | |
|   | Transient positions | X | 8NC+8NO | 077M4T4TX88 | 180927 | | | |
| | 2,4,6,8 transient -1,3,5,7 fixed | | 8NC+8NO | 077M4S4TX88 | 180929 | 077M4S4TX88B | 181019 | |
| | Transient positions | Y | 8NC+8NO | 077M4T4TY88 | 180931 | 077M4T4TY88B | 181021 | |
| | | | | | | | | |
| | | | | | | | | |

The catalogue numbers in bold are available from stock.

(1) Electrical diagrams, see E.55

Illuminated push-buttons

| Momentary | Description | Contacts | Cat. no. | Ref. no. |
|--|---|----------------------|---|----------------------------|
|  | Full voltage ~ / $\overline{\overline{\overline{\quad}}}$ BA9s max 380V - 2 W not included | NC+NO NO+NO NO | 077PLM11D0 077PLM20D0 077PLM10D0 | 181040 181041 181043 |
| | With transformer 50/60Hz BA9s6V-1.5W included | NC+NO | 077PLM11T♦ | |
| To complete by: | | | | |
| Lenses | | | | |
|  | Standard | | 077GPL● | see bottom |
| | Mushroom head Ø 35 mm (to use with the fixing ring 077GG03) | | 077GELR | 180971 |
| Locking rings | | | | |
|  | Without guard | | 077GG03 | 180980 |
| | With metal guard | | 077GGM | 180981 |
| | With transparent guard | | 077GGT | 180982 |

The catalogue numbers in **bold** are available from stock.

| Suffix | 110-120V | 220-250V |
|--------|----------|----------|
| ♦ | J | N |

| Colours | red | green | yellow | orange | blue | white | clear |
|-----------------|----------|----------|----------|----------|-----------|----------|----------|
| Standard lenses | R | V | G | A | BL | B | I |











Control and signalling units Ø 30 mm

- A
- B
- C
- D
- E
- F
- G
- H
- I
- X

For reference numbers, see chapter X, pg. X.10



Illuminated selector switches

| 2 positions | | Function (1) | Contacts | Cat. no. | Ref. no. |
|---|---|--------------|----------------|------------------------------|------------------|
|  | Fixed  Full voltage ~ /  BA9s max. 380V-2W not included | D | NC+NO | 077ISD11D0 | 181060 |
| 3 positions | | Function (1) | Contacts | Cat. no. | Ref. no. |
|  | Fixed  Full voltage ~ /  BA9s max. 380V-2W not included | B | NC+NO | 077ISB11D0 | 181170 |
|  | With spring return  Full voltage ~ /  BA9s max. 380V-2W not included | B Z | NC+NO NC+NO | 077ISB11D0RC 077ISZ11D0RC | 181174 181176 |
| To complete by: | | | | | |
|  | Lenses | | | | |
| | Knob | | | 077MIS● | see bottom |

(1) Electrical diagrams, see E.55

The catalogue numbers **in bold** are available from stock.







| Suffix | 110-120V | 220-250V |
|--------|----------|----------|
| ◆ | J | N |

| Colours | red | green | yellow |
|---------|----------|----------|----------|
| ● | R | V | G |

For reference numbers, see chapter X, pg. X.10



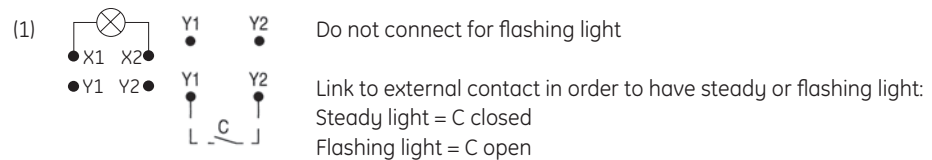
Pilot lights

| | Description | Cat. no. | Ref. no. |
|---|---|------------------------------------|------------------|
|  | Full voltage ~ / \equiv BA9s max. 380V-2W not included | 077LDNV0 | 181300 |
|  | With resistor ~ / \equiv 110-120V, BA9s60V-1.2W included 220-240V, BA9s130V-2W included | 077LRNVJ 077LRNVN | 181301 181302 |
|  | With transformer 50/60Hz BA9s6v-1.5w included | 077LTNV♦ | |
| | Multifunction (1) full voltage 24V ~ / \equiv BA9s24V-2W included | 077LDMVD | 181305 |
| | Multifunction (1) with transformer 50/60 Hz BA9s6V-0.6W included | 077LTMV♦ | |
| To complete by: | | | |
| | Lenses | | |
|  | plastic version | 077GL● | see bottom |
|  | Full voltage ~ / \equiv For bulb E14 base max 660V(1)-6W not included | 077DLE14 | 181260 |
| To complete by: | | | |
| | Lenses | | |
|  | For pilot lights 077DLE14 plastic version | 099GW1● | see bottom |

The catalogue numbers **in bold** are available from stock.

| Suffix | 110-120V | 220-250V |
|--------|----------|----------|
| ♦ | J | N |

| Colours | red | green | yellow | orange | blue | white | clear |
|---------|----------|----------|----------|----------|-----------|----------|----------|
| ● | R | V | G | A | BL | B | I |



For reference numbers, see chapter X, pg. X.10



A

B

C

D

E

F










G

H

I

X

Accessories

| | Description | Cat. no. | Ref. no. | | | |
|---|--|--|------------------------|----------------|-----------------|------------|
|  | Push-on/push-off device For momentary standard push-buttons Converts momentary push-button to push-on/push-off. This device can only be used with 077-01 (NC) and/or 077-10A (NO early make) contact blocks. | 077DPP | 181550 | | | |
|  | Push-pull to release device For momentary mushroom push-buttons Converts momentary mushroom push-button to push to latch/pull to release. | 077DAE | 181554 | | | |
|  | Handles Knob for selector switches | 077M● | see bottom | | | |
|  | Protection Guard-ring for mushroom head push-button dia 35 mm. | 077GE35 | 181620 | | | |
|  | Plug For unused mounting hole. | 077TPF | 181601 | | | |
|  | Potentiometer operator Suitable for potentiometers with shaft 50 mm long and 6 mm diameter. Potentiometer not included. | 077OPZ | 181570 | | | |
|  | Rubber protective caps For standard push-buttons - coloured - clear | 077CP● | see bottom | | | |
| | | 077CPT | 181588 | | | |
| | For illuminated standard push-buttons - clear | 077CPLT | 181600 | | | |
| | | For knob selector switches - black colour with clear knob | 077CST | 181603 | | |
|  | Spare keys Standard version | Code | | | | |
| | | 3095 | 077C3095 173095 | | | |
|  | Bulbs BA9s | Filament type | | | | |
| | | Vn | Wn | | | |
| | | 6 | 0.6 | BA9S606 | 187850 | |
| | | 6 | 1.5 | BA9S615 | 187851 | |
| | | 12 | 2 | BA9S122 | 187852 | |
| | | 24 | 2 | BA9S242 | 187853 | |
| | | 30 | 2.1 | BA9S30 | 187854 | |
| | | 48 | 2 | BA9S48 | 187855 | |
| | | 60 | 1.2 | BA9S6012 | 187856 | |
| | | 130 | 2 | BA9S130 | 187857 | |
| | | Neon type | 110 | 0.11 | BA9SN110 | 187860 |
| | | | 220 | 0.33 | BA9SN220 | 187861 |
| | | Mono LED | Vn AC/DC ± 10% | | | |
| | | | 6 | | BA9S6L● | see bottom |
| | | | 12 | | BA9S12L● | see bottom |
| | 24 | | BA9S24L● | see bottom | | |
| | 48 | | BA9S48L● | see bottom | | |
| | 110 | | BA9S110L● | see bottom | | |
| | (DC) 230 | | BA9S230L● | see bottom | | |





The catalogue numbers **in bold** are available from stock.

| Colours ● | black | red | green | yellow | blue | white |
|-----------------|----------|----------|----------|--------|------|-------|
| Knobs | N | R | V | G | BL | - |
| Protective caps | N | R | V | G | - | - |
| Mono LED | - | R | V | G | BL | B |

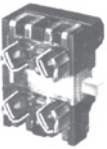
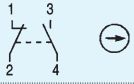





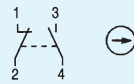


For reference numbers, see chapter X, pg. X.10



Nameplates

| | Description | Cat. no. | Ref. no. | |
|---|---|--------------------------|-----------|--------|
|  | For push-button and pilot lights | | | |
| | Without text (black background) | 077TNA | 181650 | |
| | With text in English (black background) | 077TNA40 | 181840 | |
|  | For 2 position selector switch and selector push-button | | | |
| | Without text (black background) | 077TNA2 | 181660 | |
| | With text (black background) | 077TNA230 | 181930 | |
|  | For 3 position selector switch and selector push-button | | | |
| | Without text (black background) | 077TNA3 | 181670 | |
| | With text (black background) | MANUAL CYCLE-O-AUTOMATIC | 077TNA301 | 181951 |
| | | OPEN - OFF - CLOSE | 077TNA312 | 181962 |
| UP - OFF - DOWN | | 077TNA313 | 181963 | |
|  | Diameter 62 mm for emergency push-buttons | | | |
| | Without text (yellow background) | 077TGR | 181720 | |
| | With text (yellow background): EMERGENCY STOP | 077TGRO2 | 181722 | |

Contact blocks

| 2 positions | Contacts | Cat. no. | Ref. no. | |
|---|---|--|---|----------------------------|
|  | Standard | | | |
| | For all the applications Illuminated push-buttons and illuminated selector switches excluded | | | |
| |  | NC+NO | 077-11 | 180001 |
| |  | NC | 077-01 | 180003 |
| |  | NO | 077-10 | 180002 |
| |  | NC late opening | 077-01R | 180008 |
| |  | NO early closing | 077-10A | 180007 |
| | Accessories for contact blocks 077-... IP2X protection | for use with NO for use with NC for use with NO+NC | 077PTB10 077PTB01 077PTB11 | 181608 181609 181615 |
| | For 2 + 2 and 4 + 4 positions joysticks Snap action | | 099SPDDB | 180009 |
| |  | For illuminated push-buttons and illuminated selector switches | | |
|  | | NC+NO | P9B11VN | 187000 |
|  | | NC | P9B01VN | 187001 |
|  | | NO | P9B10VN | 187002 |

The catalogue numbers in **bold** are available from stock.



A

B

C

D

E

F

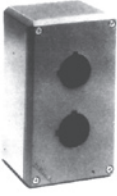

G

H

I

X

Enclosures for push-button stations in aluminium alloy (Grey RAL 7012)

| | | | Cat. no. | Ref. no. |
|---|--|-------------------|----------------|----------|
|  <p>Cover with holes with conduit entry</p> | No. of holes | Type | | |
| | 1 | 1 | 077SP1 | 180521 |
| | 1 | 1M | 077SP1M | 180522 |
| | 2 | 2 | 077SP2 | 180523 |
| | 2 | 2M | 077SP2M | 180524 |
| | 3 | 3 | 077SP3 | 180525 |
| | 4 | 4V | 077SP4V | 180526 |
| | 4 | 4 | 077SP4 | 180527 |
| | 6 | 6 | 077SP6 | 180528 |
| | 9 | 9 | 077SP9 | 180529 |
| | 12 | 12 | 077SP12 | 180530 |
| | 16 | 16 | 077SP16 | 180531 |
| | 20 | 20 | 077SP20 | 180532 |
| | 25 | 25 | 077SP25 | 180533 |
| | 30 | 30 | 077SP30 | 180534 |
| | 36 | 36 | 077SP36 | 180535 |
| | <p>Cover with holes without conduit entry</p> | No. of holes | Type | |
| 1 | | 1 | 077SP1SFE | 180536 |
| 1 | | 1M | 077SP1MSFE | 180537 |
| 2 | | 2 | 077SP2SFE | 180538 |
| 2 | | 2M | 077SP2MSFE | 180539 |
| 3 | | 3 | 077SP3SFE | 180540 |
| 4 | | 4V | 077SP4VSFE | 180541 |
| 4 | | 4 | 077SP4SFE | 180542 |
| 6 | | 6 | 077SP6SFE | 180543 |
| 9 | | 9 | 077SP9SFE | 180544 |
| 12 | | 12 | 077SP12SFE | 180545 |
| 16 | | 16 | 077SP16SFE | 180546 |
| 20 | | 20 | 077SP20SFE | 180547 |
| 25 | | 25 | 077SP25SFE | 180548 |
| 30 | | 30 | 077SP30SFE | 180549 |
| 36 | | 36 | 077SP36SFE | 180550 |
|  <p>Cover without holes with conduit entry</p> | | Type | | |
| | 1 | 080SP1SFC | 170835 | |
| | 1M | 080SP1MSFC | 170838 | |
| | 2 | 080SP2SFC | 170841 | |
| | 2M | 080SP2MSFC | 170844 | |
| | 3 | 080SP3SFC | 170847 | |
| | 4V | 077SP4VSFC | 180551 | |
| | 4 | 080SP8SFC | 170853 | |
| | 6 | 080SP12SFC | 170856 | |
| | 9 | 080SP12SFC | 170856 | |
| | 12 | 080SP18SFC | 170859 | |
| | 16 | 080SP18SFC | 170859 | |
| | 20 | 080SP35SFC | 170863 | |
| | 25 | 080SP35SFC | 170863 | |
| | 30 | 077SP36SFC | 180552 | |
| | 36 | 077SP36SFC | 180552 | |
| | <p>Cover without holes without conduit entry</p> | Type | | |
| 1 | | 080SP1SF | 170837 | |
| 1M | | 080SP1MSF | 170840 | |
| 2 | | 080SP2SF | 170843 | |
| 2M | | 080SP2MSF | 170846 | |
| 3 | | 080SP3SF | 170849 | |
| 4V | | 077SP4VSF | 180553 | |
| 4 | | 080SP8SF | 170855 | |
| 6 | | 080SP12SF | 170858 | |
| 9 | | 080SP12SF | 170858 | |
| 12 | | 080SP18SF | 170861 | |
| 16 | | 080SP18SF | 170861 | |
| 20 | | 080SP35SF | 170865 | |
| 25 | | 080SP35SF | 170865 | |
| 30 | | 077SP36SF | 180554 | |
| 36 | | 077SP36SF | 180554 | |
| Accessories Kit of two hinges for types from 12 to 36 holes. | | | 080KCSP | 170883 |

The catalogue numbers in **bold** are available from stock.

Diagrams

Selector switches

| | Function | Contacts | Diagram |
|--|--------------------------|----------|---------|
| | D 077 11... | | |
| | I 077 11... | | |
| | H 077 11... | | |
| | B 077 11... | | |
| | Z 077 11... 077 11... | | |

Illuminated selector switches

| Full voltage type | Function | Contacts | Diagram |
|-------------------|--------------------------|----------|---------|
| | D 077 10... 077 01... | | |
| | B 077 10... 077 01... | | |
| | Z 077 10... 077 01... | | |

Joysticks

| Positions | Function | Contacts | Diagram |
|-----------|--------------------------|----------|---------|
| | N 077 11... 077 11... | | |
| | R 077 11... 077 11... | | |
| | N 077 11... 077 11... | | |

Joysticks

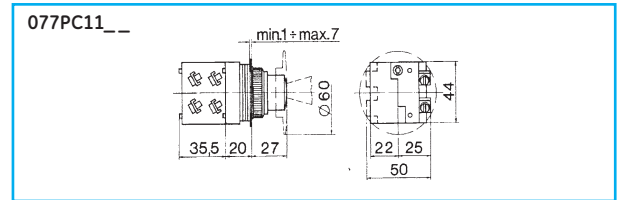
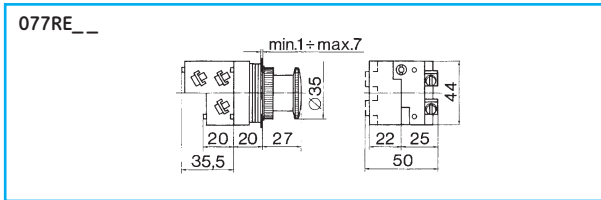
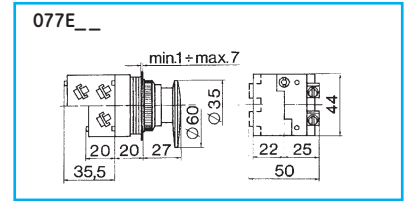
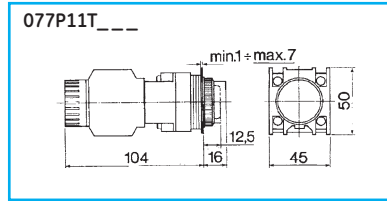
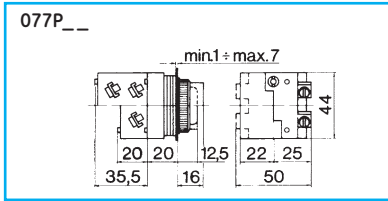
| Positions | Function | Contacts | Diagram |
|-----------|--|----------|---------|
| | X 077 11... 077 11... 077 11... 077 11... | | |
| | Y 077 11... 077 11... 077 11... 077 11... | | |
| | X 077 11... 077 11... 077 11... 077 11... 077 11... 077 11... 077 11... 077 11... | | |
| | Y 077 11... 077 11... 077 11... 077 11... 077 11... 077 11... 077 11... 077 11... | | |

■ = closed contact

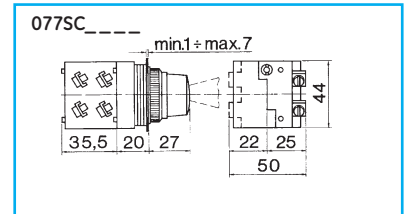
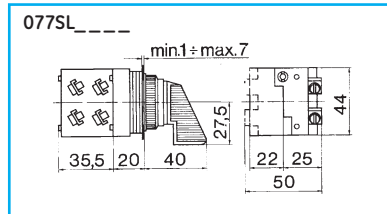
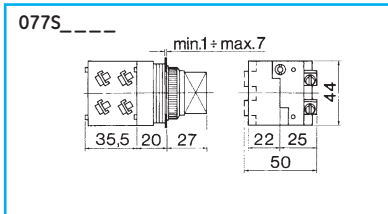


Dimensional drawings

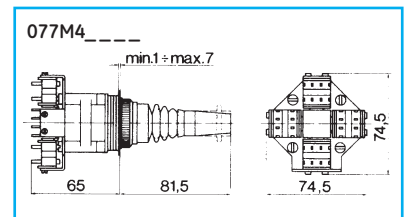
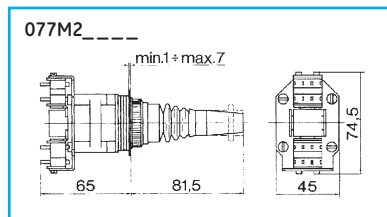
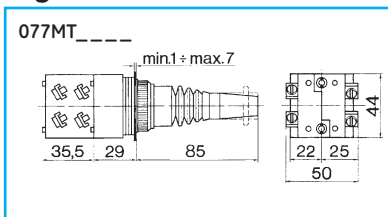
Push-buttons



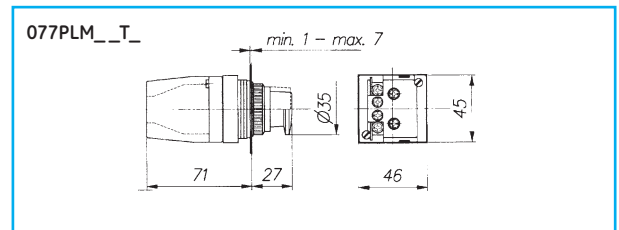
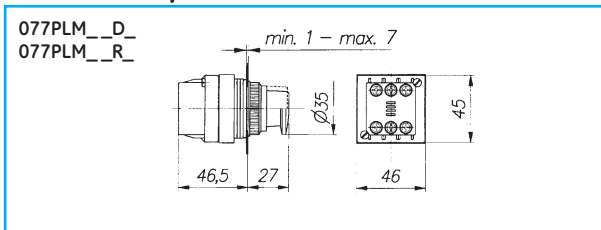
Selector switches



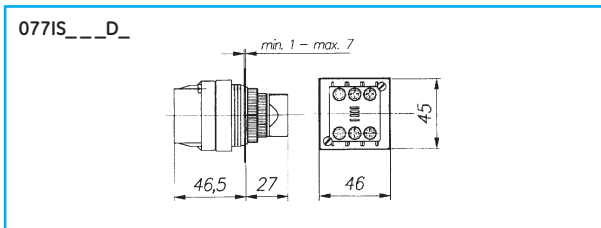
Joysticks



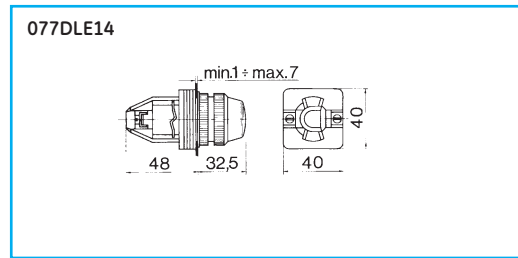
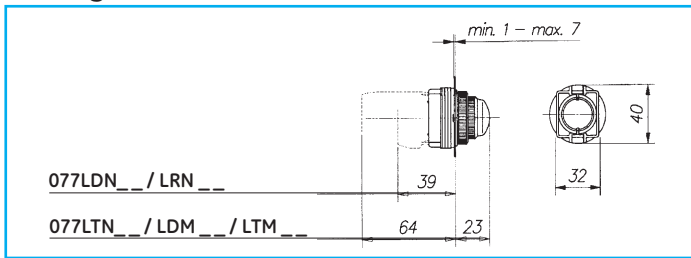
Illuminated push-buttons



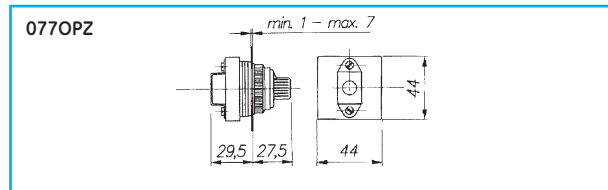
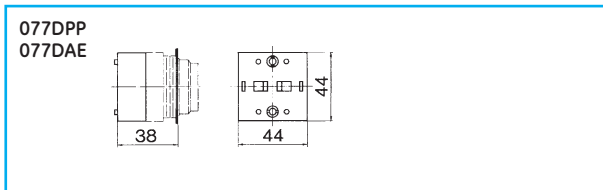
Illuminated selector switches



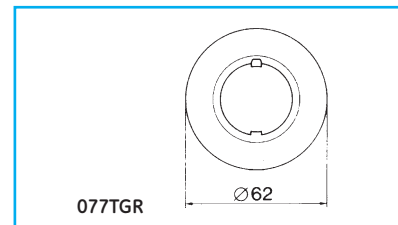
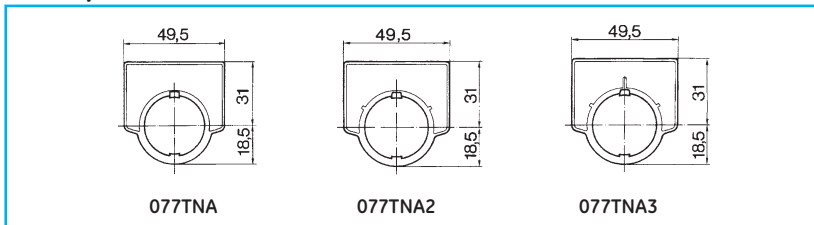
Pilot lights



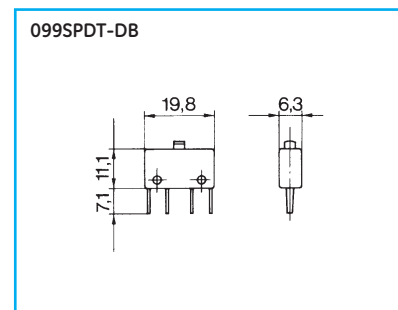
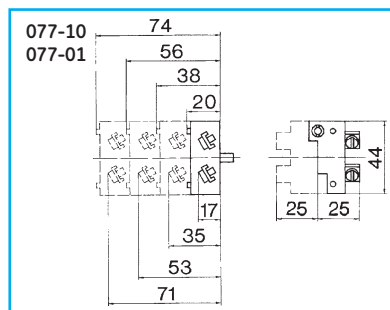
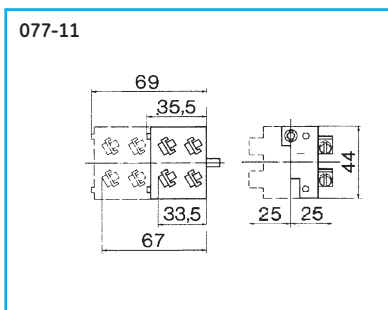
Kits



Nameplates



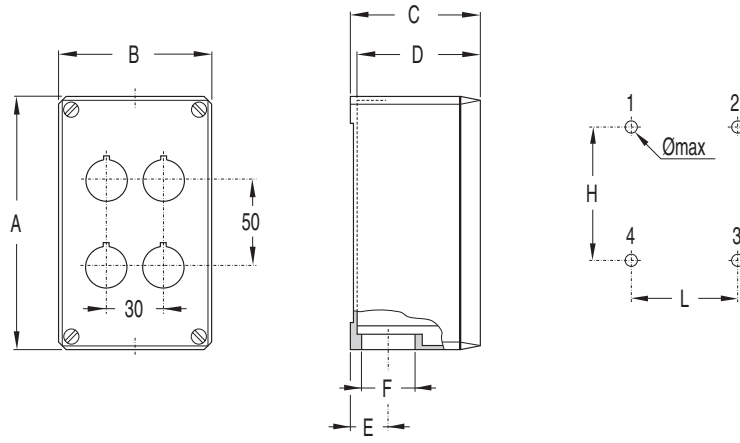
Contact blocks



- A
- B
- C
- D
- E
- F
- G
- H
- I
- X

Dimensional drawings

Aluminium enclosures



| Type | Number of holes \varnothing 30 | | Dimensions | | | | | | Fixing templates | |
|------|----------------------------------|-----------|------------|--------|--------|--------|--------|-------|-------------------------------|-----------------------|
| | Vertic. | Horizont. | A (mm) | B (mm) | C (mm) | D (mm) | E (mm) | F | HxLx \varnothing_{max} (mm) | position of the holes |
| 1 | - | - | 87 | 87 | 75 | 72 | 21.5 | PG 21 | 74x55x4 | 1 - 3 |
| 1M | - | - | 87 | 87 | 100 | 97 | 21.5 | PG 21 | 68x55x4 | 1 - 3 |
| 2 | 2 | - | 145 | 87 | 75 | 72 | 21.5 | PG 21 | 132x55x4 | 1 - 3 |
| 2M | 2 | - | 145 | 87 | 100 | 97 | 21.5 | PG 21 | 126x55x4 | 1 - 3 |
| 3 | 3 | - | 195 | 87 | 100 | 97 | 21.5 | PG 21 | 176x55x4 | 1 - 3 |
| 4V | 4 | - | 257 | 92 | 86.5 | 83.5 | 23 | PG 21 | 224x76x6 | 1 - 3 |
| 4 | 2 | 2 | 152 | 152 | 101.5 | 98.5 | 27 | PG 29 | 136x119x6 | 1 - 3 |
| 6 | 2 | 3 | 205 | 230 | 101.5 | 98.5 | 27 | PG 29 | 172x214x6 | 1-2-3-4 |
| 9 | 3 | 3 | 205 | 230 | 101.5 | 98.5 | 27 | PG 29 | 172x214x6 | 1-2-3-4 |
| 12 | 3 | 4 | 257 | 300 | 101.5 | 98.5 | 35 | PG 36 | 221x282x6 | 1-2-3-4 |
| 16 | 4 | 4 | 257 | 300 | 101.5 | 98.5 | 35 | PG 36 | 221x282x6 | 1-2-3-4 |
| 20 | 5 | 4 | 350 | 350 | 123.5 | 106.5 | 41 | PG 36 | 180x180x10 | 1-2-3-4 |
| 25 | 5 | 5 | 350 | 350 | 123.5 | 106.5 | 41 | PG 36 | 180x180x10 | 1-2-3-4 |
| 30 | 6 | 5 | 410 | 410 | 144.5 | 127.5 | 53 | PG 48 | 180x180x10 | 1-2-3-4 |
| 36 | 6 | 6 | 410 | 410 | 144.5 | 127.5 | 53 | PG 48 | 180x180x10 | 1-2-3-4 |

Control and signalling units

A

B

C

D

E

F

G

H

I

X



Notes

Grid area for notes.

Control and signalling units Ø 30 mm

| |
|---|
| A |
| B |
| C |
| D |
| E |
| F |
| G |
| H |
| I |
| X |






Light towers

- Outstanding modular concept. One terminal unit can be combined with **up to seven modular signal units**.
- Steady light units, flashing light units, strobe light units, LED light units.
- The buzzer elements emit a clearly audible dual-tone signal for maximum safety.
- A bayonet mounting, through a simple manual operation, allows a quick and simultaneous method of joining the signal units together and the electrical connection of them.
- Compact dimension Ø70mm.
- IP65 for use in extreme conditions.
- Captive screw cable connectors, located with terminal unit are **easy** to reach and guarantee a quick and neat electrical connection.
- The special design makes maintenance quick, easy and carried out in complete safety and without tools.
- The high quality of materials used to manufacture the lenses ensures the light output is at the **highest luminous** intensity, combined with a sturdy construction and a good resistance to aging.

Marking



Meaning of optical signals

| | Colour | Meaning | Operating state |
|---|----------------|--|--|
|  | Red | Extreme danger Hazardous conditions | Immediate action necessary |
|  | Yellow / Amber | Beware Warning conditions imminent | Abnormal state Monitor or action as necessary |
|  | Green | Normal conditions | No actions required |
|  | Blue | Conditions requiring defined action | Discontinuity Intervention mandatory |
|  | White / Clear | No particular meaning | Other state Can be used as required |


Meaning of audible signals (EN 981, IEC 73)

| | Signal tone | Meaning | Operating state |
|--|-----------------------------|---------|----------------------------|
| | Intermittent modulated tone | Danger | Immediate action necessary |
| | Linear tone | Safety | No actions required |



Light units


NLT1... **Steady light unit**



- With socket BA15D for filament bulbs (7W max.) and LEDs
- Supply voltage: 240V AC/DC
- Current consumption (with 5W lamps):

| | | |
|-------|------|------|
| 24V | 115V | 240V |
| 210mA | 43mA | 22mA |


NLT2... **Flashing light unit**



- With socket BA15D for filament bulbs (7W max.) and LEDs
- Supply voltage: 24V AC/DC, 115V AC, 240V AC
- Current consumption (with 5W lamps):

| | | | |
|--------|--------|---------|---------|
| 24V DC | 24V AC | 115V AC | 240V AC |
| 130mA | 145mA | 25mA | 15mA |

NLT3... **Strobe light unit**




- Lamp type: 4 Joule xenon lamp
- Supply voltage: 24V AC/DC, 115V AC, 240V AC
- Current consumption:

| | | | |
|--------|--------|---------|---------|
| 24V DC | 24V AC | 115V AC | 240V AC |
| 75mA | 135mA | 20mA | 15mA |

- Flash frequency: 1,4Hz (84 flashes per min.) according with EN 60073


Audio units

NLT73BD **Pulsating tone**



- **Protection degree IP54**
- Tone: pulsating
- Audio frequency: 2900Hz
- Pulsating tone frequency: 0,5Hz according to EN 457
- Sound level at 1 m.: 90 dB (A)
- Supply voltage: 24V AC/DC
- Current consumption: 20mA

NLT75AJ - NLT75AN **Pulsating or constant tone**




- **Protection degree IP54**
- Tone: pulsating or constant
- Audio frequency: 2600Hz according to EN 457
- Pulsating tone frequency: 1Hz according to EN 457
- Sound level at 1 m.: pulsating tone: 95 dB (A) constant tone: 93 dB (A)
- Supply voltage: 115VAC (NLT75AJ) / 240VAC (NLT75AN)
- Current consumption:

| | |
|--------|--------|
| 115VAC | 240VAC |
| 40mA | 30mA |

Pulsating or constant tone, adjustable by removing or inserting bridge JP1 in the printed circuit.


NLT75BD **Modulated tone**



- **Protection degree IP54**
- Audio frequency: 2500 - 2800Hz according to EN 457
- Sound level at 1 m.: max. 90 dB (A)
- Supply voltage: 24V AC/DC
- Current consumption: 40mA


16 sounds can be selected by means of the dip switch

NLT77BD **Pulsating tone**



- **Protection degree IP65**
- Audio frequency: 1200 - 2600Hz according to EN 457
- Sound level at 1 m.: max. 84 dB (A)
- Supply voltage: 24V AC/DC
- Current consumption: 40mA

NLT77AJ - NLT77AN **Pulsating or constant tone**



- **Protection degree IP65**
- Tone: pulsating or constant
- Audio frequency: 2600Hz according to EN 457
- Pulsating tone frequency: 1Hz according to EN 457
- Sound level at 1 m.: pulsating tone: 78 dB (A) constant tone: 75 dB (A)
- Supply voltage: 115VAC (NLT77AJ) / 240VAC (NLT77AN)
- Current consumption:

| | |
|--------|--------|
| 115VAC | 240VAC |
| 40mA | 30mA |

Pulsating or constant tone, adjustable by removing or inserting bridge JP1 in the printed circuit.

A

B

C

D

E

F

G

H

I

X



Light units

Control and signalling units

A

B

C

D

E

F

G

H




I

X

| | Supply voltage | Red | | Amber | | Yellow | | Green | | Blue | | Clear | |
|---|----------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|---------------|
| | | Cat. no. | Ref. no. | Cat. no. | Ref. no. | Cat. no. | Ref. no. | Cat. no. | Ref. no. | Cat. no. | Ref. no. | Cat. no. | Ref. no. Pack |
| Steady light units (bulb not included)  | 12...240V | NLT1R | 222230 | NLT1A | 222231 | NLT1G | 222232 | NLT1V | 222233 | NLT1L | 222234 | NLT1I | 222235 1 |
| Flashing light units (bulb BA15D filament) (bulb included)  | 24V AC/DC | NLT2BDR | 222236 | NLT2BDA | 222237 | NLT2BDG | 222238 | NLT2BDV | 222239 | NLT2BDL | 222240 | NLT2BDI | 222241 1 |
| | 115V AC | NLT2AJR | 222242 | NLT2AJA | 222243 | NLT2AJG | 222244 | NLT2AJV | 222245 | NLT2AJL | 222246 | NLT2AJI | 222247 1 |
| | 240V AC | NLT2ANR | 222248 | NLT2ANA | 222249 | NLT2ANG | 222250 | NLT2ANV | 222251 | NLT2ANL | 222252 | NLT2ANI | 222253 1 |
| Flashing light units (bulb LED) (bulb included)  | 24V AC/DC | NLT2BDLR | 222289 | NLT2BDLA | 222290 | NLT2BDLG | 222291 | NLT2BDLV | 222292 | NLT2BDLL | 222293 | NLT2BDLI | 222294 1 |
| | 115V AC | NLT2AJLR | 222295 | NLT2AJLA | 222296 | NLT2AJLG | 222297 | NLT2AJLV | 222298 | NLT2AJLL | 222299 | NLT2AJLI | 242464 1 |
| | 240V AC | NLT2ANLR | 222301 | NLT2ANLA | 222302 | NLT2ANLG | 222303 | NLT2ANLV | 222304 | NLT2ANLL | 222305 | NLT2ANLI | 222306 1 |
| Strobe light units (bulb included)  | 24V AC/DC | NLT3BDR | 222254 | NLT3BDA | 222255 | NLT3BDG | 222256 | NLT3BDV | 222257 | NLT3BDL | 222258 | NLT3BDI | 222259 1 |
| | 115V AC | NLT3AJR | 222260 | NLT3AJA | 222261 | NLT3AJG | 222262 | NLT3AJV | 222263 | NLT3AJL | 222264 | NLT3AJI | 222265 1 |
| | 240V AC | NLT3ANR | 222266 | NLT3ANA | 222267 | NLT3ANG | 222268 | NLT3ANV | 222269 | NLT3ANL | 222270 | NLT3ANI | 222271 1 |




Audio units


| | Protection degree | Supply voltage | Cat. no. | Ref. no. | Pack |
|---|-------------------|----------------|----------|----------|------|
|  <p>Pulsating tone</p> | IP54 | 24V AC/DC | NLT73BD | 222278 | 1 |
| | IP65 | 24V AC/DC | NLT77BD | 222279 | 1 |
|  <p>Pulsating or constant tone Adjustable by removing or inserting bridge JP1 in the printed circuit</p> | IP54 | 115V AC | NLT75AJ | 222287 | 1 |
| | | 240V AC | NLT75AN | 222288 | 1 |
| | IP65 | 115V AC | NLT77AJ | 222280 | 1 |
| | | 240V AC | NLT77AN | 222281 | 1 |
|  <p>Modulated tone 16 sounds can be selected by means of dip switch</p> | IP54 | 24V AC/DC | NLT75BD | 222286 | 1 |

The audio units can only be mounted as final top unit (top cover included)


Bulbs

| | Supply voltage | Red | | Amber | | Yellow | | Green | | Blue | | White | | Pack | | |
|--|----------------|------------|----------|------------|----------|------------|----------|------------|----------|------------|----------|------------|----------|-----------|--------|---|
| | | Cat. no. | Ref. no. | Cat. no. | Ref. no. | Cat. no. | Ref. no. | Cat. no. | Ref. no. | Cat. no. | Ref. no. | Cat. no. | Ref. no. | | | |
|  <p>LED - BA15D</p> | 24V AC/DC | BA15D24LR | 222330 | BA15D24LA | 222331 | BA15D24LG | 222332 | BA15D24LV | 222333 | BA15D24LL | 222334 | BA15D24LB | 222335 | 1 | | |
| | 115V AC | BA15D115LR | 222336 | BA15D115LA | 222337 | BA15D115LG | 222338 | BA15D115LV | 222339 | BA15D115LL | 222340 | BA15D115LB | 222341 | 1 | | |
| | 240V AC | BA15D230LR | 222342 | BA15D230LA | 222343 | BA15D230LG | 222344 | BA15D230LV | 222345 | BA15D230LL | 222346 | BA15D230LB | 222347 | 1 | | |
| <p>Incandescent BA15D</p> | Supply voltage | | | | | | | | | | | | | Clear | | |
| | 12V | | | | | | | | | | | | | BA15D125 | 222348 | 5 |
| | 24V | | | | | | | | | | | | | BA15D245 | 222349 | 5 |
| | 30V | | | | | | | | | | | | | BA15D305 | 222350 | 5 |
| | 115V | | | | | | | | | | | | | BA15D1155 | 222351 | 5 |
| | 240V | | | | | | | | | | | | | BA15D2305 | 222352 | 5 |

Terminal

| | Cat. no. | Ref. no. | Pack |
|---|----------|----------|------|
|  <p>Terminal unit with top cover</p> | NLT9TC | 222282 | 1 |

Base with tube

| | Cat. no. | Ref. no. | Pack |
|---|----------|----------|------|
|  <p>Base + tube height 100mm</p> | NLT5BT | 222284 | 1 |
| Base + tube height 100mm, 90° fixing | NLT90BT | 222307 | 1 |
| Tube height extension 100mm | NLT5ET | 222285 | 1 |

A

B

C

D

E

F

G

H

I

X



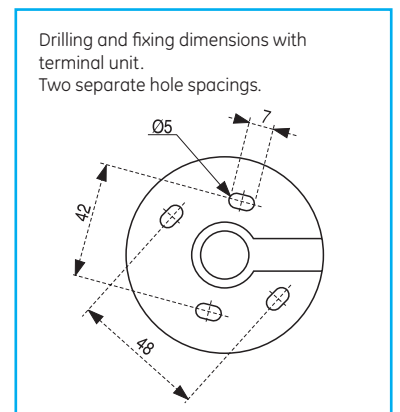
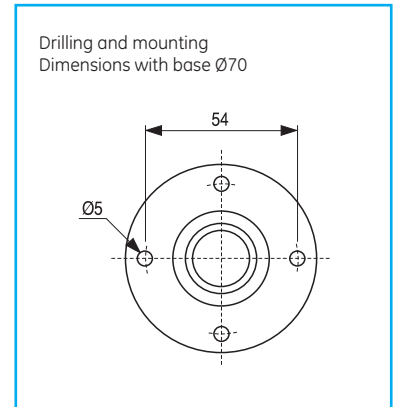
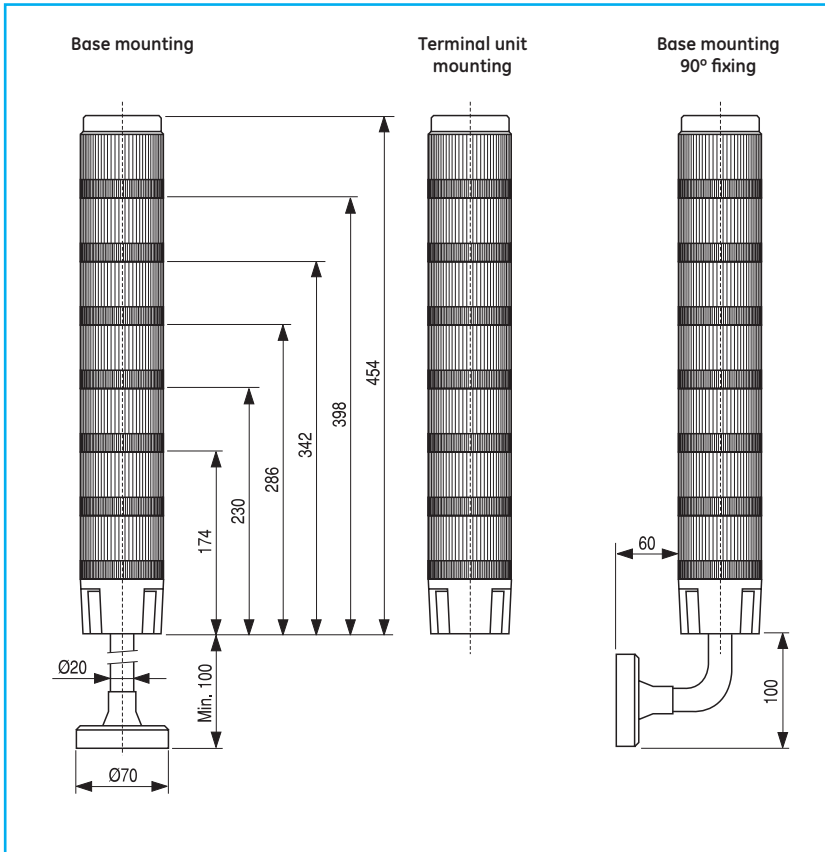
Technical data

| | |
|--|---|
| Conformity to standards | EEC regulation 89/336 electromagnetic compatibility EEC regulation 73/23 low voltage, including amendment EEC 93/68 All NLT range are made and tested in full compliance with: EN 60947-5-14 (VDE 0470, IEC 60947) CE, cUL US |
| Materials | Polycarbonate Visual and audio signal units, terminal unit, top cover, base and extension tubes |
| Rated insulated voltage | 250V max. |
| Operating temperature | -20°C ... +60°C (except version with bulb 12V = 40°C) |
| Protection degree (according to EN 60529) | IP65 (IP54 for audio units types NLT73xx and NLT75xx) (indicators must be correctly assembled with top cover, gasket or PG conduit fitting) |
| Colours (according to EN 60073) | Amber, Blue, Yellow, Clear, Red and Green |
| Lamp type | Steady/flashing units: Bayonet type BA15D socket: filament (7W max.) or LED Strobe units: Xenon lamps |
| Nr. of combined units | Up to 7 modular units |
| Connection | Captive screw cable connectors (max. cable size 1.5mm ²) inside terminal sleeve «C» is common to all signal units. |
| Connection identification code | They are numbered 1/7 from base to top |

Mechanical characteristics

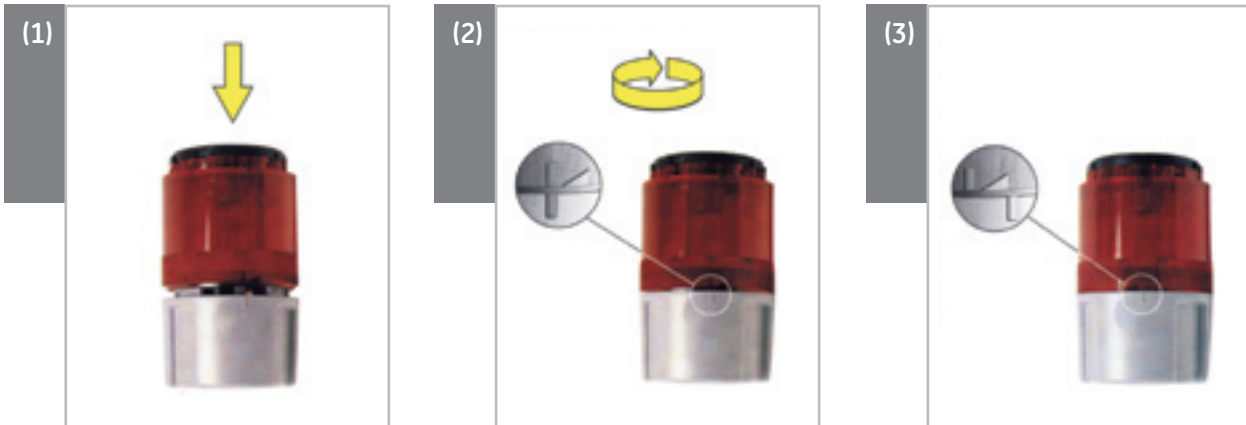
| | |
|--------------------------|--|
| Mounting of the units | |
| Average torque | 2.4Nm |
| Unfastening of the units | |
| Average torque | 2.3Nm |
| Vibration resistance | 2g min. (10-150Hz) according to IEC 68-2-6 |
| Mounting | Direct through terminal unit or with base and tube |

Dimensions

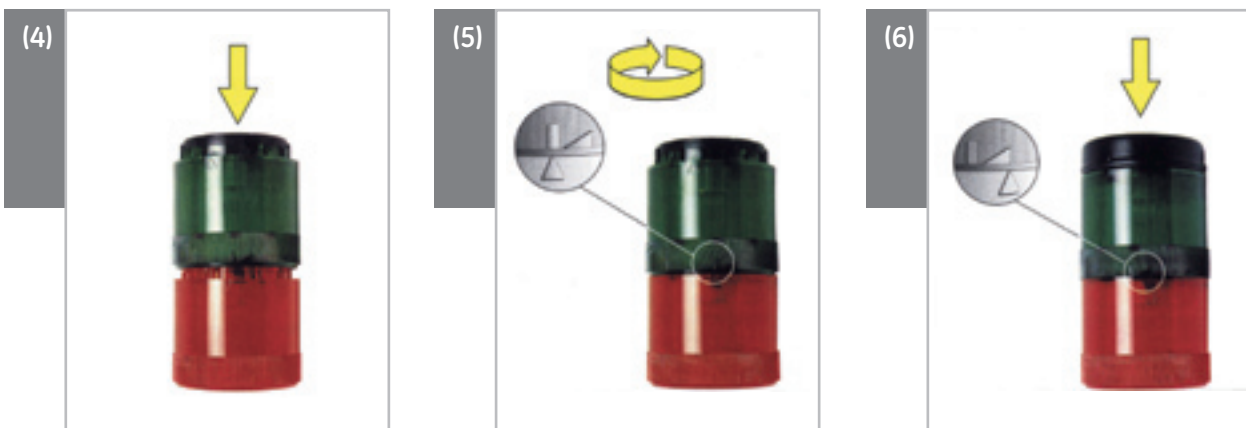


Modular system

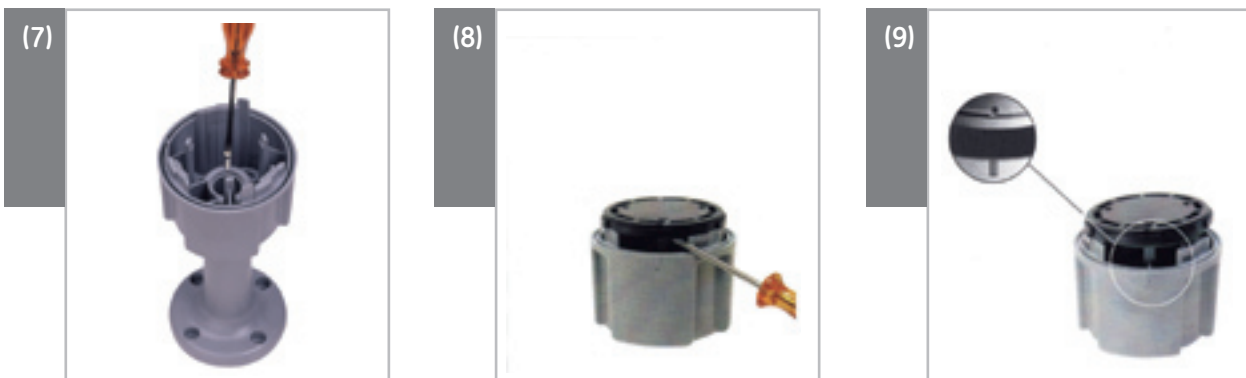
Place signal beacon unit onto terminal unit **(1)** align guide marks and twist clockwise till they are locked **(2) + (3)**

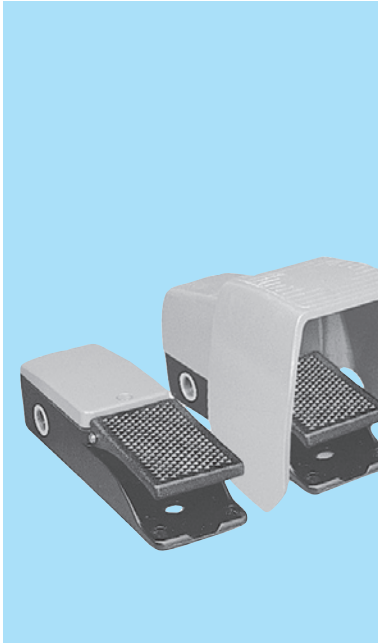


Follow the same steps to add more signal units **(4) + (5) + (6)**
The audible element can be mounted as final top unit, as it is complete with a top cover.



To fix extension tube (base always included), insert it into opening on the underside of the terminal unit and tighten screw on the side **(7)**. To reach the screw cable clamp terminals, remove black disc first, prising with a small screwdriver **(8)**. Connect to terminals (coloured units are numbered from base to top). To place terminal back into position, align the guiding marks **(9)** and press inwards.





Foot switches

General

Foot switches, for intensive services suitable for controlling and monitoring of low voltage AC and DC electrical circuits.

Climatic protections

The standard versions are suitable for use in the following climates:

- Temperate climate cat. 23/50 (DIN 50014)
- Wet climate cat. 23/83 (DIN 50015)
- Hot wet climate cat. 40/92 (DIN 50015)
- Variable wet climate cat. FW 24 (DIN 50016)

Standards

IEC 947-5-1, CEI EN 60947.5.1
VDE 0660

Approvals

CSA, UL

Specifications

| | | | | | | | | |
|--|------------------------|---|--------------------|----|-----|-----|-----|-----|
| Temperature ranges | Operation | from -30°C up to +80°C | | | | | | |
| | Storage | from -30°C up to +80°C | | | | | | |
| Degree of protection (according to IEC 529) | | IP 65 | | | | | | |
| Vibration resistance | | 20g (10 up to 55Hz) | | | | | | |
| Mechanical endurance | | 2 x 10 ⁷ for all the types | | | | | | |
| Electrical | | | | | | | | |
| Rated insulation voltage according to EN 60947.1 | | 500V | | | | | | |
| Insulation class according to VDE 0110 | | Group C | | | | | | |
| Electric shock protection according to IEC 536 | | Class I | | | | | | |
| Short-circuit prot. according to IEC 269.1 and 269.3 | | 10A gL fuses | | | | | | |
| Electrical performances of the contact blocks | | | | | | | | |
| Rated thermal current (I _{th}) | | 10A | | | | | | |
| Performances according to EN 60947.5.1 | | | | | | | | |
| | Slow motion contacts | Voltage | U _e (V) | 24 | 48 | 110 | 220 | 380 |
| | Category AC 15 | Current | I _e (A) | 6 | 6 | 6 | 6 | 4 |
| | Snap action contacts | Voltage | U _e (V) | 24 | 48 | 110 | 220 | 380 |
| | Category AC 15 | Current | I _e (A) | 6 | 6 | 6 | 5 | 4 |
| | Category DC 13 | Voltage | U _e (V) | 24 | 48 | 110 | 220 | |
| | | Current | I _e (A) | 1 | 0,8 | 0,7 | 0,3 | |
| Connection | | Same polarity for both slow motion and snap action contacts | | | | | | |
| Cables entries | IPA1, IPA2, IPB1, IPB2 | 1 x M20 | | | | | | |
| | IPA1-P | 2 x M20 | | | | | | |

Order codes ● pg. E.67
Dimensional drawings ● pg. E.73

Foot switches - Contact combinations (per pedal)

| | | Slow break | | | | Snap action | | | | | |
|---------------------|---------------------------------|------------|------------|---------|------------|-------------|------------|------------|------------|--------|---|
| | | | | | | | | | | | |
| | Function (1) | Cat. no | Ref. no. | Cat. no | Ref. no. | Cat. no | Ref. no. | Cat. no | Ref. no. | Pack | |
| | ONE pedal Without guard | N | IPA1-N211B | 132170 | | IPA1-N411B | 132198 | IPA1-N422B | 132213 | 1 | |
| | | P(2) | IPA1-P211B | 132171 | | - | | - | | 1 | |
| | | D | - | | | | | IPA1-D422B | 132214 | 1 | |
| | ONE pedal With guard | N | IPB1-N211B | 132172 | IPB1-N222B | 132186 | IPB1-N411B | 132201 | IPB1-N422B | 132215 | 1 |
| | | P(2) | IPB1-P211B | 132173 | - | | - | - | | 1 | |
| | | D | - | | | | - | IPB1-D422B | 132216 | 1 | |
| | | R | - | | - | | IPB1-R411B | 132203 | - | 1 | |
| | ONE pedal With guard Heavy duty | N | IPA2-N211B | 132182 | | | | | | 1 | |
| Spare microswitches | | | N211B | 116113 | N222B | 116664 | N411B | 116663 | N422B | 116665 | 1 |

- (1) **Function N**
Normal operation. When the pedal is pressed the contacts change position. When released they return to their position.
- Function P**
Press-on press-off operation. The position of the contacts changes each time the pedal is pressed.
- Function D**
Two-stage operation. Used with two contacts blocks. When the pedal is pressed to the first point, the contacts of the first block switch; when pressed as far as the second point the contacts of the second block switch and the first block stays in the same position.
- Function R**
Normal operation with potentiometer. When the pedal is pressed, the contacts change position at the same time as the potentiometer is operated. When released, the contacts and potentiometer return to their initial position.

Positive opening.

(2) Version with function P do not correspond to the concept of positive opening.



Approvals



Features

Enclosed in metal with aluminium protection cover, safety latch function "OFF-ON-OFF" with manual reset.

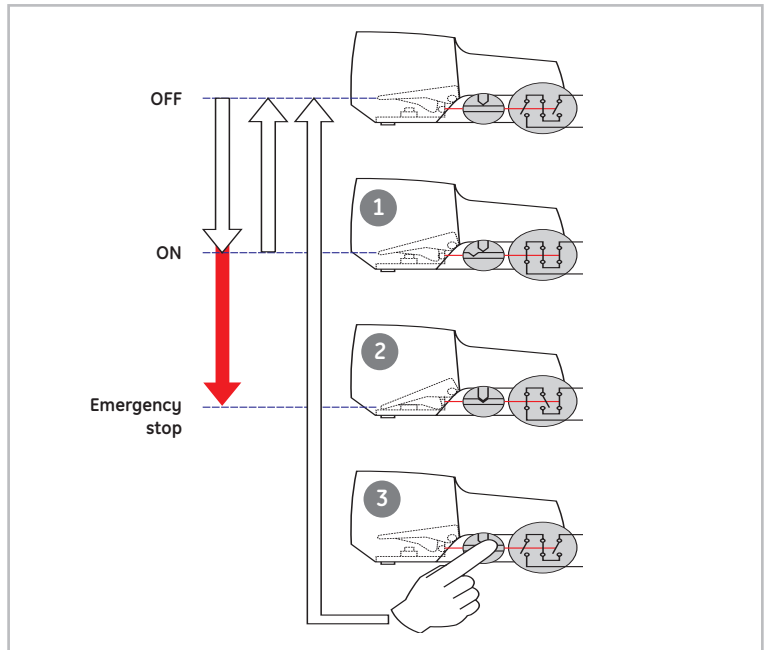
Technical data

| | |
|--|------------------|
| Switching diagram | |
| 1) Trigger point | 1) |
| 2) Latched position | 2) |
| Rated insulation voltage U_i | max. 400VAC |
| Thermal continuous current I_{the} | max. 10A |
| Switching frequency | max. 50/min. |
| Mechanical operational life number of switching cycles | 10×10^6 |
| Ambient temperature | -30°C to +80°C |
| Cable conduits | (3x) M20x1.5 |
| Protection degree | IP65 |
| Actuating force (approx.) | 10N |
| Trigger point | 200N |
| Weight | 1.5 kg |

Safety foot switches

Operation

- 1 Pedal operation up to the trigger point**
The operating contact is closed, the operating process is started
- 2 Operation past the trigger point in emergency cases**
The operating contact is opened and latched and the process is stopped. Also if the device is unused, the latch remains in the off-position in this phase. Uncontrolled restart is prevented
- 3 Reset function**
Only after the danger has passed can the contacts be manually unlatched (push-button on the side). The operating process can now be restarted by pushing the pedal up to the triggering point.



Order codes

| | Cat. no. | Ref. no. | Pack |
|--|----------|----------|------|
| - According to standards: EN 60947-1 / IEC 60947-5-1 | IPSF1 | 223000 | 1 |
| - Slow-action contact | | | |
| - Snap-action contact | | | |
| - Trigger point | | | |
| - Latch function | | | |
| - Making current according to EN/IEC 60947-5-1 AC15/240V/3A | | | |

Dimensions ● pg. E.73



Signalling devices

General

Series 105 signalling units are used to indicate the electric equipment power supply conditions.

For this purpose the devices shall be wired after the main disconnecting switch and clearly in view when the cabinet's doors are opened.

Series 105 DTL devices can be used on three-phase lines with or without the neutral wire or single-phase power lines, indicating the hazardous condition due to the applied voltage.

Three luminous red lamps are used. The flashing devices are normally used in combination with limit switches contacts NC type 114FCT03 that provides insertion when the cabinet door are open only.

Climatic protection

The standard versions are suitable for use in the following climates:

- Temperate climate cat. 23/50 (DIN 50014)
- Wet climate cat. 23/83 (DIN 50015)
- Hot wet climate cat. 40/92 (DIN 50015)
- Variable wet climate cat. FW 24 (DIN 50016)



Standards

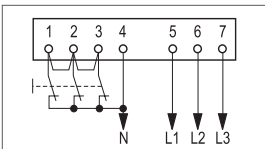
CEI, IEC, VDE, BSI and UTE

Approvals

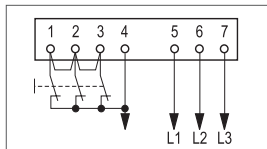
UL, CSA, CE

Suggested connections

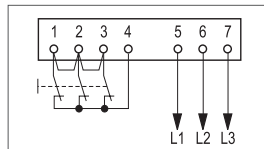
Indicates the presence of 3, 2 or 1 phase only by means of the relative lamp.



3-phase line with insulated neutral 3-phase line with grounded neutral

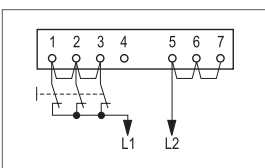


Indicates the presence of 3 or 2 phases by means of the relative lamp. One phase only is not indicated (all lamps OFF)

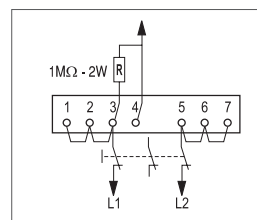


3-phase line without neutral

Indicates both phases with 3 lamps ON at same time. One phase only is not indicated (all lamps OFF)



Single-phase line (general diagram)



Single phase-line (alternative diagram)

1. Phase to phase connection on a 3 phase line with grounded neutral. Indicates the presence of 2-phases or 1 only with the 3 lamps ON at the same time.
2. Phase to neutral connection on a 3 phase line with grounded neutral or phase to phase by a matching transformer with one phase grounded. Indicates the presence of the ungrounded phase with the 3 lamps ON at the same time. No indication occur if the ungrounded phase is missing (all lamps OFF).

Specifications

| | | |
|---|---|------------------------|
| Temperature ranges | Operation | from -25°C up to +70°C |
| | Storage | from -40°C up to +70°C |
| Degree of protection (according to IEC 529) | | IP 20 |
| Electrical | | |
| Rated insulation voltage according to EN 60947.1 | | 690V |
| Impulse withstand voltage according to EN 60947.1 | | 4kV |
| Electrical input | | 2mA max. |
| Connections | Terminal strip with numbered terminals, accessible from outside | |
| | protected against accidental contacts according to DIN 57106 and IP 20 according to IEC 529 | |
| Clamping capacity | Maximum one flexible conductor 12 AWG (3.3mm ²) | |

Order codes ● pg. E.70
Dimensional drawings ● pg. E.72



Flashing devices



| Supply voltage | | Cat. no | Ref. no. | Pack |
|--------------------------|---------------------------|-----------|----------|------|
| Three-phase (50-60Hz) | Single-phase (50/60Hz) | | | |
| 220V | 110-127V | 105DTL220 | 132230 | 1 |
| 380-600V | 220-350V | 105DTL500 | 132231 | 1 |
| 690V | | 105DTL690 | 132232 | 1 |

3 pole limit switch for device control



| Protection degree | Cables entry | Operation force | Contacts | Cat. no | Ref. no. | Pack |
|-------------------|--------------|-----------------|----------|-----------|----------|------|
| IP40 | PG11 | 8.5 N min. | 3NC | 114FCT03 | 130320 | 25 |
| IP65 | PG11 | 8.5 N min. | 3NC | 114FCT03T | 130321 | 25 |

Paralell bridge for 3 poles limit switches



| Cat. no | Ref. no. | Pack |
|---------|----------|------|
| 105 PT | 132234 | 50x5 |

Single door protection unit



The unit includes the following components:

- one flashing device 105DTL220 or 105DTL500.
- one 3-pole limit switch 114FCT03 for connection of the flashing device
- one electrical interlock device and panel light 105GIL or 105GIL10.
- one mounting plate 105PM on which are fitted on the above devices.

If two doors have to be protected (as double enclosure closing on the middle) the mounting plate shall be fitted also one limit switch 114FCT03 and one device 105GIL or 105GIL10.

Approvals:

UL (USA) - CSA (Canada)

| Supply voltage | | | Cat. no | Ref. no. | Pack |
|--------------------------|---------------------------|-------------------|-------------|----------|------|
| Three-phase (50-60Hz) | Single-phase (50/60Hz) | Tripping coil | | | |
| 220V | 110-127V | Shunt trip | 105GP1P220 | 132250 | 1 |
| 220V | 110-127V | Undervoltage trip | 105GP1P220M | 132251 | 1 |
| 380-600V | 220-350V | Shunt trip | 105GP1P500 | 132252 | 1 |
| 380-600V | 220-350V | Undervoltage trip | 105GP1P500M | 132253 | 1 |

Electrical interlock device and cubicle lighting ⁽¹⁾



The switch can be directly driven by the enclosure door.
If several doors are employed, one switch per door shall be used.
When properly connected, the following functions are provided:

- Position 1 (pushed) door closed: light OFF, tripping coil of main switch unpowered (normal equipment operation)
- Position 2. (free) door opening: light ON, tripping coil of main switch powered (equipment shall cut-out automatically).
- Position 3 (pulled) door open: light ON, tripping coil of main switch unpowered (adjustment on the equipment of dry checks). When door is closed again, the switch revert automatically from position 2 or 3 to position 1.

Terminals have IP2X protection degree according to IEC/EN 60529

Approvals: UL (U.S.A.) - CSA (Canada)

| Tripping coil | | Cat. no | Ref. no. | Pack | | | | | | | | | | | | | | | | |
|-------------------|--|------------|----------|------|---|---|---|---|---|---|---|---|---|---|---|---|---|--|--|--|
| Shunt trip | | 105 GIL | 132240 | 1 | | | | | | | | | | | | | | | | |
| | <table border="1"> <thead> <tr> <th></th> <th>1</th> <th>2</th> <th>3</th> </tr> </thead> <tbody> <tr> <td>E</td> <td>○</td> <td>○</td> <td>○</td> </tr> <tr> <td>F</td> <td>○</td> <td>○</td> <td>○</td> </tr> <tr> <td>G</td> <td>○</td> <td>○</td> <td>○</td> </tr> </tbody> </table> | | 1 | 2 | 3 | E | ○ | ○ | ○ | F | ○ | ○ | ○ | G | ○ | ○ | ○ | | | |
| | 1 | 2 | 3 | | | | | | | | | | | | | | | | | |
| E | ○ | ○ | ○ | | | | | | | | | | | | | | | | | |
| F | ○ | ○ | ○ | | | | | | | | | | | | | | | | | |
| G | ○ | ○ | ○ | | | | | | | | | | | | | | | | | |
| Undervoltage trip | | 105 GIL 10 | 132241 | 1 | | | | | | | | | | | | | | | | |
| | <table border="1"> <thead> <tr> <th></th> <th>1</th> <th>2</th> <th>3</th> </tr> </thead> <tbody> <tr> <td>E</td> <td>○</td> <td>○</td> <td>○</td> </tr> <tr> <td>F</td> <td>○</td> <td>○</td> <td>○</td> </tr> <tr> <td>G</td> <td>○</td> <td>○</td> <td>○</td> </tr> </tbody> </table> | | 1 | 2 | 3 | E | ○ | ○ | ○ | F | ○ | ○ | ○ | G | ○ | ○ | ○ | | | |
| | 1 | 2 | 3 | | | | | | | | | | | | | | | | | |
| E | ○ | ○ | ○ | | | | | | | | | | | | | | | | | |
| F | ○ | ○ | ○ | | | | | | | | | | | | | | | | | |
| G | ○ | ○ | ○ | | | | | | | | | | | | | | | | | |

Electrical interlock device ⁽¹⁾



The switch is directly driven by the enclosure door.
If several doors are employed, one switch per door is needed.
When properly connected, the same functions of devices above shall be provided but without enclosure control light.

Terminals have IP2X protection degree according to IEC 529

| Tripping coil | | Cat. no | Ref. no. | Pack | | | | | | | | |
|-------------------|--|-----------|----------|------|---|---|---|---|---|--|--|--|
| Shunt trip | | 105 CI | 132242 | 1 | | | | | | | | |
| | <table border="1"> <thead> <tr> <th></th> <th>1</th> <th>2</th> <th>3</th> </tr> </thead> <tbody> <tr> <td>G</td> <td>○</td> <td>○</td> <td>○</td> </tr> </tbody> </table> | | 1 | 2 | 3 | G | ○ | ○ | ○ | | | |
| | 1 | 2 | 3 | | | | | | | | | |
| G | ○ | ○ | ○ | | | | | | | | | |
| Undervoltage trip | | 105 CI 10 | 132243 | 1 | | | | | | | | |
| | <table border="1"> <thead> <tr> <th></th> <th>1</th> <th>2</th> <th>3</th> </tr> </thead> <tbody> <tr> <td>G</td> <td>○</td> <td>○</td> <td>○</td> </tr> </tbody> </table> | | 1 | 2 | 3 | G | ○ | ○ | ○ | | | |
| | 1 | 2 | 3 | | | | | | | | | |
| G | ○ | ○ | ○ | | | | | | | | | |

Mounting plate



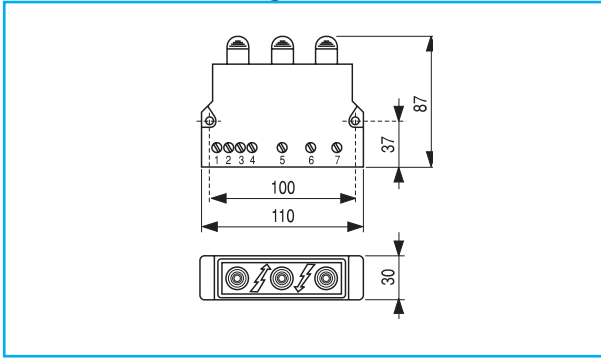
| | Cat. no | Ref. no. | Pack |
|--|---------|----------|------|
| | 105 PM | 132244 | 1 |

(1) For electrical performance and features of contact blocks please see E.42

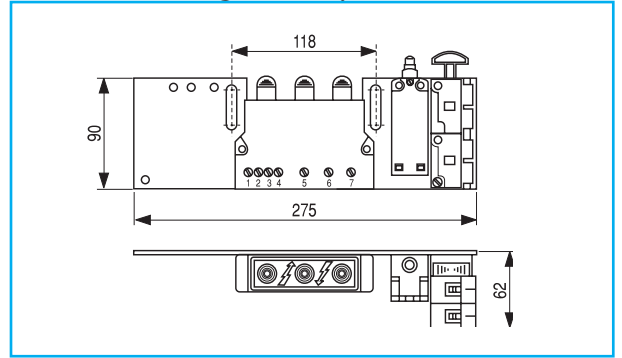


Dimensional drawings

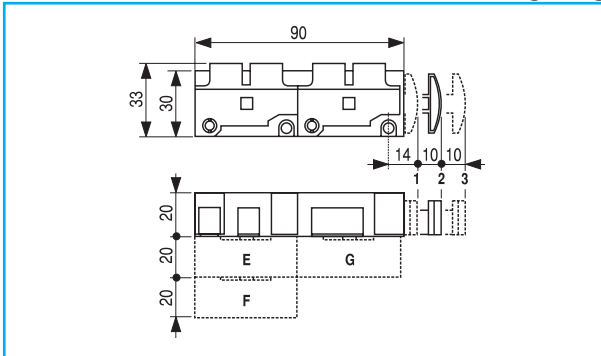
Series 105 - Flashing devices



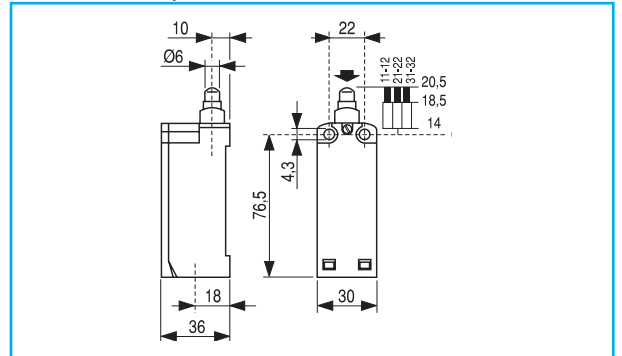
Series 105 - Single door protection unit



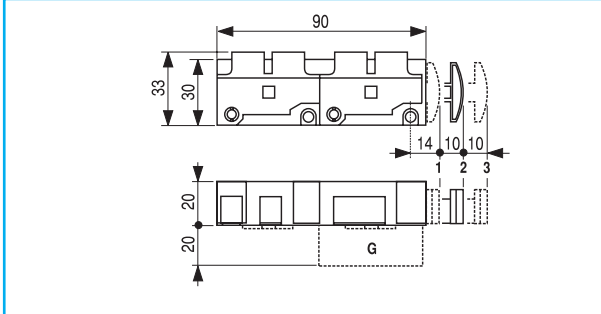
Series 105 - Electrical interlock and cubicle lighting



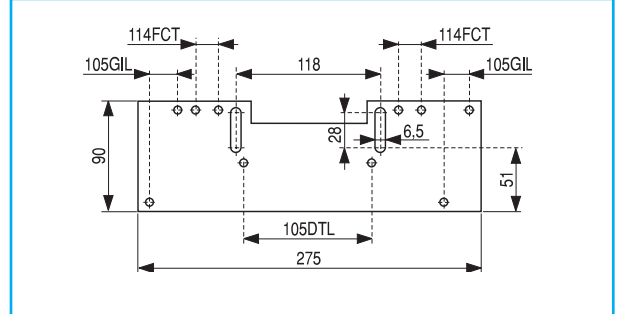
Series 105 - 3 pole limit switch for device control



Series 105 - Electrical interlock device



Series 105 - Mounting plate



A

B

C

D

E

F

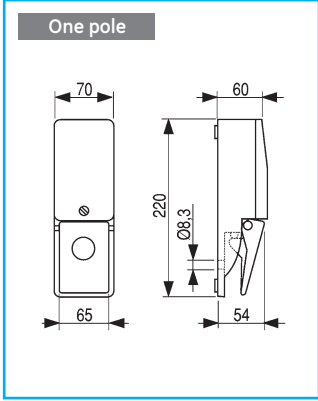
G

H

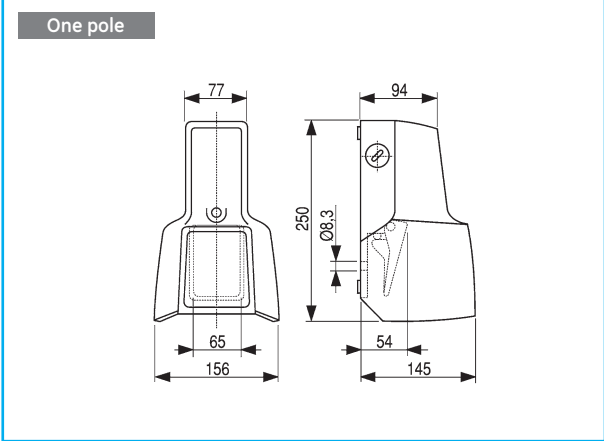
I

X

Series IP - Foot switches without protective guard



Series IP - Foot switches with protective guard



Safety foot switches

