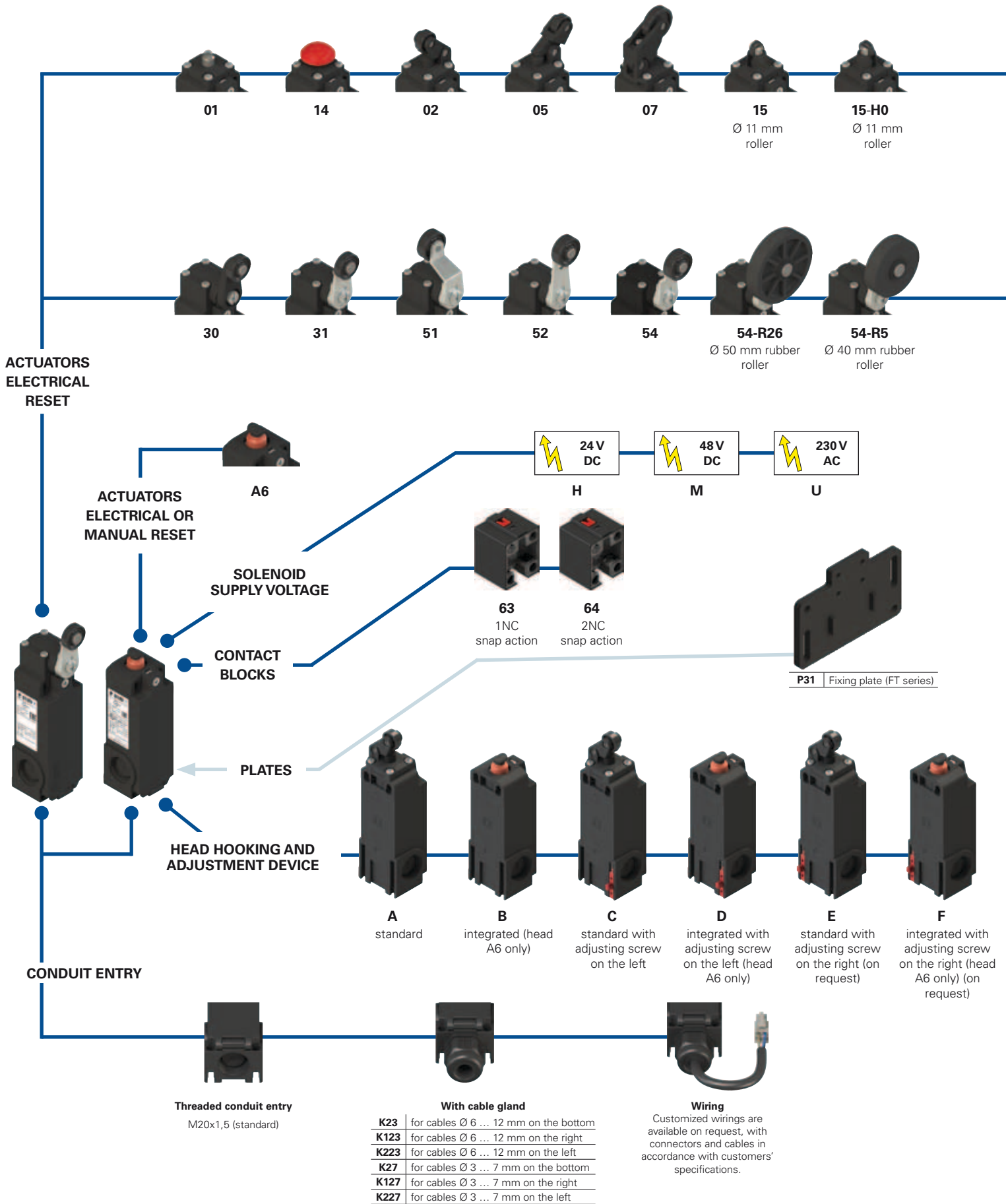


Selection diagram



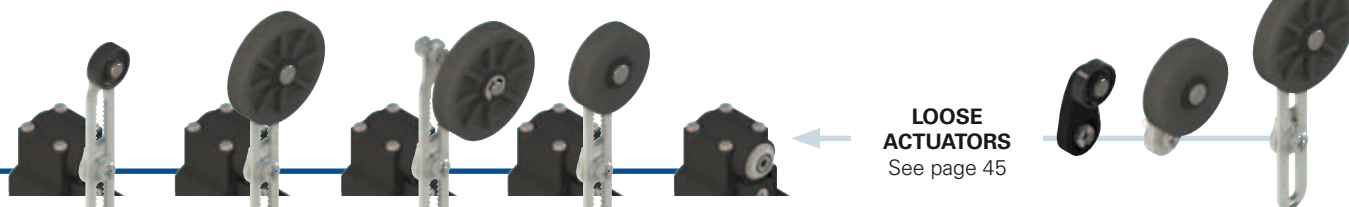


**16**  
Ø 20 mm  
roller

**16-H0**  
Ø 20 mm  
roller

**12**

**13**



**56**

**56-R26**

safety adjustable  
lever with Ø 50  
mm rubber roller

**56-R27**

safety adjustable  
lever with Ø 50  
mm overhanging  
rubber roller

**56-R5**

safety adjustable  
lever with Ø 40  
mm rubber roller

**38**

**LOOSE  
ACTUATORS**  
See page 45

## Code structure

article options  
**FT 2A6454AH-E27GK23P31R26**

### Housing

**FT** polymer housing, three conduit entries

### Head hooking and adjustment device

<b>A</b>	standard
<b>B</b>	integrated (actuator A6 only)
<b>C</b>	standard with adjusting screw on the left
<b>D</b>	integrated with adjusting screw on the left (actuator A6 only)
<b>E</b>	standard with adjusting screw on the left (on request)
<b>F</b>	integrated with adjusting screw on the left (actuator A6 only) (on request)

### Contact blocks

<b>63</b>	1NC, snap action
<b>64</b>	2NC, snap action

### Actuators

<b>A6</b>	plunger with manual reset
<b>01</b>	short plunger
<b>02</b>	roller lever
<b>05</b>	offset roller lever
...	.....

### Rollers

	standard roller
<b>R5</b>	with Ø 40 mm rubber roller
<b>R26</b>	with Ø 50 mm rubber roller
<b>R27</b>	with Ø 50 mm overhanging rubber roller

### Fixing plate

	without plate (standard)
<b>P31</b>	supplied with plate VF SFP3

### Pre-installed cable glands

<b>K23</b>	for cables Ø 6 ... 12 mm
<b>K27</b>	for cables Ø 3 ... 7 mm

For the complete list of possible combinations please contact our sales department.

### Contact type

	silver contacts (standard)
<b>G</b>	silver contacts with 1 µm gold coating
<b>G1</b>	silver contacts with 2,5 µm gold coating

### Actuation force

<b>E27</b>	Standard actuating force
<b>E26</b>	Reduced actuating force
<b>E28</b>	Reduced actuating force

### Solenoid supply voltage

<b>H</b>	24 Vdc 4.2 A (100 W)
<b>M</b>	48 Vdc 2.1 A (100 W)
<b>U</b>	230 Vac 0.5 A (115 W)
<b>K</b>	48 Vdc 0.75 A (36 W) (reduced actuating force E28) only
<b>J</b>	24 Vdc 1.5 A (36 W) (reduced actuating force E28) only



### Main data

- Different actuating force versions
- Versions with adjusting screw
- Polymer housing, with one or two conduit entries
- Protection degree IP67


### Quality marks:



Approval UL: E131787  
Approval EAC: RU C-IT.AQ35.B.00454

### Technical data

#### Housing

Made of glass-reinforced polymer, self-extinguishing, shock-proof thermoplastic resin and with double insulation:   
Three knock-out threaded conduit entries: M20 x1.5  
Protection degree: IP67 according to EN 60529 with cable gland having equal or higher protection degree

#### General data

Ambient temperature: -25°C ... +50°C  
Version for operation in ambient temperature from -40°C to +50°C on request  
Mechanical endurance: 50,000 operations cycles  
Assembling position: any  
Safety parameters  $B_{10D}$ : 100,000 for NC contacts  
Mechanical interlock, not coded: type 1 according to EN ISO 14119  
Driving torque for installation: see page 133

#### Cross section of the conductors (flexible copper wire)

Contact blocks 63, 64: min. 1 x 0.34 mm<sup>2</sup> (1 x AWG 22)  
max. 2 x 1.5 mm<sup>2</sup> (2 x AWG 16)

#### Solenoid

Rated operational voltage ( $U_e$ ) and current ( $I_e$ ): 24 Vdc ±10%; 4.2 A (100 W)  
24 Vdc ±10%; 1.5 A (36 W)  
48 Vdc ±10%; 2.1 A (100 W)  
48 Vdc ±10%; 0.75 A (36 W)  
230 Vac ±10%; 0.5 A (115 W)

Solenoid protection 24 Vdc (4.2 A): fuse 5 A type F  
Solenoid protection 24 Vdc (1.5 A): fuse 2 A type F  
Solenoid protection 48 Vdc (2.1 A): fuse 2.5 A type F  
Solenoid protection 48 Vdc (0.75 A): fuse 1 A type F  
Solenoid protection 230 Vac (0.5 A): fuse 0.8 A, type F  
Power supply time: min. 0.2 s, max 0.5 s  
Time without power supply: min. 30 s  
Max operating frequency: 118 operations cycles/hour

#### In conformity with standards:

EN 60947-5-1, IEC 60947-5-1, EN 81-20, EN 81-50, UL 508, CSA 22.2 No. 14


#### In conformity with requirements requested by:


Low Voltage Directive 2014/35/EU, EMC Directive 2014/30/EU, Lift Directive 2014/33/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 . 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 81-20 par. 5.11.2.2.1**. The switch must be actuated with **at least up to the positive opening travel** shown in the travels diagrams on page 134. The switch must be actuated **at least with the positive opening force**, shown in brackets, underneath each article, near the value of the actuating force.

 **If not expressly indicated in this chapter, for correct installation and utilization of all articles see the instructions given on pages 131 to 138.**

### Electrical data

### Utilization categories

Thermal current ( $I_{th}$ ): 10 A  
Rated insulation voltage ( $U_i$ ): 500 Vac 600 Vdc  
Rated impulse withstand voltage ( $U_{imp}$ ): 6 kV  
Conditional short circuit current: 1000 A according to EN 60947-5-1  
Protection against short circuits: fuse 10 A 500 V type aM  
Pollution degree: 3

Alternate current: AC15 (50...60 Hz)  
 $U_e$  (V) 250 400 500  
 $I_e$  (A) 6 4 1  
Direct current: DC13  
 $U_e$  (V) 24 125 250  
 $I_e$  (A) 6 1.1 0.4

### Data type approved by UL

Utilization categories Q300 (69 VA, 125-250 Vdc)  
A600 (720 VA, 120-600 Vac)  
Data of the housing type 1, 4X "indoor use only", 12, 13  
For all contact blocks use 60 or 75 °C copper (Cu) conductor and wire size No. 12-14 AWG. Terminal tightening torque of 7.1 lb in (0.8 Nm).  
In conformity with standard: UL 508, CSA 22.2 No.14.

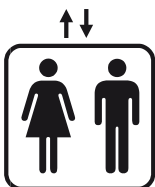
Please contact our technical service for the list of approved products.

## Introduction



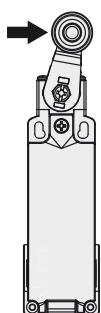
When the FT series safety switches with reset are operated they remain switched and they reset electrically through the integrated solenoid. Thanks to this feature it's possible to remote reset the switch without being physically near it. They are available with different actuators and are adapt to many applications, particularly to the lift, the over-speed governor and generally to the safety field. Some items can also be supplied with the manual reset.

## According to EN 81-20 and EN 81-50



- Safety contacts according to EN 60947-5-1, encl. K.
- Protection degree higher than IP4x.
- All switches are in compliance with the requirements set by the new standards on safety contacts.

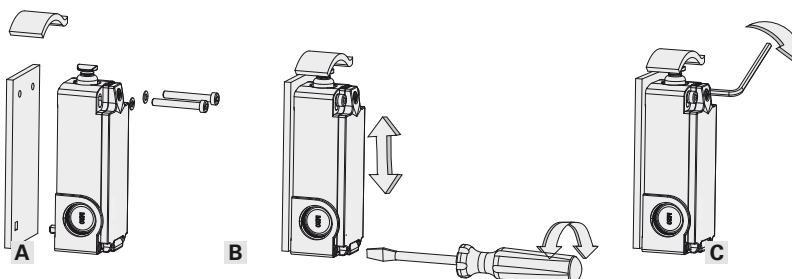
## Reduced actuating force (E26/E28)



On request FT series switches can be supplied with a reduced actuating force.

Actuator	Force
A6,	3,5 N (25 N ⊖)
01, 12, 13, 14, 15, 16	5,5 N (25 N ⊖)
02, 05	3.6 N (25 N ⊖)
07	2.1 N (25 N ⊖)
30, 31, 38,	0.06 Nm
51, 52, 54, 56	(0.25 Nm ⊖)

## Adjustment system version (C, D, E, F housing)



Pizzato Elettrica introduces a new integrated adjustment system designed purposely for applications on over-speed devices.

The system allows a fine and sensitive adjustment of the switch position along its vertical axis.

### Characteristics:

- Easy installation and adjustment
- Accurate vertical adjustment
- Wide adjustment travel (up to 4 mm)
- Unlosable components

### Operation:

**A** Make a hole in the fixing plate to insert the adjusting pin on the back of the switch. Apply the switch to the over-speed device without blocking the two fixing screws.

**B** Adjust the switch position by the screw on the front.

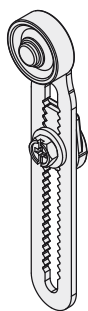
**C** Finally lock the switch body to the over-speed device.

## Protection degree IP 67

# IP67

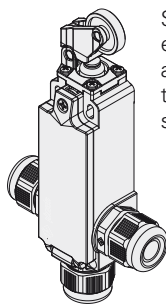
These series switches are all IP67 rated.

## Safety lever



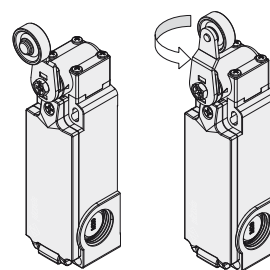
The adjustable lever code 56 (and variants) is supplied with an indentation which blocks the lever slipping in case of fixing screw release.

## Conduit entries



Switches with conduit entries in several directions are available, for applications also in restricted spaces.

## Overturning levers

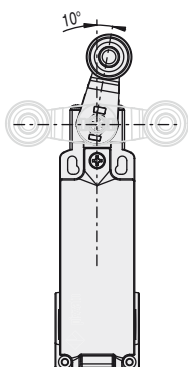


It's possible to fasten the lever on switches on straight or reverse side, maintaining the positive coupling. In this way it is possible to

obtain two different work plans of the lever.

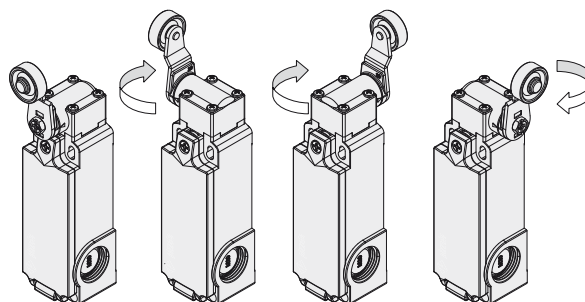
## Adjustable levers

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



## Rotating heads

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

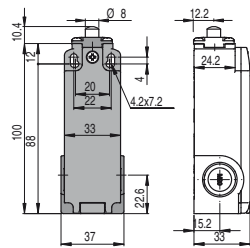
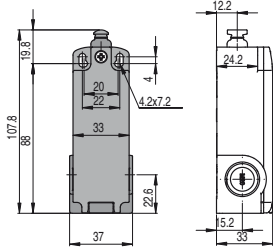


# Switches with electrical reset FT series

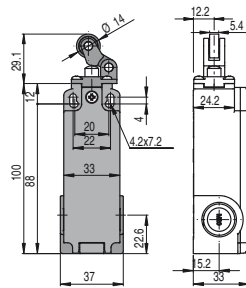
Contacts type:

**R** = snap action

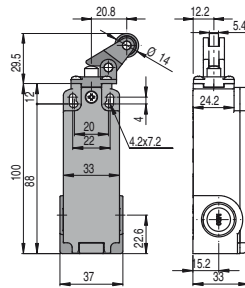
With external rubber gasket



With stainless steel roller on request

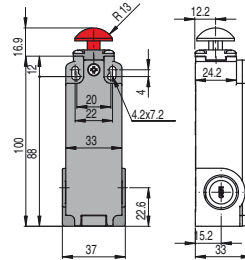
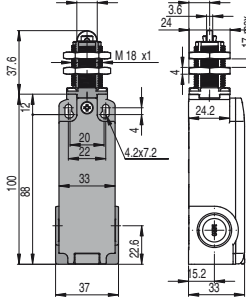
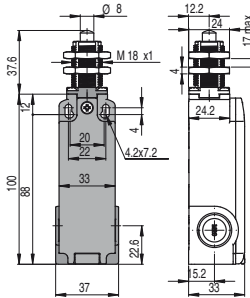
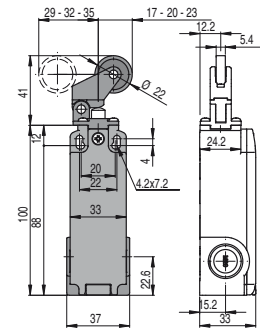


With stainless steel roller on request



Contact blocks

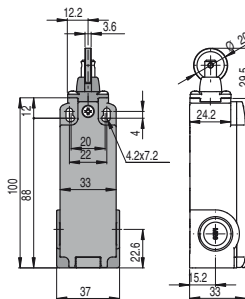
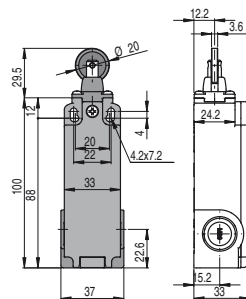
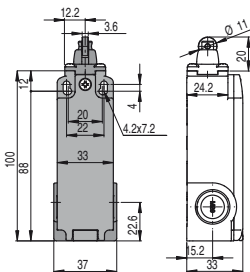
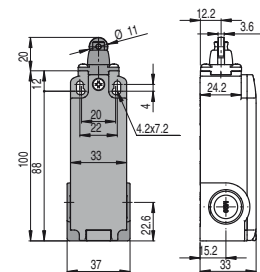
63	<b>R</b>	FT 2B63A6AH-E27	⊕ 1NC	FT 2A6301AH-E27	⊕ 1NC	FT 2A6302AH-E27	⊕ 1NC	FT 2A6305AH-E27	⊕ 1NC
64	<b>R</b>	FT 2B64A6AH-E27	⊕ 2NC	FT 2A6401AH-E27	⊕ 2NC	FT 2A6402AH-E27	⊕ 2NC	FT 2A6405AH-E27	⊕ 2NC
Max speed		page 133 - type 4		page 133 - type 4		page 133 - type 3		page 133 - type 3	
Actuating force		5 N (25 N ⊕)		6 N (25 N ⊕)		5 N (25 N ⊕)		5 N (25 N ⊕)	
Travel diagrams		page 134 - group 1d		page 134 - group 2d		page 134 - group 3d		page 134 - group 3d	



Contact blocks

63	<b>R</b>	FT 2A6307AH-E27	⊕ 1NC	FT 2A6312AH-E27	⊕ 1NC	FT 2A6313AH-E27	⊕ 1NC	FT 2A6314AH-E27	⊕ 1NC
64	<b>R</b>	FT 2A6407AH-E27	⊕ 2NC	FT 2A6412AH-E27	⊕ 2NC	FT 2A6413AH-E27	⊕ 2NC	FT 2A6414AH-E27	⊕ 2NC
Max speed		page 133 - type 2		page 133 - type 4		page 133 - type 2		page 133 - type 2	
Actuating force		3 N (25 N ⊕)		6 N (25 N ⊕)		6 N (25 N ⊕)		6 N (25 N ⊕)	
Travel diagrams		page 134 - group 4d		page 134 - group 2d		page 134 - group 2d		page 134 - group 2d	

On request Ø 12 mm stainless steel roller



Contact blocks

63	<b>R</b>	FT 2A6315AH-E27	⊕ 1NC	FT 2A6315AH-E27H0	⊕ 1NC	FT 2A6316AH-E27	⊕ 1NC	FT 2A6316AH-E27H0	⊕ 1NC
64	<b>R</b>	FT 2A6415AH-E27	⊕ 2NC	FT 2A6415AH-E27H0	⊕ 2NC	FT 2A6416AH-E27	⊕ 2NC	FT 2A6416AH-E27H0	⊕ 2NC
Max speed		page 133 - type 2		page 133 - type 2		page 133 - type 2		page 133 - type 2	
Actuating force		6 N (25 N ⊕)		6 N (25 N ⊕)		6 N (25 N ⊕)		6 N (25 N ⊕)	
Travel diagrams		page 134 - group 2d		page 134 - group 2d		page 134 - group 2d		page 134 - group 2d	

Contacts type:  
**R** = snap action

	With Ø 20 mm stainless steel roller on request	Other rollers available. See page 45	Other rollers available. See page 45	Other rollers available. See page 45
Contacts type:				
Contact blocks	63 <b>R</b> FT 2A6330AH-E27 1NC	FT 2A6331AH-E27 1NC	FT 2A6351AH-E27 1NC	FT 2A6352AH-E27 1NC
	64 <b>R</b> FT 2A6430AH-E27 2NC	FT 2A6431AH-E27 2NC	FT 2A6451AH-E27 2NC	FT 2A6452AH-E27 2NC
Max speed	page 133 - type 1	page 133 - type 1	page 133 - type 1	page 133 - type 1
Actuating force	0.08 Nm (0.25 Nm $\rightarrow$ )	0.08 Nm (0.25 Nm $\rightarrow$ )	0.08 Nm (0.25 Nm $\rightarrow$ )	0.08 Nm (0.25 Nm $\rightarrow$ )
Travel diagrams	page 134 - group 5d	page 134 - group 5d	page 134 - group 5d	page 134 - group 5d

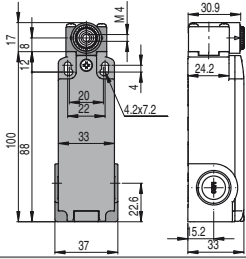
Contact blocks	63 <b>R</b> FT 2A6354AH-E27 1NC	FT 2A6354AH-E27R26 1NC	FT 2A6354AH-E27R5 1NC
	64 <b>R</b> FT 2A6454AH-E27 2NC	FT 2A6454AH-E27R26 2NC	FT 2A6454AH-E27R5 2NC
Max speed	page 133 - type 1	page 133 - type 1	page 133 - type 1
Actuating force	0.08 Nm (0.25 Nm $\rightarrow$ )	0.08 Nm (0.25 Nm $\rightarrow$ )	0.08 Nm (0.25 Nm $\rightarrow$ )
Travel diagrams	page 134 - group 5d	page 134 - group 5d	page 134 - group 5d

Contact blocks	63 <b>R</b> FT 2A6356AH-E27 1NC	FT 2A6356AH-E27R26 1NC	FT 2A6356AH-E27R27 1NC	FT 2A6356AH-E27R5 1NC
	64 <b>R</b> FT 2A6456AH-E27 2NC	FT 2A6456AH-E27R26 2NC	FT 2A6456AH-E27R27 2NC	FT 2A6456AH-E27R5 2NC
Max speed	page 133 - type 1	page 133 - type 1	page 133 - type 1	page 133 - type 1
Actuating force	0.08 Nm (0.25 Nm $\rightarrow$ )	0.08 Nm (0.25 Nm $\rightarrow$ )	0.08 Nm (0.25 Nm $\rightarrow$ )	0.08 Nm (0.25 Nm $\rightarrow$ )
Travel diagrams	page 134 - group 5d	page 134 - group 5d	page 134 - group 5d	page 134 - group 5d

**Position switches with roller lever without actuator**

Contacts type:

**R** = snap action



**IMPORTANT**

**For safety applications:** join only switches and actuators marked with symbol ⊕.

Contact blocks

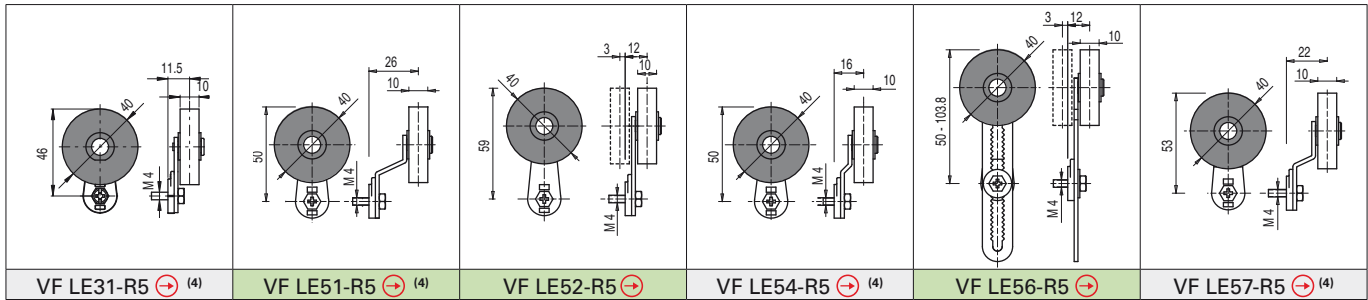
63	<b>R</b>	FT 2A6338AH-E27	⊕ 1NC
64	<b>R</b>	FT 2A6438AH-E27	⊕ 2NC
Max speed	page 133 - type 2		
Actuating force	0.08 Nm (0.25 Nm ⊕)		
Travel diagrams	page 134 - group 5d		

**Special loose actuators**

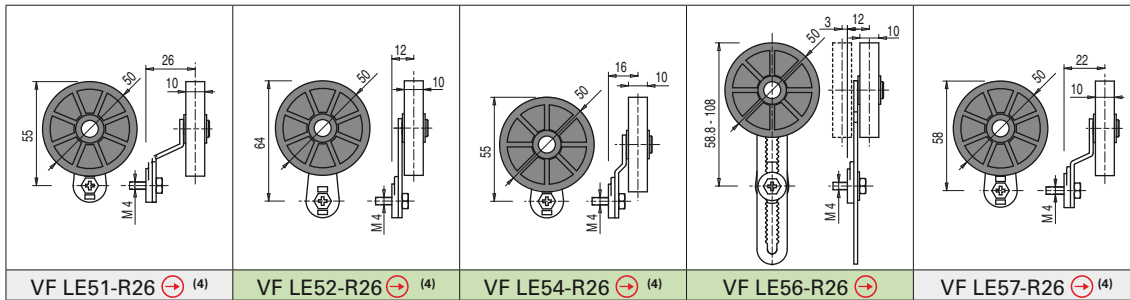
All measures in the drawings are in mm

**IMPORTANT:** These loose actuators can be used with items of series FT only.

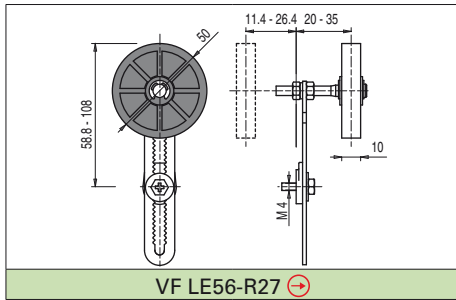
Ø 40 mm rubber rollers



Ø 50 mm rubber rollers



Ø 50 mm overhanging rubber rollers



<sup>(4)</sup> The actuator cannot be oriented to inside direction because it will mechanically interfere with the switch head.

