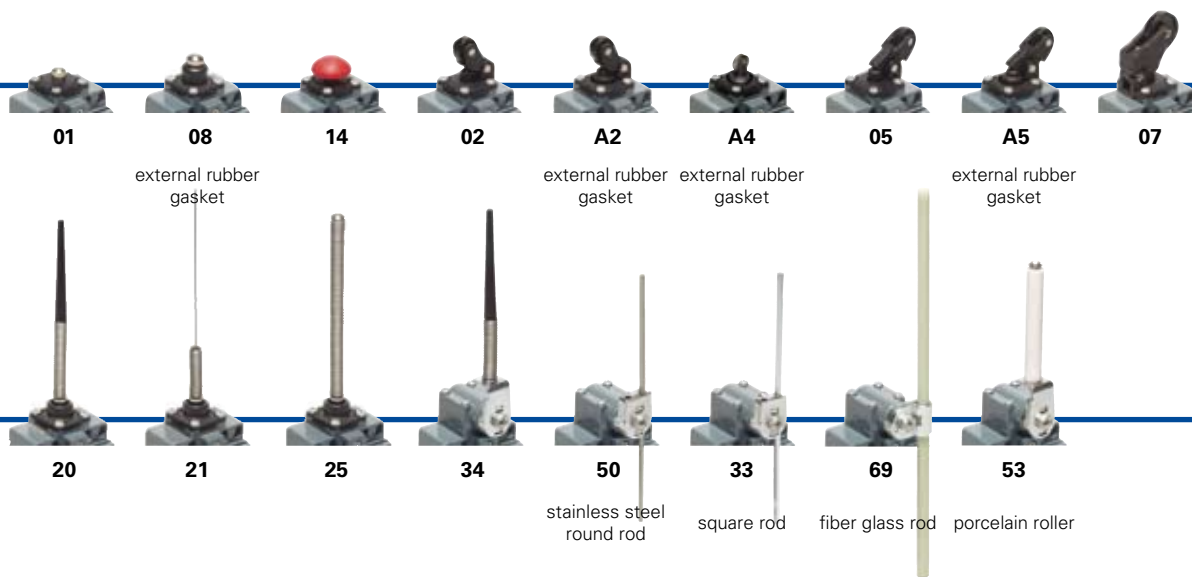


Selection diagram



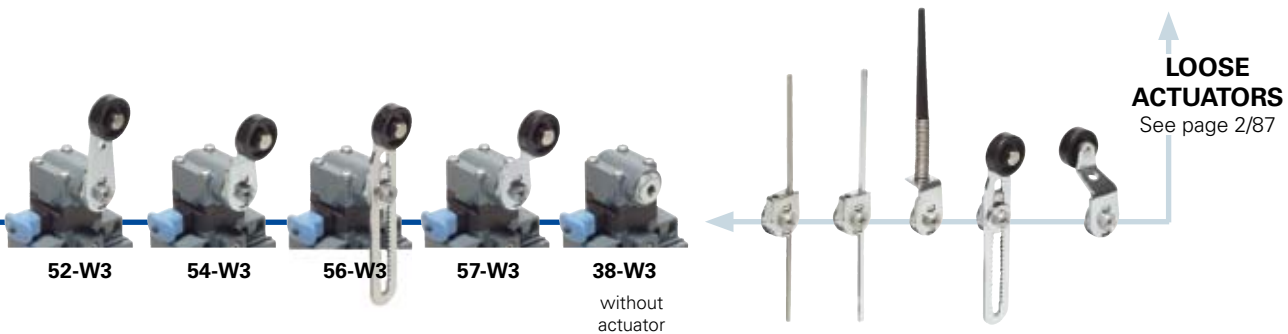
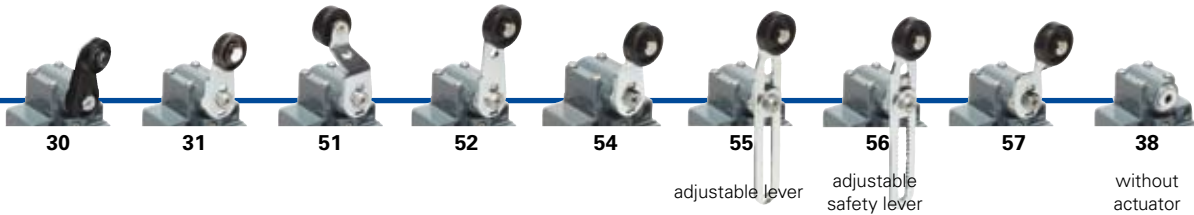
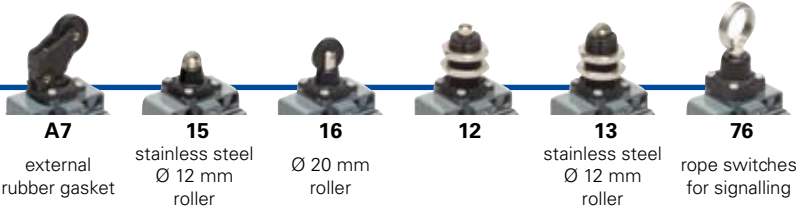
ACTUATORS



CONDUIT ENTRIES

Threaded conduit entries		With assembled cable gland		With M12 metal connector assembled and wired		
	PG 13,5 (standard)	PG 13,5	K121	for Ø 6 to Ø 12 mm cables range, from right	K41	8 poles from right
M2	M20x1,5		K221	for Ø 6 to Ø 12 mm cables range, from left	K42	8 poles from left
			K125	for Ø 3 to Ø 7 mm cables range, from right	K51	5 poles from right
			K225	for Ø 3 to Ø 7 mm cables range, from left	K52	5 poles from left
		M20x1,5	K123	for Ø 6 to Ø 12 mm cables range, from right		
			K223	for Ø 6 to Ø 12 mm cables range, from left		
			K127	for Ø 3 to Ø 7 mm cables range, from right		
			K227	for Ø 3 to Ø 7 mm cables range, from left		

● product option
 → accessory sold separately


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
FZ 502-1W3GM2K51

Housing

FZ Metal housing, two conduit entries

Contact blocks

- 5** 1NO+1NC, snap action
- 6** 1NO+1NC, slow action
- 7** 1NO+1NC, slow action overlapped
-

Actuators

- 01** short plunger
- 02** roller lever
- 05** offset roller lever
-

Suffix

- no suffix (standard)
- 1** with stainless steel roller:
 - Ø 14 mm for actuators A2, 02, A5, 05
 - Ø 20 mm for actuators 30, 31, 51, 52, 54, 55, 56, 57
- 2** with Ø 35 mm polymer roller (see special loose actuators on page 2/88)
- 3** with Ø 50 mm rubber roller (see special loose actuators on page 2/88)
- 4** with Ø 50 mm overhanging rubber roller (see special loose actuators on page 2/88)

Preinstalled cable gland or connectors

- no cable gland or connector (standard)
- K121** with right assembled cable gland suitable for Ø 6 to Ø 12 mm cables range
-
- K51** with 5 poles M12 metal connector from right
-

For the complete list of all combinations, please contact our technical office.

Threaded conduit entry

- PG 13,5 (standard)
- M2** M20x1,5

Contacts type

- silver contacts (standard)
- G** silver contacts gold plated 1 µm (contact block 2 excluded)

Reset hooking

- without reset (standard)
- W3** simultaneous reset hooking



Main data

- Metal housing, two conduit entries
- Protection degree IP67
- 17 contact blocks available
- 42 actuators available
- M12 assembled connector versions
- Silver contacts gold plated versions

Technical data

Housing

Metal housing, coated with baked epoxy powder
 Two threaded conduit entries
 Protection degree: IP67 according to EN 60529

General data

Ambient temperature: from -25°C to +80°C
 Version for operation in ambient temperature from -40°C to +80° C on request
 Max actuation frequency: 3600 operations cycles¹/hour
 Mechanical endurance: 20 million operations cycles¹
 Assembling position: any
 Driving torque for installation: see pages 7/1-7/10
 (1) One operation cycle means two movements, one to close and one to open contacts, as foreseen by EN 60947-5-1 standard.

Cross section of the conductors (flexible copper wire)

Contact blocks 20, 21, 22, 33, 34:	min.	1 x 0,34 mm ²	(1 x AWG 22)
	max.	2 x 1,5 mm ²	(2 x AWG 16)
Contact blocks 5, 6, 7, 9, 10, 11, 12, 13, 14, 15, 16, 18:	min.	1 x 0,5 mm ²	(1 x AWG 20)
	max.	2 x 2,5 mm ²	(2 x AWG 14)
Contact block 2:	min.	1 x 0,5 mm ²	(1 x AWG 20)
	max.	2 x 1,5 mm ²	(2 x AWG 16)

In conformity with standards:

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

Approvals:

IEC 60947-5-1, UL 508, GB14048.5-2001.

Markings and quality marks:

Approval IMQ: EG609
 Approval UL: E131787
 Approval CCC: 2007010305229998
 Approval ECU: 1010151

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 ⊕. 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 7/6. 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 7/10.

	Electrical data	Utilization categories	
without connector	Thermal current (I _{th}):	10 A	
	Rated insulation voltage (U _i):	500 Vac 600 Vdc	
	Rated impulse withstand voltage (U _{imp}):	400Vac500Vdc(contact blocks 2, 11, 12, 20, 21, 22, 33, 34)	Alternate current: AC15 (50...60 Hz)
		6 kV	Ue (V) 250 400 500
	4 kV (contact blocks 20, 21, 22, 33, 34)	le (A) 6 4 1	
Conditional short circuit current:	1000 A according to EN 60947-5-1	Direct current: DC13	
Protection against short circuits:	fuse 10 A 500 V type aM	Ue (V) 24 125 250	
Pollution degree:	3	le (A) 6 1,1 0,4	
with 5 poles M12 connector	Thermal current (I _{th}):	4 A	
	Rated insulation voltage (U _i):	250 Vac 300 Vdc	
	Protection against short circuits:	fuse 4 A 500 V type gG	Alternate current: AC15 (50...60 Hz)
	Pollution degree:	3	Ue (V) 24 120 250
			le (A) 4 4 4
		Direct current: DC13	
		Ue (V) 24 125 250	
		le (A) 4 1,1 0,4	
with 8 poles M12 connector	Thermal current (I _{th}):	2 A	
	Rated insulation voltage (U _i):	30 Vac 36 Vdc	
	Protection against short circuits:	fuse 2 A 500 V type gG	Alternate current: AC15 (50...60 Hz)
	Pollution degree:	3	Ue (V) 24
			le (A) 2
		Direct current: DC13	
		Ue (V) 24	
		le (A) 2	



Data type approved by IMQ, CCC and EZU

Rated insulation voltage (Ui): 500 Vac
400 Vac (for contact blocks 2, 11, 12, 20, 21, 22, 33, 34)

Thermal current (Ith): 10 A

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

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

Protection degree: IP67

MV terminals (screw clamps)

Pollution degree 3

Utilization category: AC15

Operation voltage (Ue): 400 Vac (50 Hz)

Operation current (Ie): 3 A

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

Positive opening of contacts on contact block 5, 6, 7, 9, 11, 13, 14, 16, 18, 20, 21, 22, 33, 34

In conformity with standards: EN 60947-1, EN 60947-5-1+ A1:2009, fundamental requirements of the Low Voltage Directive 2006/95/CE.

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

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 except 2 and 3 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).

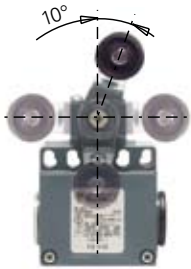
For contact blocks 2 and 3 use 60 or 75 °C copper (Cu) conductor and wire size No. 14 AWG. Terminal tightening torque of 12 lb in (1.4 Nm).

In conformity with standard: UL 508

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

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.



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

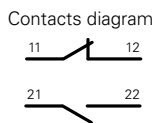
In all switches, it is possible to rotate the head in 90° steps.



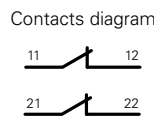
Working operation of contact block 16 with independent contacts

The contact block 16 has two NC contacts, both with positive opening activated independently according to the lever turning direction.

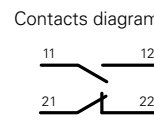
Lever turned to left




Lever not turned




Lever turned to right

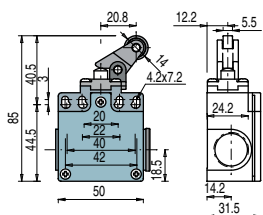
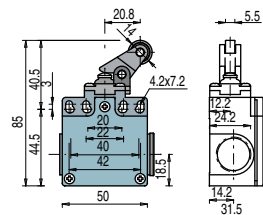
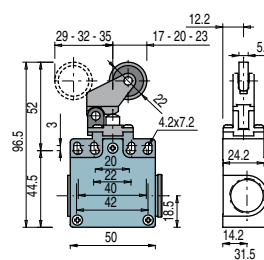
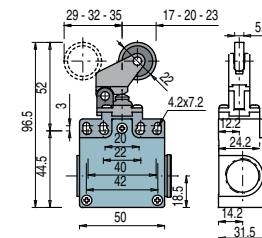



Contacts type:

- R** = snap action
- L** = slow action
- LO** = slow action overlapped
- LS** = slow action shifted
- LV** = slow action shifted and spaced
- LI** = slow action independent
- LA** = slow action closer
-  = electronic PNP

Contact blocks

		With stainless steel roller on request	With external rubber gasket With stainless steel roller on request	With external rubber gasket Ø 12 mm stainless steel roller		
5	R FZ 501	1NO+1NC	FZ 502	FZ 5A2	FZ 5A4	
6	L FZ 601	1NO+1NC	FZ 602	FZ 6A2	FZ 6A4	
7	LO FZ 701	1NO+1NC	FZ 702	FZ 7A2	FZ 7A4	
9	L FZ 901	2NC	FZ 902	FZ 9A2	FZ 9A4	
10	L FZ 1001	2NO	FZ 1002	FZ 10A2	FZ 10A4	
11	R FZ 1101	2NC	FZ 1102	FZ 11A2	FZ 11A4	
12	R FZ 1201	2NO	FZ 1202	FZ 12A2	FZ 12A4	
13	LV FZ 1301	2NC	FZ 1302	FZ 13A2	FZ 13A4	
14	LS FZ 1401	2NC	FZ 1402	FZ 14A2	FZ 14A4	
15	LS FZ 1501	2NO	FZ 1502	FZ 15A2	FZ 15A4	
18	LA FZ 1801	1NO+1NC	FZ 1802	FZ 18A2	FZ 18A4	
20	L FZ 2001	1NO+2NC	FZ 2002	FZ 20A2	FZ 20A4	
21	L FZ 2101	3NC	FZ 2102	FZ 21A2	FZ 21A4	
22	L FZ 2201	2NO+1NC	FZ 2202	FZ 22A2	FZ 22A4	
2	R FZ 201	2x(1NO-1NC)	FZ 202	FZ 2A2	FZ 2A4	
E1	 FZ E101	1NO-1NC	FZ E102	FZ E1A2	FZ E1A4	
Max speed	page 7/5 - type 4		page 7/5 - type 3		page 7/5 - type 3	
Min. force	8 N (25 N ⊕)		6 N (25 N ⊕)		4,3 N (25 N ⊕)	
Travel diagrams	page 7/6 - group 1		page 7/6 - group 2		page 7/6 - group 2	

	With stainless steel roller on request	With external rubber gasket With stainless steel roller on request	With external rubber gasket	With external rubber gasket
				
Contact blocks				
5	R FZ 505	FZ 5A5	FZ 507	FZ 5A7
6	L FZ 605	FZ 6A5	FZ 607	FZ 6A7
7	LO FZ 705	FZ 7A5	FZ 707	FZ 7A7
9	L FZ 905	FZ 9A5	FZ 907	FZ 9A7
10	L FZ 1005	FZ 10A5	FZ 1007	FZ 10A7
11	R FZ 1105	FZ 11A5	FZ 1107	FZ 11A7
12	R FZ 1205	FZ 12A5	FZ 1207	FZ 12A7
13	LV FZ 1305	FZ 13A5	FZ 1307	FZ 13A7
14	LS FZ 1405	FZ 14A5	FZ 1407	FZ 14A7
15	LS FZ 1505	FZ 15A5	FZ 1507	FZ 15A7
18	LA FZ 1805	FZ 18A5	FZ 1807	FZ 18A7
20	L FZ 2005	FZ 20A5	FZ 2007	FZ 20A7
21	L FZ 2105	FZ 21A5	FZ 2107	FZ 21A7
22	L FZ 2205	FZ 22A5	FZ 2207	FZ 22A7
2	R FZ 205	FZ 2A5	FZ 207	FZ 2A7
E1	 FZ E105	FZ E1A5	FZ E107	FZ E1A7
Max speed	page 7/5 - type 3		page 7/5 - type 3	
Min. force	6 N (25 N ⊕)		4 N (25 N ⊕)	
Travel diagrams	page 7/6 - group 2		page 7/6 - group 3	

Accessories See page 6/1

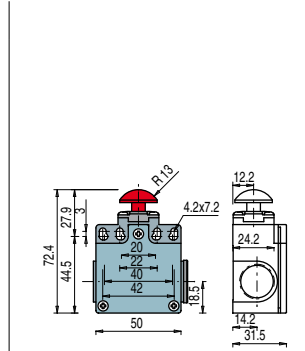
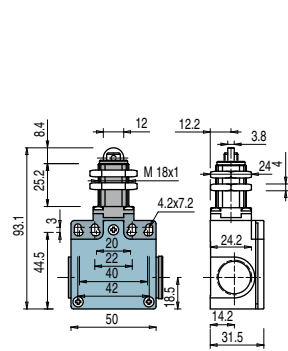
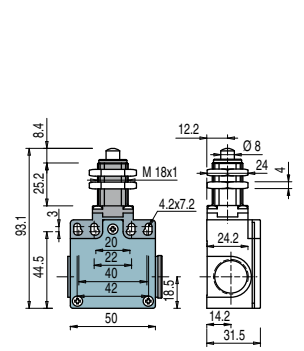
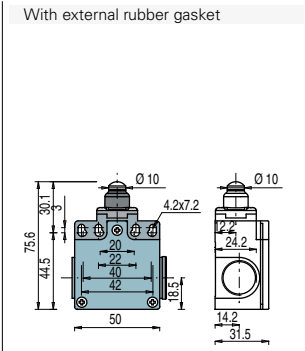
All measures in the drawings are in mm



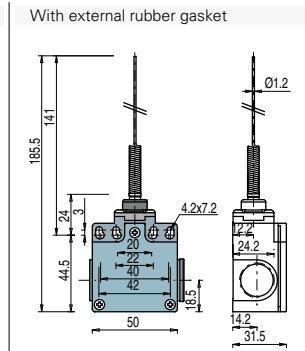
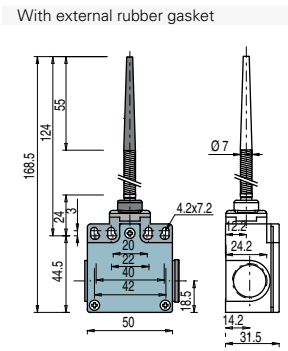
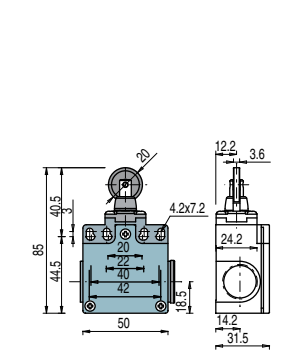
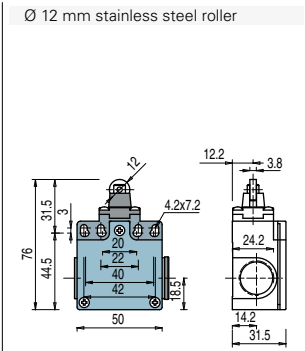
Contacts type:

- R** = snap action
- L** = slow action
- LO** = slow action overlapped
- LS** = slow action shifted
- LV** = slow action shifted and spaced
- LI** = slow action independent
- LA** = slow action closer
- ⚡** = electronic PNP

Contact blocks



5	R	FZ 508	➔ 1NO+1NC	FZ 512	➔ 1NO+1NC	FZ 513	➔ 1NO+1NC	FZ 514	➔ 1NO+1NC
6	L	FZ 608	➔ 1NO+1NC	FZ 612	➔ 1NO+1NC	FZ 613	➔ 1NO+1NC	FZ 614	➔ 1NO+1NC
7	LO	FZ 708	➔ 1NO+1NC	FZ 712	➔ 1NO+1NC	FZ 713	➔ 1NO+1NC	FZ 714	➔ 1NO+1NC
9	L	FZ 908	➔ 2NC	FZ 912	➔ 2NC	FZ 913	➔ 2NC	FZ 914	➔ 2NC
10	L	FZ 1008	2NO	FZ 1012	2NO	FZ 1013	2NO	FZ 1014	2NO
11	R	FZ 1108	➔ 2NC	FZ 1112	➔ 2NC	FZ 1113	➔ 2NC	FZ 1114	➔ 2NC
12	R	FZ 1208	2NO	FZ 1212	2NO	FZ 1213	2NO	FZ 1214	2NO
13	LV	FZ 1308	➔ 2NC	FZ 1312	➔ 2NC	FZ 1313	➔ 2NC	FZ 1314	➔ 2NC
14	LS	FZ 1408	➔ 2NC	FZ 1412	➔ 2NC	FZ 1413	➔ 2NC	FZ 1414	➔ 2NC
15	LS	FZ 1508	2NO	FZ 1512	2NO	FZ 1513	2NO	FZ 1514	2NO
18	LA	FZ 1808	➔ 1NO+1NC	FZ 1812	➔ 1S+1Ö	FZ 1813	➔ 1S+1Ö	FZ 1814	➔ 1S+1Ö
20	L	FZ 2008	➔ 1NO+2NC	FZ 2012	➔ 1NO+2NC	FZ 2013	➔ 1NO+2NC	FZ 2014	➔ 1NO+2NC
21	L	FZ 2108	➔ 3NC	FZ 2112	➔ 3NC	FZ 2113	➔ 3NC	FZ 2114	➔ 3NC
22	L	FZ 2208	➔ 2NO+1NC	FZ 2212	➔ 2NO+1NC	FZ 2213	➔ 2NO+1NC	FZ 2214	➔ 2NO+1NC
2	R	FZ 208	2x(1NO-1NC)	FZ 212	2x(1NO-1NC)	FZ 213	2x(1NO-1NC)	FZ 214	2x(1NO-1NC)
E1	⚡	FZ E108	1NO-1NC	FZ E112	1NO-1NC	FZ E113	1NO-1NC	FZ E114	1NO-1NC
Max speed		page 7/5 - type 4		page 7/5 - type 4		page 7/5 - type 2		page 7/5 - type 4	
Min. force		8 N (25 N ➔)		8 N (25 N ➔)		8 N (25 N ➔)		8 N (25 N ➔)	
Travel diagrams		page 7/6 - group 1		page 7/6 - group 1		page 7/6 - group 1		page 7/6 - group 1	




Contact blocks

5	R	FZ 515	➔ 1NO+1NC	FZ 516	➔ 1NO+1NC	FZ 520	1NO+1NC	FZ 521	1NO+1NC
6	L	FZ 615	➔ 1NO+1NC	FZ 616	➔ 1NO+1NC				
7	LO	FZ 715	➔ 1NO+1NC	FZ 716	➔ 1NO+1NC				
9	L	FZ 915	➔ 2NC	FZ 916	➔ 2NC				
10	L	FZ 1015	2NO	FZ 1016	2NO	FZ 1020	2NO	FZ 1021	2NO
11	R	FZ 1115	➔ 2NC	FZ 1116	➔ 2NC				
12	R	FZ 1215	2NO	FZ 1216	2NO	FZ 1220	2NO	FZ 1221	2NO
13	LV	FZ 1315	➔ 2NC	FZ 1316	➔ 2NC				
14	LS	FZ 1415	➔ 2NC	FZ 1416	➔ 2NC				
15	LS	FZ 1515	2NO	FZ 1516	2NO				
18	LA	FZ 1815	➔ 1S+1Ö	FZ 1816	➔ 1S+1Ö	FZ 1820	1NO+1NC	FZ 1821	1NO+1NC
20	L	FZ 2015	➔ 1NO+2NC	FZ 2016	➔ 1NO+2NC	FZ 2020	1NO+2NC	FZ 2021	1NO+2NC
21	L	FZ 2115	➔ 3NC	FZ 2116	➔ 3NC	FZ 2120	3NC	FZ 2121	3NC
22	L	FZ 2215	➔ 2NO+1NC	FZ 2216	➔ 2NO+1NC	FZ 2220	2NO+1NC	FZ 2221	2NO+1NC
2	R	FZ 215	2x(1NO-1NC)	FZ 216	2x(1NO-1NC)	FZ 220	2x(1NO-1NC)	FZ 221	2x(1NO-1NC)
E1	⚡	FZ E115	1NO-1NC	FZ E116	1NO-1NC	FZ E120	1NO-1NC	FZ E121	1NO-1NC
Max speed		page 7/5 - type 2		page 7/5 - type 2		1 m/s		1 m/s	
Min. force		8 N (25 N ➔)		8 N (25 N ➔)		0,07 Nm		0,07 Nm	
Travel diagrams		page 7/6 - group 1		page 7/6 - group 1		page 7/6 - group 4		page 7/6 - group 4	


Items with code on the green background are available in stock


Position switches FZ series

Contacts type:

- R** = snap action
- L** = slow action
- LO** = slow action overlapped
- LS** = slow action shifted
- LV** = slow action shifted and spaced
- LI** = slow action independent
- LA** = slow action closer
-  = electronic PNP

Contact blocks

	With external rubber gasket	With Ø 20 mm stainless steel roller on request	Other rollers available. See page 2/88	3x3 mm square rod
5	R FZ 525	FZ 530	FZ 531	FZ 533
6	L FZ 525	FZ 630	FZ 631	FZ 633
7	LO FZ 525	FZ 730	FZ 731	FZ 733
9	L FZ 525	FZ 930	FZ 931	FZ 933
10	L FZ 1025	FZ 1030	FZ 1031	FZ 1033
11	R FZ 1025	FZ 1130	FZ 1131	FZ 1133
12	R FZ 1225	FZ 1230	FZ 1231	FZ 1233
13	LV FZ 1225	FZ 1330	FZ 1331	FZ 1333
14	LS FZ 1225	FZ 1430	FZ 1431	FZ 1433
15	LS FZ 1225	FZ 1530	FZ 1531	FZ 1533
16	LI FZ 1225	FZ 1630	FZ 1631	FZ 1633
18	LA FZ 1825	FZ 1830	FZ 1831	FZ 1833
20	L FZ 2025	FZ 2030	FZ 2031	FZ 2033
21	L FZ 2125	FZ 2130	FZ 2131	FZ 2133
22	L FZ 2225	FZ 2230	FZ 2231	FZ 2233
2	R FZ 225	FZ 230	FZ 231	FZ 233
E1	 FZ E125	FZ E130	FZ E131	FZ E133
Max speed	1 m/s	page 7/5 - type 1	page 7/5 - type 1	1,5 m/s
Min. force	0,12 Nm	0,06 Nm (0,25 Nm ⊕)	0,06 Nm (0,25 Nm ⊕)	0,06 Nm
Travel diagrams	page 7/6 - group 4	page 7/6 - group 5	page 7/6 - group 5	page 7/6 - group 5

	Ø 3 mm stainless steel round rod	Other rollers available. See page 2/88	Other rollers available. See page 2/88
5	R FZ 534	FZ 551	FZ 552
6	L FZ 634	FZ 651	FZ 652
7	LO FZ 734	FZ 751	FZ 752
9	L FZ 934	FZ 951	FZ 952
10	L FZ 1034	FZ 1051	FZ 1052
11	R FZ 1134	FZ 1151	FZ 1152
12	R FZ 1234	FZ 1251	FZ 1252
13	LV FZ 1334	FZ 1351	FZ 1352
14	LS FZ 1434	FZ 1451	FZ 1452
15	LS FZ 1534	FZ 1551	FZ 1552
16	LI FZ 1634	FZ 1651	FZ 1652
18	LA FZ 1834	FZ 1851	FZ 1852
20	L FZ 2034	FZ 2051	FZ 2052
21	L FZ 2134	FZ 2151	FZ 2152
22	L FZ 2234	FZ 2251	FZ 2252
2	R FZ 234	FZ 251	FZ 252
E1	 FZ E134	FZ E151	FZ E152
Max speed	1,5 m/s	page 7/5 - type 1	page 7/5 - type 1
Min. force	0,06 Nm	0,06 Nm (0,25 Nm ⊕)	0,06 Nm (0,25 Nm ⊕)
Travel diagrams	page 7/6 - group 5	page 7/6 - group 5	page 7/6 - group 5

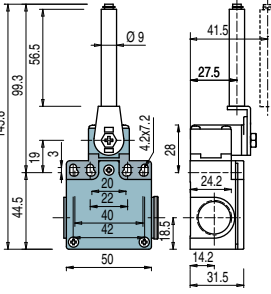
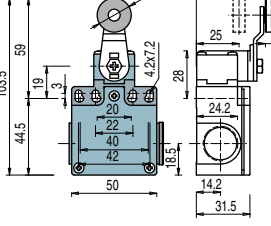
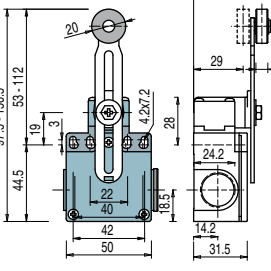
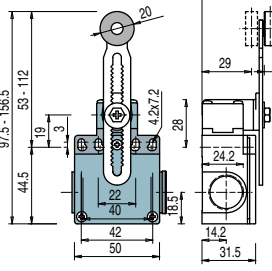
Accessories See page 6/1

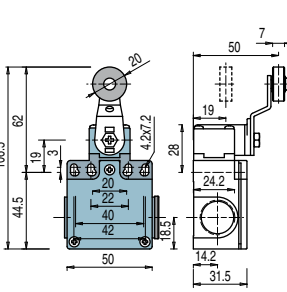
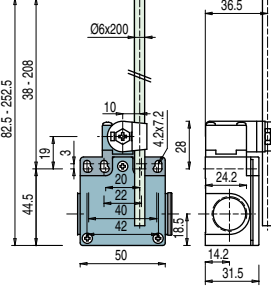
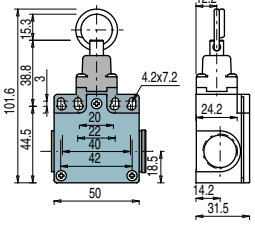


Contacts type:

- R** = snap action
- L** = slow action
- LO** = slow action overlapped
- LS** = slow action shifted
- LV** = slow action shifted and spaced
- LI** = slow action independent
- LA** = slow action closer
- A** = electronic PNP

Contact blocks

	Porcelain roller	Other rollers available. See page 2/88	Other rollers available. See page 2/88	Other rollers available. See page 2/88
				
5	R FZ 553-E0V9	R FZ 554	R FZ 555	R FZ 556
6	L FZ 653-E0V9	L FZ 654	L FZ 655	L FZ 656
7	LO FZ 753-E0V9	LO FZ 754	LO FZ 755	LO FZ 756
9	L FZ 953-E0V9	L FZ 954	L FZ 955	L FZ 956
10	L FZ 1053-E0V9	L FZ 1054	L FZ 1055	L FZ 1056
11	R FZ 1253-E0V9	R FZ 1154	R FZ 1155	R FZ 1156
12	R FZ 1253-E0V9	R FZ 1254	R FZ 1255	R FZ 1256
13	LV FZ 1353-E0V9	LV FZ 1354	LV FZ 1355	LV FZ 1356
14	LS FZ 1453-E0V9	LS FZ 1454	LS FZ 1455	LS FZ 1456
15	LS FZ 1553-E0V9	LS FZ 1554	LS FZ 1555	LS FZ 1556
16	LI FZ 1653-E0V9	LI FZ 1654	LI FZ 1655	LI FZ 1656
18	LA FZ 1853-E0V9	LA FZ 1854	LA FZ 1855	LA FZ 1856
20	L FZ 2053-E0V9	L FZ 2054	L FZ 2055	L FZ 2056
21	L FZ 2153-E0V9	L FZ 2154	L FZ 2155	L FZ 2156
22	L FZ 2253-E0V9	L FZ 2254	L FZ 2255	L FZ 2256
2	R FZ 253-E0	R FZ 254	R FZ 255	R FZ 256
E1	A FZ E153-E0V9	A FZ E154	A FZ E155	A FZ E156
Max speed	0,5 m/s	page 7/5 - type 1	page 7/5 - type 1	page 7/5 - type 1
Min. force	0,03 Nm (0,25 Nm R)	0,06 Nm (0,25 Nm R)	0,06 Nm (0,25 Nm R)	0,06 Nm (0,25 Nm R)
Travel diagrams	page 7/6 - group 6	page 7/6 - group 5	page 7/6 - group 5	page 7/6 - group 5

	Other rollers available. See page 2/88	Fiber glass rod	Rope switches for signalling
			
5	R FZ 557	R FZ 569	R FZ 576
6	L FZ 657	L FZ 669	L FZ 676
7	LO FZ 757	LO FZ 769	LO FZ 776
9	L FZ 957	L FZ 969	L FZ 976
10	L FZ 1057	L FZ 1069	L FZ 1076
11	R FZ 1157	R FZ 1169	R FZ 1176
12	R FZ 1257	R FZ 1269	R FZ 1276
13	LV FZ 1357	LV FZ 1369	LV FZ 1376
14	LS FZ 1457	LS FZ 1469	LS FZ 1476
15	LS FZ 1557	LS FZ 1569	LS FZ 1576
16	LI FZ 1657	LI FZ 1669	LI FZ 1676
18	LA FZ 1857	LA FZ 1869	LA FZ 1876
20	L FZ 2057	L FZ 2069	L FZ 2076
21	L FZ 2157	L FZ 2169	L FZ 2176
22	L FZ 2257	L FZ 2269	L FZ 2276
2	R FZ 257	R FZ 269	R FZ 276
E1	A FZ E157	A FZ E169	A FZ E176
Max speed	page 7/5 - type 1	1,5 m/s	0,5 m/s
Min. force	0,06 Nm (0,25 Nm R)	0,06 Nm	initial 20 N - final 40 N
Travel diagrams	page 7/6 - group 5	page 7/6 - group 5	page 7/6 - group 7

Items with code on the green background are available in stock

⁽¹⁾ Positive opening only with lever adjusted on the max. See page 2/87.
General Catalog 2011-2012



Position switches FZ series with reset

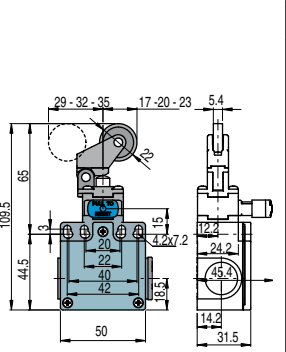
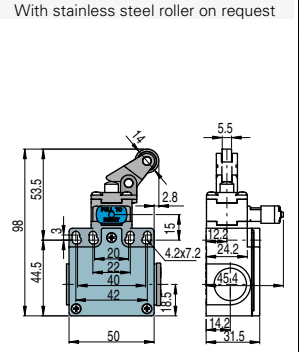
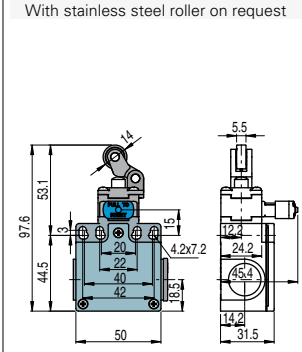
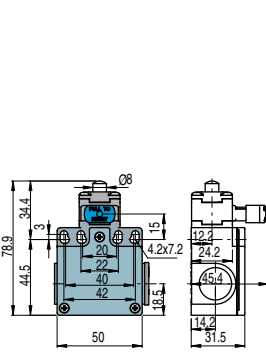


Pizzato Eletttrica has developed a reset device code W3 to make perfectly simultaneous the actuator and the contact block tripping. The new device is a block inserted between the switch body and the head, and could be rotated independently from this last one. This new device has following advantages:

- * The reset device integrate in any standard actuation head
- * Contact blocks with snap action are no more necessary because the tripping movement is made by the reset device itself
- * The reset device can be rotated independently from the head for the maximum flexibility during the assembling.

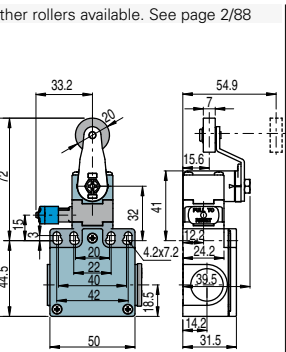
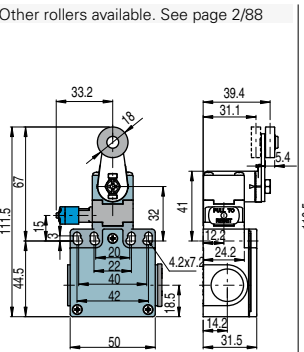
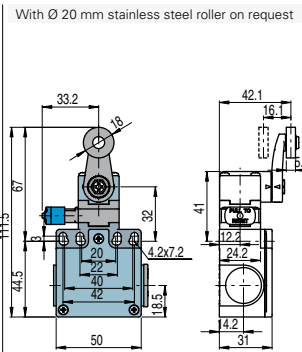
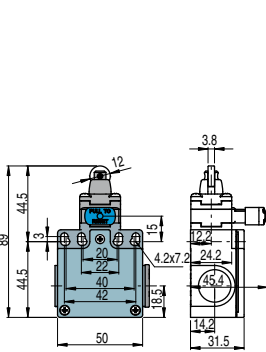
Contacts type:

- R** = snap action
- L** = slow action



Contact blocks

6	L	FZ 601-W3	⊕ 1NO+1NC	FZ 602-W3	⊕ 1NO+1NC	FZ 605-W3	⊕ 1NO+1NC	FZ 607-W3	⊕ 1NO+1NC
9	L	FZ 901-W3	⊕ 2NC	FZ 902-W3	⊕ 2NC	FZ 905-W3	⊕ 2NC	FZ 907-W3	⊕ 2NC
10	L	FZ 1001-W3	2NO	FZ 1002-W3	2NO	FZ 1005-W3	2NO	FZ 1007-W3	2NO
20	L	FZ 2001-W3	⊕ 1NO+2NC	FZ 2002-W3	⊕ 1NO+2NC	FZ 2005-W3	⊕ 1NO+2NC	FZ 2007-W3	⊕ 1NO+2NC
21	L	FZ 2101-W3	⊕ 3NC	FZ 2102-W3	⊕ 3NC	FZ 2105-W3	⊕ 3NC	FZ 2107-W3	⊕ 3NC
22	L	FZ 2201-W3	⊕ 2NO+1NC	FZ 2202-W3	⊕ 2NO+1NC	FZ 2205-W3	⊕ 2NO+1NC	FZ 2207-W3	⊕ 2NO+1NC
2	R	FZ 201-W3	2NO+2NC	FZ 202-W3	2NO+2NC	FZ 205-W3	2NO+2NC	FZ 207-W3	2NO+2NC
Max speed		page 7/5 - type 4		page 7/5 - type 3		page 7/5 - type 3		page 7/5 - type 3	
Min. force		8 N (25 N ⊕)		6 N (25 N ⊕)		6 N (25 N ⊕)		4 N (25 N ⊕)	
Travel diagrams		page 7/7 - group 1		page 7/7 - group 2		page 7/7 - group 2		page 7/7 - group 3	



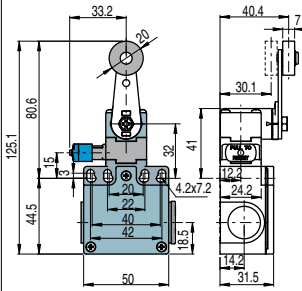
Contact blocks

6	L	FZ 615-W3	⊕ 1NO+1NC	FZ 630-W3	⊕ 1NO+1NC	FZ 631-W3	⊕ 1NO+1NC	FZ 651-W3	⊕ 1NO+1NC
9	L	FZ 915-W3	⊕ 2NC	FZ 930-W3	⊕ 2NC	FZ 931-W3	⊕ 2NC	FZ 951-W3	⊕ 2NC
10	L	FZ 1015-W3	2NO	FZ 1030-W3	2NO	FZ 1031-W3	2NO	FZ 1051-W3	2NO
20	L	FZ 2015-W3	⊕ 1NO+2NC	FZ 2030-W3	⊕ 1NO+2NC	FZ 2031-W3	⊕ 1NO+2NC	FZ 2051-W3	⊕ 1NO+2NC
21	L	FZ 2115-W3	⊕ 3NC	FZ 2130-W3	⊕ 3NC	FZ 2131-W3	⊕ 3NC	FZ 2151-W3	⊕ 3NC
22	L	FZ 2215-W3	⊕ 2NO+1NC	FZ 2230-W3	⊕ 2NO+1NC	FZ 2231-W3	⊕ 2NO+1NC	FZ 2251-W3	⊕ 2NO+1NC
2	R	FZ 215-W3	2NO+2NC	FZ 230-W3	2NO+2NC	FZ 231-W3	2NO+2NC	FZ 251-W3	2NO+2NC
Max speed		page 7/5 - type 2		page 7/5 - type 1		page 7/5 - type 1		page 7/5 - type 1	
Min. force		8 N (25 N ⊕)		0,06 Nm (0,25 Nm ⊕)		0,06 Nm (0,25 Nm ⊕)		0,06 Nm (0,25 Nm ⊕)	
Travel diagrams		page 7/7 - group 1		page 7/7 - group 4		page 7/7 - group 4		page 7/7 - group 4	

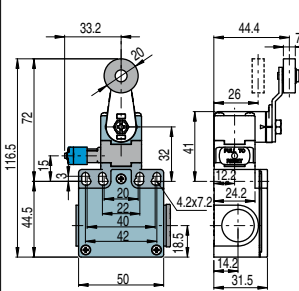
Contacts type:

- R** = snap action
- L** = slow action

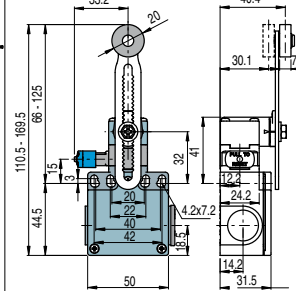
Other rollers available. See page 2/88



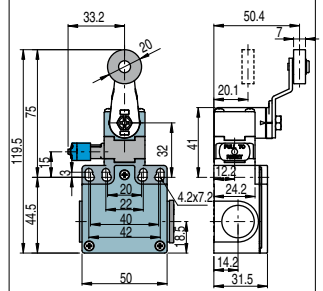
Other rollers available. See page 2/88



Other rollers available. See page 2/88



Other rollers available. See page 2/88



Contact blocks

6	L	FZ 652-W3	➔	1NO+1NC
9	L	FZ 952-W3	➔	2NC
10	L	FZ 1052-W3		2NO
20	L	FZ 2052-W3	➔	1NO+2NC
21	L	FZ 2152-W3	➔	3NC
22	L	FZ 2252-W3	➔	2NO+1NC
2	R	FZ 252-W3		2NO+2NC
Max speed		page 7/5 - type 1		
Min. force		0,06 Nm (0,25 Nm ➔)		
Travel diagrams		page 7/7 - group 4		
		FZ 654-W3	➔	1NO+1NC
		FZ 954-W3	➔	2NC
		FZ 1054-W3		2NO
		FZ 2054-W3	➔	1NO+2NC
		FZ 2154-W3	➔	3NC
		FZ 2254-W3	➔	2NO+1NC
		FZ 254-W3		2NO+2NC
		FZ 656-W3	➔	1NO+1NC
		FZ 956-W3	➔	2NC
		FZ 1056-W3		2NO
		FZ 2056-W3	➔	1NO+2NC
		FZ 2156-W3	➔	3NC
		FZ 2256-W3	➔	2NO+1NC
		FZ 256-W3		2NO+2NC
		FZ 657-W3	➔	1NO+1NC
		FZ 957-W3	➔	2NC
		FZ 1057-W3		2NO
		FZ 2057-W3	➔	1NO+2NC
		FZ 2157-W3	➔	3NC
		FZ 2257-W3	➔	2NO+1NC
		FZ 257-W3		2NO+2NC
		page 7/5 - type 1		
		0,06 Nm (0,25 Nm ➔)		
		page 7/7 - group 4		

 Items with code on the **green** background are available in stock

Position switches with revolving lever without actuator

Contacts type:

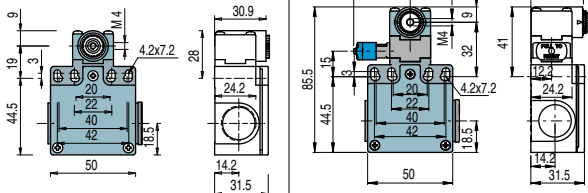
- R** = snap action
- L** = slow action
- LO** = slow action overlapped
- LS** = slow action shifted
- LV** = slow action shifted and spaced
- LI** = slow action independent
- LA** = slow action closer
- ⊖** = electronic PNP

Contact blocks

Contacts	Symbol	Model	Configuration	With manual reset knob
5	R	FZ 538	1NO+1NC	
6	L	FZ 638	1NO+1NC	FZ 638-W3 1NO+1NC
7	LO	FZ 738	1NO+1NC	
9	L	FZ 938	2NC	FZ 938-W3 2NC
10	L	FZ 1038	2NO	FZ 1038-W3 2NO
11	R	FZ 1138	2NC	
12	R	FZ 1238	2NO	
13	LV	FZ 1338	2NC	
14	LS	FZ 1438	2NC	
15	LS	FZ 1538	2NO	
16	LI	FZ 1638	2NC	
18	LA	FZ 1838	1NO+1NC	
20	L	FZ 2038	1NO+2NC	FZ 2038-W3 1NO+2NC
21	L	FZ 2138	3NC	FZ 2138-W3 3NC
22	L	FZ 2238	2NO+1NC	FZ 2238-W3 2NO+1NC
2	R	FZ 238	2x(1NO-1NC)	FZ 238-W3 2NO+2NC
E1	⊖	FZ E138	1NO-1NC	
Min. force		0,06 Nm (0,25 Nm)		0,06 Nm (0,25 Nm)
Travel diagrams		page 7/6 - group 5		page 7/7 - group 4

IMPORTANT

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

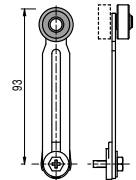


Loose actuators

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

Polymer roller Ø 18 mm	Polymer roller Ø 18 mm	Adjustable square rod 3x3x125 mm	Flexible rod actuator	Adjustable round rod Ø 3x125 mm	Polymer roller Ø 20 mm	
VF LE30	VF LE31	VF LE33	VF LE34	VF LE50	VF LE51	
Polymer roller Ø 20 mm	Porcelain roller	Polymer roller Ø 20 mm	Adjustable actuator with polymer roller	Adjustable safety actuator with polymer roller	Polymer roller Ø 20 mm	Adjustable fiber glass rod
VF LE52	VF LE53 (2)	VF LE54	VF LE55 (1)	VF LE56	VF LE57	VF LE69

- Only orders for multiple quantities of the packs are accepted.
- (1) Actuator VF LE55 suits to safety applications only if adjusted to its max length, as you can see in figure beside. If you need an adjustable lever for safety applications, use the adjustable safety lever VF LE56.
- (2) The position switch obtained by assembling the switch FZ •38 (e.g. FZ 538, FZ 638) with the actuator VF LE53 will not present the same travel diagrams and actuating forces as the position switch FZ •53-E0V9 (e.g. FZ 553-E0V9, FZ 653-E0V9...).
- (4) The actuator cannot be oriented to inside direction because it will mechanically interfere with the switch head.



Accessories See page 6/1



Special loose actuators

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

Ø 20 mm stainless steel rollers

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

Ø 35 mm polymer rollers

VF LE31-2 (4)	VF LE51-2 (4)	VF LE52-2 (4)	VF LE54-2 (4)	VF LE55-2 (1)	VF LE56-2 (4)	VF LE57-2 (4)

Ø 40 mm rubber rollers

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

Ø 50 mm rubber rollers

VF LE51-3 (4)	VF LE52-3 (4)	VF LE54-3 (4)	VF LE55-3 (1)	VF LE56-3 (4)	VF LE57-3 (4)

Ø 50 mm overhanging rubber rollers

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

Items with code on the green background are available in stock

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