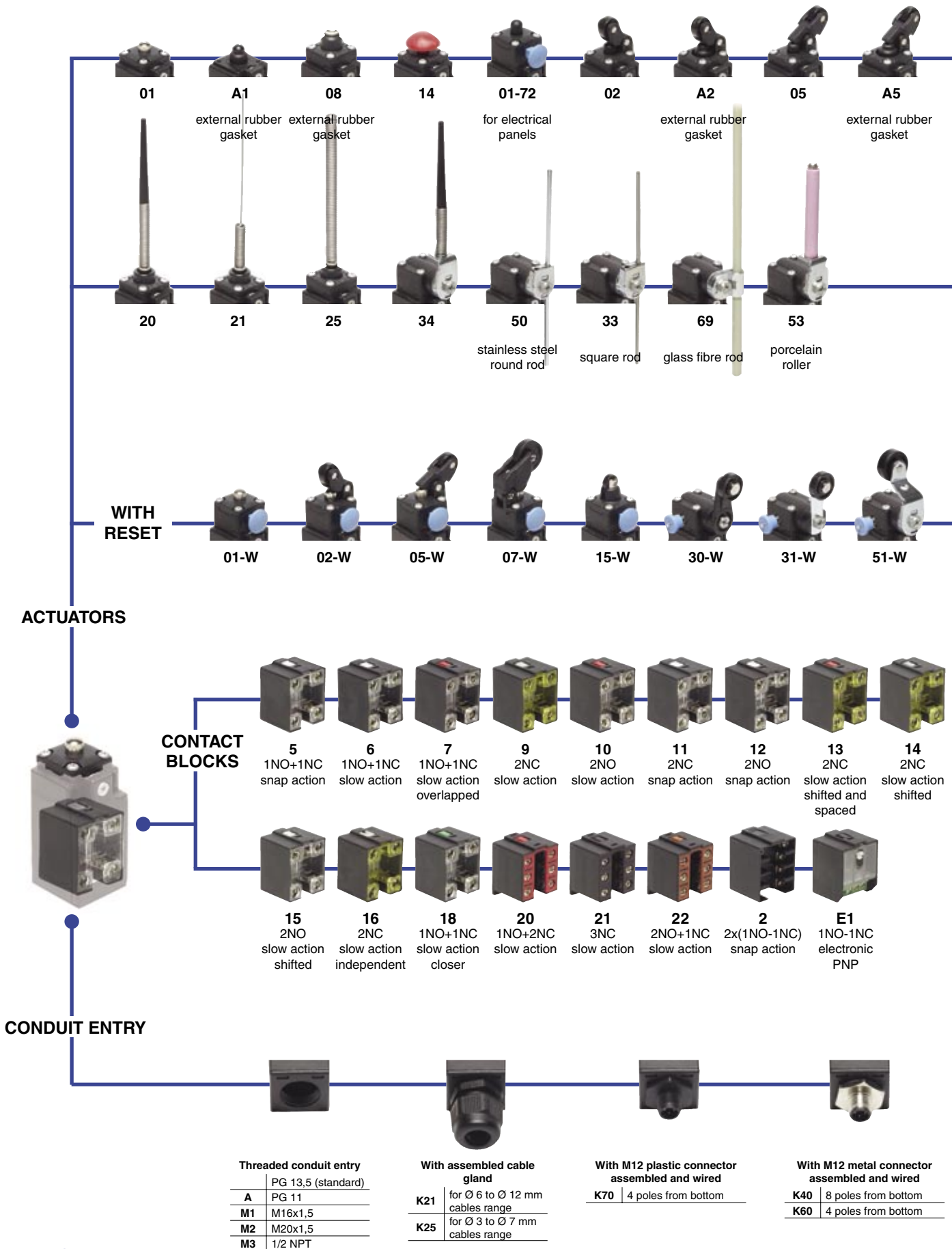
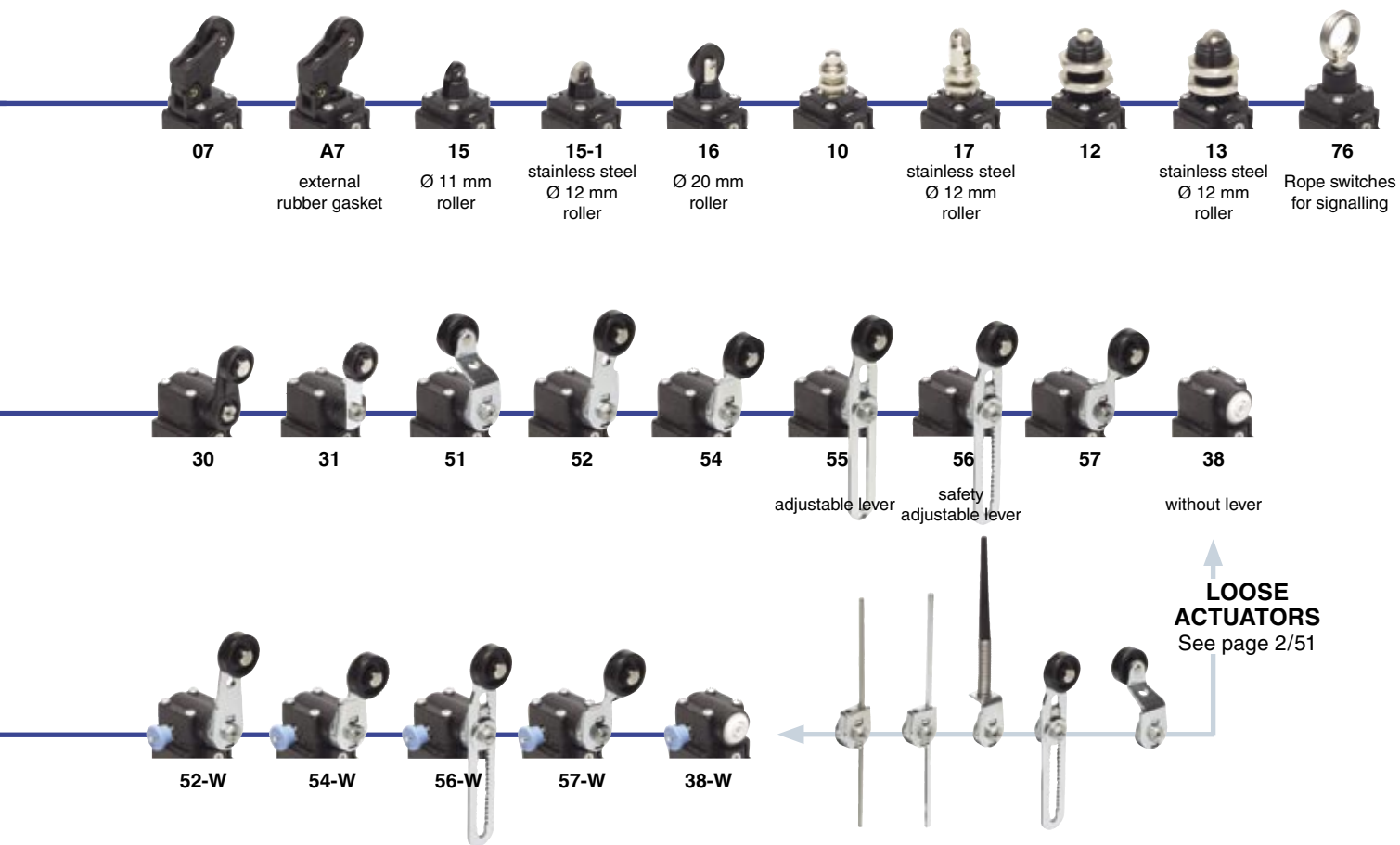


## Selection diagram



● 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.

**FR 502-1WXGM2K70**

Housing		Preinstalled cable gland or connectors	
<b>FR</b>	polymer housing, one conduit entry		no cable gland or connector (standard)
Contact blocks		<b>K21</b>	with assembled cable gland suitable for Ø 6 to Ø 12 mm cables range
<b>5</b>	1NO+1NC, snap action	<b>K40</b>	with M12 metal connector assembled and wired, 8 poles (only for contact blocks 2, 20, 21, 22)
<b>6</b>	1NO+1NC, slow action	...	.....
<b>7</b>	1NO+1NC, slow action overlapped	For the complete list of all combinations, please contact our technical office.	
...	.....	Threaded conduit entry	
Actuators			
<b>01</b>	short plunger	PG 13,5 (standard)	
<b>02</b>	roller lever	<b>A</b>	PG 11
<b>05</b>	offset roller lever	<b>M1</b>	M16x1,5
...	.....	<b>M2</b>	M20x1,5
Suffix		Contacts type	
	no suffix (standard)	<b>G</b>	silver contacts (standard)
<b>1</b>	with stainless steel roller: - Ø 12 mm for actuator 15 - Ø 14 mm for actuators A2, 02, A5, 05 - Ø 20 mm for actuators 31, 51, 52, 54, 55, 56, 57		silver contacts gold plated 1 µm (contact block 2 excluded)
<b>2</b>	with Ø 35 mm polymer roller (see special loose actuators on page 2/52)	External metallic parts	
<b>3</b>	with Ø 50 mm rubber roller (see special loose actuators on page 2/52)	<b>X</b>	zinc plated steel (standard)
<b>4</b>	with Ø 50 mm overhanging rubber roller (see special loose actuators on page 2/52)	Reset hooking	
			without reset (standard)
		<b>W</b>	normal reset hooking
		<b>W1</b>	shorter reset hooking



### Main data

- Polymer housing, one conduit entry
- 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 CSA: LA 93682-1  
 Approval EZU: 1010151

### Technical data

#### Housing

Made of glass-reinforced polymer, self-extinguishing, shock-proof thermoplastic resin and with double insulation One threaded conduit entry  
 Protection degree: IP67

#### 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 cycles<sup>1</sup>/hour  
 Mechanical endurance: 20 million operations cycles<sup>1</sup>  
 Assembling position: any  
 (1) One operation cycle means two movements, one to close and one to open contacts, as foreseen by IEC 947-5-1 standard.

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

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

#### In conformity with standards:

IEC 947-5-1, IEC 337-1, EN 60947-5-1, CEI EN 60947-5-1, CEI 17-45, EN 50047, CEI 17-33, IEC 204-1, EN 60204-1, CEI 44-5, EN 1088, EN ISO 12100-1, EN ISO 12100-2, IEC 529, EN 60529, CEI 70-1, NFC 63-140, VDE 0660-200, VDE 0113, CENELEC EN 50013.

#### Approvals:

IEC 947-5-1, UL 508, CSA C22-2 nr.14.

#### In conformity with requirements requested by:

Low Voltage Directive 73/23/EEC and subsequent modifications and completions.  
 Machinery Directive 98/37/EEC.  
 Electromagnetic Compatibility 89/336/EEC and subsequent modifications and completions.

#### Positive contact opening in conformity with standards:

IEC 947-5-1, EN 60947-5-1, CEI 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 CEI 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 6/15. 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.

**For the correct installation of all articles, please see “Utilization requirements” chapter, from page 6/1 to page 6/4.**

Electrical data	Utilization categories
without connector Thermal current (I <sub>th</sub> ): 10 A Rated insulation voltage (U <sub>i</sub> ): 500 VAC 600 VDC 400 VAC for contact blocks 20, 21, 22, 33, 34 Protection against short circuits: fuse 10 A 500 V type aM Pollution degree: 3	Alternate current: AC15 (50...60 Hz) U <sub>e</sub> (V) 250 400 500 I <sub>e</sub> (A) 6 4 1 Direct current: DC13 U <sub>e</sub> (V) 24 125 250 I <sub>e</sub> (A) 6 1,1 0,4
with 4 or 5 poles M12 connector Thermal current (I <sub>th</sub> ): 4 A Rated insulation voltage (U <sub>i</sub> ): 250 VAC 300 VDC Protection against short circuits: fuse 4 A 500 V type gG Pollution degree: 3	Alternate current: AC15 (50...60 Hz) U <sub>e</sub> (V) 24 120 250 I <sub>e</sub> (A) 4 4 4 Direct current: DC13 U <sub>e</sub> (V) 24 125 250 I <sub>e</sub> (A) 4 1,1 0,4
with 8 poles M12 connector Thermal current (I <sub>th</sub> ): 2 A Rated insulation voltage (U <sub>i</sub> ): 30 VAC 36 VDC Protection against short circuits: fuse 2 A 500 V type gG Pollution degree: 3	Alternate current: AC15 (50...60 Hz) U <sub>e</sub> (V) 24 I <sub>e</sub> (A) 2 Direct current: DC13 U <sub>e</sub> (V) 24 I <sub>e</sub> (A) 2

**Data type approved by IMQ 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, 12, 13, 14, 16, 18, 20, 21, 22, 33, 34

In conformity with standards: EN60947-1, EN 60947-5-1 and subsequent modifications and completions, fundamental requirements of the Low Voltage Directive 73/23 EEC and subsequent modifications and completions.

Please contact our technical service for the list of type 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

In conformity with standard: UL 508

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.

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.

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

**Data type approved by CSA**

Utilization categories Q300 (69 VA, 125-250 VDC)  
 A600 (720 VA, 120-600 VAC)

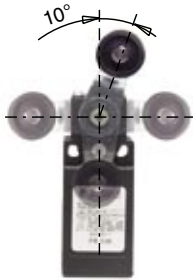
Data of the housing type 1, 4X (indoor use only), 12, 13

In conformity with standard: CSA C22-2 nr.14

Please contact our technical service for the list of type 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.

<p>Lever turned to left</p>  <p>Contacts diagram</p> <pre> 11 --- 12        /       /       21 --- 22        \       \        \             </pre>	<p>Lever not turned</p>  <p>Contacts diagram</p> <pre> 11 --- 12        /       /       21 --- 22        \       \        \             </pre>	<p>Lever turned to right</p>  <p>Contacts diagram</p> <pre> 11 --- 12        \       \       21 --- 22        /       /        \             </pre>
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## 2 Position switches FR 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
- E** = electronic PNP

Contact blocks

		With external rubber gasket	With stainless steel roller on request	With external rubber gasket With stainless steel roller on request
5	<b>R</b> FR 501	1NO+1NC	FR 5A1	1NO+1NC
6	<b>L</b> FR 601	1NO+1NC	FR 6A1	1NO+1NC
7	<b>LO</b> FR 701	1NO+1NC	FR 7A1	1NO+1NC
9	<b>L</b> FR 901	2NC	FR 9A1	2NC
10	<b>L</b> FR 1001	2NO	FR 10A1	2NO
11	<b>R</b> FR 1101	2NC	FR 11A1	2NC
12	<b>R</b> FR 1201	2NO	FR 12A1	2NO
13	<b>LV</b> FR 1301	2NC	FR 13A1	2NC
14	<b>LS</b> FR 1401	2NC	FR 14A1	2NC
15	<b>LS</b> FR 1501	2NO	FR 15A1	2NO
18	<b>LA</b> FR 1801	1NO+1NC	FR 18A1	1NO+1NC
20	<b>L</b> FR 2001	1NO+2NC	FR 20A1	1NO+2NC
21	<b>L</b> FR 2101	3NC	FR 21A1	3NC
22	<b>L</b> FR 2201	2NO+1NC	FR 22A1	2NO+1NC
2	<b>R</b> FR 201	2x(1NO-1NC)	FR 202	2x(1NO-1NC)
E1	<b>E</b> FR E101	1NO-1NC	FR E1A1	1NO-1NC
Max speed	page 6/3 - type 4		page 6/3 - type 3	
Min. force	8 N (25 N ⊕)		6 N (25 N ⊕)	
Travel diagrams	page 6/15 - group 1		page 6/15 - 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
5	<b>R</b> FR 505	1NO+1NC	FR 5A5	1NO+1NC
6	<b>L</b> FR 605	1NO+1NC	FR 6A5	1NO+1NC
7	<b>LO</b> FR 705	1NO+1NC	FR 7A5	1NO+1NC
9	<b>L</b> FR 905	2NC	FR 9A5	2NC
10	<b>L</b> FR 1005	2NO	FR 10A5	2NO
11	<b>R</b> FR 1105	2NC	FR 11A5	2NC
12	<b>R</b> FR 1205	2NO	FR 12A5	2NO
13	<b>LV</b> FR 1305	2NC	FR 13A5	2NC
14	<b>LS</b> FR 1405	2NC	FR 14A5	2NC
15	<b>LS</b> FR 1505	2NO	FR 15A5	2NO
18	<b>LA</b> FR 1805	1NO+1NC	FR 18A5	1NO+1NC
20	<b>L</b> FR 2005	1NO+2NC	FR 20A5	1NO+2NC
21	<b>L</b> FR 2105	3NC	FR 21A5	3NC
22	<b>L</b> FR 2205	2NO+1NC	FR 22A5	2NO+1NC
2	<b>R</b> FR 205	2x(1NO-1NC)	FR 2A5	2x(1NO-1NC)
E1	<b>E</b> FR E105	1NO-1NC	FR E1A5	1NO-1NC
Max speed	page 6/3 - type 3		page 6/3 - type 3	
Min. force	6 N (25 N ⊕)		4 N (25 N ⊕)	
Travel diagrams	page 6/15 - group 2		page 6/15 - group 3	

Accessories  
See page 5/1

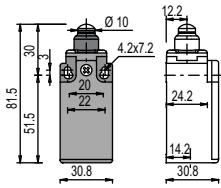
Items with code on the green background are available in stock

All measures in the drawings are in mm

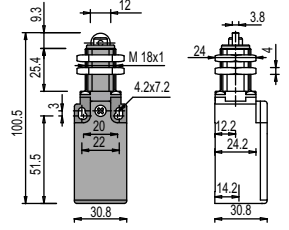
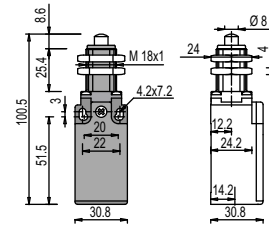
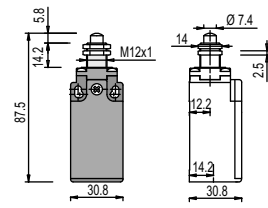


- Contacts type:
- R** = snap action
  - L** = slow action
  - LO** = slow action overlapped
  - LS** = slow action shifted
  - LV** = slow action shifted and spaced
  - LI** = slow action independent
  - LA** = slow action closer
  - E** = electronic PNP

With external rubber gasket



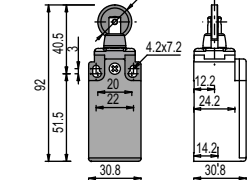
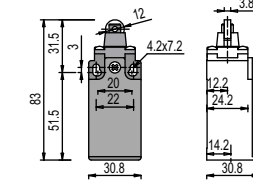
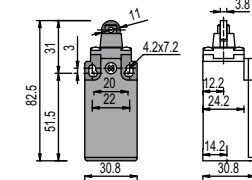
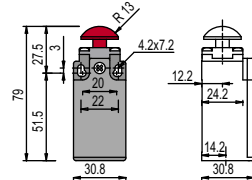
Fixed only by threaded head in vertical position



Contact blocks	With external rubber gasket	Fixed only by threaded head in vertical position	With external rubber gasket	With external rubber gasket
5	<b>R</b> FR 508	<b>R</b> FR 510	<b>R</b> FR 512	<b>R</b> FR 513
6	<b>L</b> FR 608	<b>L</b> FR 610	<b>L</b> FR 612	<b>L</b> FR 613
7	<b>LO</b> FR 708	<b>LO</b> FR 710	<b>LO</b> FR 712	<b>LO</b> FR 713
9	<b>L</b> FR 908	<b>L</b> FR 910	<b>L</b> FR 912	<b>L</b> FR 913
10	<b>L</b> FR 1008	<b>L</b> FR 1010	<b>L</b> FR 1012	<b>L</b> FR 1013
11	<b>R</b> FR 1108	<b>R</b> FR 1110	<b>R</b> FR 1112	<b>R</b> FR 1113
12	<b>R</b> FR 1208	<b>R</b> FR 1210	<b>R</b> FR 1212	<b>R</b> FR 1213
13	<b>LV</b> FR 1308	<b>LV</b> FR 1310	<b>LV</b> FR 1312	<b>LV</b> FR 1313
14	<b>LS</b> FR 1408	<b>LS</b> FR 1410	<b>LS</b> FR 1412	<b>LS</b> FR 1413
15	<b>LS</b> FR 1508	<b>LS</b> FR 1510	<b>LS</b> FR 1512	<b>LS</b> FR 1513
18	<b>LA</b> FR 1808	<b>LA</b> FR 1810	<b>LA</b> FR 1812	<b>LA</b> FR 1813
20	<b>L</b> FR 2008	<b>L</b> FR 2010	<b>L</b> FR 2012	<b>L</b> FR 2013
21	<b>L</b> FR 2108	<b>L</b> FR 2110	<b>L</b> FR 2112	<b>L</b> FR 2113
22	<b>L</b> FR 2208	<b>L</b> FR 2210	<b>L</b> FR 2212	<b>L</b> FR 2213
2	<b>R</b> FR 208	<b>R</b> FR 210	<b>R</b> FR 212	<b>R</b> FR 213
E1	<b>E</b> FR E108	<b>E</b> FR E110	<b>E</b> FR E112	<b>E</b> FR E113
Max speed	page 6/3 - type 4	page 6/3 - type 4	page 6/3 - type 4	page 6/3 - type 2
Min. force	8 N (25 N <b>R</b> )	8 N (25 N <b>R</b> )	8 N (25 N <b>R</b> )	8 N (25 N <b>R</b> )
Travel diagrams	page 6/15 - group 1	page 6/15 - group 1	page 6/15 - group 1	page 6/15 - group 1

Ø 11 mm polymer roller

Ø 12 mm stainless steel roller



Contact blocks	With external rubber gasket	Fixed only by threaded head in vertical position	With external rubber gasket	With external rubber gasket
5	<b>R</b> FR 514	<b>R</b> FR 515	<b>R</b> FR 515-1	<b>R</b> FR 516
6	<b>L</b> FR 614	<b>L</b> FR 615	<b>L</b> FR 615-1	<b>L</b> FR 616
7	<b>LO</b> FR 714	<b>LO</b> FR 715	<b>LO</b> FR 715-1	<b>LO</b> FR 716
9	<b>L</b> FR 914	<b>L</b> FR 915	<b>L</b> FR 915-1	<b>L</b> FR 916
10	<b>L</b> FR 1014	<b>L</b> FR 1015	<b>L</b> FR 1015-1	<b>L</b> FR 1016
11	<b>R</b> FR 1114	<b>R</b> FR 1115	<b>R</b> FR 1115-1	<b>R</b> FR 1116
12	<b>R</b> FR 1214	<b>R</b> FR 1215	<b>R</b> FR 1215-1	<b>R</b> FR 1216
13	<b>LV</b> FR 1314	<b>LV</b> FR 1315	<b>LV</b> FR 1315-1	<b>LV</b> FR 1316
14	<b>LS</b> FR 1414	<b>LS</b> FR 1415	<b>LS</b> FR 1415-1	<b>LS</b> FR 1416
15	<b>LS</b> FR 1514	<b>LS</b> FR 1515	<b>LS</b> FR 1515-1	<b>LS</b> FR 1516
18	<b>LA</b> FR 1814	<b>LA</b> FR 1815	<b>LA</b> FR 1815-1	<b>LA</b> FR 1816
20	<b>L</b> FR 2014	<b>L</b> FR 2015	<b>L</b> FR 2015-1	<b>L</b> FR 2016
21	<b>L</b> FR 2114	<b>L</b> FR 2115	<b>L</b> FR 2115-1	<b>L</b> FR 2116
22	<b>L</b> FR 2214	<b>L</b> FR 2215	<b>L</b> FR 2215-1	<b>L</b> FR 2216
2	<b>R</b> FR 214	<b>R</b> FR 215	<b>R</b> FR 215-1	<b>R</b> FR 216
E1	<b>E</b> FR E114	<b>E</b> FR E115	<b>E</b> FR E115-1	<b>E</b> FR E116
Max speed	page 6/3 - type 4	page 6/3 - type 2	page 6/3 - type 2	page 6/3 - type 2
Min. force	8 N (25 N <b>R</b> )	8 N (25 N <b>R</b> )	8 N (25 N <b>R</b> )	8 N (25 N <b>R</b> )
Travel diagrams	page 6/15 - group 1	page 6/15 - group 1	page 6/15 - group 1	page 6/15 - group 1

Accessories  
See page 5/1

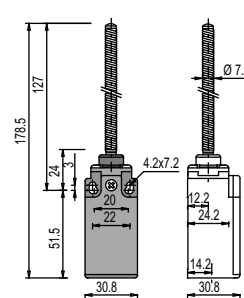
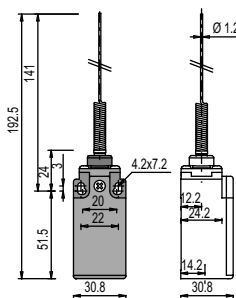
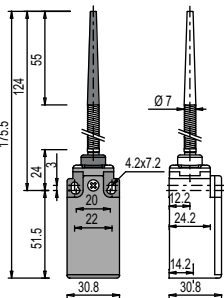
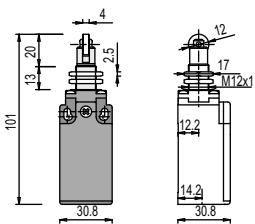
Items with code on the green background are available in stock

## 2 Position switches FR 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
- E** = electronic PNP

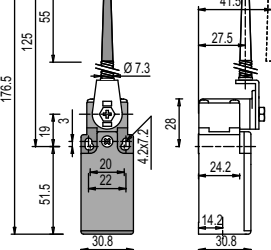
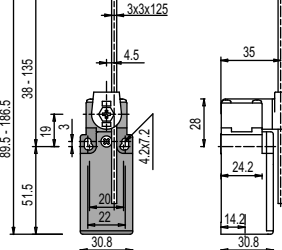
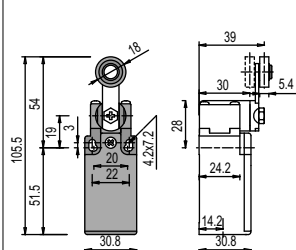
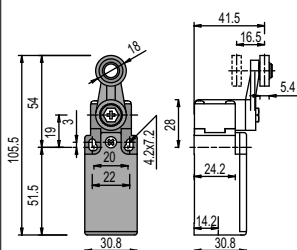
Fixed only by threaded head in vertical position



5	<b>R</b>	FR 517	1NO+1NC	FR 520	1NO+1NC	FR 521	1NO+1NC	FR 525	1NO+1NC
6	<b>L</b>	FR 617	1NO+1NC						
7	<b>LO</b>	FR 717	1NO+1NC						
9	<b>L</b>	FR 917	2NC						
10	<b>L</b>	FR 1017	2NO	FR 1020	2NO	FR 1021	2NO	FR 1025	2NO
11	<b>R</b>	FR 1117	2NC						
12	<b>R</b>	FR 1217	2NO	FR 1220	2NO	FR 1221	2NO	FR 1225	2NO
13	<b>LV</b>	FR 1317	2NC						
14	<b>LS</b>	FR 1417	2NC						
15	<b>LS</b>	FR 1517	2NO						
18	<b>LA</b>	FR 1817	1NO+1NC	FR 1820	1NO+1NC	FR 1821	1NO+1NC	FR 1825	1NO+1NC
20	<b>L</b>	FR 2017	1NO+2NC	FR 2020	1NO+2NC	FR 2021	1NO+2NC	FR 2025	1NO+2NC
21	<b>L</b>	FR 2117	3NC	FR 2120	3NC	FR 2121	3NC	FR 2125	3NC
22	<b>L</b>	FR 2217	2NO+1NC	FR 2220	2NO+1NC	FR 2221	2NO+1NC	FR 2225	2NO+1NC
2	<b>R</b>	FR 217	2x(1NO-1NC)	FR 220	2x(1NO-1NC)	FR 221	2x(1NO-1NC)	FR 225	2x(1NO-1NC)
E1	<b>E</b>	FR E117	1NO-1NC	FR E120	1NO-1NC	FR E121	1NO-1NC	FR E125	1NO-1NC
Max speed		page 6/3 - type 2		1 m/s		1 m/s		1 m/s	
Min. force		8 N (25 N ⊕)		0,06 Nm		0,04 Nm		0,11 Nm	
Travel diagrams		page 6/15 - group 1		page 6/15 - group 4		page 6/15 - group 4		page 6/15 - group 4	

Other rollers available. See page 2/52


3x3 mm square rod



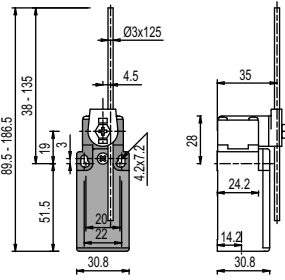
5	<b>R</b>	FR 530	1NO+1NC	FR 531	1NO+1NC	FR 533	1NO+1NC	FR 534	1NO+1NC
6	<b>L</b>	FR 630	1NO+1NC	FR 631	1NO+1NC	FR 633	1NO+1NC	FR 634	1NO+1NC
7	<b>LO</b>	FR 730	1NO+1NC	FR 731	1NO+1NC	FR 733	1NO+1NC	FR 734	1NO+1NC
9	<b>L</b>	FR 930	2NC	FR 931	2NC	FR 933	2NC	FR 934	2NC
10	<b>L</b>	FR 1030	2NO	FR 1031	2NO	FR 1033	2NO	FR 1034	2NO
11	<b>R</b>	FR 1130	2NC	FR 1131	2NC	FR 1133	2NC	FR 1134	2NC
12	<b>R</b>	FR 1230	2NO	FR 1231	2NO	FR 1233	2NO	FR 1234	2NO
13	<b>LV</b>	FR 1330	2NC	FR 1331	2NC	FR 1333	2NC	FR 1334	2NC
14	<b>LS</b>	FR 1430	2NC	FR 1431	2NC	FR 1433	2NC	FR 1434	2NC
15	<b>LS</b>	FR 1530	2NO	FR 1531	2NO	FR 1533	2NO	FR 1534	2NO
16	<b>LI</b>	FR 1630	2NC	FR 1631	2NC	FR 1633	2NC	FR 1634	2NC
18	<b>LA</b>	FR 1830	1NO+1NC	FR 1831	1NO+1NC	FR 1833	1NO+1NC	FR 1834	1NO+1NC
20	<b>L</b>	FR 2030	1NO+2NC	FR 2031	1NO+2NC	FR 2033	1NO+2NC	FR 2034	1NO+2NC
21	<b>L</b>	FR 2130	3NC	FR 2131	3NC	FR 2133	3NC	FR 2134	3NC
22	<b>L</b>	FR 2230	2NO+1NC	FR 2231	2NO+1NC	FR 2233	2NO+1NC	FR 2234	2NO+1NC
2	<b>R</b>	FR 230	2x(1NO-1NC)	FR 231	2x(1NO-1NC)	FR 233	2x(1NO-1NC)	FR 234	2x(1NO-1NC)
E1	<b>E</b>	FR E130	1NO-1NC	FR E131	1NO-1NC	FR E133	1NO-1NC	FR E134	1NO-1NC
Max speed		page 6/3 - type 1		page 6/3 - type 1		1,5 m/s		1,5 m/s	
Min. force		0,1 Nm (0,25 Nm ⊕)		0,1 Nm (0,25 Nm ⊕)		0,1 Nm		0,1 Nm	
Travel diagrams		page 6/15 - group 5		page 6/15 - group 5		page 6/15 - group 5		page 6/15 - group 5	

Accessories  
See page 5/1

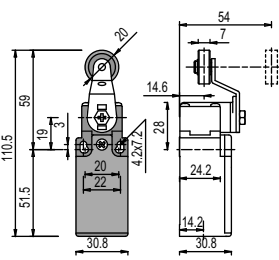
Items with code on the green background are available in stock

- 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

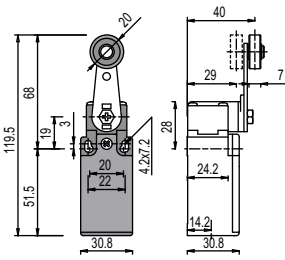
Ø 3 mm stainless steel round rod



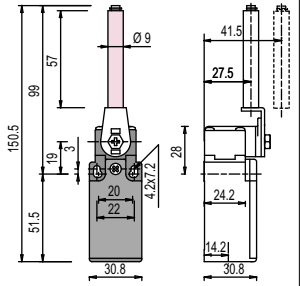
Other rollers available. See page 2/52




Other rollers available. See page 2/52

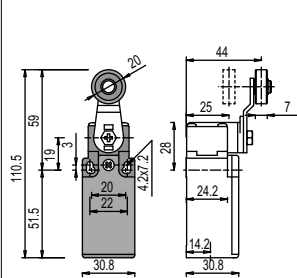


Porcelain roller

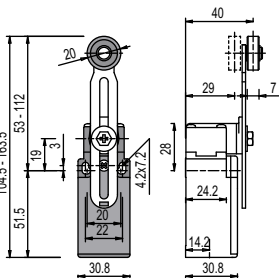


Contact blocks	FR 550	1NO+1NC	FR 551	1NO+1NC	FR 552	1NO+1NC	FR 553-E0V9	1NO+1NC
5	<b>R</b>	FR 550	1NO+1NC	FR 551	1NO+1NC	FR 552	FR 553-E0V9	1NO+1NC
6	<b>L</b>	FR 650	1NO+1NC	FR 651	1NO+1NC	FR 652	FR 653-E0V9	1NO+1NC
7	<b>LO</b>	FR 750	1NO+1NC	FR 751	1NO+1NC	FR 752	FR 753-E0V9	1NO+1NC
9	<b>L</b>	FR 950	2NC	FR 951	2NC	FR 952	FR 953-E0V9	2NC
10	<b>L</b>	FR 1050	2NO	FR 1051	2NO	FR 1052	FR 1053-E0V9	2NO
11	<b>R</b>	FR 1150	2NC	FR 1151	2NC	FR 1152		
12	<b>R</b>	FR 1250	2NO	FR 1251	2NO	FR 1252	FR 1253-E0V9	2NO
13	<b>LV</b>	FR 1350	2NC	FR 1351	2NC	FR 1352	FR 1353-E0V9	2NC
14	<b>LS</b>	FR 1450	2NC	FR 1451	2NC	FR 1452	FR 1453-E0V9	2NC
15	<b>LS</b>	FR 1550	2NO	FR 1551	2NO	FR 1552	FR 1553-E0V9	2NO
16	<b>LI</b>	FR 1650	2NC	FR 1651	2NC	FR 1652		
18	<b>LA</b>	FR 1850	1NO+1NC	FR 1851	1NO+1NC	FR 1852	FR 1853-E0V9	1NO+1NC
20	<b>L</b>	FR 2050	1NO+2NC	FR 2051	1NO+2NC	FR 2052	FR 2053-E0V9	1NO+2NC
21	<b>L</b>	FR 2150	3NC	FR 2151	3NC	FR 2152	FR 2153-E0V9	3NC
22	<b>L</b>	FR 2250	2NO+1NC	FR 2251	2NO+1NC	FR 2252	FR 2253-E0V9	2NO+1NC
2	<b>R</b>	FR 250	2x(1NO-1NC)	FR 251	2x(1NO-1NC)	FR 252	FR 253-E0	2x(1NO-1NC)
E1		FR E150	1NO-1NC	FR E151	1NO-1NC	FR E152	FR E153-E0V9	1NO-1NC
Max speed	1,5 m/s		page 6/3 - type 1		page 6/3 - type 1		0,5 m/s	
Min. force	0,1 Nm		0,1 Nm (0,25 Nm ⊕)		0,1 Nm (0,25 Nm ⊕)		0,06 Nm (0,25 Nm ⊕)	
Travel diagrams	page 6/15 - group 5		page 6/15 - group 5		page 6/15 - group 5		page 6/15 - group 6	

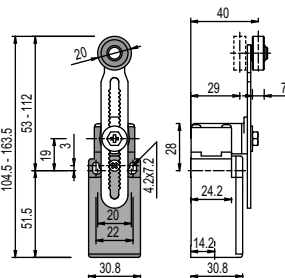
Other rollers available. See page 2/52



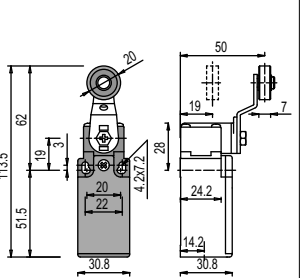
Other rollers available. See page 2/52




Other rollers available. See page 2/52



Other rollers available. See page 2/52



Contact blocks	FR 554	1NO+1NC	FR 555	1NO+1NC	FR 556	1NO+1NC	FR 557	1NO+1NC
5	<b>R</b>	FR 554	1NO+1NC	FR 555	1NO+1NC	FR 556	FR 557	1NO+1NC
6	<b>L</b>	FR 654	1NO+1NC	FR 655	1NO+1NC	FR 656	FR 657	1NO+1NC
7	<b>LO</b>	FR 754	1NO+1NC	FR 755	1NO+1NC	FR 756	FR 757	1NO+1NC
9	<b>L</b>	FR 954	2NC	FR 955	2NC	FR 956	FR 957	2NC
10	<b>L</b>	FR 1054	2NO	FR 1055	2NO	FR 1056	FR 1057	2NO
11	<b>R</b>	FR 1154	2NC	FR 1155	2NC	FR 1156	FR 1157	2NC
12	<b>R</b>	FR 1254	2NO	FR 1255	2NO	FR 1256	FR 1257	2NO
13	<b>LV</b>	FR 1354	2NC	FR 1355	2NC	FR 1356	FR 1357	2NC
14	<b>LS</b>	FR 1454	2NC	FR 1455	2NC	FR 1456	FR 1457	2NC
15	<b>LS</b>	FR 1554	2NO	FR 1555	2NO	FR 1556	FR 1557	2NO
16	<b>LI</b>	FR 1654	2NC	FR 1655	2NC	FR 1656	FR 1657	2NC
18	<b>LA</b>	FR 1854	1NO+1NC	FR 1855	1NO+1NC	FR 1856	FR 1857	1NO+1NC
20	<b>L</b>	FR 2054	1NO+2NC	FR 2055	1NO+2NC	FR 2056	FR 2057	1NO+2NC
21	<b>L</b>	FR 2154	3NC	FR 2155	3NC	FR 2156	FR 2157	3NC
22	<b>L</b>	FR 2254	2NO+1NC	FR 2255	2NO+1NC	FR 2256	FR 2257	2NO+1NC
2	<b>R</b>	FR 254	2x(1NO-1NC)	FR 255	2x(1NO-1NC)	FR 256	FR 257	2x(1NO-1NC)
E1		FR E154	1NO-1NC	FR E155	1NO-1NC	FR E156	FR E157	1NO-1NC
Max speed	page 6/3 - type 1		page 6/3 - type 1		page 6/3 - type 1		page 6/3 - type 1	
Min. force	0,1 Nm (0,25 Nm ⊕)		0,1 Nm (0,25 Nm ⊕)		0,1 Nm (0,25 Nm ⊕)		0,1 Nm (0,25 Nm ⊕)	
Travel diagrams	page 6/15 - group 5		page 6/15 - group 5		page 6/15 - group 5		page 6/15 - group 5	

Accessories  
See page 5/1

Items with code on the green background are available in stock

(1) Positive opening only with lever adjusted on the max. See page 2/51



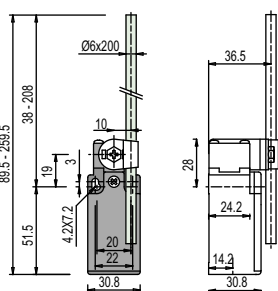
## 2 Position switches FR series

Contacts type:

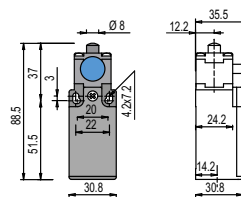
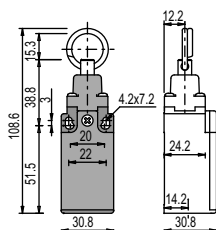
- R** = snap action
- L** = slow action
- LO** = slow action overlapped
- LS** = slow action shifted
- LV** = slow action shifted and spaced
- LI** = slow action independent
- LA** = slow action closer
- E** = electronic PNP

Contact blocks

Glass fibre rod



Rope switches for signalling



5	<b>R</b>	FR 569	1NO+1NC	FR 576	1NO+1NC	FR 501-72	1NO+1NC
6	<b>L</b>	FR 669	1NO+1NC	FR 676	1NO+1NC		
7	<b>LO</b>	FR 769	1NO+1NC	FR 776	1NO+1NC		
9	<b>L</b>	FR 969	2NC	FR 976	2NO		
10	<b>L</b>	FR 1069	2NO	FR 1076	2NC	FR 1001-72	2NO
11	<b>R</b>	FR 1169	2NC	FR 1176	2NO	This switch can be installed on doors of electrical boards. It is used to switch on possible signal devices, once the door is open (e.g. three-phase flashing devices, etc.) The operator assigned to the board maintenance may simulate the closing of the door by pushing the blue push button. At the end of the maintenance the functionality of the switch will be automatically reestablished easily by closing the door of the board.	
12	<b>R</b>	FR 1269	2NO	FR 1276	2NC		
13	<b>LV</b>	FR 1369	2NC	FR 1376	2NO		
14	<b>LS</b>	FR 1469	2NC	FR 1476	2NO		
15	<b>LS</b>	FR 1569	2NO	FR 1576	2NC		
16	<b>LI</b>	FR 1669	2NC				
18	<b>LA</b>	FR 1869	1NO+1NC	FR 1876	1NO+1NC		
20	<b>L</b>	FR 2069	1NO+2NC	FR 2076	2NO+1NC		
21	<b>L</b>	FR 2169	3NC	FR 2176	3NO		
22	<b>L</b>	FR 2269	2NO+1NC	FR 2276	1NO+2NC		
2	<b>R</b>	FR 269	2x(1NO-1NC)	FR 276	2x(1NO-1NC)		
E1	<b>E</b>	FR E169	1NO-1NC				
Max speed		1,5 m/s		0,5 m/s		page 6/3 - type 4	
Min. force		0,1 Nm		initial 20 N - final 40 N		8 N (25 N)	
Travel diagrams		page 6/15 - group 5		page 6/15 - group 7		page 6/15 - group 1	

## Position switches FR series with reset

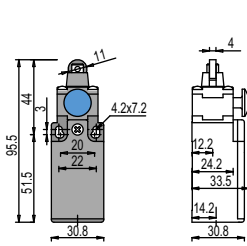
		With stainless steel roller on request		With stainless steel roller on request		With stainless steel roller on request	
5	<b>R</b>	FR 501-W	1NO+1NC	FR 502-W	1NO+1NC	FR 505-W	1NO+1NC
6	<b>L</b>	FR 601-W	1NO+1NC	FR 602-W	1NO+1NC	FR 605-W	1NO+1NC
7	<b>LO</b>	FR 701-W	1NO+1NC	FR 702-W	1NO+1NC	FR 705-W	1NO+1NC
9	<b>L</b>	FR 901-W	2NC	FR 902-W	2NC	FR 905-W	2NC
10	<b>L</b>	FR 1001-W	2NO	FR 1002-W	2NO	FR 1005-W	2NO
11	<b>R</b>	FR 1101-W	2NC	FR 1102-W	2NC	FR 1105-W	2NC
12	<b>R</b>	FR 1201-W	2NO	FR 1202-W	2NO	FR 1205-W	2NO
13	<b>LV</b>	FR 1301-W	2NC	FR 1302-W	2NC	FR 1305-W	2NC
14	<b>LS</b>	FR 1401-W	2NC	FR 1402-W	2NC	FR 1405-W	2NC
15	<b>LS</b>	FR 1501-W	2NO	FR 1502-W	2NO	FR 1505-W	2NO
18	<b>LA</b>	FR 1801-W	1NO+1NC	FR 1802-W	1NO+1NC	FR 1805-W	1NO+1NC
20	<b>L</b>	FR 2001-W	1NO+2NC	FR 2002-W	1NO+2NC	FR 2005-W	1NO+2NC
21	<b>L</b>	FR 2101-W	3NC	FR 2102-W	3NC	FR 2105-W	3NC
22	<b>L</b>	FR 2201-W	2NO+1NC	FR 2202-W	2NO+1NC	FR 2205-W	2NO+1NC
2	<b>R</b>	FR 201-W	2x(1NO-1NC)	FR 202-W	2x(1NO-1NC)	FR 205-W	2x(1NO-1NC)
Max speed		page 6/3 - type 4		page 6/3 - type 3		page 6/3 - type 3	
Min. force		8 N (25 N)		6 N (25 N)		4 N (25 N)	
Travel diagrams		page 6/16 - group 1		page 6/16 - group 2		page 6/16 - group 3	

Accessories  
See page 5/1

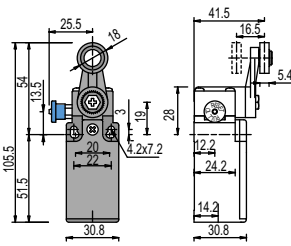
Items with code on the green background are available in stock

- 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

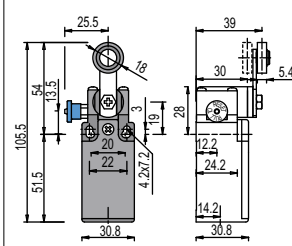
With stainless steel roller on request



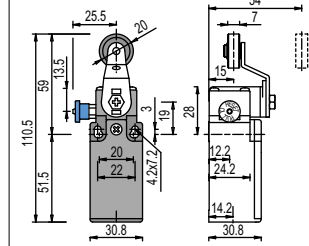
On request roller with different diameter roller made of polymer, rubber or metal



On request roller with different diameter roller made of polymer, rubber or metal

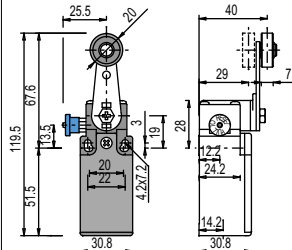


On request roller with different diameter roller made of polymer, rubber or metal

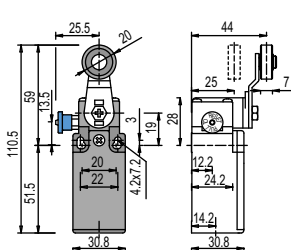


5	<b>R</b>	FR 515-W	⊕ 1NO+1NC	FR 530-W	⊖ 1NO+1NC	FR 531-W	⊕ 1NO+1NC	FR 551-W	⊕ 1NO+1NC
6	<b>L</b>	FR 615-W	⊕ 1NO+1NC	FR 630-W	⊖ 1NO+1NC	FR 631-W	⊕ 1NO+1NC	FR 651-W	⊕ 1NO+1NC
7	<b>LO</b>	FR 715-W	⊕ 1NO+1NC	FR 730-W	⊖ 1NO+1NC	FR 731-W	⊕ 1NO+1NC	FR 751-W	⊕ 1NO+1NC
9	<b>L</b>	FR 915-W	⊕ 2NC	FR 930-W	⊖ 2NC	FR 931-W	⊕ 2NC	FR 951-W	⊕ 2NC
10	<b>L</b>	FR 1015-W	2NO	FR 1030-W	2NO	FR 1031-W	2NO	FR 1051-W	2NO
11	<b>R</b>	FR 1115-W	⊕ 2NC	FR 1130-W	⊖ 2NC	FR 1131-W	⊕ 2NC	FR 1151-W	⊕ 2NC
12	<b>R</b>	FR 1215-W	2NO	FR 1230-W	2NO	FR 1231-W	2NO	FR 1251-W	2NO
13	<b>LV</b>	FR 1315-W	⊕ 2NC	FR 1330-W	⊖ 2NC	FR 1331-W	⊕ 2NC	FR 1351-W	⊕ 2NC
14	<b>LS</b>	FR 1415-W	⊕ 2NC	FR 1430-W	⊖ 2NC	FR 1431-W	⊕ 2NC	FR 1451-W	⊕ 2NC
15	<b>LS</b>	FR 1515-W	2NO	FR 1530-W	2NO	FR 1531-W	2NO	FR 1551-W	2NO
18	<b>LA</b>	FR 1815-W	⊕ 1NO+1NC	FR 1830-W	⊖ 1NO+1NC	FR 1831-W	⊕ 1NO+1NC	FR 1851-W	⊕ 1NO+1NC
20	<b>L</b>	FR 2015-W	⊕ 1NO+2NC	FR 2030-W	⊖ 1NO+2NC	FR 2031-W	⊕ 1NO+2NC	FR 2051-W	⊕ 1NO+2NC
21	<b>L</b>	FR 2115-W	⊕ 3NC	FR 2130-W	⊖ 3NC	FR 2131-W	⊕ 3NC	FR 2151-W	⊕ 3NC
22	<b>L</b>	FR 2215-W	⊕ 2NO+1NC	FR 2230-W	⊖ 2NO+1NC	FR 2231-W	⊕ 2NO+1NC	FR 2251-W	⊕ 2NO+1NC
2	<b>R</b>	FR 215-W	2x(1NO-1NC)	FR 230-W	2x(1NO-1NC)	FR 231-W	2x(1NO-1NC)	FR 251-W	2x(1NO-1NC)
Max speed		page 6/3 - type 2		page 6/3 - type 1		page 6/3 - type 1		page 6/3 - type 1	
Min. force		8 N (25 N ⊕)		0,1 Nm (0,25 Nm ⊕)		0,1 Nm (0,25 Nm ⊕)		0,1 Nm (0,25 Nm ⊕)	
Travel diagrams		page 6/16 - group 1		page 6/16 - group 4		page 6/16 - group 4		page 6/16 - group 4	

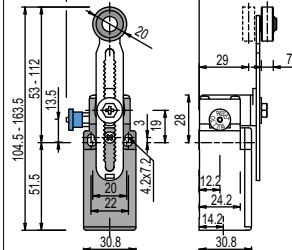
On request roller with different diameter roller made of polymer, rubber or metal



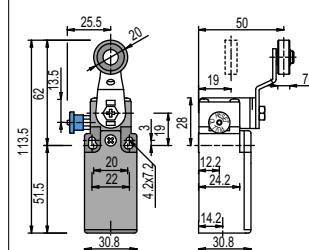
On request roller with different diameter roller made of polymer, rubber or metal



On request roller with different diameter roller made of polymer, rubber or metal



On request roller with different diameter roller made of polymer, rubber or metal



5	<b>R</b>	FR 552-W	⊕ 1NO+1NC	FR 554-W	⊖ 1NO+1NC	FR 556-W	⊕ 1NO+1NC	FR 557-W	⊕ 1NO+1NC
6	<b>L</b>	FR 652-W	⊕ 1NO+1NC	FR 654-W	⊖ 1NO+1NC	FR 656-W	⊕ 1NO+1NC	FR 657-W	⊕ 1NO+1NC
7	<b>LO</b>	FR 752-W	⊕ 1NO+1NC	FR 754-W	⊖ 1NO+1NC	FR 756-W	⊕ 1NO+1NC	FR 757-W	⊕ 1NO+1NC
9	<b>L</b>	FR 952-W	⊕ 2NC	FR 954-W	⊖ 2NC	FR 956-W	⊕ 2NC	FR 957-W	⊕ 2NC
10	<b>L</b>	FR 1052-W	2NO	FR 1054-W	2NO	FR 1056-W	2NO	FR 1057-W	2NO
11	<b>R</b>	FR 1152-W	⊕ 2NC	FR 1154-W	⊖ 2NC	FR 1156-W	⊕ 2NC	FR 1157-W	⊕ 2NC
12	<b>R</b>	FR 1252-W	2NO	FR 1254-W	2NO	FR 1256-W	2NO	FR 1257-W	2NO
13	<b>LV</b>	FR 1352-W	⊕ 2NC	FR 1354-W	⊖ 2NC	FR 1356-W	⊕ 2NC	FR 1357-W	⊕ 2NC
14	<b>LS</b>	FR 1452-W	⊕ 2NC	FR 1454-W	⊖ 2NC	FR 1456-W	⊕ 2NC	FR 1457-W	⊕ 2NC
15	<b>LS</b>	FR 1552-W	2NO	FR 1554-W	2NO	FR 1556-W	2NO	FR 1557-W	2NO
18	<b>LA</b>	FR 1852-W	⊕ 1NO+1NC	FR 1854-W	⊖ 1NO+1NC	FR 1856-W	⊕ 1NO+1NC	FR 1857-W	⊕ 1NO+1NC
20	<b>L</b>	FR 2052-W	⊕ 1NO+2NC	FR 2054-W	⊖ 1NO+2NC	FR 2056-W	⊕ 1NO+2NC	FR 2057-W	⊕ 1NO+2NC
21	<b>L</b>	FR 2152-W	⊕ 3NC	FR 2154-W	⊖ 3NC	FR 2156-W	⊕ 3NC	FR 2157-W	⊕ 3NC
22	<b>L</b>	FR 2252-W	⊕ 2NO+1NC	FR 2254-W	⊖ 2NO+1NC	FR 2256-W	⊕ 2NO+1NC	FR 2257-W	⊕ 2NO+1NC
2	<b>R</b>	FR 252-W	2x(1NO-1NC)	FR 254-W	2x(1NO-1NC)	FR 256-W	2x(1NO-1NC)	FR 257-W	2x(1NO-1NC)
Max speed		page 6/3 - type 1		page 6/3 - type 1		page 6/3 - type 1		page 6/3 - type 1	
Min. force		0,1 Nm (0,25 Nm ⊕)		0,1 Nm (0,25 Nm ⊕)		0,1 Nm (0,25 Nm ⊕)		0,1 Nm (0,25 Nm ⊕)	
Travel diagrams		page 6/16 - group 4		page 6/16 - group 4		page 6/16 - group 4		page 6/16 - group 4	

**Accessories**  
See page 5/1

Items with code on the green background are available in stock

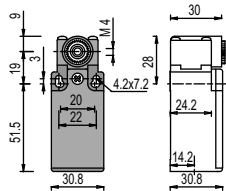
## 2 Position switches FR series

### Position switches with revolving lever without actuator

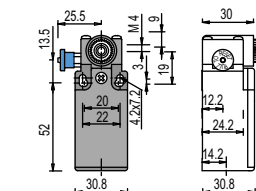
Contacts type:

- 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



with manual reset knob



### IMPORTANT

**For safety applications:** join only switches and actuators marked with symbol  $\ominus$ .  
For more information about safety applications see page 6/1.

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

Items with code on the green background are available in stock

Accessories  
See page 5/1

### Loose actuators

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

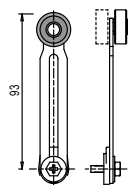
10 pcs pack	$\varnothing$ 18 mm roller	$\varnothing$ 18 mm roller	Adjustable square rod 3x3x125 mm	Flexible rod actuator	Adjustable round rod $\varnothing$ 3x125 mm	Polymer roller $\varnothing$ 20 mm	
Article	VF LE30 $\ominus$	VF LE31 $\ominus$	VF LE33	VF LE34	VF LE50	VF LE51 $\ominus$	
10 pcs pack	Polymer roller $\varnothing$ 20 mm	Porcelain roller	Polymer roller $\varnothing$ 20 mm	Adjustable actuator with polymer roller	Adjustable safety actua- tor with polymer roller	Polymer roller $\varnothing$ 20 mm	Adjustable glass fibre rod
Article	VF LE52 $\ominus$	VF LE53 $\ominus$ (2)	VF LE54 $\ominus$	VF LE55 $\ominus$ (1)	VF LE56 $\ominus$	VF LE57 $\ominus$	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 FR  $\bullet$ 38 (e.g. FR 538, FR 638) with the actuator VF LE53 will not present the same travel diagrams and actuating forces as the position switch FR  $\bullet$ 53-E0V9 (e.g. FR 553-E0V9, FR 653-E0V9...).

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



**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						10 pcs pack
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						10 pcs pack
VF LE31-2 (4)	VF LE51-2 (4)	VF LE52-2 (1)	VF LE54-2 (4)	VF LE55-2 (1) (1)	VF LE56-2 (1)	VF LE57-2 (1)
Ø 40 mm rubber rollers						10 pcs pack
VF LE31-R5 (4)	VF LE51-R5 (4)	VF LE52-R5 (1)	VF LE54-R5 (4)	VF LE55-R5 (1) (1)	VF LE56-R5 (1)	VF LE57-R5 (4)
Ø 50 mm rubber rollers						10 pcs pack
	VF LE51-3 (4)	VF LE52-3 (4)	VF LE54-3 (4)	VF LE55-3 (1) (1)	VF LE56-3 (1)	VF LE57-3 (4)
Ø 50 mm overhanging rubber rollers						10 pcs pack
	VF LE55-4 (1) (1)					VF LE56-4 (1)