

### Main features

- Reduced actuating force
- Protection degree IP67
- Technopolymer housing, one or two conduit entries
- Ability to affix actuator in 2 positions, perpendicular to one another

### Quality marks:



IMQ approval:	EG610
UL approval:	E131787
CCC approval:	2007010305230013
EAC approval:	RU C-IT.YT03.B.00035/19

### Technical data

#### Description

Double interruption positive opening safety switch. Suitable for controlling automatic lift doors.

#### Housing

Housing made of glass fibre reinforced technopolymer, self-extinguishing, shock-proof and with double insulation: 

FR series, one conduit entry: M20x1.5 (M16x1.5 on request)

FX series, two knock-out threaded conduit entries: M20x1.5 (M16x1.5 on request)

Protection degree acc. to EN 60529: IP67 with cable gland of equal or higher protection degree

#### General data

Ambient temperature:	-25°C ... +80°C
Version for operation at ambient temperatures from -40°C ... +80°C on request	
Max. operating frequency:	3600 operating cycles/hour
Mechanical endurance:	10 million operating cycles
Mechanical interlock, not coded:	type 1 acc. to EN ISO 14119
Safety parameter B <sub>10D</sub> :	20,000,000 for NC contacts
Max. actuation speed:	0.5 m/s
Min. actuation speed:	1 mm/s
Mounting position:	any
Tightening torques for installation:	see page 141
Wire cross-sections and wire stripping lengths:	see page 153

#### In compliance with standards:

IEC 60947-5-1, EN 60947-5-1, EN 60947-1, EN 50047, IEC 60204-1, EN 60204-1, EN ISO 14119, EN ISO 12100, IEC 60529, EN 60529, EN IEC 63000, EN 81-20, EN 81-50, UL 508, CSA 22.2 No.14.

#### Approvals:

IEC 60947-5-1, UL 508, CSA 22.2 No.14, GB/T14048.5-2017.


#### Compliance with the requirements of:


Low Voltage Directive 2014/35/EU, EMC Directive 2014/30/EU, Lift Directive 2014/33/EU, RoHS Directive 2011/65/EU.

#### 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  next to 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 81-20 par. 5.11.2.2.1**. Actuate the switch **at least up to the positive opening travel** reported in the travel diagrams. Actuate the switch **at least with the positive opening force**, reported in brackets below each article, next to the actuating force value.

 **If not expressly indicated in this chapter, for correct installation and utilization of all articles see the instructions given on pages 139 to 146.**

Electrical data		Utilization category
Thermal current (I <sub>th</sub> ):	10 A	Alternating current: AC15 (50÷60 Hz)
Rated insulation voltage (U <sub>i</sub> ):	500 Vac 600 Vdc	U <sub>e</sub> (V) 250 400 500
Rated impulse withstand voltage (U <sub>imp</sub> ):	6 kV	I <sub>e</sub> (A) 6 4 1
Conditional short circuit current:	1000 A acc. to EN 60947-5-1	Direct current: DC13
Protection against short circuits:	type aM fuse 10 A 500 V	U <sub>e</sub> (V) 24 125 250
Pollution degree:	3	I <sub>e</sub> (A) 3 0.55 0.3

### Features approved by IMQ

Rated insulation voltage (U <sub>i</sub> ):	500 Vac
Conventional free air thermal current (I <sub>th</sub> ):	10 A
Protection against short circuits:	type aM fuse 10 A 500 V
Rated impulse withstand voltage (U <sub>imp</sub> ):	6 kV
Protection degree of the housing:	IP67
MV terminals (screw terminals)	
Pollution degree:	3
Utilization category:	AC15
Operating voltage (U <sub>e</sub> ):	400 Vac (50 Hz)
Operating current (I <sub>e</sub> ):	3 A
Forms of the contact element: Y, Y+Y	
Positive opening of contacts on contact blocks 38, 39	
In compliance with standards: EN 60947-1, EN 60947-5-1, fundamental requirements of the Low Voltage Directive 2014/35/EU	

Please contact our technical department for the list of approved products.

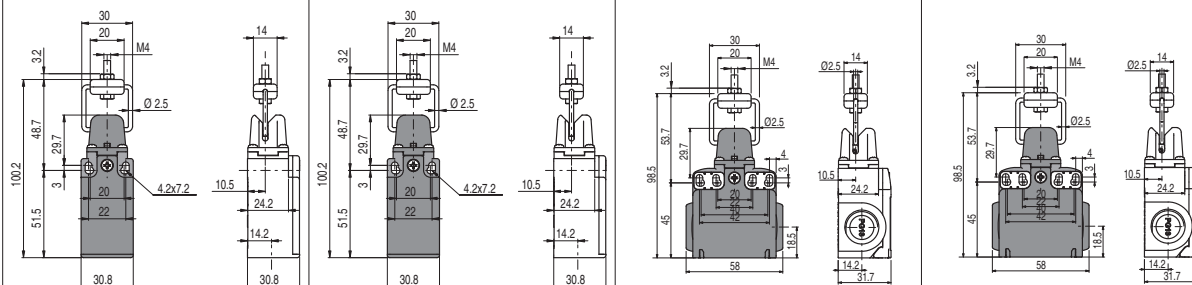
### Features approved by UL

Electrical Ratings:	Q300 pilot duty (69 VA, 125-250 V dc) A600 pilot duty (720 VA, 120-600 V ac)
Environmental Ratings:	Types 1, 4X, 12, 13
For all contact blocks use 60 or 75°C copper (Cu) conductors, rigid or flexible, wire size 12, 14 AWG. Tightening torque for terminal screws of 7.1 lb in (0.8 Nm).	
The hub is to be connected to the conduit before the hub is connected to the enclosure.	

Please contact our technical department for the list of approved products.

## Dimensional drawings

Contact type:

**L** = slow action


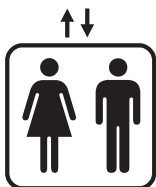
Contact blocks

38 <b>L</b>	FR 38B1-D30M2	/	FX 38B1-D30M2	/
39 <b>L</b>	/	FR 39B1-D30M2	/	FX 39B1-D30M2
Actuating force	3 N (25 N )		4.2 N (25 N )	
Travel diagrams				

**Legend**

Closed contact | Open contact | Positive opening travel

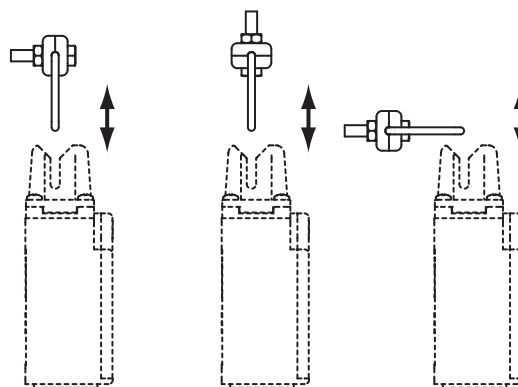
### Compliant with EN 81-20 and EN 81-50



- Safety contacts in compliance with EN 60947-5-1, annex K.
- Protection degree higher than IP4x.
- Mechanical service life > 10<sup>6</sup> cycles.

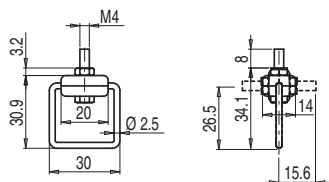
### Adjustable actuator

The actuator can be fixed in two positions, perpendicular to one another. The switch can also be actuated from different directions.



### Separate actuator

Article	Description
VF KEYD30	Adjustable actuator



### Head with variable orientation

The head of all switches is adjustable in 90° steps.

