

Main features

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

Technical data

Housing

Metal housing with anticorrosive surface 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: -15°C ... +180°C for articles FD 2011-M2T2 and FD 2016-M2T2
 -25°C ... +180°C for article FD 2038-M2T2
 Max. actuation frequency: 3600 operating cycles¹/hour
 Mechanical endurance: 1 million operating cycles¹
 Mounting position: any
 Safety parameters:
 B_{10d}: 2,000,000 for NC contacts
 Mechanical interlock, not coded: type 1 according to EN ISO 14119
 Tightening torques for installation: see pages 235-246
 (1) One operation cycle means two movements, one to close and one to open contacts, as defined in EN 60947-5-1.

Cable cross section (flexible copper strands)

Contact block 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 ISO 14119, EN ISO 12100, IEC 60529, EN 60529, UL 508, CSA 22.2 No.14.

Markings and quality marks:



EAC approval: RU C-IT ДМ94.В.01024

In conformity with the requirements of:

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

Positive contact opening in conformity with standards:

IEC 60947-5-1, EN 60947-5-1.

Installation for safety applications:

Use only switches marked with the symbol ⊕ aside the product code. Always connect the safety circuit to the **NC contacts** (normally closed contacts: 11-12, 21-22 or 31-32) as stated in **standard EN 60947-5-1, encl. K, par. 2**. Actuate the switch **at least up to the positive opening travel** shown in the travel diagrams on page 238. Operate the switch **at least with the positive opening force**, indicated between brackets below each article, aside the minimum force value.

⚠ **If not expressly indicated in this chapter, for correct installation and utilization of all articles see chapter utilization requirements from page 235 to page 246.**

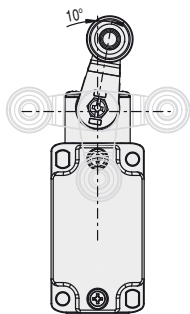
Electrical data

Utilization category

Ambient temperature +20 °C	Thermal current (I _{th}):	4 A	Alternating current: AC15 (50-60 Hz)		
	Rated insulation voltage (U _i):	250 Vac 300 Vdc	U _e (V)	24	120 250
	Rated impulse withstand voltage (U _{imp}):	4 kV	I _e (A)	4	4 4
	Conditional short circuit current:	1000 A according to EN 60947-5-1	Direct current: DC13		
	Protection against short circuits:	fuse 4 A 250 V type gG	U _e (V)	24	125 250
Pollution degree:	3	I _e (A)	4	1.1 0.4	
Ambient temperature +180 °C	Thermal current (I _{th}):	4 A	Alternating current: AC15 (50-60 Hz)		
	Rated insulation voltage (U _i):	250 Vac 300 Vdc	U _e (V)	24	120 250
	Protection against short circuits:	fuse 4 A 250 V type gG	I _e (A)	4	4 4
	Pollution degree:	3	Direct current: DC13		
			U _e (V)	24	
		I _e (A)	1		

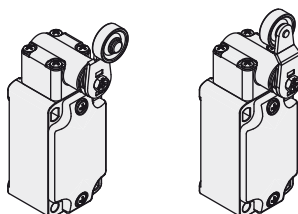
Adjustable levers

For switches with swivelling lever the lever can be adjusted in 10° steps over the entire 360° range. The positive movement transmission is always guaranteed thanks to the particular geometrical coupling between the lever and the revolving shaft as prescribed for safety applications by the German standard BG-GS-ET-15.



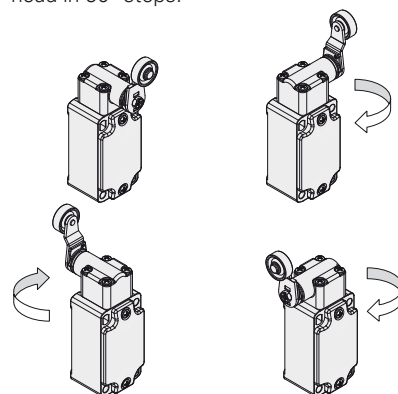
Overturning levers

Negli interruttori a leva girevole è possibile fissare la leva dritta o rovescia mantenendo l'accoppiamento positivo. In questo modo si possono avere due diversi piani di lavoro della leva.



Orientable heads

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



Dimensional drawings

Contact type:

L = slow action

Contact blocks

20 L	FD 2011-M2T2	FD 2016-M2T2	FD 2038-M2T2
Max. speed	page 7/3 - type 4	page 7/3 - type 2	
Min. force	8 N (25 N	8 N (25 N	0.1 Nm (0.25 Nm
Travel diagrams	page 238 - group 1	page 238 - group 1	page 238 - group 4

IMPORTANT

For safety applications: join only switches and actuators marked with symbol aside the product code.

For more information about safety applications see details on page 235.

Special loose actuators

All measures in the drawings are in mm

Stainless steel roller Ø 20 mm	Adjustable round rod Ø 3x125 mm	Adjustable square rod 3x3x125 mm	Stainless steel roller Ø 20 mm	Stainless steel roller Ø 20 mm	Adjustable actuator with Ø 20 mm stainless steel rollers	Stainless steel roller Ø 20 mm
VF L31-R24T2	VF L32-T2	VF L33-T2	VF L51-R24T2	VF L52-R24T2	VF L56-R24T2	VF L57-R24T2