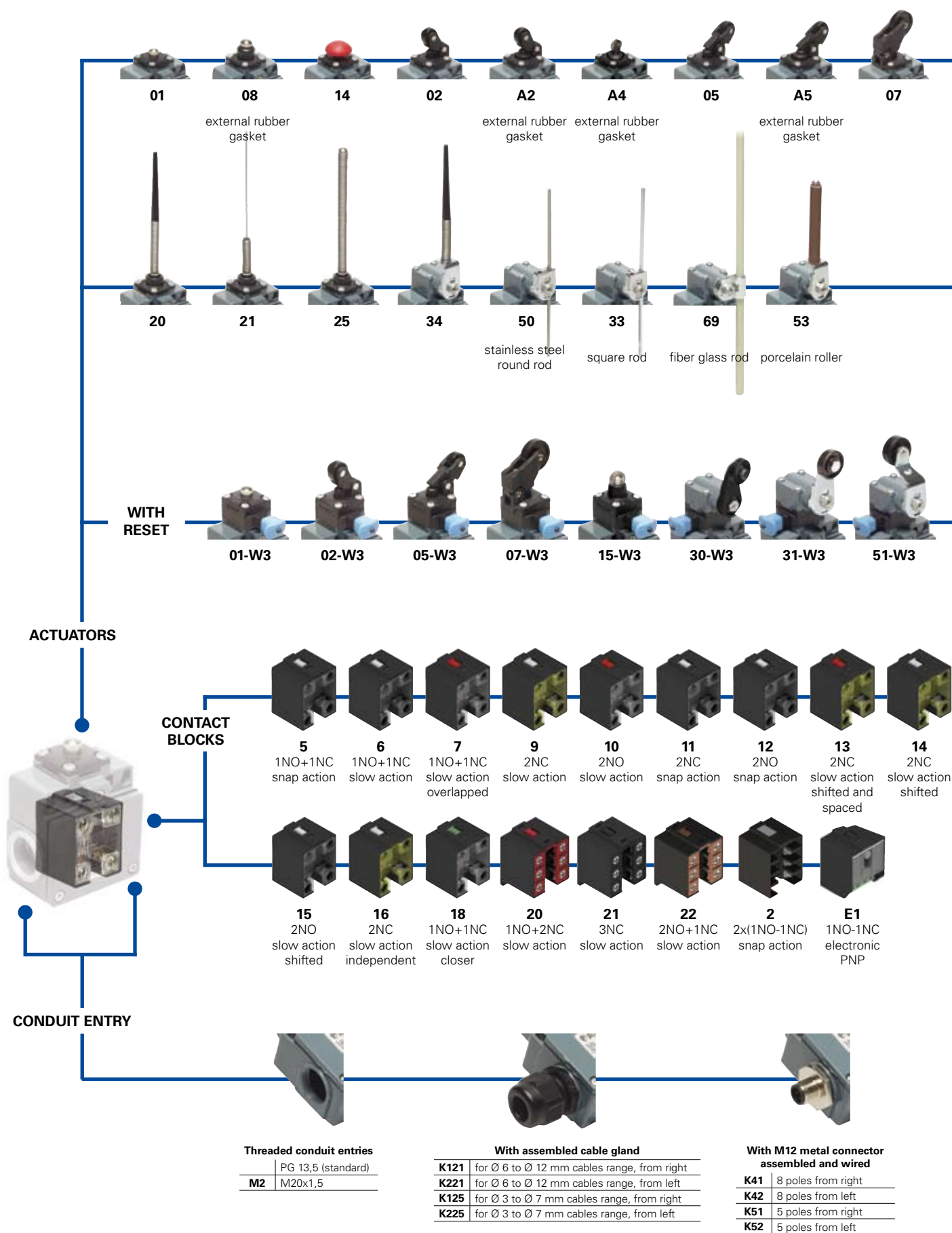
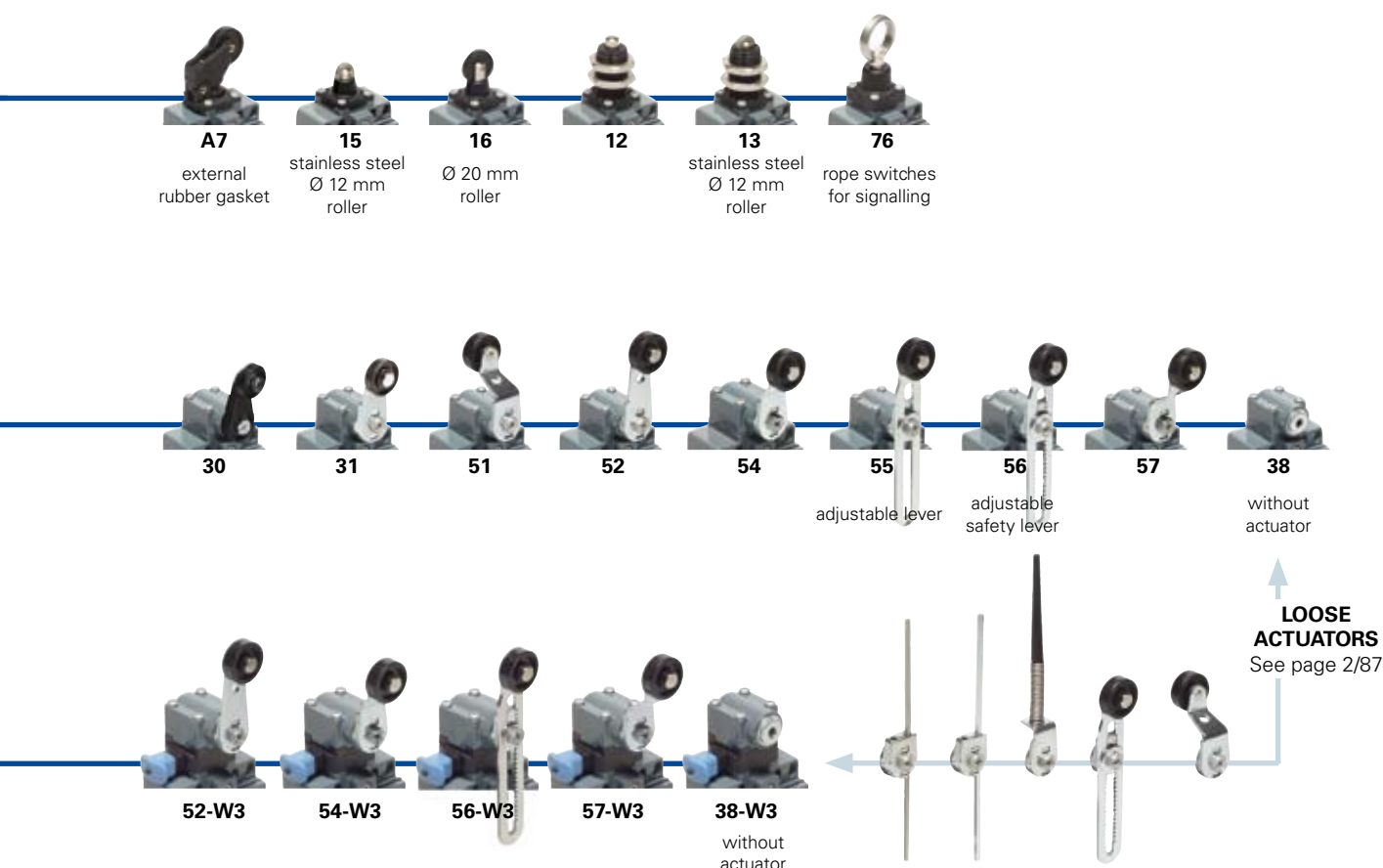


Selection diagram





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	assembled cable gland from right (see conduit entry page 2/77)
...	
K51	assembled 5 poles M12 metal connector from right (see conduit entry page 2/77)
...	

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
W4	simultaneous reset with increased force



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

Markings and quality marks:



Approval IMQ:

Approval UL:

Approval CCC:

Approval ECU:

Approval GOST:

EG609

E131787

2007010305229998

1010151

POCC IT.AB24.B04512

Technical data

Housing

Metal housing, coated with baked epoxy powder
Two threaded conduit entries
Protection degree:

IP67 according to EN 60529 with cable gland having equal or higher protection degree

General data

Ambient temperature:
Version for operation in ambient temperature from -40°C to +80° C on request
Max actuation frequency:
Mechanical endurance:
Assembling position:
Driving torque for installation:

from -25°C to +80°C
3600 operations cycles¹/hour
20 million operations cycles¹
any
see pages 7/1-7/12

(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.

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 7/12.**

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

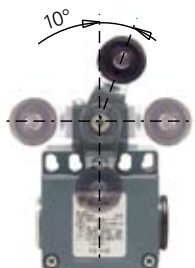
In conformity with standard: UL 508

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.

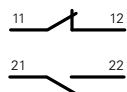


Working operation of contact block 16 with independent contacts

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

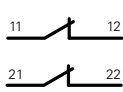
Lever turned to left

Contacts diagram



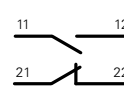
Lever not turned

Contacts diagram



Lever turned to right

Contacts diagram



2B

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
- PNP** = electronic PNP

Contact blocks

5		FZ 501	1NO+1NC	FZ 502	1NO+1NC	FZ 5A2	1NO+1NC	FZ 5A4	1NO+1NC
6		FZ 601	1NO+1NC	FZ 602	1NO+1NC	FZ 6A2	1NO+1NC	FZ 6A4	1NO+1NC
7		FZ 701	1NO+1NC	FZ 702	1NO+1NC	FZ 7A2	1NO+1NC	FZ 7A4	1NO+1NC
9		FZ 901	2NC	FZ 902	2NC	FZ 9A2	2NC	FZ 9A4	2NC
10		FZ 1001	2NO	FZ 1002	2NO	FZ 10A2	2NO	FZ 10A4	2NO
11		FZ 1101	2NC	FZ 1102	2NC	FZ 11A2	2NC	FZ 11A4	2NC
12		FZ 1201	2NO	FZ 1202	2NO	FZ 12A2	2NO	FZ 12A4	2NO
13		FZ 1301	2NC	FZ 1302	2NC	FZ 13A2	2NC	FZ 13A4	2NC
14		FZ 1401	2NC	FZ 1402	2NC	FZ 14A2	2NC	FZ 14A4	2NC
15		FZ 1501	2NO	FZ 1502	2NO	FZ 15A2	2NO	FZ 15A4	2NO
18		FZ 1801	1NO+1NC	FZ 1802	1NO+1NC	FZ 18A2	1NO+1NC	FZ 18A4	1NO+1NC
20		FZ 2001	1NO+2NC	FZ 2002	1NO+2NC	FZ 20A2	1NO+2NC	FZ 20A4	1NO+2NC
21		FZ 2101	3NC	FZ 2102	3NC	FZ 21A2	3NC	FZ 21A4	3NC
22		FZ 2201	2NO+1NC	FZ 2202	2NO+1NC	FZ 22A2	2NO+1NC	FZ 22A4	2NO+1NC
2		FZ 201	2x(1NO-1NC)	FZ 202	2x(1NO-1NC)	FZ 2A2	2x(1NO-1NC)	FZ 2A4	2x(1NO-1NC)
E1		FZ E101	1NO-1NC	FZ E102	1NO-1NC	FZ E1A2	1NO-1NC	FZ E1A4	1NO-1NC
Max speed		page 7/5 - type 4		page 7/5 - type 3		page 7/5 - type 3		page 7/5 - type 5	
Min. force		8 N (25 N)		6 N (25 N)		4,3 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		page 7/6 - group 1	

	With stainless steel roller on request	With external rubber gasket With stainless steel roller on request		With external rubber gasket
Contact blocks				
5	FZ 505	1NO+1NC	FZ 5A5	1NO+1NC
6	FZ 605	1NO+1NC	FZ 6A5	1NO+1NC
7	FZ 705	1NO+1NC	FZ 7A5	1NO+1NC
9	FZ 905	2NC	FZ 9A5	2NC
10	FZ 1005	2NO	FZ 10A5	2NO
11	FZ 1105	2NC	FZ 11A5	2NC
12	FZ 1205	2NO	FZ 12A5	2NO
13	FZ 1305	2NC	FZ 13A5	2NC
14	FZ 1405	2NC	FZ 14A5	2NC
15	FZ 1505	2NO	FZ 15A5	2NO
18	FZ 1805	1NO+1NC	FZ 18A5	1NO+1NC
20	FZ 2005	1NO+2NC	FZ 20A5	1NO+2NC
21	FZ 2105	3NC	FZ 21A5	3NC
22	FZ 2205	2NO+1NC	FZ 22A5	2NO+1NC
2	FZ 205	2x(1NO-1NC)	FZ 2A5	2x(1NO-1NC)
E1	FZ E105	1NO-1NC	FZ E1A5	1NO-1NC
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	



Contacts type:		With external rubber gasket			
R	= snap action				

$\varnothing$ 12 mm stainless steel roller					With external rubber gasket				
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	1NO+1NC	FZ 1816	1NO+1NC	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	A	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 $\rightarrow$)				8 N (25 N $\rightarrow$)	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

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 525	1NO+1NC	FZ 530	⊕	1NO+1NC	FZ 531	⊕	1NO+1NC	FZ 533	1NO+1NC
6	L			FZ 630	⊕	1NO+1NC	FZ 631	⊕	1NO+1NC	FZ 633	1NO+1NC
7	LO			FZ 730	⊕	1NO+1NC	FZ 731	⊕	1NO+1NC	FZ 733	1NO+1NC
9	L			FZ 930	⊕	2NC	FZ 931	⊕	2NC	FZ 933	2NC
10	L	FZ 1025	2NO	FZ 1030		2NO	FZ 1031		2NO	FZ 1033	2NO
11	R			FZ 1130	⊕	2NC	FZ 1131	⊕	2NC	FZ 1133	2NC
12	R	FZ 1225	2NO	FZ 1230		2NO	FZ 1231		2NO	FZ 1233	2NO
13	LV			FZ 1330	⊕	2NC	FZ 1331	⊕	2NC	FZ 1333	2NC
14	LS			FZ 1430	⊕	2NC	FZ 1431	⊕	2NC	FZ 1433	2NC
15	LS			FZ 1530		2NO	FZ 1531		2NO	FZ 1533	2NO
16	LI			FZ 1630	⊕	2NC	FZ 1631	⊕	2NC	FZ 1633	2NC
18	LA	FZ 1825	1NO+1NC	FZ 1830	⊕	1NO+1NC	FZ 1831	⊕	1NO+1NC	FZ 1833	1NO+1NC
20	L	FZ 2025	1NO+2NC	FZ 2030	⊕	1NO+2NC	FZ 2031	⊕	1NO+2NC	FZ 2033	1NO+2NC
21	L	FZ 2125	3NC	FZ 2130	⊕	3NC	FZ 2131	⊕	3NC	FZ 2133	3NC
22	L	FZ 2225	2NO+1NC	FZ 2230	⊕	2NO+1NC	FZ 2231	⊕	2NO+1NC	FZ 2233	2NO+1NC
2	R	FZ 225	2x(1NO-1NC)	FZ 230		2x(1NO-1NC)	FZ 231		2x(1NO-1NC)	FZ 233	2x(1NO-1NC)
E1		FZ E125	1NO-1NC	FZ E130		1NO-1NC	FZ E131		1NO-1NC	FZ E133	1NO-1NC
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	

Contact blocks

5	R	FZ 534	1NO+1NC	FZ 550	1NO+1NC	FZ 551	⊕ 1NO+1NC	FZ 552	⊕ 1NO+1NC
6	L	FZ 634	1NO+1NC	FZ 650	1NO+1NC	FZ 651	⊕ 1NO+1NC	FZ 652	⊕ 1NO+1NC
7	LO	FZ 734	1NO+1NC	FZ 750	1NO+1NC	FZ 751	⊕ 1NO+1NC	FZ 752	⊕ 1NO+1NC
9	L	FZ 934	2NC	FZ 950	2NC	FZ 951	⊕ 2NC	FZ 952	⊕ 2NC
10	L	FZ 1034	2NO	FZ 1050	2NO	FZ 1051	2NO	FZ 1052	2NO
11	R	FZ 1134	2NC	FZ 1150	2NC	FZ 1151	⊕ 2NC	FZ 1152	⊕ 2NC
12	R	FZ 1234	2NO	FZ 1250	2NO	FZ 1251	2NO	FZ 1252	2NO
13	LV	FZ 1334	2NC	FZ 1350	2NC	FZ 1351	⊕ 2NC	FZ 1352	⊕ 2NC
14	LS	FZ 1434	2NC	FZ 1450	2NC	FZ 1451	⊕ 2NC	FZ 1452	⊕ 2NC
15	LS	FZ 1534	2NO	FZ 1550	2NO	FZ 1551	2NO	FZ 1552	2NO
16	LI	FZ 1634	2NC	FZ 1650	2NC	FZ 1651	⊕ 2NC	FZ 1652	⊕ 2NC
18	LA	FZ 1834	1NO+1NC	FZ 1850	1NO+1NC	FZ 1851	⊕ 1NO+1NC	FZ 1852	⊕ 1NO+1NC
20	L	FZ 2034	1NO+2NC	FZ 2050	1NO+2NC	FZ 2051	⊕ 1NO+2NC	FZ 2052	⊕ 1NO+2NC
21	L	FZ 2134	3NC	FZ 2150	3NC	FZ 2151	⊕ 3NC	FZ 2152	⊕ 3NC
22	L	FZ 2234	2NO+1NC	FZ 2250	2NO+1NC	FZ 2251	⊕ 2NO+1NC	FZ 2252	⊕ 2NO+1NC
2	R	FZ 234	2x(1NO-1NC)	FZ 250	2x(1NO-1NC)	FZ 251	2x(1NO-1NC)	FZ 252	2x(1NO-1NC)
E1	A	FZ E134	1NO-1NC	FZ E150	1NO-1NC	FZ E151	1NO-1NC	FZ E152	1NO-1NC
Max speed		1,5 m/s		1,5 m/s		page 7/5 - type 1		page 7/5 - type 1	
Min. force		0,06 Nm		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		page 7/6 - group 5	



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

	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 )	0,06 Nm (0,25 Nm )	0,06 Nm (0,25 Nm )	0,06 Nm (0,25 Nm )
Travel diagrams	page 7/6 - group 6	page 7/6 - group 5	page 7/6 - group 5	page 7/6 - group 5

Contact blocks

	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		
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		
Max speed	page 7/5 - type 1	1,5 m/s	0,5 m/s	
Min. force	0,06 Nm (0,25 Nm )	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.



Pizzato Elettrica 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 almost all 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
- Two driving forces: standard and increased for applications with vibrations
- Mechanical endurance: 1 million operations cycles.

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	4,5 N (25 N ➔)	4 N (25 N ➔)	4 N (25 N ➔)	2,5 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

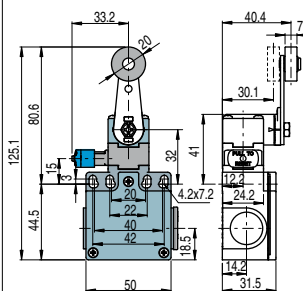
Contact blocks

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	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 7/7 - group 1	page 7/7 - group 4	page 7/7 - group 4	page 7/7 - group 4

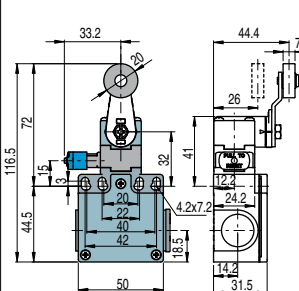
Contacts type:

R = snap action
L = slow action

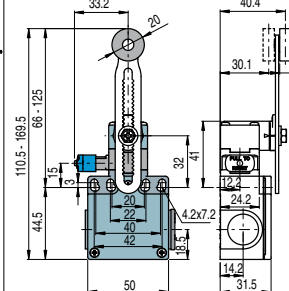
Other rollers available. See page 2/88



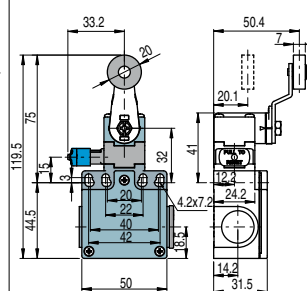
Other rollers available. See page 2/88



Other rollers available. See page 2/88



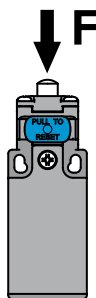
Other rollers available. See page 2/88



Contact blocks

6	L	FZ 652-W3	➔ 1NO+1NC	FZ 654-W3	➔ 1NO+1NC	FZ 656-W3	➔ 1NO+1NC	FZ 657-W3	➔ 1NO+1NC
9	L	FZ 952-W3	➔ 2NC	FZ 954-W3	➔ 2NC	FZ 956-W3	➔ 2NC	FZ 957-W3	➔ 2NC
10	L	FZ 1052-W3	2NO	FZ 1054-W3	2NO	FZ 1056-W3	2NO	FZ 1057-W3	2NO
20	L	FZ 2052-W3	➔ 1NO+2NC	FZ 2054-W3	➔ 1NO+2NC	FZ 2056-W3	➔ 1NO+2NC	FZ 2057-W3	➔ 1NO+2NC
21	L	FZ 2152-W3	➔ 3NC	FZ 2154-W3	➔ 3NC	FZ 2156-W3	➔ 3NC	FZ 2157-W3	➔ 3NC
22	L	FZ 2252-W3	➔ 2NO+1NC	FZ 2254-W3	➔ 2NO+1NC	FZ 2256-W3	➔ 2NO+1NC	FZ 2257-W3	➔ 2NO+1NC
2	R	FZ 252-W3	2NO+2NC	FZ 254-W3	2NO+2NC	FZ 256-W3	2NO+2NC	FZ 257-W3	2NO+2NC
Max speed		page 7/5 - type 1			page 7/5 - type 1			page 7/5 - type 1	
Min. force		0,07 Nm (0,25 Nm ➔)			0,07 Nm (0,25 Nm ➔)			0,07 Nm (0,25 Nm ➔)	
Travel diagrams		page 7/7 - group 4			page 7/7 - group 4			page 7/7 - group 4	

Increased actuating force



The switch can be supplied with an increased actuating force (option W4); ideal for applications with vibrations.

Actuator	Force
01, 14, 15, 16	7 N
02, 05	6 N
07	3,5 N
30 ... 57	0,08 Nm

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

Position switches with revolving lever without actuator

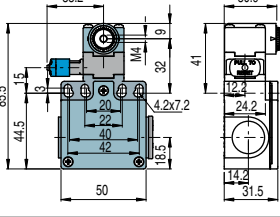
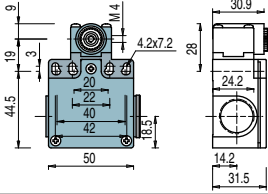
Contacts type:

- 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

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 ➔)	0,07 Nm (0,25 Nm ➔)
Travel diagrams		page 7/6 - group 5	page 7/7 - group 4

With manual reset knob



IMPORTANT

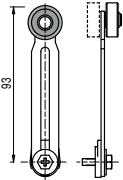
For safety applications: join only switches and actuators marked with symbol ➔. For more information about safety applications see page 7/1.

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

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 (1)

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