



Main features

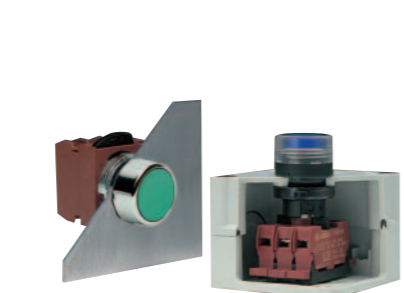


Shape, material and colours

The P9 line offers three types of operators:

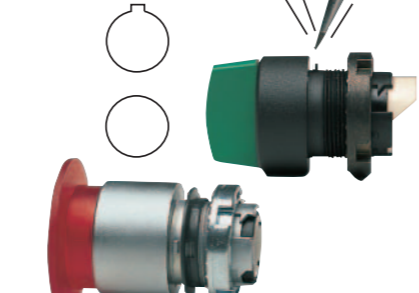
- round in satin chrome metal
- round in engineered thermoplastic
- square in engineered thermoplastic

Modern ergonomic P9 actuators are available in a wide variety of colours and styles, and are the result of superior industrial design experience. SERIES P9 satisfies any sophisticated industrial applications.



Mounting system

The P9 line offers a wide variety of operators, contact blocks and power supplies for panel mounting. Furthermore a range of operators, contact blocks and power supplies are available for base mounting. The base mounting option is simple thanks to plastic enclosures fitted with a standard mounting adaptor, which allows a snap-on and secure fastening.



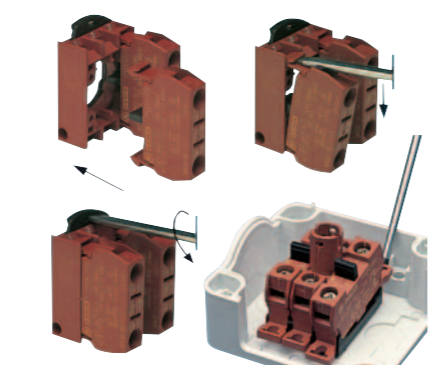
Fitting and positioning

All the P9 operators are fitted with seal to ensure IP66 degree of protection. A locating tab on the operator allows the correct positioning on panels with holes drilled according to CENELEC EN 50007 standards (with notch). The tab also ensures panel stability and prevents unwanted rotations. The tab can be removed with a screwdriver for applications in holes without notch.



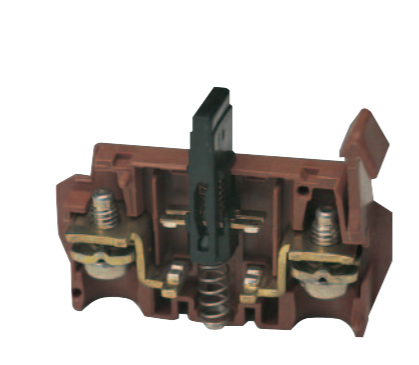
Rear locking and back mounting procedure

P9 operators are back mounted to the panel by a patented locking ring. The units can be assembled using a standard screwdriver. As an option, an assembly wrench is available.



Fast mounting

All the P9 rear panel devices are snap-on. Mounting between panel and operator is accomplished by means of a patented snap-on flange which ensures a fast fitting. For base mounting, the fitting is done directly on the adaptor inside the enclosures base. Each single block can be mounted or removed individually. In panel mounting, it is also possible to install or remove the snap-on mounting flange with the contact block group. Blocks and/or flange can be disassembled by a standard screwdriver, to simplify operations.



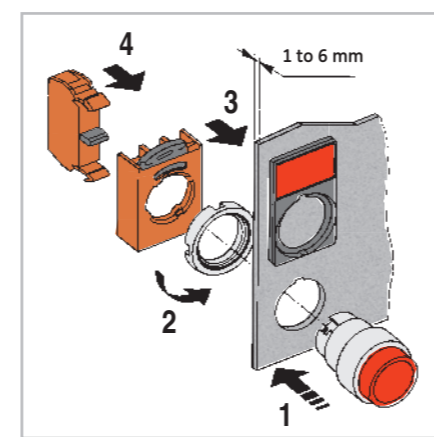
Safety and reliability

The P9 contact blocks are designed to ensure maximum reliability in every condition and to monitor control circuits at low energy levels (12V-5mA minimum), thanks to advanced solution such as:

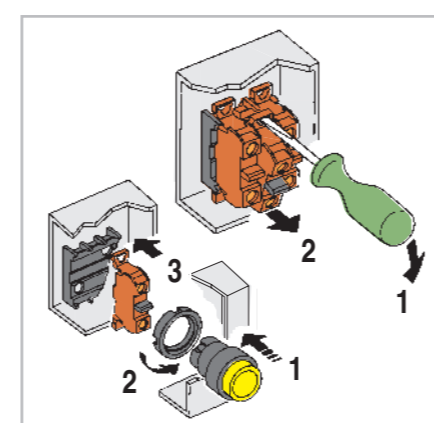
- four contact points
- high efficiency self-cleaning operation
- silver contacts, properly shaped
- high control pressure.

Technical data

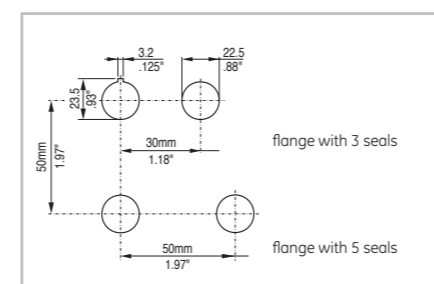
Panel mounting



Base mounting



Mounting



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

Compliance with standards

IEC 947.5.1 - VDE 0660 - NF-C63140
CEI EN 60947.5.1 - UTE - BSI
NEMA - CENELEC EN 50007

Approvals

UL (U.S.A.) - CSA (Canada) - RINA (I) - Lloyd's Register of Shipping (U.K.) - Bureau Veritas (F)

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. FW24 (DIN 50016)

Temperature ranges

- Operation: from - 25°C up to + 70°C
- Storage: from - 40°C up to + 70°C

Degree of protection 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 NEMA type 1-3-3R-3S-4-4X-12-13 according to UL 508.

Degree of protection of the terminals

IP2x according to CENELEC EN 60529

Shock resistance

(according 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

Electric shock protection

- Class I according to IEC 536 for metal operators
- Class II (double insulation) according to IEC 536 for plastic operators.

Short-circuit protection

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

Electrical resistance of the contact

≤ 25 m Ω according to IEC 255, cat 3

Performances of the contacts

- Slow action
- Self-cleaning sliding
- NC "positive opening"
- Double movable contact
- Four switching points
- Double break

Identification of the terminals

According to CENELEC EN 50013

Electrical performances

Rated thermal current I_{th} = 10A
Performances according IEC 947.5.1

Category AC15

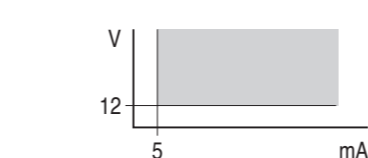
Voltage Ue (V)	24	48	60	110	220	380	500	600
Current Ie (A)	10	10	10	6	3	2	1.5	1.2

Category 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

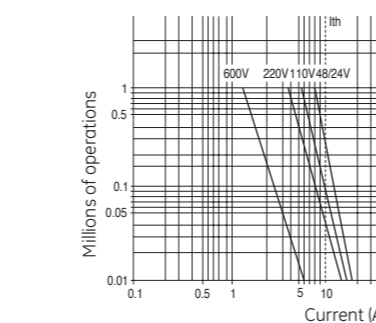
Performances according to CSA and UL AC/Heavy Duty (A600) - DC/Standard Duty (Q300)

Minimum operating range

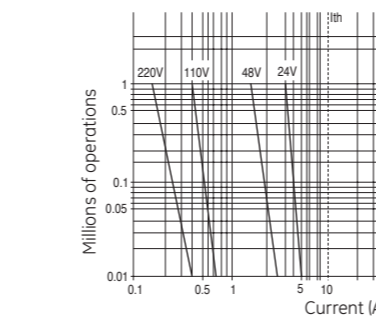


Electrical life

Alternate current 50/60 Hz cat. AC15



Direct current cat. DC 13



Common accessories

Bulbs BA9s

Filament type	Vn	Wn	Cat. nr.	Ref. nr.
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

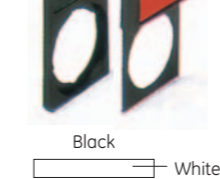
Mono led

Vn AC/DC ± 10%	Cat. nr.	Ref. nr.
6	BA9S6LR*	187871
12	BA9S12LR*	187881
24	BA9S24LR*	187891
48	BA9S48LR*	187901
110	BA9S110LR*	187911
230	BA9S230LR*	187921

* Colour palette :

Insert holders

Supplied with neutral insert engravable on both sides
Standard 30 x 50 mm



Round plates

For emergency push-buttons
diameter 59 mm
(yellow background)



Plugs

Shape	Cat. nr.	Ref. nr.
Round	P9ARHPR	187491
Square 30x30mm	P9ASHP3	187792
Rectangular 30x50mm	P9ASHP5	187793

Tools

Tool	Cat. nr.	Ref. nr.
Locking ring wrench	P9ACWAF	187845
Bulb extractor	080ESL	170212
Extractor for caps and lenses	P9ASEBG	187795

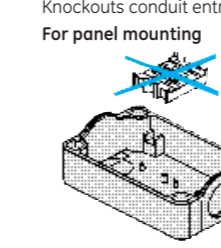
Push-button stations

Empty versions in thermoplastic IP66

Light grey coloured
Panel or base mounted



Cover with holes
Knockouts conduit entry



Accessories

Write-on plates
Bilaminated, self adhesive,
20 x 20 mm
Black background engravable
for white texts

Without text

With text (1)

START

(1) Other languages on request

With symbols

→

Earth terminal clamp

P9AELN

START

→

P9AEMT

Empty versions in aluminium alloy

Grey coloured RAL 7012
Panel mounting

Cover with holes

No of holes	Cat. nr.	Ref. nr.
1 (yellow cover)	P9EPEG1	189000
1	P9EPE01	189001
2	P9EPE02	189002
3	P9EPE03	189003
4	P9EPE04	189004
6	P9EPE06	189005

189031

189032

189033

189034

189035

189036

189037

189038

189152

189154

189041

189042

189043

189044

189045

189046

189047

187491

187792

187793

187845

170212

187795

Equipped versions in thermoplastic IP66, one unit



Operators

Colour

Diagram

Namepl.

Cat. nr.

Ref. nr.

Flush push-button

green

I

P9EPA01Y02

189010

Flush push-button

white

I

P9EPA01Y03

189011

Flush push-button

red

0

P9EPA01Y04

189012

Flush push-button

black

0

P9EPA01Y05

189013

Emergency push-button with latch according to EN418 (on yellow cover)

red

0

P9EPAG1Y01

189015

Key selector switch with 2 pos.

0-I

P9EPA01Y06

189014

189016

189017

189022

189021

189020

189022

189021

189020

189021

Equipped versions in thermoplastic IP66, three units



Operators

Colour

Diagram

Namepl.

Cat. nr.

Ref. nr.

Full voltage pilot light

white

I

P9EPA03Y01

189018

Flush push-buttons

green

I

P9EPA03Y02

189019

Flush push-buttons

white

I

P9EPA03Y03

189020

Flush push-buttons

black

0

P9EPA03Y04

189021

Resistor + diode pilot light 220/240V AC BA9S 130V-2W incl.

white

I

P9EPA03Y03

189020

Flush push-buttons

green

I

P9EPA03Y04

189021

Flush push-buttons

white

I

P9EPA03Y04

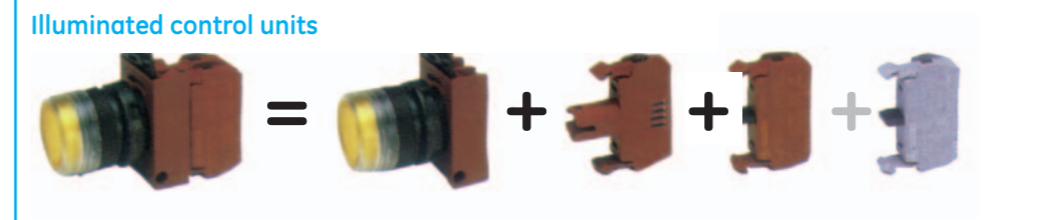
189021

Flush push-buttons

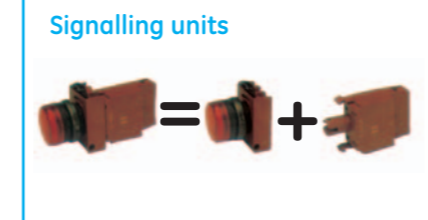


Example:
Green push-button in metal, round with flush cap + 2 contacts NO = P9 MPNVG + 2x P9 B10VN

	Push-button with flush cap	Push-button with raised cap	Push-button mushroom head	Push-button emergency push-twist to release mushroom head	Push-button emergency with positive break push-twist to release mushroom head	Selector switch with knob	Selector switch with lever	Selector switch with key (code 3095) key removal in all positions	Joystick
Round satin chrome P9M	 P9MPN+G Ref. nr.N.. 184000R.. 184001V.. 184002G.. 184003L.. 184006	 P9MPN+S Ref. nr.N.. 184010R.. 184011V.. 184012G.. 184013L.. 184016	 P9MEM4+N Ref. nr.N.. 184030R.. 184031V.. 184032G.. 184033	 P9MERA+N Ref. nr.R.. 184070	 P9MERA+N Ref. nr.R.. 184070	 I-II fixed ● P9MSMDON 184110 I-O-II fixed ● P9MSMZON 184200 I-O-II spring return ● P9MSM23N 184320	 I-II fixed ● P9MSVDON 184370 I-O-II fixed ● P9MSVZON 184379 I-O-II spring return ● P9MSV23N 184391	 I-II fixed ● P9MSCDOK95 184402 I-O-II fixed ● P9MSC20T95 184439 I-O-II spring return ● P9MSC23C95 184467	 fixed pos. ● P9MMN2F 184700 transient pos. ● P9MMN2T 184701 fixed pos. ● P9MMN4F 184720 transient pos. ● P9MMN4T 184721
Round plastic P9X	 P9XPN+G Ref. nr.N.. 185000R.. 185001V.. 185002G.. 185003L.. 185006	 P9XPN+S Ref. nr.N.. 185010R.. 185011V.. 185012G.. 185013L.. 185016	 P9XEM4+N Ref. nr.N.. 185040R.. 185041V.. 185042G.. 185043	 P9XERAR+N Ref. nr.R.. 185070	 P9XERARA Ref. nr.R.. 185072	 I-II fixed ● P9XSMDON 185110 I-O-II fixed ● P9XSMZON 185200 I-O-II spring return ● P9XSM23N 185320	 I-II fixed ● P9XSVDON 185370 I-O-II fixed ● P9XSVZON 185379 I-O-II spring return ● P9XSV23N 185391	 I-II fixed ● P9XSCDOK95 185402 I-O-II fixed ● P9XSC20T95 185439 I-O-II spring return ● P9XSC23C95 185467	 fixed pos. ● P9XMMN2F 185700 transient pos. ● P9XMMN2T 185701 fixed pos. ● P9XMMN4F 185720 transient pos. ● P9XMMN4T 185721
Square plastic P9S	 P9SPN+G Ref. nr.N.. 186000R.. 186001V.. 186002G.. 186003L.. 186006	 P9SPN+S Ref. nr.N.. 186010R.. 186011V.. 186012G.. 186013L.. 186016	 P9SEM4+N Ref. nr.N.. 186030R.. 186031V.. 186032G.. 186033	 P9SERARA Ref. nr.R.. 186072	 P9SERARA Ref. nr.R.. 186072	 I-II fixed ● P9SSMDON 186110 I-O-II fixed ● P9SSMZON 186200 I-O-II spring return ● P9SSM23N 186320	 I-II fixed ● P9SSVDON 186110 I-O-II fixed ● P9SSVZON 186379 I-O-II spring return ● P9SSV23N 186391	 I-II fixed ● P9SSCDOK95 186402 I-O-II fixed ● P9SSC20T95 186439 I-O-II spring return ● P9SSC23C95 186467	 fixed pos. ● P9SMMN2F 186700 transient pos. ● P9SMMN2T 186701 fixed pos. ● P9SMMN4F 186720 transient pos. ● P9SMMN4T 186721

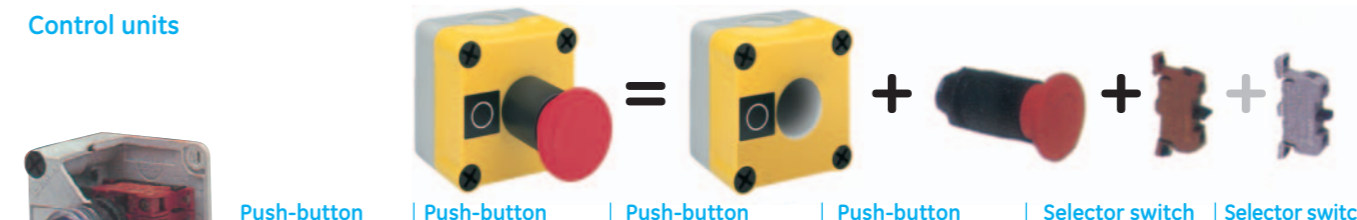


	Illuminated push-button with flush cap	Illuminated push-button with raised cap	Illuminated push-button with mushroom head	Illuminated push-button push-pull to release with mushroom head	Illuminated selector switch
Round satin chrome P9M	 P9MPL+GD Ref. nr.R.. 184491V.. 184492G.. 184493B.. 184497	 P9MPL+SD Ref. nr.R.. 184501V.. 184502G.. 184503B.. 184507	 P9MEM4+L Ref. nr.R.. 184511V.. 184512G.. 184513L.. 184516	 P9META+L1 Ref. nr.R.. 184561	 I-II fixed Ref. nr. P9MSLDR* 184591 I-O-II fixed Ref. nr. P9MSLZR* 184601 I-O-II spring return Ref. nr. P9MSLZR* 184631 *Colour palette = R V G L
Round plastic P9X	 P9XPL+GD Ref. nr.R.. 185491V.. 185492G.. 185493B.. 185497	 P9XPL+SD Ref. nr.R.. 185501V.. 185502G.. 185503B.. 185507	 P9XEM4+L Ref. nr.R.. 185511V.. 185512G.. 185513L.. 185516	 P9XETA+L1 Ref. nr.R.. 185561	 I-II fixed Ref. nr. P9XSLDR* 185591 I-O-II fixed Ref. nr. P9XSLZR* 185601 I-O-II spring return Ref. nr. P9XSLZR* 185631 *Colour palette = R V G L
Square plastic P9S	 P9SPL+GD Ref. nr.R.. 186491V.. 186492G.. 186493B.. 186497	 P9SPL+SD Ref. nr.R.. 186501V.. 186502G.. 186503B.. 186507	 P9SEM4+L Ref. nr.R.. 186511V.. 186512G.. 186513L.. 186516	 P9SETA+L1 Ref. nr.R.. 186561	 I-II fixed Ref. nr. P9SSLDR* 186591 I-O-II fixed Ref. nr. P9SSLZR* 186601 I-O-II spring return Ref. nr. P9SSLZR* 186631 *Colour palette = R V G L



	Pilot light diffused lens	Pilot light unibloc full voltage >= BA95 max. 2W not included
Round satin chrome P9M	 P9ML+D Ref. nr.R.. 184791V.. 184792G.. 184793B.. 184797	 P9ML+DDO Ref. nr.R.. 185821V.. 185822G.. 185823B.. 185827
Round plastic P9X	 P9XPL+D Ref. nr.R.. 185791V.. 185792G.. 185793B.. 185797	 P9XPL+DDO Ref. nr.R.. 185821V.. 185822G.. 185823B.. 185827
Square plastic P9S	 P9SPL+D Ref. nr.R.. 186791V.. 186792G.. 186793B.. 186797	 P9SPL+DDO Ref. nr.R.. 186821V.. 186822G.. 186823B.. 186827

	1 NC 1 NO 2 NC 1 NC + 1 NO 2 NO	Cat. nr.	Ref. nr.
Power supplies	Full voltage >= BA95 max. 380V-2W not included	P9PDNV0	187020
Resistor	F110/220V >= BA95 60V-1.2W included 220-240V >= BA95 130V-2W included	P9PRNVJ P9PRNVN	187023 187024
Transformer 50/60 Hz	110 - 120V 220 - 250V BA95 6V-1.5W included	P9PTNVJ P9PTNVN	187030 187031
Multifunction	Full voltage 24V BA95 24V-2W included 110 - 120V 220 - 250V BA95 6V-0.6W included	P9PDMVD P9PTMVJ P9PTMVN	187040 187045 187046
Integrated LED	x1 x2 Position on flange 2 3 1	P9 PLN VDR* P9 PLN VJR* P9 PLN VR*	197004 197010 197016
Standard light	24V AC/DC 120V AC/DC 250V AC/DC	P9 PLF VDR* P9 PLF VJR* P9 PLF VNR*	197022 197028 197034
Flashing light	24V AC/DC 120V AC/DC 230V AC/DC	P9 PLF VDR* P9 PLF VJR* P9 PLF VNR*	197022 197028 197034



	1 NC 1 NO 2 NC 1 NC + 1 NO 2 NO	Cat. nr.	Ref. nr.
Control units	Full voltage >= BA95 max. 380V-2W not included	P9PDNV0	187020
Resistor	F110/220V >= BA95 60V-1.2W included 220-240V >= BA95 130V-2W included	P9PRNVJ P9PRNVN	187023 187024
Transformer 50/60 Hz	110 - 120V 220 - 250V BA95 6V-1.5W included	P9PTNVJ P9PTNVN	187030 187031
Multifunction	Full voltage 24V BA95 24V-2W included 110 - 120V 220 - 250V BA95 6V-0.6W included	P9PDMVD P9PTMVJ P9PTMVN	187040 187045 187046
Integrated LED	x1 x2 Position on flange 2 3 1	P9 PLN VDR* P9 PLN VJR* P9 PLN VR*	197004 197010 197016
Standard light	24V AC/DC 120V AC/DC 250V AC/DC	P9 PLF VDR* P9 PLF VJR* P9 PLF VNR*	197022 197028 197034
Flashing light	24V AC/DC 120V AC/DC 230V AC/DC	P9 PLF VDR* P9 PLF VJR* P9 PLF VNR*	197022 197028 197034

	1 NC 1 NO	Cat. nr.	Ref. nr.
Power supplies	Full voltage >= BA95 max. 380V-2W not included	P9PDNV0	187020
Additional resistor	110/120V >= BA95 60V-1.2W 220/240V >= BA95 130V-2W	P9PRNVJ P9PRNVN	187023 187024
Integrated LED	x1 x2 Position on flange 2 3 1	P9 PLN DR* P9 PLN JR* P9 PLN NR*	197040 197046 197052

	1 NC 1 NO	Cat. nr.	Ref. nr.
Power supplies	Full voltage >= BA95 max. 380V-2W not included	P9PDNV0	187020
Additional resistor	110/120V >= BA95 60V-1.2W 220/240V >= BA95 130V-2W	P9PRNVJ P9PRNVN	187023 187024
Integrated LED	x1 x2 Position on flange 2 3 1	P9 PLN DR* P9 PLN JR* P9 PLN NR*	197040 197046 197052

Push-buttons⁽¹⁾

STYLE	FORM	TYPE	CAP COLOUR	PUSH-BUTTON TYPE	LENS TYPE
P9	P	N	N = Black R = Red V = Green G = Yellow L = Blue B = White	G = Flush R = Extended S = Recessed	D = Diffuser for illuminated push-button only

Selector switches⁽¹⁾

STYLE	FORM	TYPE	CAM	SPRING RETURN	COLOUR
P9	S	M	D = 2 positions Z = 3 positions	O = Fixed 3 = From left & right L = 0 < R 1 = L > 5 = < R	N = Black R = Red V = Green G = Yellow L = Blue

Pilot lights⁽¹⁾

STYLE	FORM	TYPE	LENS TYPE
P9	L	R	D = Diffused R = Refracted V = Glass

Contact blocks⁽¹⁾

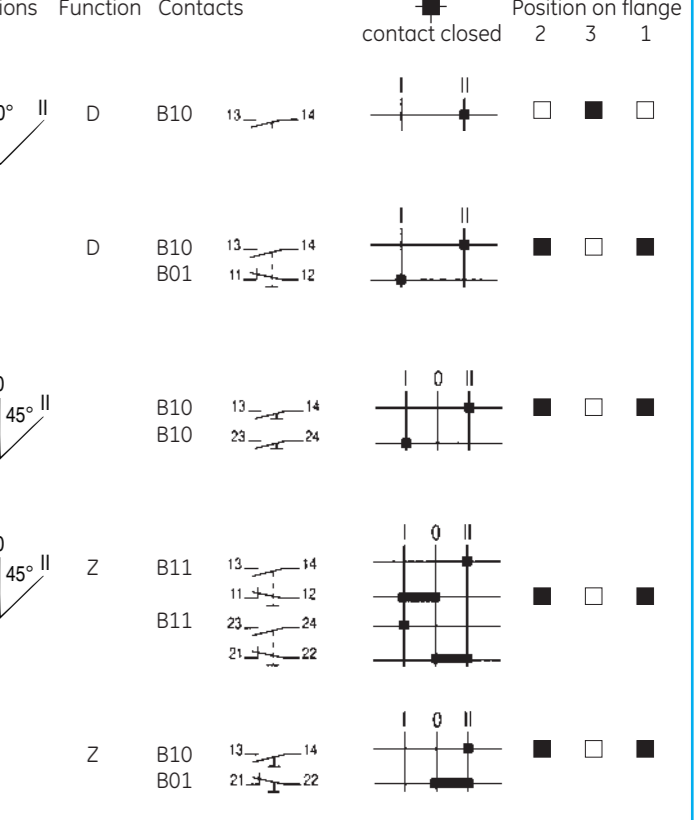
FORM	NORMALLY OPEN CONTACTS	NORMALLY CLOSED CONTACTS	TERMINAL TYPE	CONTACT TYPE
P9 B	0 = None 1 = 1 NO	0 = None 1 = 1 NO	V = Standard screw B = Base mounting screw F = Faston	N = Normal A = Early closing R = Late opening

Power supplies⁽¹⁾

FORM	TYPE	STYLE	TERMINAL TYPE	VOLTAGE
P9 P	D = Full voltage R = Resistor V = Lever T = Transformer L = Led	O = Normal M = Multi-function (continuous/blinking) D = Diode L = Long life F = Flashing	V = Standard screw B = Base mounting screw F = Faston	O = Full voltage D = 24V J = 110-120V N = 220-240V

Joysticks

Positions	Contacts	Position on flange
1 0 3	B11 13-14 11-12 23-24 21-22	2 3 1
1 0 3 4	B11 13-14 11-12 23-24 21-22	2 3 1



⁽¹⁾ Nomenclature keys are indicative only. Do not use for orders.
The complete range is shown in our general catalogue "Control and Automation Products"