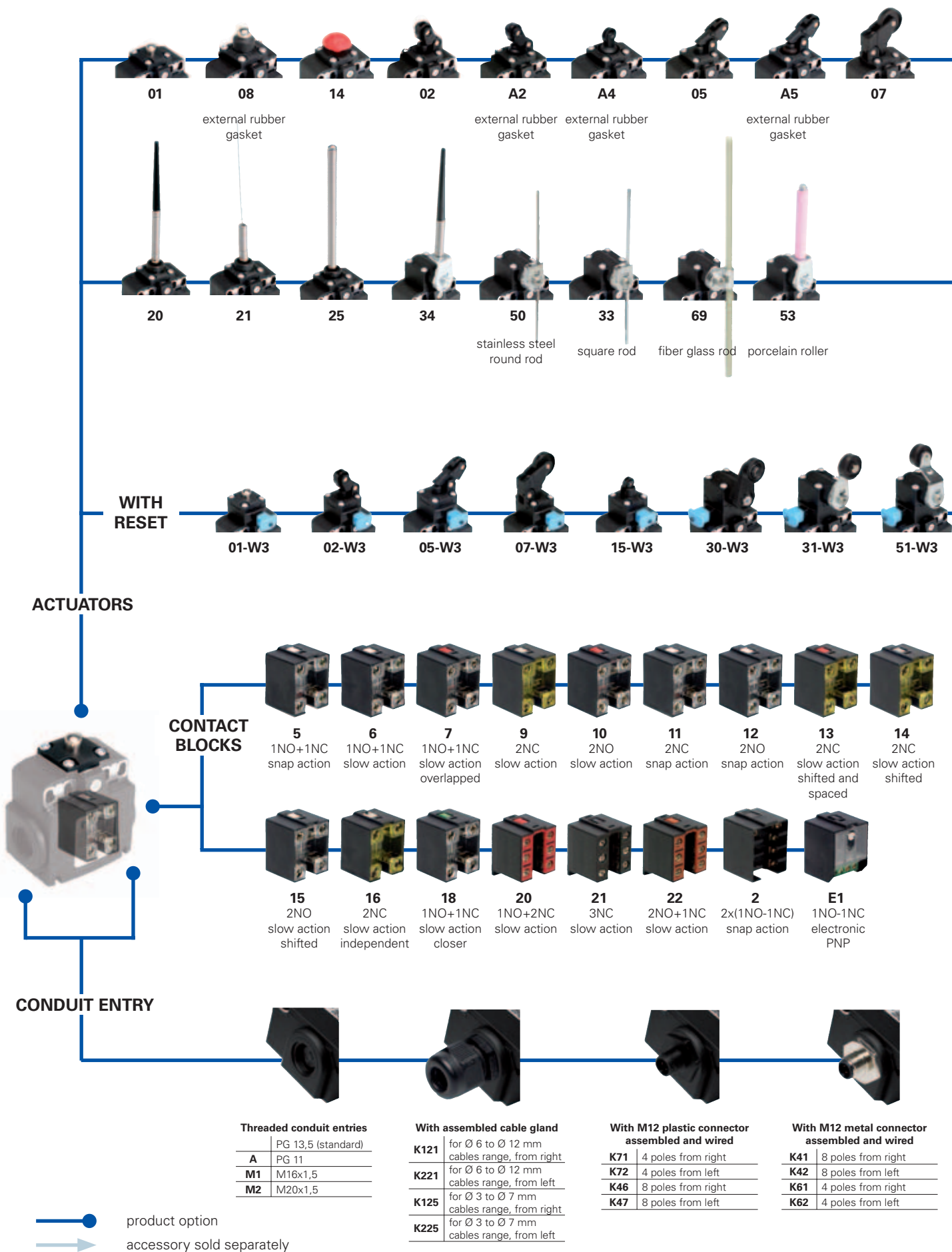
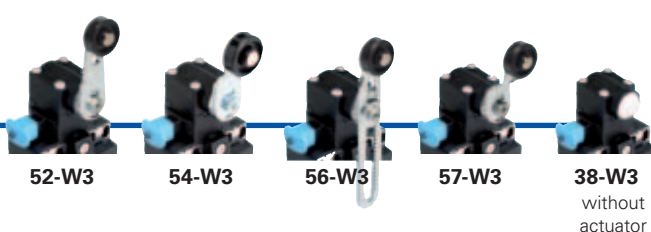
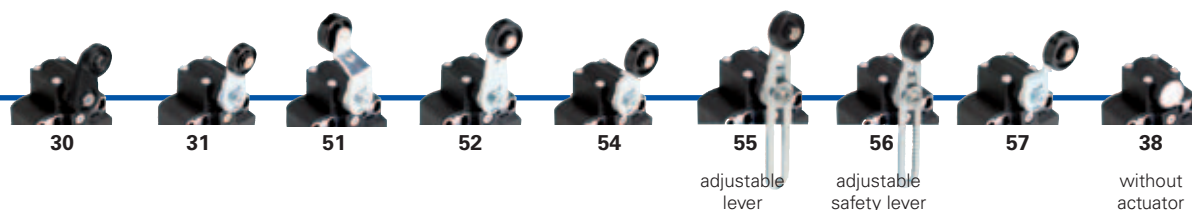
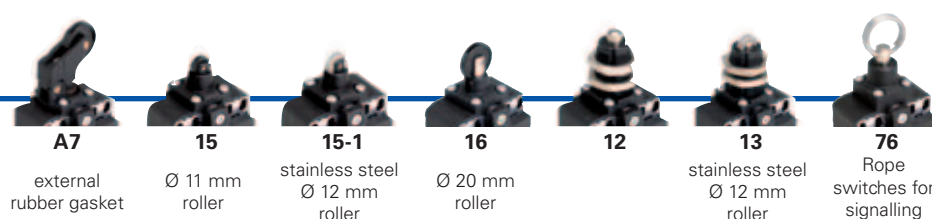


Selection diagram





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
FX 502-1W3XGM2K71

Housing

FX polymer 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 12 mm for actuator A4, 15
 - 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 2/52)
3 with Ø 50 mm rubber roller (see special loose actuators on page 2/52)
4 with Ø 50 mm overhanging rubber roller (see special loose actuators on page 2/52)

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
 ...

K71 with 4 poles M12 plastic connector
 ...

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

Threaded conduit entry

PG 13,5 (standard)
A PG 11
M1 M16x1,5
M2 M20x1,5

Contacts type

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

External metallic parts

zinc plated steel (standard)
X stainless steel

Reset hooking

without reset (standard)
W3 simultaneous reset hooking



Main data

- Polymer housing, two conduit entries
- Protection degree IP67
- 17 contact blocks available
- 43 actuators available
- External stainless steel parts versions
- M12 assembled connector versions
- Silver contacts gold plated versions

Markings and quality marks:



Approval IMQ: EG610
 Approval UL: E131787
 Approval CCC: 2007010305230013
 Approval ECU: 1010151

Technical data

Housing

Made of glass-reinforced polymer, self-extinguishing, shock-proof thermoplastic resin and with double insulation 
 Two knock out 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 operating frequency: 3600 operations cycles¹/hour
 Mechanical endurance: 20 million operations cycles¹
 Assembling position: any
 Driving torque for installation: see pages 6/1-6/10
 (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, 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, CENELEC EN 50013.

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 6/6. 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 6/1 to page 6/10.**

Electrical data		Utilization categories			
without connector	Thermal current (I _{th}):	10 A			
	Rated insulation voltage (U _i):	500 Vac 600 Vdc 400 Vac 500 Vdc for contact blocks 20, 21, 22, 33, 34			
	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			
with 4 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			
	Pollution degree:	3			
		Alternate current: AC15 (50...60 Hz)			
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			
	Pollution degree:	3			
		Alternate current: AC15 (50...60 Hz)			



Data type approved by IMQ, CCC and EZU

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

Thermal current (Ith): 10 A

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

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 and subsequent modifications and completions, fundamental requirements of the Low Voltage Directive 2006/95/CE and subsequent modifications and completions.

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

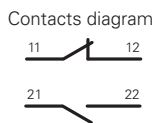
In all switches, it is possible to rotate the head in 90° steps.



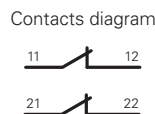
Working operation of contact block 16 with independent contacts

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

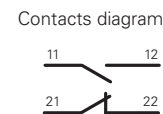
Lever turned to left



Lever not turned



Lever turned to right



1
1A
1B
2
2A
2B
2C
2D
2E
3
3A
3B
3C
4
4A
4B
4C
4D
4E
4F
4G
4H
5
6

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

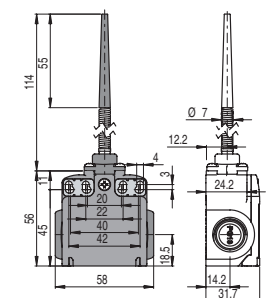
Contact blocks

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

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



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



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

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 external rubber gasket	With Ø 20 mm stainless steel roller on request	Other rollers available. See page 2/76
5	R	R	R	R
6	L	L	L	L
7	LO	LO	LO	LO
9	L	L	L	L
10	L	L	L	L
11	R	R	R	R
12	R	R	R	R
13	LV	LV	LV	LV
14	LS	LS	LS	LS
15	LS	LS	LS	LS
16	LI	LI	LI	LI
18	LA	LA	LA	LA
20	L	L	L	L
21	L	L	L	L
22	L	L	L	L
2	R	R	R	R
E1				
Max speed	1 m/s	1 m/s	page 6/5 - type 1	page 6/5 - type 1
Min. force	0,07 Nm	0,12 Nm	0,06 Nm (0,25 Nm )	0,06 Nm (0,25 Nm )
Travel diagrams	page 6/6 - group 4	page 6/6 - group 4	page 6/6 - group 5	page 6/6 - group 5

	3x3 mm square rod	Ø 3 mm stainless steel round rod	Other rollers available. See page 2/76
5	R	R	R
6	L	L	L
7	LO	LO	LO
9	L	L	L
10	L	L	L
11	R	R	R
12	R	R	R
13	LV	LV	LV
14	LS	LS	LS
15	LS	LS	LS
16	LI	LI	LI
18	LA	LA	LA
20	L	L	L
21	L	L	L
22	L	L	L
2	R	R	R
E1			
Max speed	1,5 m/s	1,5 m/s	page 6/5 - type 1
Min. force	0,06 Nm	0,06 Nm	0,06 Nm (0,25 Nm )
Travel diagrams	page 6/6 - group 5	page 6/6 - group 5	page 6/6 - 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
- A** = electronic PNP

Contact blocks

5	R	FX 552	➔ 1NO+1NC	FX 553-E0V9	➔ 1NO+1NC	FX 554	➔ 1NO+1NC	FX 555	➔ ⁽¹⁾ 1NO+1NC
6	L	FX 652	➔ 1NO+1NC	FX 653-E0V9	➔ 1NO+1NC	FX 654	➔ 1NO+1NC	FX 655	➔ ⁽¹⁾ 1NO+1NC
7	LO	FX 752	➔ 1NO+1NC	FX 753-E0V9	➔ 1NO+1NC	FX 754	➔ 1NO+1NC	FX 755	➔ ⁽¹⁾ 1NO+1NC
9	L	FX 952	➔ 2NC	FX 953-E0V9	➔ 2NC	FX 954	➔ 2NC	FX 955	➔ ⁽¹⁾ 2NC
10	L	FX 1052	2NO	FX 1053-E0V9	2NO	FX 1054	2NO	FX 1055	2NO
11	R	FX 1152	➔ 2NC	FX 1253-E0V9	2NO	FX 1154	➔ 2NC	FX 1155	➔ ⁽¹⁾ 2NC
12	R	FX 1252	2NO	FX 1353-E0V9	➔ 2NC	FX 1254	2NO	FX 1255	2NO
13	LV	FX 1352	➔ 2NC	FX 1453-E0V9	➔ 2NC	FX 1354	➔ 2NC	FX 1355	➔ ⁽¹⁾ 2NC
14	LS	FX 1452	➔ 2NC	FX 1553-E0V9	2NO	FX 1454	➔ 2NC	FX 1455	➔ ⁽¹⁾ 2NC
15	LS	FX 1552	2NO			FX 1554	2NO	FX 1555	2NO
16	LI	FX 1652	➔ 2NC	FX 1853-E0V9	➔ 1NO+1NC	FX 1654	➔ 2NC	FX 1655	➔ ⁽¹⁾ 2NC
18	LA	FX 1852	➔ 1NO+1NC	FX 2053-E0V9	➔ 1NO+2NC	FX 1854	➔ 1NO+1NC	FX 1855	➔ ⁽¹⁾ 1NO+1NC
20	L	FX 2052	➔ 1NO+2NC	FX 2153-E0V9	➔ 3NC	FX 2054	➔ 1NO+2NC	FX 2055	➔ ⁽¹⁾ 1NO+2NC
21	L	FX 2152	➔ 3NC	FX 2253-E0V9	➔ 2NO+1NC	FX 2154	➔ 3NC	FX 2155	➔ ⁽¹⁾ 3NC
22	L	FX 2252	➔ 2NO+1NC	FX 253-E0	2x(1NO-1NC)	FX 2254	➔ 2NO+1NC	FX 2255	➔ ⁽¹⁾ 2NO+1NC
2	R	FX 252	2x(1NO-1NC)	FX E153-E0V9	1NO-1NC	FX 254	2x(1NO-1NC)	FX 255	2x(1NO-1NC)
E1	A	FX E152	1NO-1NC			FX E154	1NO-1NC	FX E155	1NO-1NC
Max speed		page 6/5 - type 1		0,5 m/s		page 6/5 - type 1		page 6/5 - type 1	
Min. force		0,06 Nm (0,25 Nm ➔)		0,03 Nm (0,25 Nm ➔)		0,06 Nm (0,25 Nm ➔)		0,06 Nm (0,25 Nm ➔)	
Travel diagrams		page 6/6 - group 5		page 6/6 - group 6		page 6/6 - group 5		page 6/6 - group 5	

Other rollers available. See page 2/76				Other rollers available. See page 2/76				Fiber glass rod				Rope switches for signalling			
5	R	FX 556	➔ 1NO+1NC	5	R	FX 557	➔ 1NO+1NC	5	R	FX 569	1NO+1NC	5	R	FX 576	1NO+1NC
6	L	FX 656	➔ 1NO+1NC	6	L	FX 657	➔ 1NO+1NC	6	L	FX 669	1NO+1NC	6	L	FX 676	1NO+1NC
7	LO	FX 756	➔ 1NO+1NC	7	LO	FX 757	➔ 1NO+1NC	7	LO	FX 769	1NO+1NC	7	LO	FX 776	1NO+1NC
9	L	FX 956	➔ 2NC	9	L	FX 957	➔ 2NC	9	L	FX 969	2NC	9	L	FX 976	2NO
10	L	FX 1056	2NO	10	L	FX 1057	2NO	10	L	FX 1069	2NO	10	L	FX 1076	2NC
11	R	FX 1156	➔ 2NC	11	R	FX 1157	➔ 2NC	11	R	FX 1169	2NC	11	R	FX 1176	2NO
12	R	FX 1256	2NO	12	R	FX 1257	2NO	12	R	FX 1269	2NO	12	R	FX 1276	2NC
13	LV	FX 1356	➔ 2NC	13	LV	FX 1357	➔ 2NC	13	LV	FX 1369	2NC	13	LV	FX 1376	2NO
14	LS	FX 1456	➔ 2NC	14	LS	FX 1457	➔ 2NC	14	LS	FX 1469	2NC	14	LS	FX 1476	2NO
15	LS	FX 1556	2NO	15	LS	FX 1557	2NO	15	LS	FX 1569	2NO	15	LS	FX 1576	2NC
16	LI	FX 1656	➔ 2NC	16	LI	FX 1657	➔ 2NC	16	LI	FX 1669	2NC	16	LI		
18	LA	FX 1856	➔ 1NO+1NC	18	LA	FX 1857	➔ 1NC+1NO	18	LA	FX 1869	1NC+1NO	18	LA	FX 1876	1NO+1NC
20	L	FX 2056	➔ 1NO+2NC	20	L	FX 2057	➔ 1NO+2NC	20	L	FX 2069	1NO+2NC	20	L	FX 2076	2NO+1NC
21	L	FX 2156	➔ 3NC	21	L	FX 2157	➔ 3NC	21	L	FX 2169	3NC	21	L	FX 2176	3NO
22	L	FX 2256	➔ 2NO+1NC	22	L	FX 2257	➔ 2NO+1NC	22	L	FX 2269	2NO+1NC	22	L	FX 2276	1NO+2NC
2	R	FX 256	2x(1NO-1NC)	2	R	FX 257	2x(1NO-1NC)	2	R	FX 269	2x(1NO-1NC)	2	R	FX 276	2x(1NO-1NC)
E1	A	FX E156	1NO-1NC	E1	A	FX E157	1NO-1NC	E1	A	FX E169	1NO-1NC				
Max speed		page 6/5 - type 1		Max speed		page 6/5 - type 1		Max speed		1,5 m/s		Max speed		0,5 m/s	
Min. force		0,06 Nm (0,25 Nm ➔)		Min. force		0,06 Nm (0,25 Nm ➔)		Min. force		0,06 Nm		Min. force		initial 20 N - final 40 N	
Travel diagrams		page 6/6 - group 5		Travel diagrams		page 6/6 - group 5		Travel diagrams		page 6/6 - group 5		Travel diagrams		page 6/6 - group 7	

⁽¹⁾ Positive opening only with lever adjusted on the max. See page 2/75

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



Pizzato Elettrica has developed an innovative 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:

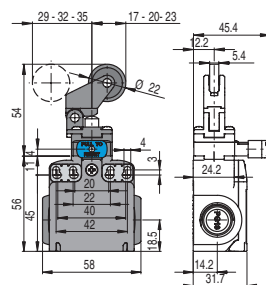
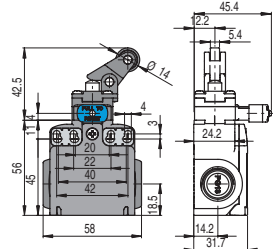
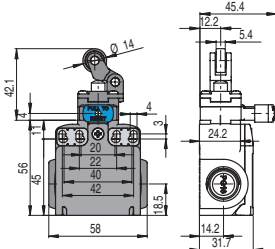
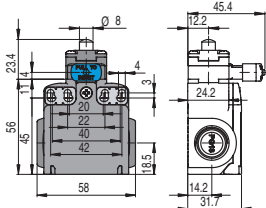
- * The reset device integrate in any standard actuation head
- * Contact blocks with snap action are no more necessary because the tripping movement is made by the reset device itself
- * Unlike some previous versions, the reset device can be rotated independently from the head for the maximum flexibility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

Contacts type:

R = snap action
L = slow action

With stainless steel roller on request

With stainless steel roller on request



Contact blocks

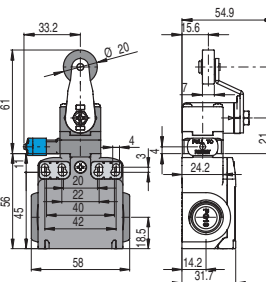
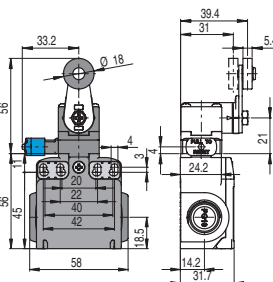
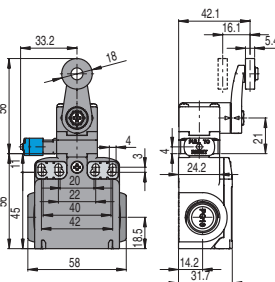
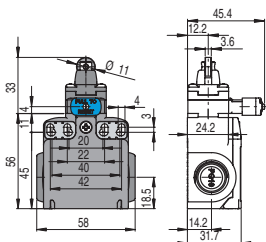
6		FX 601-W3  1NO+1NC	FX 602-W3  1NO+1NC	FX 605-W3  1NO+1NC	FX 607-W3  1NO+1NC
9		FX 901-W3  2NC	FX 902-W3  2NC	FX 905-W3  2NC	FX 907-W3  2NC
10		FX 1001-W3 2NO	FX 1002-W3 2NO	FX 1005-W3 2NO	FX 1007-W3 2NO
20		FX 2001-W3  1NO+2NC	FX 2002-W3  1NO+2NC	FX 2005-W3  1NO+2NC	FX 2007-W3  1NO+2NC
21		FX 2101-W3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

With stainless steel roller on request

With Ø 20 mm stainless steel roller on request

Other rollers available. See page 2/76

Other rollers available. See page 2/76



6		FX 615-W3  1NO+1NC	FX 630-W3  1NO+1NC	FX 631-W3  1NO+1NC	FX 651-W3  1NO+1NC
9		FX 915-W3  2NC	FX 930-W3  2NC	FX 931-W3  2NC	FX 951-W3  2NC
10		FX 1015-W3 2NO	FX 1030-W3 2NO	FX 1031-W3 2NO	FX 1051-W3 2NO
20		FX 2015-W3  1NO+2NC	FX 2030-W3  1NO+2NC	FX 2031-W3  1NO+2NC	FX 2051-W3  1NO+2NC
21		FX 2115-W3  3NC	FX 2130-W3  3NC	FX 2131-W3  3NC	FX 2151-W3  3NC
22		FX 2215-W3  2NO+1NC	FX 2230-W3  2NO+1NC	FX 2231-W3  2NO+1NC	FX 2251-W3  2NO+1NC
2		FX 215-W3 2NO+2NC	FX 230-W3 2NO+2NC	FX 231-W3 2NO+2NC	FX 251-W3 2NO+2NC
Max speed		page 6/5 - type 2	page 6/5 - type 1	page 6/5 - type 1	page 6/5 - 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 6/7 - group 1	page 6/7 - group 4	page 6/7 - group 4	page 6/7 - group 4

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

with manual reset knob

IMPORTANT

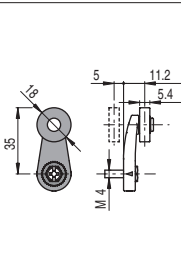
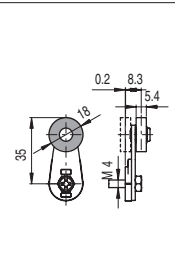
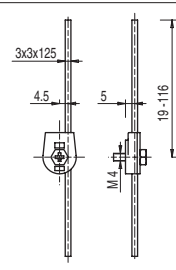
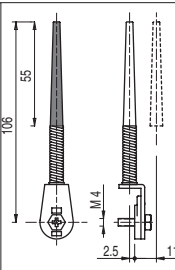
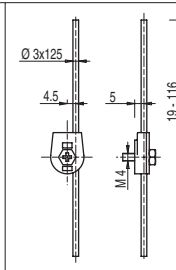
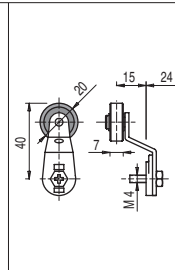
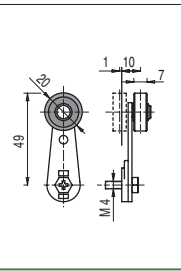
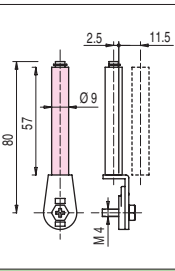
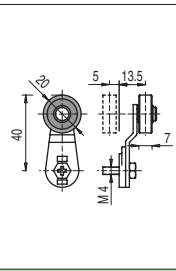
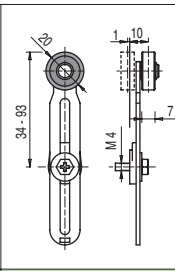
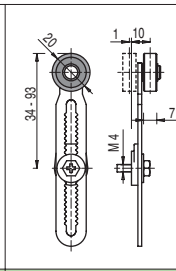
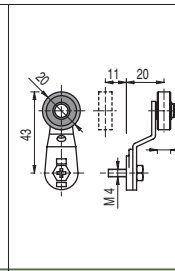
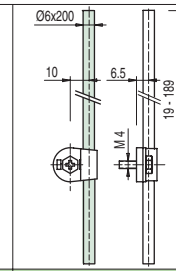
For safety applications: join only switches and actuators marked with symbol ➔.

For more information about safety applications see page 6/1.

Loose actuators

10 pcs pack

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

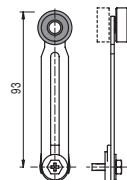
Ø 18 mm roller	Ø 18 mm roller	Adjustable square rod 3x3x125 mm	Flexible rod actuator	Adjustable round rod Ø 3x125 mm	Polymer roller Ø 20 mm	
						
VF LE30 ➔	VF LE31 ➔	VF LE33	VF LE34	VF LE50	VF LE51 ➔	
Polymer roller Ø 20 mm	Porcelain roller	Polymer roller Ø 20 mm	Adjustable actuator with polymer roller	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 FX •38 (e.g. FX 538, FX 638) with the actuator VF LE53 will not present the same travel diagrams and actuating forces as the position switch FX •53-E0V9 (e.g. FX 553-E0V9, FX 653-E0V9...).

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



Accessories See page 5/1



Special loose actuators

10 pcs pack

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) (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 (1)	VF LE57-2 (4)

Ø 40 mm rubber rollers

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