

Series P9

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

$\leq 25 \text{ m } \Omega$ according to IEC 255, cat. 3

Identification of the terminals

According CENELEC EN 50013

Electrical performances

Rated thermal current $I_{th} = 10 \text{ A}$

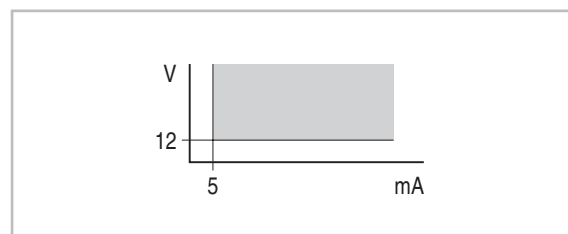
Performances according IEC 947.5.1

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

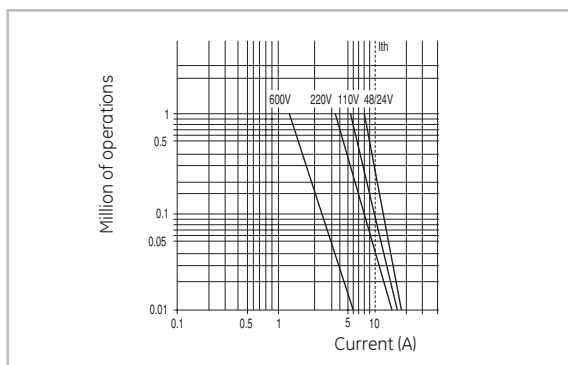
AC Heavy Duty	(A600)
DC Standard Duty	(Q300)

Operating range

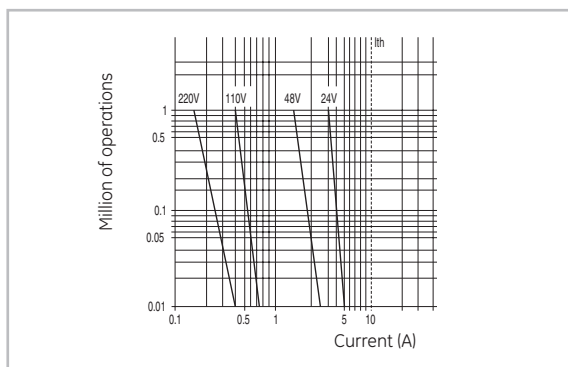


Electrical endurance

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.

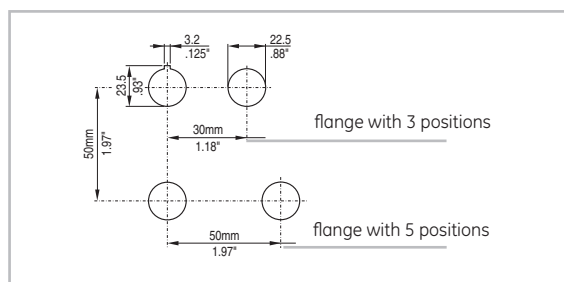
Using the five position flange take into account the bigger with (50 mm instead of 30 mm).

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.



Selector switches with key

2 positions		Function (1)	Key removal	Cat. no.	Ref. no.	Cat. no.	Ref. no.	Cat. no.	Ref. no.	
Fixed				I	II	I-II	see bottom			see bottom
							Metal	Plastic	Plastic (1)	
			D	I	P9MSCD0A▲	P9XSCD0A95	185400	P9SSCD0A95	186400	
				II	P9MSCD0E▲	P9XSCD0E95	185401			
				I-II	P9MSCD0K▲	P9XSCD0K95	185402			
			I	0	P9MSCI0C▲					
				I	P9MSCI0E▲					
				0-I	P9MSCI0N▲					
			H	I	P9MSCH0A▲					
				0	P9MSCH0C▲					
				I-0	P9MSCH0H▲					
	With spring return		D	I	P9MSCD5A▲	P9XSCD5A95	185409	P9SSCD5A95	186409	
				I	0	P9MSCI5C▲	P9XSCI5C95	185410	P9SSCI5C95	186410
				H	0	P9MSCH1C▲				
3 positions										
Fixed		E	I	P9MSCE0A▲						
			0	P9MSCE0C▲						
			II	P9MSCE0E▲						
			I-0	P9MSCE0H▲						
			I-II	P9MSCE0K▲						
			0-II	P9MSCE0N▲						
		I-0-II	P9MSCE0T▲							
			L	I	P9MSCL0A▲					
				0	P9MSCL0C▲					
				II	P9MSCL0E▲					
				I-0	P9MSCL0H▲					
				I-II	P9MSCL0K▲					
	0-II	P9MSCL0N▲								
		I-0-II	P9MSCL0T▲							
			U	I	P9MSCU0A▲					
				0	P9MSCU0C▲					
				II	P9MSCU0E▲					
				I-0	P9MSCU0H▲					
	I-II			P9MSCU0K▲						
		0-II		P9MSCU0N▲						
			I-0-II	P9MSCU0T▲	P9XSCU0T95	185432				
				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