

## Technical data

### Compliance with standards

IEC 947.5.1 - VDE 0660 - NFC63140  
CEI EN60947.5.1 - UTE - BSI - NEMA  
CENELEC EN 50007

### Approvals

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

### 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 IEC255, cat. 3

### Identification of the terminals

According CENELEC EN 50013

### Electrical performances

Rated thermal current I<sub>th</sub> = 10 A

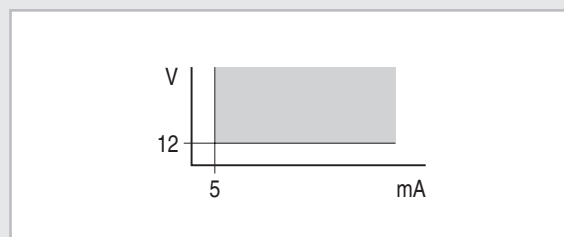
#### Performances according IEC 947.5.1

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



## Nomenclature

### Standard & illuminated push-buttons

Style	Type	Type	Cap colour	Push-button type	Lens type	
<b>M</b> = Round satin chrome <b>X</b> = Round plastic <b>S</b> = Square plastic	<b>P</b> = Push button	<b>N</b> = Non illuminated <b>L</b> = Illuminated	<b>O</b> = No cap <b>N</b> = Black <b>R</b> = Red <b>V</b> = Green <b>G</b> = Yellow <b>L</b> = Blue <b>B</b> = White <b>M</b> = Brown <b>H</b> = Grey	<b>G</b> = Flush <b>S</b> = Extended <b>E</b> = Recessed	<b>D</b> = Diffused for illuminated push button only	

### Double function push-buttons

Style	Type	Type	Cap colour	Push-button type	ISO symbols	
	<b>P</b> = Push button	<b>L</b> = Illuminated	<b>V</b> = Green <b>N</b> = Black	<b>G</b> = Flush <b>S</b> = Top flush bottom extended	<b>00</b> = No sym. <b>01</b> = With sym.	

### Pilot lights

Style	Type	Colour	Lens type	For Unibloc type only	
<b>M</b> = Round satin chrome <b>X</b> = Round plastic <b>S</b> = Square plastic	<b>L</b> = Standard <b>U</b> = Unibloc	<b>R</b> = Red <b>V</b> = Green <b>G</b> = Yellow <b>L</b> = Blue <b>B</b> = White <b>I</b> = Clear <b>A</b> = Orange	<b>D</b> = Diffused <b>R</b> = Refracted <b>V</b> = Glass	<b>D0</b> = Full voltage <b>RN</b> = With resistor	

### E

### Mushroom head push-buttons

Style	Type	Mushroom diameter	Colour	Illumination	Key selection	
<b>M</b> = Round satin chrome <b>X</b> = Round plastic <b>S</b> = Square plastic	<b>M</b> = Momentary <b>T</b> = Push/Pull <b>R</b> = Turn to reset <b>C</b> = Key to reset	<b>3</b> = Ø 28 mm <b>4</b> = Ø 40 mm <b>6</b> = Ø 60 mm	<b>N</b> = Black <b>R</b> = Red <b>V</b> = Green <b>G</b> = Yellow	<b>N</b> = Non illuminated <b>L</b> = Illuminated	See key selection table on E.16	

## Push-buttons

Standard / Momentary



Description	Cat. no.	Ref. no. see bottom	Cat. no.	Ref. no. see bottom	Cat. no.	Ref. no. see bottom
	Metal		Plastic		Plastic	
With flush cap	<b>P9MPN●G</b>		<b>P9XPN●G</b>		<b>P9SPN●G</b>	
With raised cap	<b>P9MPN●S</b>		<b>P9XPN●S</b>		<b>P9SPN●S</b>	
Recessed	<b>P9MPN●E</b>					

Mushroom head / Momentary



Mushroom head Ø 28 mm	<b>P9MEM3●N</b>		<b>P9XEM3●N</b>			
Mushroom head Ø 40 mm	<b>P9MEM4●N</b>		<b>P9XEM4●N</b>			
Mushroom head Ø 60 mm	<b>P9MEM6●N</b>		<b>P9XEM6●N</b>			
Mushroom head $\nabla$ 30 mm					<b>P9SEM3●N</b>	

Mushroom head / Emergency with latch

Standard



Push-pull to release

Mushroom head Ø40 mm	<b>P9MET4●N1</b>		<b>P9XET4●N1</b>		<b>P9SET4●N1</b>	
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Push-twist to release

Red mushroom head Ø28 mm	<b>P9MER3RN</b>	184070	<b>P9XER3RN</b>	185070		
Red mushroom head Ø40 mm	<b>P9MER4RN</b>	184071	<b>P9XER4RN</b>	185071		

Push-key to release

Red mushroom head Ø40 mm	<b>P9MEC4RN▲</b>		<b>P9XEC4RN▲</b>			
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Positive break in accordance with EN 418



Push-twist to release

Red mushroom head Ø40 mm			<b>P9XER4RA</b>	185072	<b>P9SER4RA</b>	186072
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Push-key to release

Red mushroom head Ø40 mm			<b>P9XEC4RA▲</b>		<b>P9SEC4RA▲</b>	
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Mushroom head / 3 positions



Ø40 mm 1-0 fixed. 2 transient	<b>P9MET4●N2</b>		<b>P9XET4●N2</b>		<b>P9SET4●N2</b>	
Ø40 mm 0 fixed. 1-2 transient	<b>P9MET4●N3</b>		<b>P9XET4●N3</b>		<b>P9SET4●N3</b>	

With keylock <sup>(1)</sup>

Key withdrawable in position I & II



normal	<b>P9MPCN1K▲</b>		<b>P9XPCN1K▲</b>			
depressed	<b>P9MPCN2K▲</b>		<b>P9XPCN2K▲</b>			
normal & depressed	<b>P9MPCN3K▲</b>		<b>P9XPCN3K▲</b>			

Key withdrawable position III



Lockable position



normal	<b>P9MPCN1E▲</b>		<b>P9XPCN1E▲</b>			
depressed	<b>P9MPCN2E▲</b>		<b>P9XPCN2E▲</b>			
normal & depressed	<b>P9MPCN3E▲</b>		<b>P9XPCN3E▲</b>			

(1) Keys on E.16

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

Colours		black	red	green	yellow	brown	bleu	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.10

