



Main features

- ATEX approval
- Metal housing
- Protection degree IP67
- Cable, halogen-free polyurethane

Technical data

Housing

Metal housing, powder-coated
with cable in halogen-free polyurethane, 2 m, other lengths on request
Protection degree acc. to EN 60529: IP67

General data

Ambient temperature: -20°C ... +60°C
Max. actuation frequency: 3600 operating cycles/hour
Mechanical endurance: 10 million operating cycles
Mounting position: any
Safety parameters B_{10D} (NC contacts): 20,000,000
Mechanical interlock, not coded: type 1 acc. to EN ISO 14119
Tightening torques for installation: see page 231

ATEX markings:

Product code extension
Quality mark

Certificate type and notified body

-EX5



EU declaration of conformity
Pizzato Elettrica S.r.l.

In compliance with standards:

IEC 60947-5-1, EN 60947-5-1, EN 60947-1, IEC 60204-1, EN 60204-1, EN ISO 14119, EN ISO 12100, IEC 60529, EN 60529, UL 508, CSA 22.2 No.14, IEC 60079-0, EN 60079-0, IEC 60079-31, EN 60079-31, IEC 60079-15, EN 60079-15, EN 50581.


Compliance with the requirements of:

ATEX Directive 2014/34/EU, EMC Directive 2014/30/EU, RoHS Directive 2011/65/EU.



Positive contact opening in conformity with standards:

IEC 60947-5-1, EN 60947-5-1.

Installation for safety applications:

Use only switches marked with the symbol  next to the product code. Always connect the safety circuit to the **NC contacts** (normally closed contacts: see "Internal wiring") as required by **EN ISO 14119, paragraph 5.4** for specific interlock applications and **EN ISO 13849-2 tables D3** (well-tried components) and **D.8** (failure exclusions) for safety applications in general. Actuate the switch **at least up to the positive opening travel** shown in the travel diagrams on page 232. Actuate the switch **at least with the positive opening force**, reported in brackets below each article, next to the actuating force value.

⚠ If not expressly indicated in this chapter, for correct installation and utilization of all articles see the instructions given on pages 223 to 236 and in the certificate.

Category	Zone	EPL	Approvals
3D	22	Dc	 II 3D Ex tc III CT80°C Dc
3G	2	Gc	 II 3G Ex nC IIC T6 Gc

Product code extension
-EX5

Electrical data

Thermal current (I_{th}): 10 A
Rated insulation voltage (U_i): 400 Vac/dc
Conditional short circuit current: 1000 A acc. to EN 60947-5-1
Protection against short circuits: type aM fuse 10 A 500 V
Pollution degree: 3

Utilization category

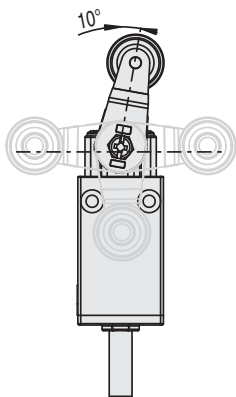
Alternating current: AC15 (50-60 Hz)

U_e (V)	120	250	400
I_e (A)	6	4	3

 Direct current: DC13

U_e (V)	24	125	250
I_e (A)	2.5	0.55	0.27

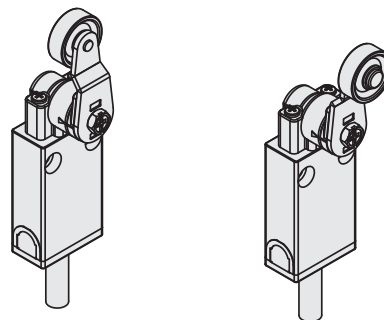
Adjustable levers



For these switches the lever can be adjusted in 10° steps over the entire 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.

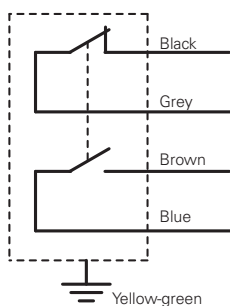
Reversible levers

With these switches, the lever can be secured in either the normal or reverse position, whereby positive coupling is retained. In this way two different working planes of the lever are possible.



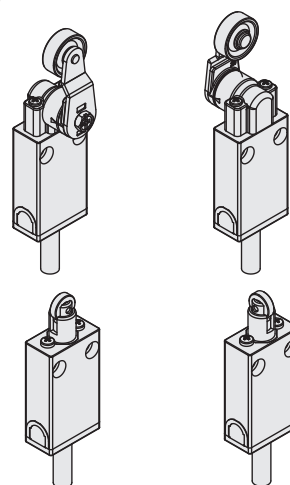
Internal wiring

1NO+1NC



Head with variable orientation

Depending on the model, it is possible to rotate the head in 90° or 180° steps.



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
product code extension
FA 4501-2SHG-EX5

Housing		ATEX approval	
FA	metal	-EX5	II 3D Ex tc IIIC T80°C Dc II 3G Ex nC IICT6 Gc
Contact block		Contact type	
45	1NO+1NC, snap action		silver contacts (standard)
46	1NO+1NC, slow action	G	silver contacts, 1 µm gold coating
Actuators		Cable type	
01	short plunger	H	PUR cable, halogen free
02	unidirectional lever	Output direction	
08	plunger	S	bottom output
...		
Connection type			
1	cable, length: 1 m		
2	cable length: 2 m		
...		
0	cable, length: 10 m		

Other lengths on request

		Contact type:		Unidirectional operation		External gasket		Secured only by means of threaded head	
		R = snap action L = slow action		It does not switch → ← It switches					
Category	Contact block								
3D	45 R	FA 4501-2SH-EX5 → 1NO+1NC		FA 4502-2SH-EX5 → 1NO+1NC		FA 4508-2SH-EX5 → 1NO+1NC		FA 4510-2SH-EX5 → 1NO+1NC	
3G	46 L	FA 4601-2SH-EX5 → 1NO+1NC		FA 4602-2SH-EX5 → 1NO+1NC		FA 4608-2SH-EX5 → 1NO+1NC		FA 4610-2SH-EX5 → 1NO+1NC	
Max. speed		0.5 m/s		0.5 m/s		0.5 m/s		0.5 m/s	
Actuating force		10 N (25 N →)		5 N (25 N →)		10 N (25 N →)		10 N (25 N →)	
Travel diagrams		page 232 - group 1		page 232 - group 2		page 232 - group 1		page 232 - group 1	

		Contact type:		Secured only by means of threaded head		External gasket		Roller, Ø 12 mm, stainless steel	
		R = snap action L = slow action							
Category	Contact block								
3D	45 R	FA 4511-2SH-EX5 → 1NO+1NC		FA 4512-2SH-EX5 → 1NO+1NC		FA 4513-2SH-EX5 → 1NO+1NC		FA 4515-2SH-EX5 → 1NO+1NC	
3G	46 L	FA 4611-2SH-EX5 → 1NO+1NC		FA 4612-2SH-EX5 → 1NO+1NC		FA 4613-2SH-EX5 → 1NO+1NC		FA 4615-2SH-EX5 → 1NO+1NC	
Max. speed		0.1 m/s with cam at 30°		0.1 m/s with cam at 30°		0.5 m/s		0.1 m/s with cam at 30°	
Actuating force		10 N (25 N →)		10 N (25 N →)		10 N (25 N →)		10 N (25 N →)	
Travel diagrams		page 232 - group 1		page 232 - group 1		page 232 - group 1		page 232 - group 1	

		Contact type:		Roller, Ø 12 mm, stainless steel		External gasket		External gasket		With Ø 20 mm stainless steel roller on request	
		R = snap action L = slow action									
Category	Contact block										
3D	45 R	FA 4517-2SH-EX5 → 1NO+1NC		FA 4520-2SH-EX5 1NO+1NC		FA 4525-2SH-EX5 1NO+1NC		FA 4530-2SH-EX5 → 1NO+1NC		FA 4535-2SH-EX5 → 1NO+1NC	
3G	46 L	FA 4617-2SH-EX5 → 1NO+1NC		/		/		FA 4630-2SH-EX5 → 1NO+1NC		/	
Max. speed		0.1 m/s with cam at 30°		1 m/s		1 m/s		1 m/s		1.5 m/s with cam at 30°	
Actuating force		10 N (25 N →)		0.03 Nm		0.06 Nm		0.06 Nm		0.03 Nm (25 N →)	
Travel diagrams		page 232 - group 1		page 232 - group 3		page 232 - group 3		page 232 - group 3		page 232 - group 4	

All values in the drawings are in mm

Accessories See page 207

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



Category		Contact block		With stainless steel roller on request	Square rod, 3x3 mm	With stainless steel roller on request	With stainless steel roller on request			
3D 3G	45	R	FA 4531-2SH-EX5	1NO+1NC	FA 4533-2SH-EX5	1NO+1NC	FA 4534-2SH-EX5	1NO+1NC	FA 4540-2SH-EX5	1NO+1NC
	46	L	FA 4631-2SH-EX5	1NO+1NC	FA 4633-2SH-EX5	1NO+1NC	FA 4634-2SH-EX5	1NO+1NC	FA 4640-2SH-EX5	1NO+1NC
Max. speed		1.5 m/s with cam at 30°		1.5 m/s		1.5 m/s		1.5 m/s with cam at 30°		
Actuating force		0.03 Nm (0.25 Nm \rightarrow)		0.03 Nm		0.03 Nm		0.03 Nm (0.25 Nm \rightarrow)		
Travel diagrams		page 232 - group 4		page 232 - group 4		page 232 - group 4		page 232 - group 4		

Category		Contact block		Round rod, Ø 3 mm, stainless steel	With stainless steel roller on request	With stainless steel roller on request	With stainless steel roller on request			
3D 3G	45	R	FA 4550-2SH-EX5	1NO+1NC	FA 4551-2SH-EX5	1NO+1NC	FA 4552-2SH-EX5	1NO+1NC	FA 4554-2SH-EX5	1NO+1NC
	46	L	FA 4650-2SH-EX5	1NO+1NC	FA 4651-2SH-EX5	1NO+1NC	FA 4652-2SH-EX5	1NO+1NC	FA 4654-2SH-EX5	1NO+1NC
Max. speed		1.5 m/s		1.5 m/s with cam at 30°		1.5 m/s with cam at 30°		1.5 m/s with cam at 30°		
Actuating force		0.03 Nm		0.03 Nm (0.25 Nm \rightarrow)		0.03 Nm (0.25 Nm \rightarrow)		0.03 Nm (0.25 Nm \rightarrow)		
Travel diagrams		page 232 - group 4		page 232 - group 4		page 232 - group 4		page 232 - group 4		

Category		Contact block		With stainless steel roller on request	With stainless steel roller on request	With stainless steel roller on request	Glass fibre rod			
3D 3G	45	R	FA 4555-2SH-EX5	1NO+1NC	FA 4556-2SH-EX5	1NO+1NC	FA 4557-2SH-EX5	1NO+1NC	FA 4569-2SH-EX5	1NO+1NC
	46	L	FA 4655-2SH-EX5	1NO+1NC	FA 4656-2SH-EX5	1NO+1NC	FA 4657-2SH-EX5	1NO+1NC	FA 4669-2SH-EX5	1NO+1NC
Max. speed		1.5 m/s with cam at 30°		1.5 m/s with cam at 30°		1.5 m/s with cam at 30°		1.5 m/s		
Actuating force		0.03 Nm (0.25 Nm \rightarrow)		0.03 Nm (0.25 Nm \rightarrow)		0.03 Nm (0.25 Nm \rightarrow)		0.03 Nm		
Travel diagrams		page 232 - group 4		page 232 - group 4		page 232 - group 4		page 232 - group 4		

⁽¹⁾ Positive opening only with actuator set to max.