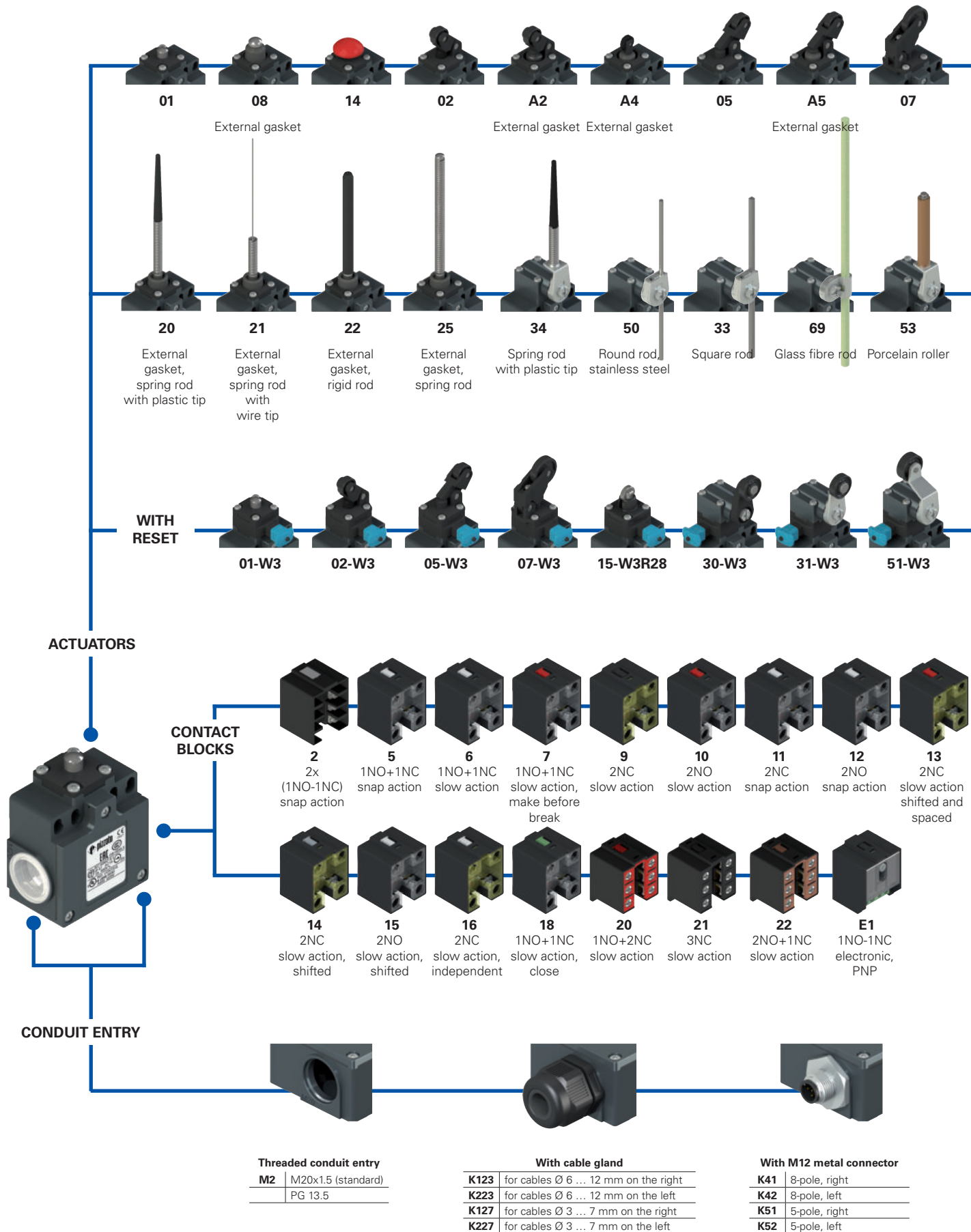


Selection diagram



● Product options
→ Sold separately as accessory



A7 External gasket
15-R28 Roller Ø 12 mm, stainless steel
16 Roller Ø 20 mm
12
13 Roller Ø 12 mm, stainless steel
76 Rope switch for signalling



30 **31** **51** **52** **54** **55** Adjustable lever
56 Adjustable safety lever
57 **38** Without actuator



52-W3 **54-W3** **56-W3** **57-W3** **38-W3** Without actuator



Code structure

Attention! The feasibility of a code number does not mean the effective availability of a product. Please contact our sales office.

article options options
FZ 502-W3GM2K51R23T6

Housing	
FZ	metal, two conduit entries

Contact block	
5	1NO+1NC, snap action
6	1NO+1NC, slow action
7	1NO+1NC, slow action, make before break
...

Actuators	
01	short plunger
02	roller lever
05	angled lever with roller
...

Reset	
	without reset (standard)
W3	simultaneous reset
W4	simultaneous reset, increased force

Contact type	
	silver contacts (standard)
G	silver contacts, 1 µm gold coating
G1	silver contacts, 2.5 µm gold coating (not for contact block 2, 20, 21, 22)

Ambient temperature	
	-25°C ... +80°C (standard)
T6	-40°C ... +80°C

Pre-installed cable glands or connectors	
	no cable gland or connector (standard)
K123	cable gland for cables Ø 6 ... 12 mm on the right
K51	M12 metal connector, 5-pole, right

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

Threaded conduit entry	
M2	M20x1.5 (standard)
	PG 13.5
Rollers	
	standard roller
R28	stainless steel Ø 12 mm (for actuators A4, 15)
R23	stainless steel Ø 14 mm (for actuators A2, 02, A5, 05, 30, 31, 51, 52, 54, 55, 56, 57)
R24	stainless steel Ø 20 mm (for actuators 30, 31, 51, 52, 54, 55, 56, 57)
R36	stainless steel Ø 16 mm (for actuators 30, 31, 51, 52, 54, 55, 56, 57)
R25	technopolymer, Ø 35 mm (for actuators 30, 31, 51, 52, 54, 55, 56, 57)
R5	rubber, Ø 40 mm (for actuators 30, 31, 51, 52, 54, 55, 56, 57)
R26	rubber, Ø 50 mm (for actuators 51, 52, 54, 55, 56, 57)
R27	rubber, protruding, Ø 50 mm (for actuators 55, 56)



Main features

- Metal housing, two conduit entries
- Protection degree IP67
- 17 contact blocks available
- 44 actuators available
- Versions with M12 connector
- Versions with gold-plated silver contacts

Technical data

Housing

Metal housing, powder-coated
 Two threaded conduit entries: M20x1.5 (standard)
 Protection degree acc. to EN 60529: IP67 with cable gland of equal or higher protection degree

General data

Ambient temperature: -25°C ... +80°C (standard)
 -40°C ... +80°C (T6 option)
 Max. actuation frequency: 3600 operating cycles/hour
 Mechanical endurance: 20 million operating cycles
 Mounting position: any
 Safety parameter B_{10D} : 40,000,000 for NC contacts
 Mechanical interlock, not coded: type 1 acc. to EN ISO 14119
 Tightening torques for installation: see page 229
 Wire cross-sections and wire stripping lengths: see page 247

In compliance with standards:

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

Approvals:

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

Compliance with the requirements of:

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

Positive contact opening in conformity with standards:

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

Quality marks:



IMO approval: EG610
 UL approval: E131787
 CCC approval: 2020970305002284
 EAC approval: RU C-IT.YT03.B.00035/19

Installation for safety applications:

Use only switches marked with the symbol \ominus 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 required by **EN ISO 14119, paragraph 5.4** for specific interlock applications and **EN ISO 13849-2 tables D3** (well-tried components) and **D.8** (fault exclusions) for safety applications in general. Actuate the switch **at least up to the positive opening travel** shown in the travel diagrams on page 230. 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 225 to 240.

	Electrical data	Utilization category
without connector	Thermal current (I_{th}):	10 A
	Rated insulation voltage (U):	500 Vac 600 Vdc 400 Vac 500 Vdc (contact blocks 2, 11, 12, 20, 21, 22)
	Rated impulse withstand voltage (U_{imp}):	6 kV 4 kV (contact blocks 20, 21, 22)
with M12 connector, 5-pole	Thermal current (I_{th}):	4 A
	Rated insulation voltage (U):	250 Vac 300 Vdc
	Protection against short circuits:	type gG fuse 4 A 500 V
with M12 connector, 8-pole	Thermal current (I_{th}):	2 A
	Rated insulation voltage (U):	30 Vac 36 Vdc
	Protection against short circuits:	type gG fuse 2 A 500 V
	Pollution degree:	3
		Alternating current: AC15 (50÷60 Hz)
		Ue (V) 250 400 500
		Ie (A) 6 4 1
		Direct current: DC13
		Ue (V) 24 125 250
		Ie (A) 3 0.55 0.3
		Alternating current: AC15 (50÷60 Hz)
		Ue (V) 24 120 250
		Ie (A) 4 4 4
		Direct current: DC13
		Ue (V) 24 125 250
		Ie (A) 3 0.55 0.3
		Alternating current: AC15 (50÷60 Hz)
		Ue (V) 24
		Ie (A) 2
		Direct current: DC13
		Ue (V) 24
		Ie (A) 2



Features approved by IMO

Rated insulation voltage (U_i): 500 Vac
 400 Vac (for contact blocks 2, 11, 12, 20, 21, 22, 28, 29, 30, 37, 33, 34)

Conventional free air thermal current (I_{th}): 10 A

Protection against short circuits: type aM fuse 10 A 500 V

Rated impulse withstand voltage (U_{imp}): 6 kV
 4 kV (for contact blocks 20, 21, 22, 28, 29, 30, 33, 34)

Protection degree of the housing: IP67

MV terminals (screw terminals)

Pollution degree: 3

Utilization category: AC15

Operating voltage (U_e): 400 Vac (50 Hz)

Operating current (I_e): 3 A

Forms of the contact element: Za, Za+Za, X+X, Zb, Y+Y, Y+Y+X, Y+Y+Y, Y+X+X, Y, X.

Positive opening of contacts on contact blocks 5, 6, 7, 8, 9, 11, 13, 14, 16, 17, 18, 19, 20, 21, 22, 28, 29, 30, 33, 34, 37, 38, 39, 66.

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 except 2 and 3 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).

For contact blocks 2 and 3 use 60 or 75°C copper (Cu) conductors, rigid or flexible, wire size 14 AWG. Tightening torque for terminal screws of 12 lb in (1.4 Nm).

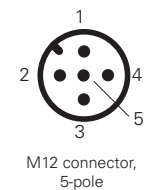
Please contact our technical department for the list of approved products.

Wiring diagram for M12 connectors

Contact block 2 2x(1NO-1NC)	Contact block 5 1NO+1NC	Contact block 6 1NO+1NC	Contact block 7 1NO+1NC	Contact block 9 2NC	Contact block 10 2NO	Contact block 11 2NC	Contact block 12 2NO	Contact block 13 2NC
M12 connector, 8-pole	M12 connector, 5-pole	M12 connector, 5-pole	M12 connector, 5-pole	M12 connector, 5-pole	M12 connector, 5-pole	M12 connector, 5-pole	M12 connector, 5-pole	M12 connector, 5-pole
Contacts Pin no.	Contacts Pin no.	Contacts Pin no.	Contacts Pin no.	Contacts Pin no.	Contacts Pin no.	Contacts Pin no.	Contacts Pin no.	Contacts Pin no.
NO 3-4	NC 1-2	NC 1-2	NC 1-2	NC 1-2	NO 1-2	NC 1-2	NO 1-2	NC (1°) 1-2
NC 5-6	NO 3-4	NO 3-4	NO 3-4	NC 3-4	NO 3-4	NC 3-4	NO 3-4	NC (2°) 3-4
NC 7-8	ground 5	ground 5	ground 5	ground 5	ground 5	ground 5	ground 5	ground 5
NO 1-2								

Contact block 14 2NC	Contact block 15 2NO	Contact block 16 2NC	Contact block 18 1NO+1NC	Contact block 20 1NO+2NC	Contact block 21 3NC	Contact block 22 2NO+1NC	Contact block 33 1NO+1NC	Contact block 34 2NC
M12 connector, 5-pole	M12 connector, 5-pole	M12 connector, 5-pole	M12 connector, 5-pole	M12 connector, 8-pole	M12 connector, 8-pole	M12 connector, 8-pole	M12 connector, 5-pole	M12 connector, 5-pole
Contacts Pin no.	Contacts Pin no.	Contacts Pin no.	Contacts Pin no.	Contacts Pin no.	Contacts Pin no.	Contacts Pin no.	Contacts Pin no.	Contacts Pin no.
NC (1°) 1-2	NO (1°) 1-2	NC, lever to the right 1-2	NC 1-2	NC 3-4	NC 3-4	NC 3-4	NC 1-2	NC 1-2
NC (2°) 3-4	NO (2°) 3-4	NC, lever to the left 3-4	NO 3-4	NC 5-6	NC 5-6	NO 5-6	NO 3-4	NC 3-4
ground 5	ground 5	ground 5	ground 5	NO 7-8	NC 7-8	NO 7-8	ground 5	ground 5
				ground 1	ground 1	ground 1		

Contact block E1
PNP



Contacts	Pin no.
+	1
-	3
NC	2
NO	4
ground	5

FZ series position switches

- Contact type**
R = snap action
L = slow action
LO = slow action, make before break
LS = slow action, shifted
LV = slow action, shifted and spaced
LI = slow action, independent
LA = slow action, close
⏏ = electronic, PNP

Contact block

	With stainless steel roller on request		External gasket		External gasket	
2 R	FZ 201-M2	2x(1NO-1NC)	FZ 202-M2	2x(1NO-1NC)	FZ 2A2-M2	2x(1NO-1NC)
5 R	FZ 501-M2	1NO+1NC	FZ 502-M2	1NO+1NC	FZ 5A2-M2	1NO+1NC
6 L	FZ 601-M2	1NO+1NC	FZ 602-M2	1NO+1NC	FZ 6A2-M2	1NO+1NC
7 LO	FZ 701-M2	1NO+1NC	FZ 702-M2	1NO+1NC	FZ 7A2-M2	1NO+1NC
9 L	FZ 901-M2	2NC	FZ 902-M2	2NC	FZ 9A2-M2	2NC
10 L	FZ 1001-M2	2NO	FZ 1002-M2	2NO	FZ 10A2-M2	2NO
11 R	FZ 1101-M2	2NC	FZ 1102-M2	2NC	FZ 11A2-M2	2NC
12 R	FZ 1201-M2	2NO	FZ 1202-M2	2NO	FZ 12A2-M2	2NO
13 LV	FZ 1301-M2	2NC	FZ 1302-M2	2NC	FZ 13A2-M2	2NC
14 LS	FZ 1401-M2	2NC	FZ 1402-M2	2NC	FZ 14A2-M2	2NC
15 LS	FZ 1501-M2	2NO	FZ 1502-M2	2NO	FZ 15A2-M2	2NO
18 LA	FZ 1801-M2	1NO+1NC	FZ 1802-M2	1NO+1NC	FZ 18A2-M2	1NO+1NC
20 L	FZ 2001-M2	1NO+2NC	FZ 2002-M2	1NO+2NC	FZ 20A2-M2	1NO+2NC
21 L	FZ 2101-M2	3NC	FZ 2102-M2	3NC	FZ 21A2-M2	3NC
22 L	FZ 2201-M2	2NO+1NC	FZ 2202-M2	2NO+1NC	FZ 22A2-M2	2NO+1NC
E1 ⏏	FZ E101-M2	1NO-1NC	FZ E102-M2	1NO-1NC	FZ E1A2-M2	1NO-1NC
Max. speed	page 229 - type 4		page 229 - type 3		page 229 - type 3	
Actuating force	8 N (25 N ⊕)		6 N (25 N ⊕)		4.3 N (25 N ⊕)	
Travel diagrams	page 230 - group 1		page 230 - group 2		page 230 - group 2	

- Contact type**
R = snap action
L = slow action
LO = slow action, make before break
LS = slow action, shifted
LV = slow action, shifted and spaced
LI = slow action, independent
LA = slow action, close
⏏ = electronic, PNP

Contact block

	With stainless steel roller on request		External gasket		External gasket	
2 R	FZ 205-M2	2x(1NO-1NC)	FZ 2A5-M2	2x(1NO-1NC)	FZ 207-M2	2x(1NO-1NC)
5 R	FZ 505-M2	1NO+1NC	FZ 5A5-M2	1NO+1NC	FZ 507-M2	1NO+1NC
6 L	FZ 605-M2	1NO+1NC	FZ 6A5-M2	1NO+1NC	FZ 607-M2	1NO+1NC
7 LO	FZ 705-M2	1NO+1NC	FZ 7A5-M2	1NO+1NC	FZ 707-M2	1NO+1NC
9 L	FZ 905-M2	2NC	FZ 9A5-M2	2NC	FZ 907-M2	2NC
10 L	FZ 1005-M2	2NO	FZ 10A5-M2	2NO	FZ 1007-M2	2NO
11 R	FZ 1105-M2	2NC	FZ 11A5-M2	2NC	FZ 1107-M2	2NC
12 R	FZ 1205-M2	2NO	FZ 12A5-M2	2NO	FZ 1207-M2	2NO
13 LV	FZ 1305-M2	2NC	FZ 13A5-M2	2NC	FZ 1307-M2	2NC
14 LS	FZ 1405-M2	2NC	FZ 14A5-M2	2NC	FZ 1407-M2	2NC
15 LS	FZ 1505-M2	2NO	FZ 15A5-M2	2NO	FZ 1507-M2	2NO
18 LA	FZ 1805-M2	1NO+1NC	FZ 18A5-M2	1NO+1NC	FZ 1807-M2	1NO+1NC
20 L	FZ 2005-M2	1NO+2NC	FZ 20A5-M2	1NO+2NC	FZ 2007-M2	1NO+2NC
21 L	FZ 2105-M2	3NC	FZ 21A5-M2	3NC	FZ 2107-M2	3NC
22 L	FZ 2205-M2	2NO+1NC	FZ 22A5-M2	2NO+1NC	FZ 2207-M2	2NO+1NC
E1 ⏏	FZ E105-M2	1NO-1NC	FZ E1A5-M2	1NO-1NC	FZ E107-M2	1NO-1NC
Max. speed	page 229 - type 3		page 229 - type 3		page 229 - type 3	
Actuating force	6 N (25 N ⊕)		4.3 N (25 N ⊕)		4 N (25 N ⊕)	
Travel diagrams	page 230 - group 2		page 230 - group 2		page 230 - group 3	

All values in the drawings are in mm

Accessories See page 207

→ The 2D and 3D files are available at www.pizzato.com



	Other rollers available. See page 102	Porcelain roller	Other rollers available. See page 102	Other rollers available. See page 102																																																																																																																																																																										
<p>Contact type</p> <ul style="list-style-type: none"> R = snap action L = slow action LO = slow action, make before break LS = slow action, shifted LV = slow action, shifted and spaced LI = slow action, independent LA = slow action, close ⏏ = electronic, PNP <p>Contact block</p>																																																																																																																																																																														
	<table border="1"> <tr><td>2</td><td>R</td><td>FZ 252-M2</td><td>2x(1NO-1NC)</td></tr> <tr><td>5</td><td>R</td><td>FZ 552-M2</td><td>1NO+1NC</td></tr> <tr><td>6</td><td>L</td><td>FZ 652-M2</td><td>1NO+1NC</td></tr> <tr><td>7</td><td>LO</td><td>FZ 752-M2</td><td>1NO+1NC</td></tr> <tr><td>9</td><td>L</td><td>FZ 952-M2</td><td>2NC</td></tr> <tr><td>10</td><td>L</td><td>FZ 1052-M2</td><td>2NO</td></tr> <tr><td>11</td><td>R</td><td>FZ 1152-M2</td><td>2NC</td></tr> <tr><td>12</td><td>R</td><td>FZ 1252-M2</td><td>2NO</td></tr> <tr><td>13</td><td>LV</td><td>FZ 1352-M2</td><td>2NC</td></tr> <tr><td>14</td><td>LS</td><td>FZ 1452-M2</td><td>2NC</td></tr> <tr><td>15</td><td>LS</td><td>FZ 1552-M2</td><td>2NO</td></tr> <tr><td>16</td><td>LI</td><td>FZ 1652-M2</td><td>2NC</td></tr> <tr><td>18</td><td>LA</td><td>FZ 1852-M2</td><td>1NO+1NC</td></tr> <tr><td>20</td><td>L</td><td>FZ 2052-M2</td><td>1NO+2NC</td></tr> <tr><td>21</td><td>L</td><td>FZ 2152-M2</td><td>3NC</td></tr> <tr><td>22</td><td>L</td><td>FZ 2252-M2</td><td>2NO+1NC</td></tr> <tr><td>E1</td><td>⏏</td><td>FZ E152-M2</td><td>1NO-1NC</td></tr> </table>	2	R	FZ 252-M2	2x(1NO-1NC)	5	R	FZ 552-M2	1NO+1NC	6	L	FZ 652-M2	1NO+1NC	7	LO	FZ 752-M2	1NO+1NC	9	L	FZ 952-M2	2NC	10	L	FZ 1052-M2	2NO	11	R	FZ 1152-M2	2NC	12	R	FZ 1252-M2	2NO	13	LV	FZ 1352-M2	2NC	14	LS	FZ 1452-M2	2NC	15	LS	FZ 1552-M2	2NO	16	LI	FZ 1652-M2	2NC	18	LA	FZ 1852-M2	1NO+1NC	20	L	FZ 2052-M2	1NO+2NC	21	L	FZ 2152-M2	3NC	22	L	FZ 2252-M2	2NO+1NC	E1	⏏	FZ E152-M2	1NO-1NC	<table border="1"> <tr><td>FZ 253-E0M2</td><td>2x(1NO-1NC)</td></tr> <tr><td>FZ 553-E0M2V9</td><td>1NO+1NC</td></tr> <tr><td>FZ 653-E0M2V9</td><td>1NO+1NC</td></tr> <tr><td>FZ 753-E0M2V9</td><td>1NO+1NC</td></tr> <tr><td>FZ 953-E0M2V9</td><td>2NC</td></tr> <tr><td>FZ 1053-E0M2V9</td><td>2NO</td></tr> <tr><td>/</td><td>/</td></tr> <tr><td>FZ 1253-E0M2V9</td><td>2NO</td></tr> <tr><td>FZ 1353-E0M2V9</td><td>2NC</td></tr> <tr><td>FZ 1453-E0M2V9</td><td>2NC</td></tr> <tr><td>FZ 1553-E0M2V9</td><td>2NO</td></tr> <tr><td>/</td><td>/</td></tr> <tr><td>FZ 1853-E0M2V9</td><td>1NO+1NC</td></tr> <tr><td>FZ 2053-E0M2V9</td><td>1NO+2NC</td></tr> <tr><td>FZ 2153-E0M2V9</td><td>3NC</td></tr> <tr><td>FZ 2253-E0M2V9</td><td>2NO+1NC</td></tr> <tr><td>FZ E153-E0M2V9</td><td>1NO-1NC</td></tr> </table>	FZ 253-E0M2	2x(1NO-1NC)	FZ 553-E0M2V9	1NO+1NC	FZ 653-E0M2V9	1NO+1NC	FZ 753-E0M2V9	1NO+1NC	FZ 953-E0M2V9	2NC	FZ 1053-E0M2V9	2NO	/	/	FZ 1253-E0M2V9	2NO	FZ 1353-E0M2V9	2NC	FZ 1453-E0M2V9	2NC	FZ 1553-E0M2V9	2NO	/	/	FZ 1853-E0M2V9	1NO+1NC	FZ 2053-E0M2V9	1NO+2NC	FZ 2153-E0M2V9	3NC	FZ 2253-E0M2V9	2NO+1NC	FZ E153-E0M2V9	1NO-1NC	<table border="1"> <tr><td>FZ 254-M2</td><td>2x(1NO-1NC)</td></tr> <tr><td>FZ 554-M2</td><td>1NO+1NC</td></tr> <tr><td>FZ 654-M2</td><td>1NO+1NC</td></tr> <tr><td>FZ 754-M2</td><td>1NO+1NC</td></tr> <tr><td>FZ 954-M2</td><td>2NC</td></tr> <tr><td>FZ 1054-M2</td><td>2NO</td></tr> <tr><td>FZ 1154-M2</td><td>2NC</td></tr> <tr><td>FZ 1254-M2</td><td>2NO</td></tr> <tr><td>FZ 1354-M2</td><td>2NC</td></tr> <tr><td>FZ 1454-M2</td><td>2NC</td></tr> <tr><td>FZ 1554-M2</td><td>2NO</td></tr> <tr><td>FZ 1654-M2</td><td>2NC</td></tr> <tr><td>FZ 1854-M2</td><td>1NO+1NC</td></tr> <tr><td>FZ 2054-M2</td><td>1NO+2NC</td></tr> <tr><td>FZ 2154-M2</td><td>3NC</td></tr> <tr><td>FZ 2254-M2</td><td>2NO+1NC</td></tr> <tr><td>FZ E154-M2</td><td>1NO-1NC</td></tr> </table>	FZ 254-M2	2x(1NO-1NC)	FZ 554-M2	1NO+1NC	FZ 654-M2	1NO+1NC	FZ 754-M2	1NO+1NC	FZ 954-M2	2NC	FZ 1054-M2	2NO	FZ 1154-M2	2NC	FZ 1254-M2	2NO	FZ 1354-M2	2NC	FZ 1454-M2	2NC	FZ 1554-M2	2NO	FZ 1654-M2	2NC	FZ 1854-M2	1NO+1NC	FZ 2054-M2	1NO+2NC	FZ 2154-M2	3NC	FZ 2254-M2	2NO+1NC	FZ E154-M2	1NO-1NC	<table border="1"> <tr><td>FZ 255-M2</td><td>2x(1NO-1NC)</td></tr> <tr><td>FZ 555-M2</td><td>1NO+1NC</td></tr> <tr><td>FZ 655-M2</td><td>1NO+1NC</td></tr> <tr><td>FZ 755-M2</td><td>1NO+1NC</td></tr> <tr><td>FZ 955-M2</td><td>2NC</td></tr> <tr><td>FZ 1055-M2</td><td>2NO</td></tr> <tr><td>FZ 1155-M2</td><td>2NC</td></tr> <tr><td>FZ 1255-M2</td><td>2NO</td></tr> <tr><td>FZ 1355-M2</td><td>2NC</td></tr> <tr><td>FZ 1455-M2</td><td>2NC</td></tr> <tr><td>FZ 1555-M2</td><td>2NO</td></tr> <tr><td>FZ 1655-M2</td><td>2NC</td></tr> <tr><td>FZ 1855-M2</td><td>1NO+1NC</td></tr> <tr><td>FZ 2055-M2</td><td>1NO+2NC</td></tr> <tr><td>FZ 2155-M2</td><td>3NC</td></tr> <tr><td>FZ 2255-M2</td><td>2NO+1NC</td></tr> <tr><td>FZ E155-M2</td><td>1NO-1NC</td></tr> </table>	FZ 255-M2	2x(1NO-1NC)	FZ 555-M2	1NO+1NC	FZ 655-M2	1NO+1NC	FZ 755-M2	1NO+1NC	FZ 955-M2	2NC	FZ 1055-M2	2NO	FZ 1155-M2	2NC	FZ 1255-M2	2NO	FZ 1355-M2	2NC	FZ 1455-M2	2NC	FZ 1555-M2	2NO	FZ 1655-M2	2NC	FZ 1855-M2	1NO+1NC	FZ 2055-M2	1NO+2NC	FZ 2155-M2	3NC	FZ 2255-M2	2NO+1NC	FZ E155-M2	1NO-1NC
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Max. speed	page 229 - type 1	0.5 m/s	page 229 - type 1	page 229 - type 1																																																																																																																																																																										
Actuating force	0.06 Nm (0.25 Nm \rightarrow)	0.03 Nm (0.25 Nm \rightarrow)	0.06 Nm (0.25 Nm \rightarrow)	0.06 Nm (0.25 Nm \rightarrow)																																																																																																																																																																										
Travel diagrams	page 230 - group 5	page 230 - group 6	page 230 - group 5	page 230 - group 5																																																																																																																																																																										

	Other rollers available. See page 102	Other rollers available. See page 102	Glass fibre rod	Rope switch for signalling																																																																																																																																						
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FZ 2276-M2	1NO+2NC																																																																																																																																									
Max. speed	page 229 - type 1	page 229 - type 1	1.5 m/s	0.5 m/s																																																																																																																																						
Actuating force	0.06 Nm (0.25 Nm \rightarrow)	0.06 Nm (0.25 Nm \rightarrow)	0.06 Nm	initial 20 N - final 40 N																																																																																																																																						
Travel diagrams	page 230 - group 5	page 230 - group 5	page 230 - group 5	page 230 - group 7																																																																																																																																						

(1) Positive opening only with actuator set to max. See page 102.
All values in the drawings are in mm

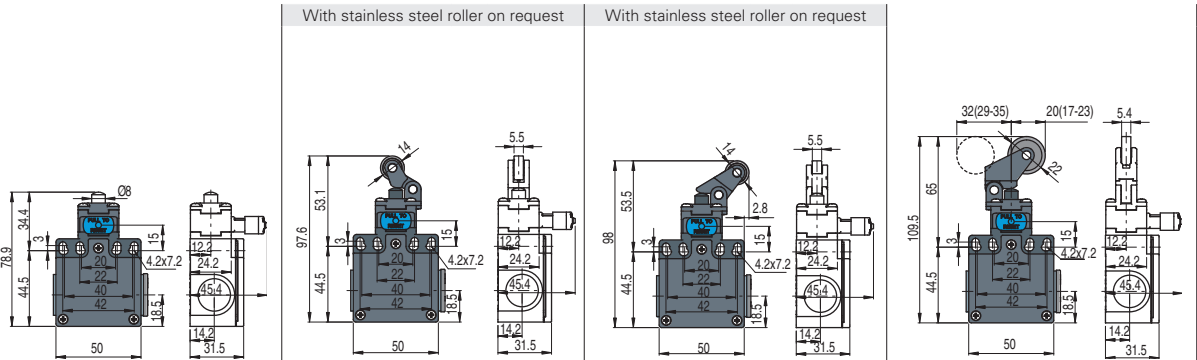
FZ series position switches with reset



The majority of switches can be equipped with a reset device (option W3) which enables the simultaneous actuation of actuator and contact block. The device is a module that is mounted between the body and the head of the switch that can be rotated independently from the head. The reset device has the following advantages:

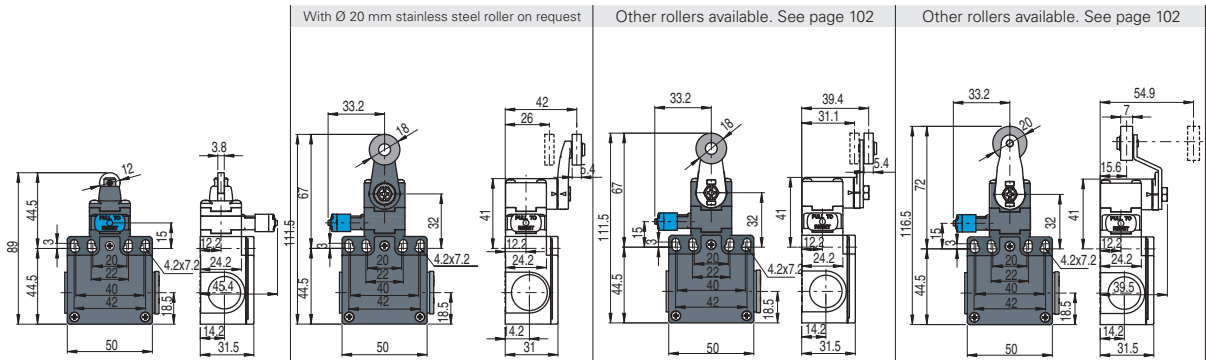
- can be integrated into the majority of standard actuator heads;
- contact blocks with snap action are no more necessary because the tripping movement is executed by the reset device itself;
- can be rotated independently from the head ensuring maximum flexibility during installation;
- can be delivered with two different actuating forces: standard and increased for vibration applications;
- mechanical endurance: 1 million operating cycles.

Contact type
R = snap action
L = slow action



Contact block	With stainless steel roller on request	With stainless steel roller on request	With stainless steel roller on request	With stainless steel roller on request
2 R	FZ 201-W3M2 2x(1NO-1NC)	FZ 202-W3M2 2x(1NO-1NC)	FZ 205-W3M2 2x(1NO-1NC)	FZ 207-W3M2 2x(1NO-1NC)
6 L	FZ 601-W3M2 1NO+1NC	FZ 602-W3M2 1NO+1NC	FZ 605-W3M2 1NO+1NC	FZ 607-W3M2 1NO+1NC
9 L	FZ 901-W3M2 2NC	FZ 902-W3M2 2NC	FZ 905-W3M2 2NC	FZ 907-W3M2 2NC
10 L	FZ 1001-W3M2 2NO	FZ 1002-W3M2 2NO	FZ 1005-W3M2 2NO	FZ 1007-W3M2 2NO
20 L	FZ 2001-W3M2 1NO+2NC	FZ 2002-W3M2 1NO+2NC	FZ 2005-W3M2 1NO+2NC	FZ 2007-W3M2 1NO+2NC
21 L	FZ 2101-W3M2 3NC	FZ 2102-W3M2 3NC	FZ 2105-W3M2 3NC	FZ 2107-W3M2 3NC
22 L	FZ 2201-W3M2 2NO+1NC	FZ 2202-W3M2 2NO+1NC	FZ 2205-W3M2 2NO+1NC	FZ 2207-W3M2 2NO+1NC
Max. speed	page 229 - type 4	page 229 - type 3	page 229 - type 3	page 229 - type 3
Actuating force	4.5 N (25 N)	4 N (25 N)	4 N (25 N)	2.5 N (25 N)
Travel diagrams	page 231 - group 1	page 231 - group 2	page 231 - group 2	page 231 - group 3

Contact type
R = snap action
L = slow action



Contact block	With Ø 20 mm stainless steel roller on request	With Ø 20 mm stainless steel roller on request	Other rollers available. See page 102	Other rollers available. See page 102
2 R	FZ 215-W3M2R28 2x(1NO-1NC)	FZ 230-W3M2 2x(1NO-1NC)	FZ 231-W3M2 2x(1NO-1NC)	FZ 251-W3M2 2x(1NO-1NC)
6 L	FZ 615-W3M2R28 1NO+1NC	FZ 630-W3M2 1NO+1NC	FZ 631-W3M2 1NO+1NC	FZ 651-W3M2 1NO+1NC
9 L	FZ 915-W3M2R28 2NC	FZ 930-W3M2 2NC	FZ 931-W3M2 2NC	FZ 951-W3M2 2NC
10 L	FZ 1015-W3M2R28 2NO	FZ 1030-W3M2 2NO	FZ 1031-W3M2 2NO	FZ 1051-W3M2 2NO
20 L	FZ 2015-W3M2R28 1NO+2NC	FZ 2030-W3M2 1NO+2NC	FZ 2031-W3M2 1NO+2NC	FZ 2051-W3M2 1NO+2NC
21 L	FZ 2115-W3M2R28 3NC	FZ 2130-W3M2 3NC	FZ 2131-W3M2 3NC	FZ 2151-W3M2 3NC
22 L	FZ 2215-W3M2R28 2NO+1NC	FZ 2230-W3M2 2NO+1NC	FZ 2231-W3M2 2NO+1NC	FZ 2251-W3M2 2NO+1NC
Max. speed	page 229 - type 2	page 229 - type 1	page 229 - type 1	page 229 - type 1
Actuating force	4.5 N (25 N)	0.07 Nm (0.25 Nm)	0.07 Nm (0.25 Nm)	0.07 Nm (0.25 Nm)
Travel diagrams	page 231 - group 1	page 231 - group 4	page 231 - group 4	page 231 - group 4

All values in the drawings are in mm

Accessories See page 207

→ The 2D and 3D files are available at www.pizzato.com

Other rollers available. See page 102	Other rollers available. See page 102	Other rollers available. See page 102	Other rollers available. See page 102
Contact type R = snap action L = slow action			
Contact block 2 R FZ 252-W3M2 2x(1NO-1NC) 6 L FZ 652-W3M2 1NO+1NC 9 L FZ 952-W3M2 2NC 10 L FZ 1052-W3M2 2NO 20 L FZ 2052-W3M2 1NO+2NC 21 L FZ 2152-W3M2 3NC 22 L FZ 2252-W3M2 2NO+1NC	FZ 254-W3M2 2x(1NO-1NC) FZ 654-W3M2 1NO+1NC FZ 954-W3M2 2NC FZ 1054-W3M2 2NO FZ 2054-W3M2 1NO+2NC FZ 2154-W3M2 3NC FZ 2254-W3M2 2NO+1NC	FZ 256-W3M2 2x(1NO-1NC) FZ 656-W3M2 1NO+1NC FZ 956-W3M2 2NC FZ 1056-W3M2 2NO FZ 2056-W3M2 1NO+2NC FZ 2156-W3M2 3NC FZ 2256-W3M2 2NO+1NC	FZ 257-W3M2 2x(1NO-1NC) FZ 657-W3M2 1NO+1NC FZ 957-W3M2 2NC FZ 1057-W3M2 2NO FZ 2057-W3M2 1NO+2NC FZ 2157-W3M2 3NC FZ 2257-W3M2 2NO+1NC
Max. speed	page 229 - type 1	page 229 - type 1	page 229 - type 1
Actuating force	0.07 Nm (0.25 Nm \rightarrow)	0.07 Nm (0.25 Nm \rightarrow)	0.07 Nm (0.25 Nm \rightarrow)
Travel diagrams	page 231 - group 4	page 231 - group 4	page 231 - group 4

Increased actuating force



The switch can be delivered with increased actuating force (option W4). Ideal for vibration applications.

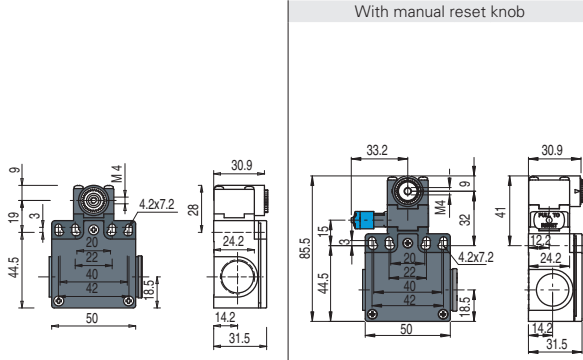
Actuators	Actuating force
01, 14, 15, 16	7 N
02, 05	6 N
07	3.5 N
30 ... 57	0.08 Nm

To order the switch with reset and increased actuating force, replace the -W3 option with -W4 in the order code.

Example: FZ 601-W3M2 \rightarrow FZ 601-W4M2

Position switches with swivelling lever without actuator

- Contact type
- R** = snap action
 - L** = slow action
 - LO** = slow action, make before break
 - LS** = slow action, shifted
 - LV** = slow action, shifted and spaced
 - LI** = slow action, independent
 - LA** = slow action, close
 - ⏏** = electronic, PNP



IMPORTANT

For safety applications: join only switches and actuators marked with symbol ⊕ next to the product code. For more information about safety applications see details on page 225.

Contact block

2	R	FZ 238-M2	2x(1NO-1NC)	FZ 238-W3M2	2x(1NO-1NC)
5	R	FZ 538-M2	⊕ 1NO+1NC	/	/
6	L	FZ 638-M2	⊕ 1NO+1NC	FZ 638-W3M2	⊕ 1NO+1NC
7	LO	FZ 738-M2	⊕ 1NO+1NC	/	/
9	L	FZ 938-M2	⊕ 2NC	FZ 938-W3M2	⊕ 2NC
10	L	FZ 1038-M2	2NO	FZ 1038-W3M2	2NO
11	R	FZ 1138-M2	⊕ 2NC	/	/
12	R	FZ 1238-M2	2NO	/	/
13	LV	FZ 1338-M2	⊕ 2NC	/	/
14	LS	FZ 1438-M2	⊕ 2NC	/	/
15	LS	FZ 1538-M2	2NO	/	/
16	LI	FZ 1638-M2	⊕ 2NC	/	/
18	LA	FZ 1838-M2	⊕ 1NO+1NC	/	/
20	L	FZ 2038-M2	⊕ 1NO+2NC	FZ 2038-W3M2	⊕ 1NO+2NC
21	L	FZ 2138-M2	⊕ 3NC	FZ 2138-W3M2	⊕ 3NC
22	L	FZ 2238-M2	⊕ 2NO+1NC	FZ 2238-W3M2	⊕ 2NO+1NC
E1	⏏	FZ E138-M2	1NO-1NC	/	/
Actuating force		0.06 Nm (0.25 Nm ⊕)		0.07 Nm (0.25 Nm ⊕)	
Travel diagrams		page 230 - group 5		page 231 - group 4	

Separate actuators

IMPORTANT: These separate actuators can be used only with items of the FR, FM, FX, FZ and FK series.

Technopolymer roller Ø 18 mm	Technopolymer roller Ø 18 mm	Adjustable square rod, 3x3x125 mm	Spring rod with plastic tip	Adjustable round rod Ø 3x125 mm	Technopolymer roller Ø 20 mm	
VF LE30 ⊕	VF LE31 ⊕	VF LE33	VF LE34	VF LE50	VF LE51 ⊕	
Technopolymer roller Ø 20 mm	Porcelain roller	Technopolymer roller Ø 20 mm	Adjustable actuator with technopolymer roller	Adjustable safety actuator with technopolymer roller	Technopolymer roller Ø 20 mm	Adjustable glass fibre rod
VF LE52 ⊕	VF LE53 ⊕ (2)	VF LE54 ⊕	VF LE55 ⊕ (1)	VF LE56 ⊕	VF LE57 ⊕	VF LE69

All values in the drawings are in mm

Accessories See page 207

→ The 2D and 3D files are available at www.pizzato.com



Special separate actuators

IMPORTANT: These separate actuators can be used only with items of the FR, FM, FX, FZ and FK series.

Stainless steel rollers, Ø 20 mm

VF LE31-R24 (4)	VF LE51-R24 (4)	VF LE52-R24 (4)	VF LE54-R24 (4)	VF LE55-R24 (1) (1)	VF LE56-R24 (4)	VF LE57-R24 (4)

Technopolymer rollers, Ø 35 mm

VF LE31-R25 (4) (4)	VF LE51-R25 (4) (4)	VF LE52-R25 (4)	VF LE54-R25 (4) (4)	VF LE55-R25 (1) (1)	VF LE56-R25 (4)	VF LE57-R25 (4)

Rubber rollers, Ø 40 mm

VF LE31-R5 (4) (4)	VF LE51-R5 (4) (4)	VF LE52-R5 (4)	VF LE54-R5 (4) (4)	VF LE55-R5 (1) (1)	VF LE56-R5 (4)	VF LE57-R5 (4) (4)

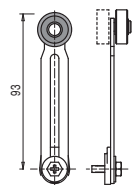
Rubber rollers, Ø 50 mm

VF LE51-R26 (4) (4)	VF LE52-R26 (4) (4)	VF LE54-R26 (4) (4)	VF LE55-R26 (1) (1)	VF LE56-R26 (4)	VF LE57-R26 (4) (4)

Protruding rubber rollers, Ø 50 mm

VF LE55-R27 (1) (1)	VF LE56-R27 (4)

- (1) Lever VF LE55 can only be used in safety applications if adjusted to its max. length, as shown in the figure to the right. If an adjustable lever is required for safety applications, use the VF LE56 adjustable safety lever.
- (2) The position switch obtained by assembling switch FZ •38-M2 (e.g. FZ 538-M2, FZ 638-M2, ...) with actuator VF LE53 will not present the same travel diagrams and actuating forces as switch FZ •53 E0M2V9 (e.g. FZ 553-E0M2V9, FZ 653-E0M2V9, ...)
- (4) The actuator cannot be rotated to the inside because it will hit the switch head upon actuation.



All values in the drawings are in mm

Accessories See page 207

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