

Auxiliary Relays

Monostable Relay – 7PA27

Description

7PA27 is a monostable relay with 4 change-over contacts.

The relay has been tested according to IEC and EN standards and has the CE marking.

Applications

The design, quality and high durability of the relays ensure reliable usability under highly demanding conditions such as in power plants, generator stations, transformer stations and railroads.

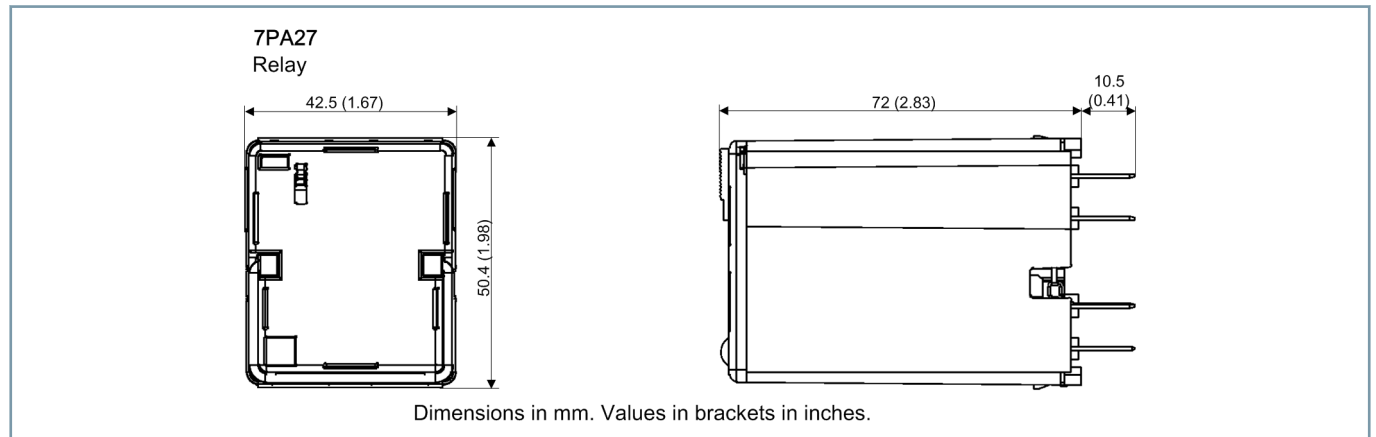
They are suitable for use in energy systems and process control systems for large-scale industry applications, the petrochemical sector, steel and cement factories, and many more. Mechanically sturdy contacts, high insulation resistance, high making and breaking power, and a high continuous current enable direct switching in high-voltage and medium-voltage systems.



[ph_7PA27, 1, ---]

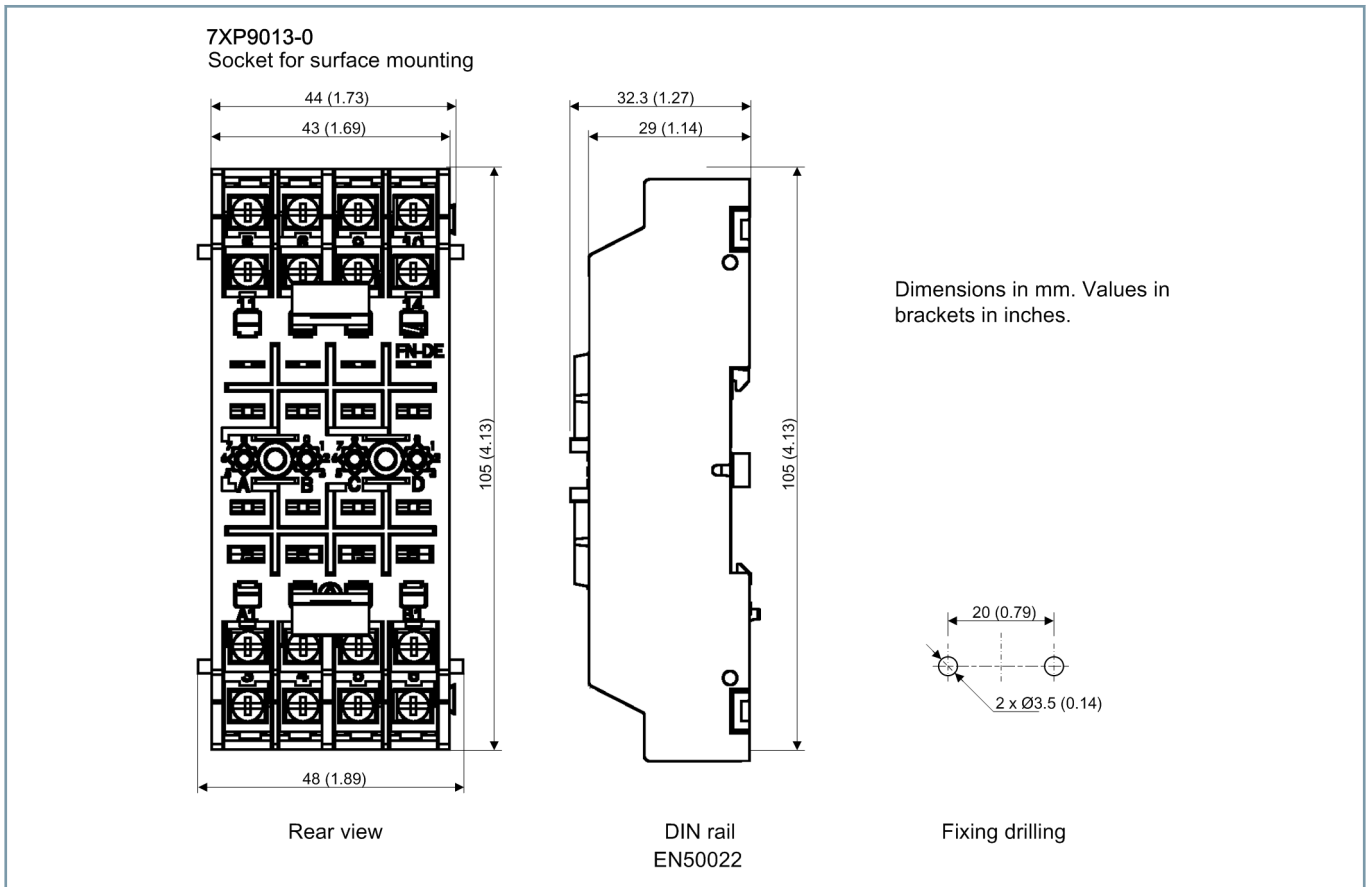
Figure 2.2/7 Monostable Fast-Acting Relay 7PA2732

Dimensions and Connections



[dw_7pa27_dimensions_and_panel-mounting-cutout, 2, en_US]

Figure 2.2/8 Dimensions



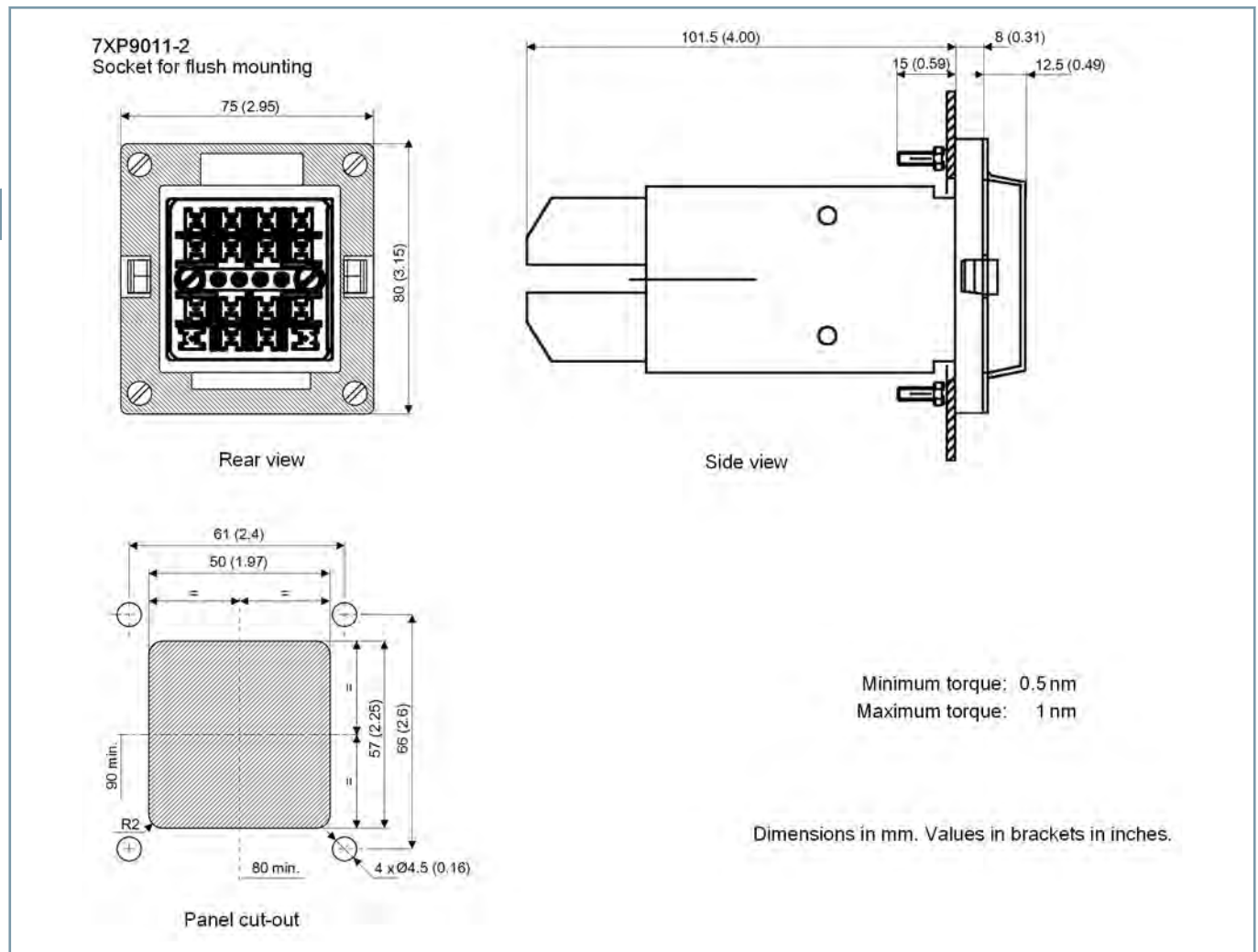
[dw_7pa23_27_30-1phs_socket_for_surface-mounting, 2, en_US]

Figure 2.2/9 Surface-Mounting Base

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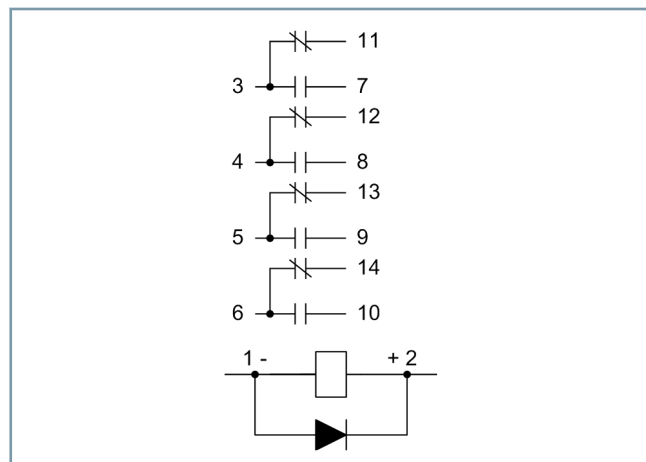
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2.2



[dw_7pa27_socket_for_flush-mounting_2_en_US]

Figure 2.2/10 Flush-Mounting Base



[dw_7pa27_connection_2_en_US]

Figure 2.2/11 Connections 7PA27

Technical Data

Rated Voltage and Internal Consumption					
V _N (VDC)	Voltage Range (VDC)	Internal Consumption (mA)		Excitation Voltage (VDC) between ¹	De-Excitation Voltage (VDC) between ¹
		Standard [mA]	Peak		
24/30	19 to 36	42	1 A/20 ms	16 and 19	9 and 14
48	38.4 to 52.8	32		28.8 and 33.6	14.4 and 21.6
60	42 to 72	18		36 and 42	18 and 27

¹ Excitation and de-excitation voltages for the 7PA26*20 are specified for an ambient temperature of 23°C and cold relay. These values change with temperature.

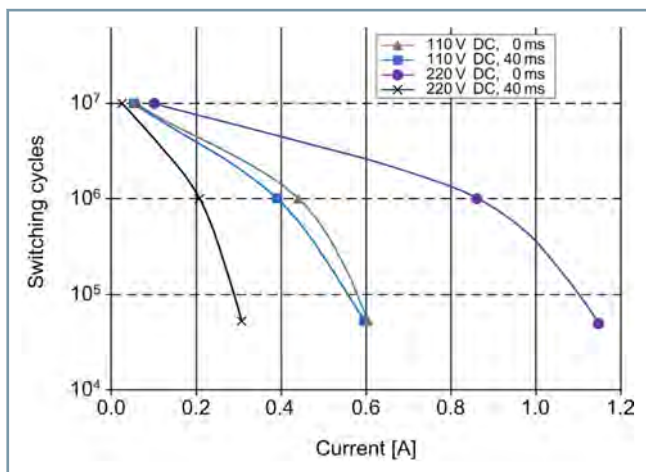
Rated Voltage and Internal Consumption					
110/125	77 to 150	8	0.3 A/20 ms	65 and 77	38 and 55
220	154 to 264	6		132 and 154	66 and 99

Pre-Arcing Time	
For excitation	<8 ms
For de-excitation	<40 ms

Contacts	
Continuous current	<10 A
Overload capability	80 A/200 ms 200 A/10 ms
Switching power	40 A/0.5 s, 110 VDC

Breaking Power for 10 ⁵ Switching Cycles				
VDC	Not inductive		Inductive, 40 ms	
	1 contact (A)	2 contacts in series (A)	1 contact (A)	2 contacts in series (A)
24	18	>20	8.1	>20
48	6.9	>20	3.3	18
60	3.4	>20	1.85	13
125	0.9	4	0.47	2
220	0.55	1.05	0.24	0.43

For details, refer to [Figure 2.2/12](#)



[dw_7PA26_27_curva_2_en_US]

Figure 2.2/12 Diagram

V _{max} , open-circuited contact	250 VDC/400 VAC
Mechanical endurance	10 ⁷ switching cycles
Operating temperature	-25 °C +55 °C
Storage temperature	-40 °C +85 °C
Max. humidity	93 %/40 °C

Weights and Packaging	
7PA27	250 g
Carton	125 x 79 x 84 mm

Weights and Packaging	
7XP9011-2	300 g
7XP9013-0	110 g

Design guidelines	
Electrical tests according to	IEC 60255-27
Insulation	2 kV/50 Hz/1 min
Surge immunity	5 kV/1.2/50 μs
Insulation resistance	> 100 MΩ/500 VDC
Flame resistance	
Plastics	UL94: V0
Protection class	IEC 60529, EN60529
Relays	IP40
Flush-mounting base	IP10
Surface-Mounting Base	IP10
Environmental conditions	IEC 60068-2
Dry cold, in operation	-25 °C
Dry heat, in operation	+70 °C
Storage and transportation	-25 °C + 85 °C

EMC Tests	
High-frequency test:	EN 60255-22-1
Test level: 1 MHz, 400 imp/s, 2 s	
Common mode: 2.5 kV	
Differential mode: 1 kV	
Fast transient bursts	EN 61000-4-4
Test level: 4 kV, 2.5 kHz, 1 min*2	
kV, 5 kHz, 1 min	
Energy surge voltages	EN 61000-4-5
8/20 μs. (current) - 1.2/50 μs. (voltage) - 8/20 μs. (current)	
Common mode: 2 kV - differential mode: 1 kV	
Radiated HF field interference, amplitude-modulated:	EN 61000-4-3
Test level: 80-1000 MHz, 10 V/m, 80% AM (1 kHz)	
Radiated HF field interference, pulse-modulated:	EN 61000-4-3
Test level: 900 ±5 MHz, 10 V/m, 50% (200 Hz) 1.89 GHz ±10 MHz, 10 V/m, 50% (200 Hz)	
Line-conducted HF	EN 61000-4-6
amplitude-modulated: Test level: 0.15-80 MHz, 10 V, 80% AM (1 kHz)	
Electrostatic discharge test:	EN 61000-4-2
Test level: Contact ±15 kV, air mode ±15 kV	

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EMC Tests	
Magnetic Field with Energy Frequency Test level: 100 A/m 1 min•1000 A/m 1 s.	EN 61000-4-8
Emitted interference tests: Test level: Cover: 30-230 MHz, 40 dB (µV/m) (quasi peak) - 10 m 230-1000 MHz, 47 dB (µV/m) (quasi peak) - 10 m Power supply: 0.15-0.5 MHz, 79 dB (µV) (quasi peak)/66 dB average 0.5-5 MHz, 73 dB (µV) (quasi peak)/60 dB average 5-30 MHz, 73 dB (µV) (quasi peak)/60 dB average	EN 55011 Class A

Selection and Ordering Data

Description	Order No.															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Monostable quick-operating relay with 4 change-over contacts	7	P	A	2	7	□	2	-	0	A	A	0	0	-	□	
						▲							▲			
<i>Rated voltage</i>						|							|			
DC 24/30 V						1							|			
DC 60 V						2							|			
DC 110/125 V						3							|			
DC 220 V						4							|			
DC 48 V						8							|			
<i>Base</i>													|			
Without base													0			
With base 7XP9011-2 (flush mounting)													1			
With base 7XP9013-0 (surface mounting)													2			
5 x retaining bracket for auxiliary relay with surface mounting base (1 required for each relay/ surface mounting base)	.	.	.	.	.	.	.	.	.	.	.	.	A	Y	R	: E 4 0