



Contact type: R = snap action L = slow action LO = slow action make before break LS = slow action shifted LV = slow action shifted and spaced LI = slow action independent LA = slow action close A = electronic PNP	External gasket		External gasket		Secured only by means of threaded head in vertical position				
Contact block									
2	R	FR 2A7-M2	2x(1NO-1NC)	FR 208-M2	2x(1NO-1NC)	FR 210-M2	2x(1NO-1NC)	FR 212-M2	2x(1NO-1NC)
5	R	FR 5A7-M2	⊕ 1NO+1NC	FR 508-M2	⊕ 1NO+1NC	FR 510-M2	⊕ 1NO+1NC	FR 512-M2	⊕ 1NO+1NC
6	L	FR 6A7-M2	⊕ 1NO+1NC	FR 608-M2	⊕ 1NO+1NC	FR 610-M2	⊕ 1NO+1NC	FR 612-M2	⊕ 1NO+1NC
7	LO	FR 7A7-M2	⊕ 1NO+1NC	FR 708-M2	⊕ 1NO+1NC	FR 710-M2	⊕ 1NO+1NC	FR 712-M2	⊕ 1NO+1NC
9	L	FR 9A7-M2	⊕ 2NC	FR 908-M2	⊕ 2NC	FR 910-M2	⊕ 2NC	FR 912-M2	⊕ 2NC
10	L	FR 10A7-M2	2NO	FR 1008-M2	2NO	FR 1010-M2	2NO	FR 1012-M2	2NO
11	R	FR 11A7-M2	⊕ 2NC	FR 1108-M2	⊕ 2NC	FR 1110-M2	⊕ 2NC	FR 1112-M2	⊕ 2NC
12	R	FR 12A7-M2	2NO	FR 1208-M2	2NO	FR 1210-M2	2NO	FR 1212-M2	2NO
13	LV	FR 13A7-M2	⊕ 2NC	FR 1308-M2	⊕ 2NC	FR 1310-M2	⊕ 2NC	FR 1312-M2	⊕ 2NC
14	LS	FR 14A7-M2	⊕ 2NC	FR 1408-M2	⊕ 2NC	FR 1410-M2	⊕ 2NC	FR 1412-M2	⊕ 2NC
15	LS	FR 15A7-M2	2NO	FR 1508-M2	2NO	FR 1510-M2	2NO	FR 1512-M2	2NO
18	LA	FR 18A7-M2	⊕ 1NO+1NC	FR 1808-M2	⊕ 1NO+1NC	FR 1810-M2	⊕ 1NO+1NC	FR 1812-M2	⊕ 1NO+1NC
20	L	FR 20A7-M2	⊕ 1NO+2NC	FR 2008-M2	⊕ 1NO+2NC	FR 2010-M2	⊕ 1NO+2NC	FR 2012-M2	⊕ 1NO+2NC
21	L	FR 21A7-M2	⊕ 3NC	FR 2108-M2	⊕ 3NC	FR 2110-M2	⊕ 3NC	FR 2112-M2	⊕ 3NC
22	L	FR 22A7-M2	⊕ 2NO+1NC	FR 2208-M2	⊕ 2NO+1NC	FR 2210-M2	⊕ 2NO+1NC	FR 2212-M2	⊕ 2NO+1NC
E1	A	FR E1A7-M2	1NO-1NC	FR E108-M2	1NO-1NC	FR E110-M2	1NO-1NC	FR E112-M2	1NO-1NC
Max. speed	page 227 - type 3		page 227 - type 4		page 227 - type 4		page 227 - type 4		
Actuating force	3 N (25 N ⊕)		8 N (25 N ⊕)		8 N (25 N ⊕)		8 N (25 N ⊕)		
Travel diagrams	page 228 - group 3		page 228 - group 1		page 228 - group 1		page 228 - group 1		

Contact type: R = snap action L = slow action LO = slow action make before break LS = slow action shifted LV = slow action shifted and spaced LI = slow action independent LA = slow action close A = electronic PNP					Roller, Ø 11 mm, technopolymer 		Roller, Ø 12 mm, stainless steel 		
	Contact block								
2	R	FR 213-M2	2x(1NO-1NC)	FR 214-M2	2x(1NO-1NC)	FR 215-M2	2x(1NO-1NC)	FR 215-M2R28	2x(1NO-1NC)
5	R	FR 513-M2	⊕ 1NO+1NC	FR 514-M2	⊕ 1NO+1NC	FR 515-M2	⊕ 1NO+1NC	FR 515-M2R28	⊕ 1NO+1NC
6	L	FR 613-M2	⊕ 1NO+1NC	FR 614-M2	⊕ 1NO+1NC	FR 615-M2	⊕ 1NO+1NC	FR 615-M2R28	⊕ 1NO+1NC
7	LO	FR 713-M2	⊕ 1NO+1NC	FR 714-M2	⊕ 1NO+1NC	FR 715-M2	⊕ 1NO+1NC	FR 715-M2R28	⊕ 1NO+1NC
9	L	FR 913-M2	⊕ 2NC	FR 914-M2	⊕ 2NC	FR 915-M2	⊕ 2NC	FR 915-M2R28	⊕ 2NC
10	L	FR 1013-M2	2NO	FR 1014-M2	2NO	FR 1015-M2	2NO	FR 1015-M2R28	2NO
11	R	FR 1113-M2	⊕ 2NC	FR 1114-M2	⊕ 2NC	FR 1115-M2	⊕ 2NC	FR 1115-M2R28	⊕ 2NC
12	R	FR 1213-M2	2NO	FR 1214-M2	2NO	FR 1215-M2	2NO	FR 1215-M2R28	2NO
13	LV	FR 1313-M2	⊕ 2NC	FR 1314-M2	⊕ 2NC	FR 1315-M2	⊕ 2NC	FR 1315-M2R28	⊕ 2NC
14	LS	FR 1413-M2	⊕ 2NC	FR 1414-M2	⊕ 2NC	FR 1415-M2	⊕ 2NC	FR 1415-M2R28	⊕ 2NC
15	LS	FR 1513-M2	2NO	FR 1514-M2	2NO	FR 1515-M2	2NO	FR 1515-M2R28	2NO
18	LA	FR 1813-M2	⊕ 1NO+1NC	FR 1814-M2	⊕ 1NO+1NC	FR 1815-M2	⊕ 1NO+1NC	FR 1815-M2R28	⊕ 1NO+1NC
20	L	FR 2013-M2	⊕ 1NO+2NC	FR 2014-M2	⊕ 1NO+2NC	FR 2015-M2	⊕ 1NO+2NC	FR 2015-M2R28	⊕ 1NO+2NC
21	L	FR 2113-M2	⊕ 3NC	FR 2114-M2	⊕ 3NC	FR 2115-M2	⊕ 3NC	FR 2115-M2R28	⊕ 3NC
22	L	FR 2213-M2	⊕ 2NO+1NC	FR 2214-M2	⊕ 2NO+1NC	FR 2215-M2	⊕ 2NO+1NC	FR 2215-M2R28	⊕ 2NO+1NC
E1	A	FR E113-M2	1NO-1NC	FR E114-M2	1NO-1NC	FR E115-M2	1NO-1NC	FR E115-M2R28	1NO-1NC
Max. speed	page 227 - type 2		page 227 - type 4		page 227 - type 2		page 227 - type 2		
Actuating force	8 N (25 N ⊕)		8 N (25 N ⊕)		8 N (25 N ⊕)		8 N (25 N ⊕)		
Travel diagrams	page 228 - group 1		page 228 - group 1		page 228 - group 1		page 228 - group 1		

All values in the drawings are in mm

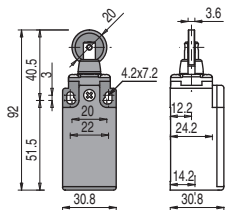
Accessories See page 207

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

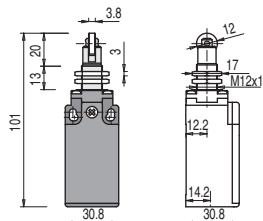
FR series position switches

Contact type:

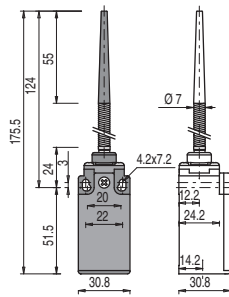
- R** = snap action
- L** = slow action
- LO** = slow action make before break
- LS** = slow action shifted
- LV** = slow action shifted and spaced
- LI** = slow action independent
- LA** = slow action close
- ⏏** = electronic PNP



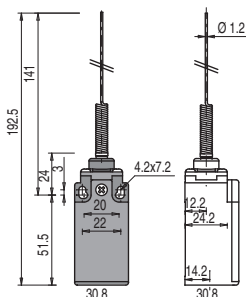
Secured only by means of threaded head in vertical position



External gasket
Spring rod



External gasket
Spring rod



Contact block

2	R	FR 216-M2	2x(1NO-1NC)	FR 217-M2	2x(1NO-1NC)	FR 220-M2	2x(1NO-1NC)	FR 221-M2	2x(1NO-1NC)
5	R	FR 516-M2	⊕ 1NO+1NC	FR 517-M2	⊕ 1NO+1NC	FR 520-M2	1NO+1NC	FR 521-M2	1NO+1NC
6	L	FR 616-M2	⊕ 1NO+1NC	FR 617-M2	⊕ 1NO+1NC	/	/	/	/
7	LO	FR 716-M2	⊕ 1NO+1NC	FR 717-M2	⊕ 1NO+1NC	/	/	/	/
9	L	FR 916-M2	⊕ 2NC	FR 917-M2	⊕ 2NC	/	/	/	/
10	L	FR 1016-M2	2NO	FR 1017-M2	2NO	FR 1020-M2	2NO	FR 1021-M2	2NO
11	R	FR 1116-M2	⊕ 2NC	FR 1117-M2	⊕ 2NC	/	/	/	/
12	R	FR 1216-M2	2NO	FR 1217-M2	2NO	FR 1220-M2	2NO	FR 1221-M2	2NO
13	LV	FR 1316-M2	⊕ 2NC	FR 1317-M2	⊕ 2NC	/	/	/	/
14	LS	FR 1416-M2	⊕ 2NC	FR 1417-M2	⊕ 2NC	/	/	/	/
15	LS	FR 1516-M2	2NO	FR 1517-M2	2NO	/	/	/	/
18	LA	FR 1816-M2	⊕ 1NO+1NC	FR 1817-M2	⊕ 1NO+1NC	FR 1820-M2	1NO+1NC	FR 1821-M2	1NO+1NC
20	L	FR 2016-M2	⊕ 1NO+2NC	FR 2017-M2	⊕ 1NO+2NC	FR 2020-M2	1NO+2NC	FR 2021-M2	1NO+2NC
21	L	FR 2116-M2	⊕ 3NC	FR 2117-M2	⊕ 3NC	FR 2120-M2	3NC	FR 2121-M2	3NC
22	L	FR 2216-M2	⊕ 2NO+1NC	FR 2217-M2	⊕ 2NO+1NC	FR 2220-M2	2NO+1NC	FR 2221-M2	2NO+1NC
E1	⏏	FR E116-M2	1NO-1NC	FR E117-M2	1NO-1NC	FR E120-M2	1NO-1NC	FR E121-M2	1NO-1NC

Max. speed page 227 - type 2

page 227 - type 2

1 m/s

1 m/s

Actuating force 8 N (25 N ⊕)

8 N (25 N ⊕)

0.07 Nm

0.07 Nm

Travel diagrams page 228 - group 1

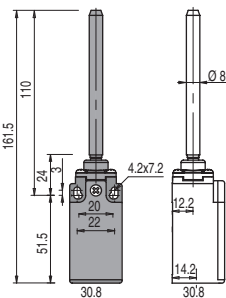
page 228 - group 1

page 228 - group 4

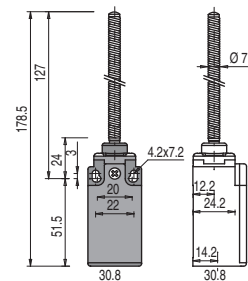
page 228 - group 4

Contact type:

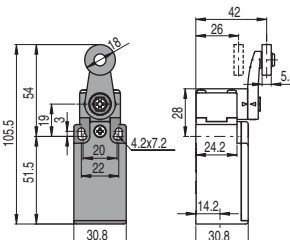
- R** = snap action
- L** = slow action
- LO** = slow action make before break
- LS** = slow action shifted
- LV** = slow action shifted and spaced
- LI** = slow action independent
- LA** = slow action close
- ⏏** = electronic PNP



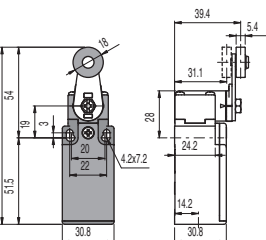
External gasket
Spring rod



With Ø 20 mm stainless steel roller on request



Other rollers available. See page 66



Contact block

2	R	FR 222-M2	2x(1NO-1NC)	FR 225-M2	2x(1NO-1NC)	FR 230-M2	2x(1NO-1NC)	FR 231-M2	2x(1NO-1NC)
5	R	/	/	FR 525-M2	1NO+1NC	FR 530-M2	⊕ 1NO+1NC	FR 531-M2	⊕ 1NO+1NC
6	L	/	/	/	/	FR 630-M2	⊕ 1NO+1NC	FR 631-M2	⊕ 1NO+1NC
7	LO	/	/	/	/	FR 730-M2	⊕ 1NO+1NC	FR 731-M2	⊕ 1NO+1NC
9	L	/	/	/	/	FR 930-M2	⊕ 2NC	FR 931-M2	⊕ 2NC
10	L	FR 1022-M2	2NO	FR 1025-M2	2NO	FR 1030-M2	2NO	FR 1031-M2	2NO
11	R	/	/	/	/	FR 1130-M2	⊕ 2NC	FR 1131-M2	⊕ 2NC
12	R	FR 1222-M2	2NO	FR 1225-M2	2NO	FR 1230-M2	2NO	FR 1231-M2	2NO
13	LV	/	/	/	/	FR 1330-M2	⊕ 2NC	FR 1331-M2	⊕ 2NC
14	LS	/	/	/	/	FR 1430-M2	⊕ 2NC	FR 1431-M2	⊕ 2NC
15	LS	/	/	/	/	FR 1530-M2	2NO	FR 1531-M2	2NO
16	LI	/	/	/	/	FR 1630-M2	⊕ 2NC	FR 1631-M2	⊕ 2NC
18	LA	FR 1822-M2	⊕ 1NO+1NC	FR 1825-M2	1NO+1NC	FR 1830-M2	⊕ 1NO+1NC	FR 1831-M2	⊕ 1NO+1NC
20	L	FR 2022-M2	⊕ 1NO+2NC	FR 2025-M2	1NO+2NC	FR 2030-M2	⊕ 1NO+2NC	FR 2031-M2	⊕ 1NO+2NC
21	L	FR 2122-M2	⊕ 3NC	FR 2125-M2	3NC	FR 2130-M2	⊕ 3NC	FR 2131-M2	⊕ 3NC
22	L	FR 2222-M2	⊕ 2NO+1NC	FR 2225-M2	2NO+1NC	FR 2230-M2	⊕ 2NO+1NC	FR 2231-M2	⊕ 2NO+1NC
E1	⏏	FR E122-M2	1NO-1NC	FR E125-M2	1NO-1NC	FR E130-M2	1NO-1NC	FR E131-M2	1NO-1NC

Max. speed 1 m/s

1 m/s

page 227 - type 1

page 227 - type 1

Actuating force 0.12 Nm (0.25 Nm ⊕)

0.12 Nm

0.06 Nm (0.25 Nm ⊕)

0.06 Nm (0.25 Nm ⊕)

Travel diagrams page 228 - group 4

page 228 - group 4

page 228 - group 5

page 228 - group 5

All values in the drawings are in mm

Accessories See page 207

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