

Main features

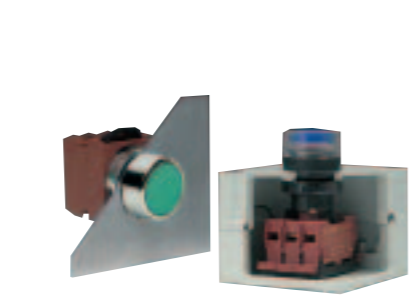


Shape, material and colours

The P9 line offers three types of operators:

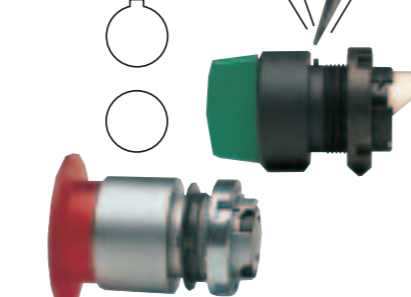
- round in satin chrome metal
- round in engineered thermoplastic
- square in engineered thermoplastic

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 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.



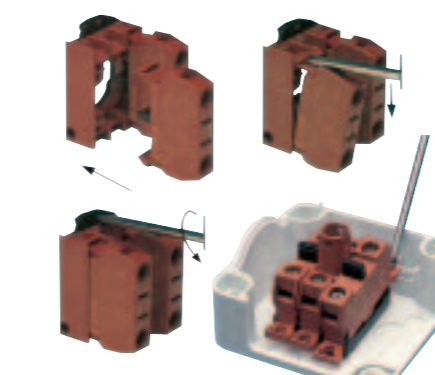
Fitting and positioning

All the P9 operators are fitted with seal to ensure IP66 degree of protection. A correct 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.



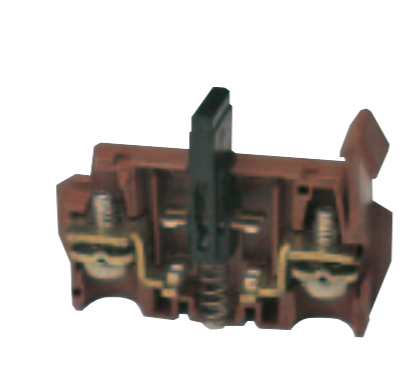
Rear locking and back mounting procedure

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.



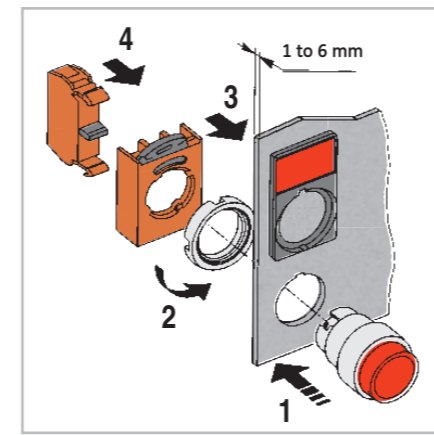
Safety and reliability

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:

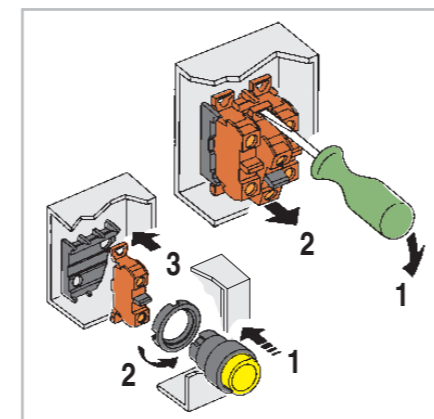
- four contact points
- high efficiency self-cleaning operation
- silver contacts, properly shaped
- high control pressure.

Technical data

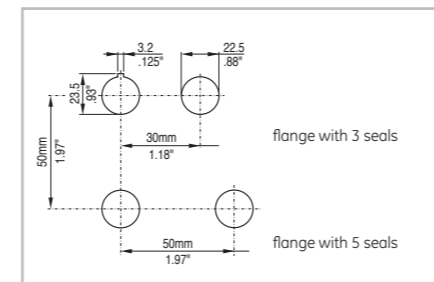
Panel mounting



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

cULus B - RINA (I)
Lloyd's Register of Shipping (U.K.) - GOST
Bureau Veritas (F)
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
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 CENELEC EN 50013

Electrical performances

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

Category AC15

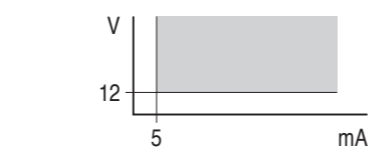
Voltage U_e (V) 24 48 60 110 220 380 500 600
Current I_e (A) 10 10 10 6 3 2 1.5 1.2

Category DC 13

Voltage U_e (V) 24 48 60 110 220 300
Current I_e (A) 2.5 1.4 1 0.55 0.27 0.2

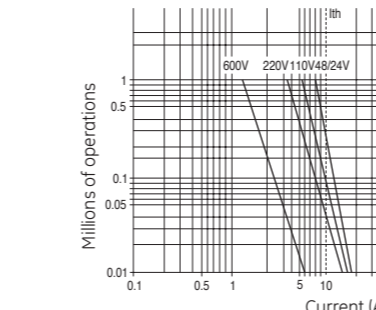
Performances according to CSA and UL AC/Heavy Duty (A600) - DC/Standard Duty (Q300)

Minimum operating range

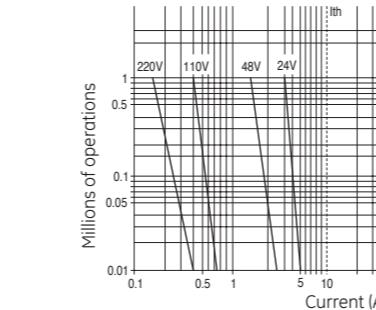


Electrical life

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
Vn AC ± 10%	Cat. nr.	Ref. nr.
230	BA9S230LR*	187921

* Colour palette :

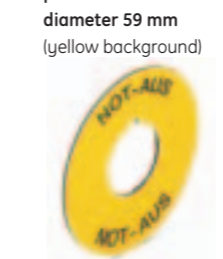
Insert holders

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



Round plates

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



Emergenza	080XTGR01	179525
Emergency Stop	080XTGR02	179526
Arrêt d'urgence	080XTGR03	179510
Not - Aus	080XTGR04	179527
Noodstop	080XTGR05	179528
Paro Emergencia	080XTGR06	179529

Plugs



Round	P9ARHPR	187491
Square 30x30mm	P9ASHPS	187792
Rectangular 30x50mm	P9ASHPS	187793

Tools



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



No of holes	Cat. nr.	Ref. nr.
1 (yellow cover)	P9EPG01	189000
1	P9EPG01	189001
2	P9EPG02	189002
3	P9EPG03	189003
4	P9EPG04	189004
6	P9EPG06	189005

Accessories

Write-on plates

Illuminated, self adhesive,
20 x 20 mm
Black background engravable
for white texts

Without text

	P9AELN	189030
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With text (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

(1) Other languages on request

With symbols	→	P9AELN006	189041
I	I	P9AELN028	189042
O	O	P9AELN029	189043
II	II	P9AELN035	189044
III	III	P9AELN038	189045
O-I	O-I	P9AELN039	189046
I-O-II	I-O-II	P9AELN042	189047

Earth terminal clamp

	P9AEMT	189029
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Empty versions in aluminium alloy

Grey coloured RAL 7012
Panel mounting

Cover with holes

1	080SP1	170801
2	080SP2	170802
3	080SP3	170803
4	080SP4	170804
6	080SP6	170806
8	080SP8	170807
12	080SP12	170808
18	080SP18	170809
35	080SP35	170811

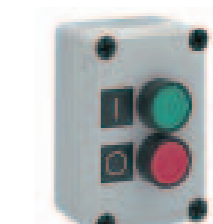
Equipped versions in thermoplastic IP66, one unit



Operators Colour Diagram Namepl. Cat. nr. Ref. nr.

Flush push-button	green		I	P9EPA01Y02	189010
Flush push-button	white		I	P9EPA01Y03	189011
Emergency push-button with latch according to EN418 (on yellow cover)	red		0	P9EPAG1Y01N	189007

Equipped versions in thermoplastic IP66, two units



Operators Colour Diagram Namepl. Cat. nr. Ref. nr.

Flush push-buttons	green		I	P9EPA02Y01	189016
	red		0		

The catalogue numbers in bold are available from stock.

Equipped versions in thermoplastic IP66, three units



Operators Colour Diagram Namepl. Cat. nr. Ref. nr.

Full voltage pilot light	white			P9EPA03Y01	189018
BA9S max 380V-2W not incl.	green		I		
Flush push-buttons	red		0		
Flush push-buttons	black		↑	P9EPA03Y05	189022
	red		0		
	black		↓		

Series P9

Control and Signalling Units



Standard control units	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 309S) 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	P9MER4 RN 184070		I-II fixed ● P9MSMD0N 184110 ● P9MSVD0N 184370 I-O-II fixed ● P9MSMZ0N 184200 ● P9MSVZ0N 184379 I-O-II spring return ● P9MSMZ3N 184320 ● P9MSVZ3N 184391	I-II fixed ● P9MSVD0N 184370 I-O-II fixed ● P9MSVZ0N 184379 I-O-II spring return ● P9MSVZ3N 184391	I-II fixed ● P9MSCD0K95 184402 I-O-II fixed ● P9MSCZ0T95 184439 I-O-II spring return ● P9MSCZ3C95 184467	fixed pos. ● P9MMN2F 184700 transient pos. ● P9MMN2T 184701 ● P9MMN4F 184720 ● P9MMN4T 184721

Standard control units	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 309S) key removal in all positions	Joystick
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.. 185041	P9XER4 RN 185070	P9XER4 RN 185077	I-II fixed ● P9XSM0D0N 185110 I-O-II fixed ● P9XSMZ0N 185200 I-O-II spring return ● P9XSMZ3N 185320	I-II fixed ● P9XSMVD0N 185370 I-O-II fixed ● P9XSMVZ0N 185379 I-O-II spring return ● P9XSMVZ3N 185391	I-II fixed ● P9XSCD0K95 185402 I-O-II fixed ● P9XSCZ0T95 185439 I-O-II spring return ● P9XSCZ3C95 185467	fixed pos. ● P9XMMN2F 185700 transient pos. ● P9XMMN2T 185701 ● P9XMMN4F 185720 ● P9XMMN4T 185721

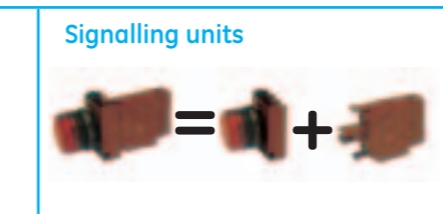
Standard control units	Push-button with flush cap	Push-button with raised cap	Push-button mushroom head	Push-button emergency push-twist to release mushroom head	Push-button emergency with positive break push-twist to release mushroom head	Selector switch with knob	Selector switch with lever	Selector switch with key (code 309S) key removal in all positions	Joystick
Square plastic P9S	P9SPN + G Ref. nr.N.. 186000R.. 186001V.. 186002G.. 186003L.. 186006	P9SPN + S Ref. nr.N.. 186010R.. 186011V.. 186012G.. 186013L.. 186016	P9SEM3 RN 186031	P9SER4 RN 186072		I-II fixed ● P9SSMD0N 186110 I-O-II fixed ● P9SSMZ0N 186200 I-O-II spring return ● P9SSMZ3N 186320	I-II fixed ● P9SSVD0N 186402 I-O-II fixed ● P9SSVZ0N 186439 I-O-II spring return ● P9SSVZ3N 186467	I-II fixed ● P9SSCD0K95 186402 I-O-II fixed ● P9SSCZ0T95 186439 I-O-II spring return ● P9SSCZ3C95 186467	Double function with indicator light white lens P9DPLVRG00 186881 P9DPLVRG01 186891



Illuminated control units	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
	P9MPL + GD Ref. nr.R.. 184491V.. 184492G.. 184493B.. 184497	P9MPL + SD Ref. nr.R.. 184501V.. 184502G.. 184503B.. 184507	P9MEM4 + L Ref. nr.R.. 184551V.. 184552G.. 184553L.. 184556	P9MET4 RL1 184561	I-II fixed Ref. nr. P9MSLD0R* 184591 I-O-II fixed P9MSLZ0R* 184601 I-O-II spring return P9MSLZ3R* 184631 *Colour palette = ● R ● V ● G ● L

Illuminated control units	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
	P9XPL + GD Ref. nr.R.. 185491V.. 185492G.. 185493B.. 185497	P9XPL + SD Ref. nr.R.. 185501V.. 185502G.. 185503B.. 185507	P9XEM4 + L Ref. nr.R.. 185551V.. 185552G.. 185553L.. 185556	P9XET4 RL1 185561	I-II fixed Ref. nr. P9XSLD0R* 185591 I-O-II fixed P9XSLZ0R* 185601 I-O-II spring return P9XSLZ3R* 185631 *Colour palette = ● R ● V ● G ● L

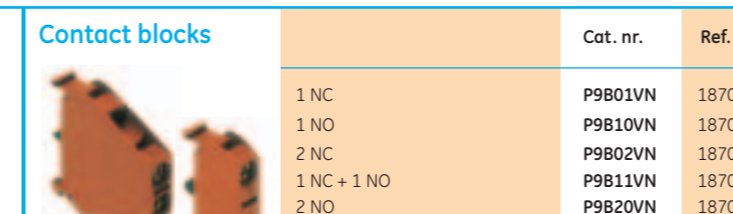
Illuminated control units	Illuminated push-button with flush cap	Illuminated push-button with raised cap	Illuminated push-button with mushroom head	Illuminated push-button push-pull to release with mushroom head	Illuminated selector switch
	P9SPL + GD Ref. nr.R.. 186491V.. 186492G.. 186493B.. 186497	P9SPL + SD Ref. nr.R.. 186501V.. 186502G.. 186503B.. 186507	P9SEM4 + L Ref. nr.R.. 186551V.. 186552G.. 186553L.. 186556	P9SET4 RL1 186561	I-II fixed Ref. nr. P9SSLD0R* 186591 I-O-II fixed P9SSLZ0R* 186601 *Colour palette = ● R ● V ● G ● L



Signalling units	Pilot light diffused lens	Pilot light unibloc full voltage
	P9ML + D Ref. nr.R.. 184791V.. 184792G.. 184793B.. 184797	P9ML + DDD Ref. nr.R.. 185821V.. 185822G.. 185823B.. 185827

Signalling units	Pilot light unibloc full voltage
	P9PLN VDR* 197004 P9PLN VJR* 197010 P9PLN VNR* 197016

Signalling units	Pilot light unibloc full voltage
	P9PLF VDR* 197022 P9PLF VJR* 197028 P9PLF VNR* 197034



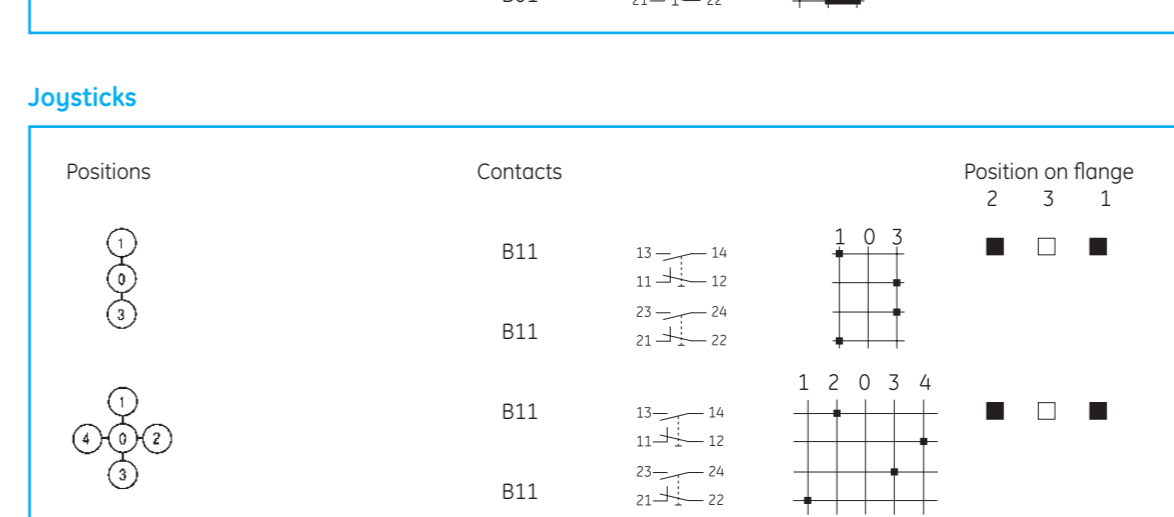
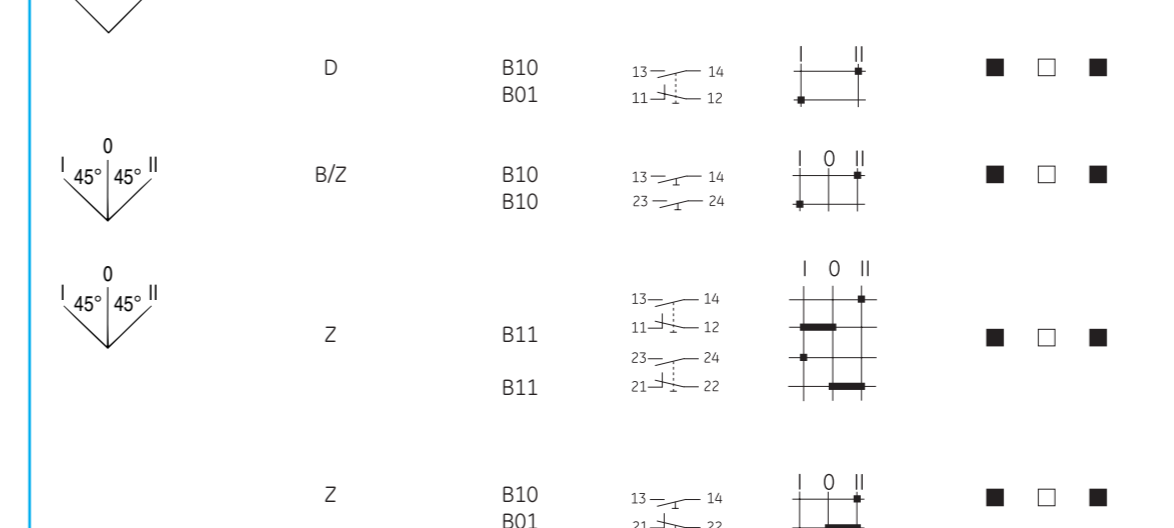
Contact blocks	Full voltage	Resistor	Transformer 50/60 Hz	Multifunction ⁽¹⁾	Transformer 50/60 Hz
	P9PDNV0 187020	P9PRNVJ 187023 P9PRNVN 187024	P9PTNVJ 187030 P9PTNVN 187031	P9PDMVD 187040 P9PTMVJ 187045 P9PTMVN 187046	P9PTMVJ 187045 P9PTMVN 187046

Contact blocks	Full voltage	Resistor	Transformer 50/60 Hz	Multifunction ⁽¹⁾	Transformer 50/60 Hz
	P9PDNV0 187020	P9PRNVJ 187023 P9PRNVN 187024	P9PTNVJ 187030 P9PTNVN 187031	P9PDMVD 187040 P9PTMVJ 187045 P9PTMVN 187046	P9PTMVJ 187045 P9PTMVN 187046

Contact blocks	Full voltage	Resistor	Transformer 50/60 Hz	Multifunction ⁽¹⁾	Transformer 50/60 Hz
	P9PDNV0 187020	P9PRNVJ 187023 P9PRNVN 187024	P9PTNVJ 187030 P9PTNVN 187031	P9PDMVD 187040 P9PTMVJ 187045 P9PTMVN 187046	P9PTMVJ 187045 P9PTMVN 187046



Control units using same operators of standard plastic panel mounting devices	Power supplies	Integrated LED
	P9PDNB0 187070	P9PLNB DR* 197040 P9PLNB JR* 197046 P9PLNB NR* 197052



Catalogue number structure ⁽¹⁾

Push-buttons

STYLE	FORM	TYPE	CAP COLOUR	PUSH-BUTTON TYPE	LENS TYPE
M = Round satin chrome X = Round plastic S = Square plastic	P = Push-Button	N = Non illuminated L = Illuminated	N = Black R = Red V = Green G = Yellow L = Blue B = White	G = Flush S = Extended E = Recessed	D = Diffuser for illuminated push-button only

Selector switches

STYLE	FORM	TYPE	CAM	SPRING RETURN	COLOUR
M = Round satin chrome X = Round plastic S = Square plastic	S = Selector switches	M = Knob V = Lever L = Illuminated Knob	D = 2 positions Z = 3 positions	0 = Fixed 3 = From left & right L → 0 ← R 1 = L → 5 = ← R	N = Black R = Green V = Yellow L = Blue

Pilot lights

STYLE	FORM	TYPE	LENS TYPE
M = Round satin chrome X = Round plastic S = Square plastic	L = Pilot light	R = Red V = Green G = Yellow B = White	D = Diffused

Contact blocks

FORM	NORMALLY OPEN CONTACTS	NORMALLY CLOSED CONTACTS	TERMINAL TYPE	CONTACT TYPE
B = Contact Block	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

FORM	TYPE	STYLE	TERMINAL TYPE	VOLTAGE
P = Power supplies	D = Full voltage R = Resistor T = Transformer L = Led	0 = Normal M = Multi-function continuous/blinking D = Diode L = Long life T = Test F = Flashing	V = Standard screw B = Base mounting screw F = Faston	0 = Full voltage D = 24V J = 110-120V N = 220-240V

⁽¹⁾ Nomenclature keys are indicative only. Do not use for orders.

The complete range is shown in our general catalogue "Control and Automation Products"