

Description



Pizzato Elettrica offers a wide range of products suitable for places where chemical and corrosive agents are used and for aseptic places where particular attention must be paid to cleanliness and hygiene.

The technopolymer housings and external metal parts in stainless steel allow these devices to be used for a variety of applications, ranging from the food and pharmaceutical sectors to the chemical and marine sectors.

Main features:

- Technopolymer housings
- External metallic parts exclusively in stainless steel
- Protection degree IP67 (FR, FX, FK, FW, FP series switches)
- Protection degree IP67 and IP69K (SR, ST, HX series sensors)

Resistance against corrosion

Substance	Stainless steel	Technopolymer	Substance	Stainless steel	Technopolymer
Acetylene	■	■	Whisky malt	■	■
Vinegar	■	■	Molasses	■	■
Acetone	■	■	Nickel chloride	□	□
Acetic acid	■	□	Aluminium nitrate	■	■
Boric acid	■	■	Combustible oils	■	■
Citric acid	■	■	Tanning oil	■	-
Hydrochloric acid 100%	□	□	Linseed oil	■	■
Chromic acid 5%	■	□	Hydraulic oil (synthetic)	■	■
Hydrofluoric acid 100%	■	□	Mineral Oil	■	■
Formic acid	■	□	Motor Oil	■	■
Phosphoric acid (<40%)	□	■	Transformer oil	■	■
Lactic acid	■	■	Paraffin	■	■
Nitric acid (concentrated)	■	□	Potassium chloride	■	■
Oleic acid	■	■	Potassium hydroxide (caustic potash)	■	□
Sulphuric acid (<10%)	■	□	Potassium sulphate	■	■
Sulphuric acid (10-75%)	□	□	Propane (liquid)	■	■
Sulphuric acid (75-100%)	□	□	Copper sulphate >5%	■	□
Stearic acid	■	■	Liquid soaps	■	■
Tartaric acid	□	■	Chocolate syrup	■	■
White water	■	■	Milk whey	■	-
Sea water	□	■	Sodium bicarbonate	■	■
Distilled water	■	■	Sodium bisulphate	□	■
White spirit	■	■	Sodium carbonate	■	■
Ethyl alcohol	■	■	Sodium chloride	■	■
Methyl alcohol	■	■	Sodium hydroxide (80%)	■	□
Liquid ammonia	■	■	Sodium hypochlorite (100%)	□	□
Ammonium acetate	■	■	Sodium nitrate	■	■
Ammonium carbonate	■	■	Sodium sulphate	■	■
Ammonium sulfate	■	■	Sodium sulphide	□	■
Leaded petrol	■	■	Aluminium sulphate	■	■
Unleaded petrol	■	■	Ferrous sulphate	■	■
Benzol	■	□	Calcium hydroxide	□	■
Beer	■	■	Potassium hydroxide	■	■
Butane	■	■	Sodium hydroxide	-	■
Butanol	■	■	Tanning solutions	■	■
Quicklime	■	■	Photographic solutions	-	■
Calcium chloride	■	■	Fruit juice	■	■
Calcium hydroxide	■	■	Vegetable juice	■	■
Chloroform	■	■	Toluene	■	□
Aluminium chloride	■	■	Transparent (paint)	■	-
Ferrous chloride	□	□	Trichloroethylene	■	■
Chrome plating	□	□	Whisky and wine	■	■
Diesel	■	■	Zinc plate	□	□
Ether	■	■	Zinc chloride	■	■
Formaldehyde 100%	■	□	Zinc sulphate	-	■
Furfural	■	■	Sulphur chloride	■	■
Gelatine	■	■	Sugar (liquid)	■	■
Glycerine	■	■	Sugar beet	■	■
Glucose	■	■			
Shellac (orange)	■	■			
Hydrogen (gas)	■	■			
Iodine	□	■			
Milk	■	■			
Magnesium chloride	□	■			
Magnesium hydroxide	■	■			
Magnesium sulphate (Epsom salt)	■	■			
Mayonnaise	■	■			

Resistance against corrosion

- No corrosion
- Possible corrosion
- Corrosion
- Data not available



Contact type		FR 201-XM2		FR 202-XM2		FR 205-XM2		FR 207-XM2	
R	= snap action								
L	= slow action								
Contact block									
2	R	FR 201-XM2	2x(1NO-1NC)	FR 202-XM2	2x(1NO-1NC)	FR 205-XM2	2x(1NO-1NC)	FR 207-XM2	2x(1NO-1NC)
5	R	FR 501-XM2	1NO+1NC	FR 502-XM2	1NO+1NC	FR 505-XM2	1NO+1NC	FR 507-XM2	1NO+1NC
6	L	FR 601-XM2	1NO+1NC	FR 602-XM2	1NO+1NC	FR 605-XM2	1NO+1NC	FR 607-XM2	1NO+1NC
9	L	FR 901-XM2	2NC	FR 902-XM2	2NC	FR 905-XM2	2NC	FR 907-XM2	2NC
20	L	FR 2001-XM2	1NO+2NC	FR 2002-XM2	1NO+2NC	FR 2005-XM2	1NO+2NC	FR 2007-XM2	1NO+2NC
Max. speed		page 229 - type 4		page 229 - type 3		page 229 - type 3		page 229 - type 3	
Actuating force		8 N (25 N \ominus)		6 N (25 N \ominus)		6 N (25 N \ominus)		4 N (25 N \ominus)	
Travel diagrams		page 230 - group 1		page 230 - group 2		page 230 - group 2		page 230 - group 3	

Contact type		FR 215-XM2		FR 220-XM2		FR 230-XM2V38	
R	= snap action						
L	= slow action						
Contact block							
2	R	FR 215-XM2	2x(1NO-1NC)	FR 220-XM2	2x(1NO-1NC)	FR 230-XM2V38	2x(1NO-1NC)
5	R	FR 515-XM2	1NO+1NC	FR 520-XM2	1NO+1NC	FR 530-XM2V38	1NO+1NC
6	L	FR 615-XM2	1NO+1NC		/	FR 630-XM2V38	1NO+1NC
9	L	FR 915-XM2	2NC		/	FR 930-XM2V38	2NC
20	L	FR 2015-XM2	1NO+2NC	FR 2020-XM2	1NO+2NC	FR 2030-XM2V38	1NO+2NC
Max. speed		page 229 - type 2		1 m/s		page 229 - type 1	
Actuating force		8 N (25 N \ominus)		0.07 Nm		0.06 Nm (0.25 Nm \ominus)	
Travel diagrams		page 230 - group 1		page 230 - group 4		page 230 - group 5	

Contact type		FR 231-XM2V38		FR 251-XM2V38		FR 254-XM2V38		FR 256-XM2V38	
R	= snap action								
L	= slow action								
Contact block									
2	R	FR 231-XM2V38	2x(1NO-1NC)	FR 251-XM2V38	2x(1NO-1NC)	FR 254-XM2V38	2x(1NO-1NC)	FR 256-XM2V38	2x(1NO-1NC)
5	R	FR 531-XM2V38	1NO+1NC	FR 551-XM2V38	1NO+1NC	FR 554-XM2V38	1NO+1NC	FR 556-XM2V38	1NO+1NC
6	L	FR 631-XM2V38	1NO+1NC	FR 651-XM2V38	1NO+1NC	FR 654-XM2V38	1NO+1NC	FR 656-XM2V38	1NO+1NC
9	L	FR 931-XM2V38	2NC	FR 951-XM2V38	2NC	FR 954-XM2V38	2NC	FR 956-XM2V38	2NC
20	L	FR 2031-XM2V38	1NO+2NC	FR 2051-XM2V38	1NO+2NC	FR 2054-XM2V38	1NO+2NC	FR 2056-XM2V38	1NO+2NC
Max. speed		page 229 - type 1		page 229 - type 1		page 229 - type 1		page 229 - type 1	
Actuating force		0.06 Nm (0.25 Nm \ominus)		0.06 Nm (0.25 Nm \ominus)		0.06 Nm (0.25 Nm \ominus)		0.06 Nm (0.25 Nm \ominus)	
Travel diagrams		page 230 - group 5		page 230 - group 5		page 230 - group 5		page 230 - 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

Switches with external parts in stainless steel

Contact type								
R = snap action								
L = slow action								
2	R	FX 201-XM2	2x(1NO-1NC)	FX 202-XM2	2x(1NO-1NC)	FX 205-XM2	2x(1NO-1NC)	
5	R	FX 501-XM2	1NO+1NC	FX 502-XM2	1NO+1NC	FX 505-XM2	1NO+1NC	
6	L	FX 601-XM2	1NO+1NC	FX 602-XM2	1NO+1NC	FX 605-XM2	1NO+1NC	
9	L	FX 901-XM2	2NC	FX 902-XM2	2NC	FX 905-XM2	2NC	
20	L	FX 2001-XM2	1NO+2NC	FX 2002-XM2	1NO+2NC	FX 2005-XM2	1NO+2NC	
Max. speed	page 229 - type 4		page 229 - type 3		page 229 - type 3		page 229 - type 3	
Actuating force	8 N (25 N \ominus)		6 N (25 N \ominus)		6 N (25 N \ominus)		4 N (25 N \ominus)	
Travel diagrams	page 230 - group 1		page 230 - group 2		page 230 - group 2		page 230 - group 3	

Contact type				External gasket		External gasket		
R = snap action								
L = slow action								
2	R	FX 215-XM2	2x(1NO-1NC)	FX 220-XM2	2x(1NO-1NC)	FX 225-XM2	2x(1NO-1NC)	
5	R	FX 515-XM2	1NO+1NC	FX 520-XM2	1NO+1NC	FX 525-XM2	1NO+1NC	
6	L	FX 615-XM2	1NO+1NC	/	/	/	/	
9	L	FX 915-XM2	2NC	/	/	/	/	
20	L	FX 2015-XM2	1NO+2NC	FX 2020-XM2	1NO+2NC	FX 2025-XM2	1NO+2NC	
Max. speed	page 229 - type 2		1 m/s		1 m/s		page 229 - type 1	
Actuating force	8 N (25 N \ominus)		0.07 Nm		0.12 Nm		0.06 Nm (0.25 Nm \ominus)	
Travel diagrams	page 230 - group 1		page 230 - group 4		page 230 - group 4		page 230 - group 5	

Contact type								
R = snap action								
L = slow action								
2	R	FX 231-XM2V38	2x(1NO-1NC)	FX 251-XM2V38	2x(1NO-1NC)	FX 254-XM2V38	2x(1NO-1NC)	
5	R	FX 531-XM2V38	1NO+1NC	FX 551-XM2V38	1NO+1NC	FX 554-XM2V38	1NO+1NC	
6	L	FX 631-XM2V38	1NO+1NC	FX 651-XM2V38	1NO+1NC	FX 654-XM2V38	1NO+1NC	
9	L	FX 931-XM2V38	2NC	FX 951-XM2V38	2NC	FX 954-XM2V38	2NC	
20	L	FX 2031-XM2V38	1NO+2NC	FX 2051-XM2V38	1NO+2NC	FX 2054-XM2V38	1NO+2NC	
Max. speed	page 229 - type 1		page 229 - type 1		page 229 - type 1		page 229 - type 1	
Actuating force	0.06 Nm (0.25 Nm \ominus)		0.06 Nm (0.25 Nm \ominus)		0.06 Nm (0.25 Nm \ominus)		0.06 Nm (0.25 Nm \ominus)	
Travel diagrams	page 230 - group 5		page 230 - group 5		page 230 - group 5		page 230 - group 5	

All values in the drawings are in mm

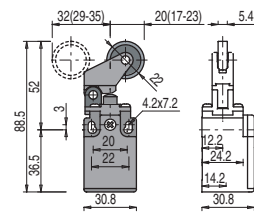
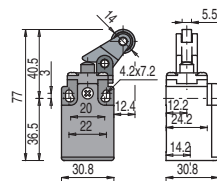
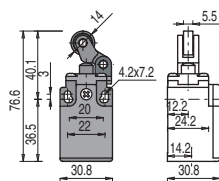
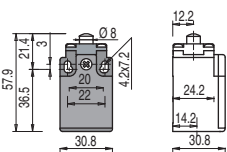
Accessories See page 207

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



Contact type

R = snap action
L = slow action

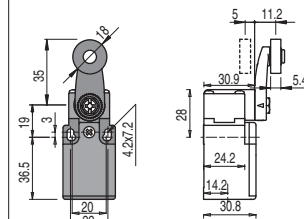
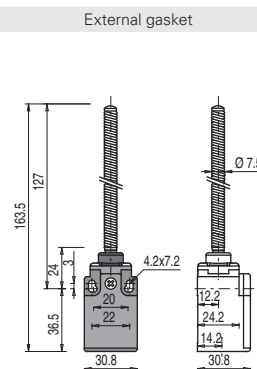
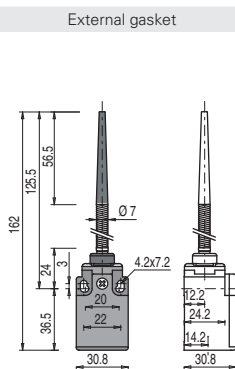
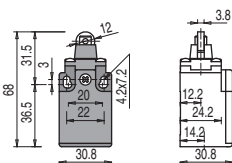


Contact block

3	R	FK 301-XM1	1NO+1NC	FK 302-XM1	1NO+1NC	FK 305-XM1	1NO+1NC	FK 307-XM1	1NO+1NC
33	L	FK 3301-XM1	1NO+1NC	FK 3302-XM1	1NO+1NC	FK 3305-XM1	1NO+1NC	FK 3307-XM1	1NO+1NC
34	L	FK 3401-XM1	2NC	FK 3402-XM1	2NC	FK 3405-XM1	2NC	FK 3407-XM1	2NC
Max. speed		page 229 - type 4		page 229 - type 3		page 229 - type 3		page 229 - type 3	
Actuating force		8 N (25 N)		6 N (25 N)		6 N (25 N)		4 N (25 N)	
Travel diagrams		page 230 - group 1		page 230 - group 2		page 230 - group 2		page 230 - group 3	

Contact type

R = snap action
L = slow action

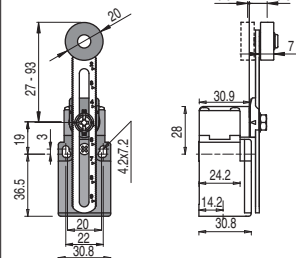
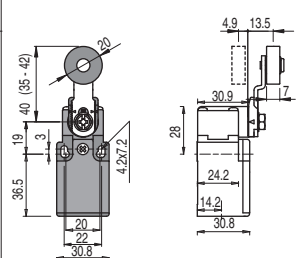
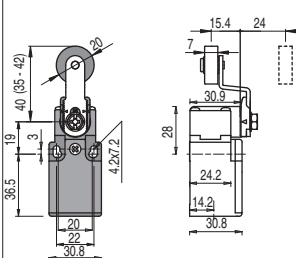
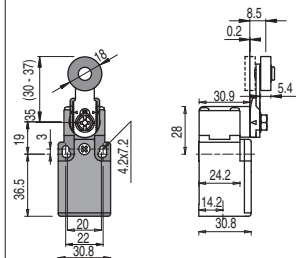


Contact block

3	R	FK 315-XM1	1NO+1NC	FK 320-XM1	1NO-1NC	FK 325-XM1	1NO-1NC	FK 330-XM1V38	1NO+1NC
33	L	FK 3315-XM1	1NO+1NC	FK 3320-XM1	1NO+1NC	FK 3325-XM1	1NO+1NC	FK 3330-XM1V38	1NO+1NC
34	L	FK 3415-XM1	2NC	FK 3420-XM1	2NC	FK 3425-XM1	2NC	FK 3430-XM1V38	2NC
Max. speed		page 229 - type 2		1 m/s		1 m/s		page 229 - type 1	
Actuating force		8 N (25 N)		0.05 Nm		0.1 Nm		0.06 Nm (0.25 Nm)	
Travel diagrams		page 230 - group 1		page 230 - group 4		page 230 - group 4		page 230 - group 5	

Contact type

R = snap action
L = slow action



Contact block

3	R	FK 331-XM1V38	1NO+1NC	FK 351-XM1V38	1NO+1NC	FK 354-XM1V38	1NO+1NC	FK 356-XM1V38	1NO+1NC
33	L	FK 3331-XM1V38	1NO+1NC	FK 3351-XM1V38	1NO+1NC	FK 3354-XM1V38	1NO+1NC	FK 3356-XM1V38	1NO+1NC
34	L	FK 3431-XM1V38	2NC	FK 3451-XM1V38	2NC	FK 3454-XM1V38	2NC	FK 3456-XM1V38	2NC
Max. speed		page 229 - type 1		page 229 - type 1		page 229 - type 1		page 229 - type 1	
Actuating force		0.06 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 230 - group 5		page 230 - group 5		page 230 - group 5		page 230 - 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

Contact type
R = snap action
L = slow action

Contact block

2	R	FP 201-XM2	2x(1NO-1NC)	FP 202-XM2	2x(1NO-1NC)	FP 205-XM2	2x(1NO-1NC)	FP 208-XM2	2x(1NO-1NC)
5	R	FP 501-XM2	1NO+1NC	FP 502-XM2	1NO+1NC	FP 505-XM2	1NO+1NC	FP 508-XM2	1NO+1NC
6	L	FP 601-XM2	1NO+1NC	FP 602-XM2	1NO+1NC	FP 605-XM2	1NO+1NC	FP 608-XM2	1NO+1NC
9	L	FP 901-XM2	2NC	FP 902-XM2	2NC	FP 905-XM2	2NC	FP 908-XM2	2NC
20	L	FP 2001-XM2	1NO+2NC	FP 2002-XM2	1NO+2NC	FP 2005-XM2	1NO+2NC	FP 2008-XM2	1NO+2NC
Max. speed	page 227 - type 4		page 227 - type 3		page 227 - type 3		page 227 - type 4		
Actuating force	8 N (25 N \ominus)		6 N (25 N \ominus)		6 N (25 N \ominus)		8 N (25 N \ominus)		
Travel diagrams	page 228 - group 1		page 228 - group 2		page 228 - group 2		page 228 - group 1		

Contact type
R = snap action
L = slow action

External gasket

Contact block

2	R	FP 210-XM2	2x(1NO-1NC)	FP 211-XM2	2x(1NO-1NC)	FP 216-XM2	2x(1NO-1NC)
5	R	FP 510-XM2	1NO+1NC	FP 511-XM2	1NO+1NC	FP 516-XM2	1NO+1NC
6	L	FP 610-XM2	1NO+1NC	FP 611-XM2	1NO+1NC	FP 616-XM2	1NO+1NC
9	L	FP 910-XM2	2NC	FP 911-XM2	2NC	FP 916-XM2	2NC
20	L	FP 2010-XM2	1NO+2NC	FP 2011-XM2	1NO+2NC	FP 2016-XM2	1NO+2NC
Max. speed	page 227 - type 4		page 227 - type 4		page 227 - type 2		
Actuating force	11 N (25 N \ominus)		8 N (25 N \ominus)		8 N (25 N \ominus)		
Travel diagrams	page 228 - group 1		page 228 - group 1		page 228 - group 1		

Safety switches for hinges

Contact type
L = slow action

Contact block

9	L	FR 996-XM2	2NC	FX 996-XM2	2NC	/	
18	L	FR 1896-XM2	1NO+1NC	FX 1896-XM2	1NO+1NC	/	
20	L	FR 2096-XM2	1NO+2NC	FX 2096-XM2	1NO+2NC	/	
33	L	/	/	/	/	FK 3396-XM1	1NO+1NC
34	L	/	/	/	/	FK 3496-XM1	2NC
Actuating force	0.15 Nm (0.4 Nm \ominus)		0.15 Nm (0.4 Nm \ominus)		0.15 Nm (0.4 Nm \ominus)		
Travel diagrams	page 232 - group 9		page 232 - group 9		page 232 - group 9		

⚠ If not expressly indicated in this chapter, for correct installation and utilization of all articles see the instructions given on pages 225 to 240.

All values in the drawings are in mm

Accessories See page 207

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



Safety switches with separate actuator

Contact type
L = slow action

	Without actuator	Without actuator	Without actuator	Without actuator
Contact block	6 L FR 693-XM2 1NO+1NC 9 L FR 993-XM2 2NC 20 L FR 2093-XM2 1NO+2NC 33 L / 34 L /	FX 693-XM2 1NO+1NC FX 993-XM2 2NC FX 2093-XM2 1NO+2NC / /	FW 692-XM2 1NO+1NC FW 992-XM2 2NC FW 2092-XM2 1NO+2NC / /	/ / / FK 3393-XM1 1NO+1NC FK 3493-XM1 2NC
Actuating force	10 N (18 N)	10 N (18 N)	10 N (18 N)	10 N (18 N)
Travel diagrams	page 232 - group 8	page 232 - group 8	page 232 - group 8	page 232 - group 8

Stainless steel actuators

IMPORTANT: These actuators can be used only with items of the FR, FX, FK and FW series (e.g. FR 693-XM2).
 Low level of coding acc. to EN ISO 14119.

Article	Description	Article	Description
VF KEYD	Straight actuator	VF KEYD1	Angled actuator
VF KEYD5	Extended actuator	VF KEYD6	Extended actuator, angled
VF KEYD8	Universal actuator	VF KEYD10	Profiled actuator

SR series magnetic safety sensors



See page 27 and 33,
 General Catalogue Safety 2021-2022

ST series RFID safety sensors



See page 39 and 49,
 General Catalogue Safety 2021-2022

HX series stainless steel safety switches



See page 73,
 General Catalogue Safety 2021-2022

All values in the drawings are in mm

Accessories See page 207

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