Position switches for high temperature **FD** series



Technical data

Housing

Metal housing with surface anticorrosive treatment

One threaded conduit entry M20 x 1,5

Protection degree: IP67 according to EN 60529 with cable gland having equal or higher

protection degree

General data

Ambient temperature: from -15°C to +180°C for article FD 2011-M2T2 and FD 2016-M2T2

from -25°C to +180°C for article FD 2038-M2T2

Max actuation frequency: 3600 operations cycles¹/hour Mechanical endurance: 1 million operations cycles¹

Assembling position: any

Driving torque for installation: see pages 7/1-7/12
(1) One operation cycle means two movements, one to close and one to open contacts, as foreseen

by EN 60947-5-1 standard.

Main data

- Operating temperature up to +180°C
- Metal housing, one conduit entry
- Protection degree IP67

Cross section of the conductors (flexible copper wire)

Contact blocks 20: min. 1 x 0,34 mm² (1 x AWG 22) max. 2 x 1,5 mm² (2 x AWG 16)

In conformity with standards:

IEC 60947-5-1, EN 60947-5-1, EN 60947-1, EN 50041, IEC 60204-1, EN 60204-1, EN 1088, EN ISO 12100-1, EN ISO 12100-2, IEC 60529, EN 60529, NFC 63-140, VDE 0660-200, VDE 0113, CENELEC EN 50013.

Markings and quality marks:





Approval GOST: POCC IT.AB24.B04512

In conformity with requirements requested by:

Low Voltage Directive 2006/95/EC, Machinery Directive 2006/42/EC and Electromagnetic Compatibility 2004/108/EC.

Positive contact opening in conformity with standards:

IEC 60947-5-1, EN 60947-5-1, VDE 0660-206.

Installation for safety applications:

Use only switches marked with the symbol ①. The safety circuit must always be connected with the **NC contacts** (normally closed contacts: 11-12, 21-22 or 31-32) as stated in the **standard EN 60947-5-1**, **encl. K**, **par. 2**. The switch must be actuated with **at least up to the positive opening travel** shown in the travels diagrams on page 7/4. The switch must be actuated **at least with the positive opening force**, shown in brackets, underneath each article, near the value of the min. force.

⚠ If not expressly indicated in this chapter, for the right installation and the correct utilization of all articles see requirements indicated from page 7/1 to page 7/12.

Electrical data			Utilization categories			
	Thermal current (lth):	4 A	Alternate current: AC15 (5060 Hz)			
t Ire	Rated insulation voltage (Ui):	250 Vac 300 Vdc	Ue (V)	24	120	250
ien ratu	Rated impulse withstand voltage (U _{imp}):	4 kV	le (A)	4	4	4
pe 20	Protection against short circuits:	fuse 4 A 500 V type qG	Direct current: DC13			
Ambient temperature +20 °C	Conditional shot circuit current:	1000 A according to EN 60947-5-1	Ue (V)	24	125	250
Ψ.	Pollution degree:	3	le (A)	4	1,1	0,4
			Alternate current: AC15 (5060 Hz)			
t e .	Thermal current (Ith):	4 A	Ue (V)	24	120	250
nien rratu 0°C	Rated insulation voltage (Ui):	250 Vac 300 Vdc	le (A)	4	4	4
Ambient temperature +180°C	Protection against short circuits:	fuse 4 A 250 V type gG	Direct current: DC13			
	Pollution degree:	3	Ue (V)	24		
	5		le (A)	1		

Adjustable levers

In switches with revolving lever it is possible to adjust the lever with 10° steps for the whole 360° range. The positive movement



transmission always guaranteed thanks to the particular geometrical coupling between the lever and the revolvina shaft as prescribed for safety applications by the German standard BG-GS-ET-15.

Overturning levers

It's possible to fasten the lever on switches on straight or reverse side, maintaining the positive coupling.

In this way it is possible to obtain two different work plans of the lever.

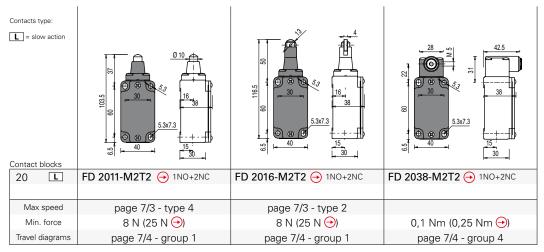


Rotating heads

In all switches, it is possible to rotate the head in 90° steps.



Dimensional drawings



IMPORTANT

For safety applications: join only switches and actuators marked with symbol \odot . For more information about safety applications see page 7/1.

