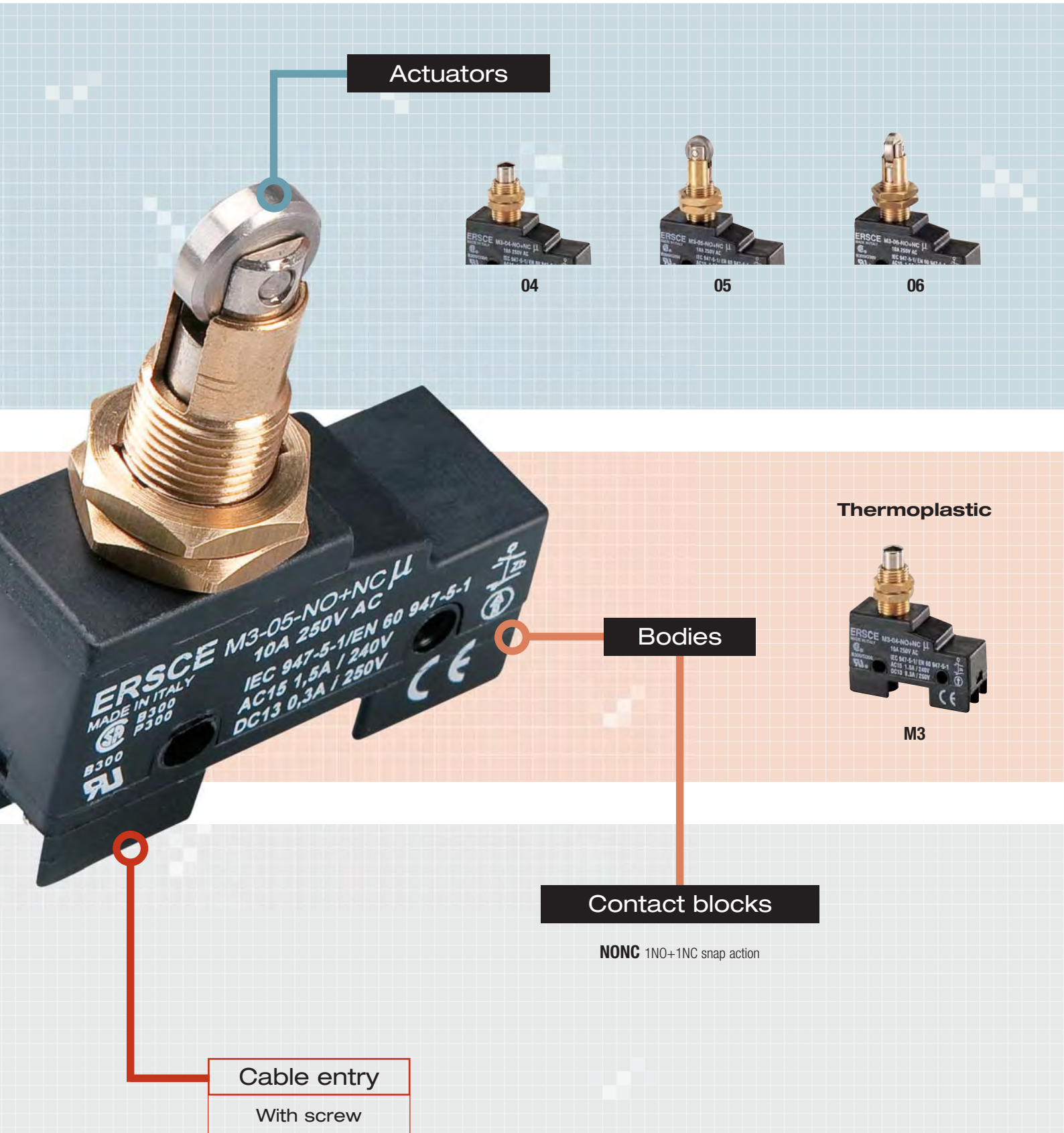




Miniaturized
limit switches





08

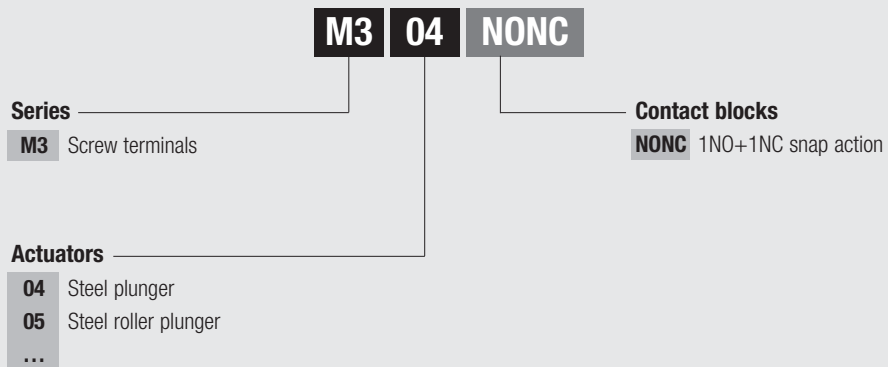
09

11

13

14

Part no. structure



Note: Please verify the effective availability of a product before ordering.

General characteristics

The M3 series miniaturized limit switches are among the most compact on the market. Contact blocks are 1NO+1NC snap action, with positive opening of the NC contact. The switches are made of PA6 double insulated thermoplastic reinforced with fiberglass, class V2. The M3 series is equipped with M3,5 screw terminals.



- thermoplastic body
- metal actuators
- contacts type Zb
- gold plated contacts (on request)
- contact blocks with positive opening of the NC contact according to IEC EN 60947-5-1 e VD 0660-2000

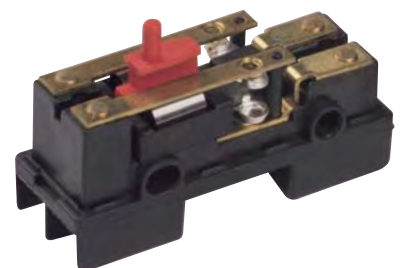
Galvanically separated contacts type Zb

The NO and NC contacts are galvanically separated with positive opening; it is possible to use the contacts independently.



High performance contacts

Ag/Ni.



Technical information

Operating speed		mm/s	1...1000	
Operating frequency		operat./sec (Hz)	0,5	
Insulation resistance	500 V DC	MΩ	100	
Dielectric strength	50/60 Hz per 1' *	V AC	2500	
Rated insulation voltage	Ui IEC947-5-1	V AC	250	
Rated thermal current	Ithe IEC947-5-1	A	10	
Rated operating current	IEC947-5-1/EN60947-5-1			
Category AC15	le	24 V	A	5
B300		125 V	A	3
		230 V	A	1,5
	Category DC13	le	24 V	A
Q300		120 V	A	0,6
		230 V	A	0,2
Contact resistance	IEC255-7 cat.3	initial value	mΩ	25 max
Short circuit protective devices	IEC269 (IEC947-5-1)	gl or gG type fuse	A	3
Pollution degree	IEC947-5-1			3
Actuator protection degree	EN 60529			IP40
Vibration resistance	IEC68-2-6	mm		0,35 ± 15% (10 ÷ 55 Hz ± 1 Hz)
Shock resistance	IEC68-2-27	11 ms	g	30
Mechanical life			cycles	15.000.000
Electrical life	a 250 V AC 1,5A with resistance		cycles	500.000
	load cosφ=1		cycles	500.000
	a 250 V AC 1,5A with inductive		cycles	500.000
load cosφ=0,4		cycles	500.000	
Terminals	Type			Screw with combined notch and retractable plate (notch Ph. Size 1)
Terminals protection degree	EN60529			IP00
				IP40 with terminal covers
				Steel class 8,8/ Galvanized
Material				Steel class 8,8/ Galvanized
Max. screw tightening torque		cNm (Kg cm)		120 (12,24)
Max connecting capacity	rigid cable	mm ²		2x1,5
	flexible cable	mm ²		2x1,5
Max. screw tightening torque		mm ²		1x1,5
Max connecting capacity				In accordance with EN50013
Air ambient temperature	operational	°C		-25 ÷ +85 without formation of ice)
Relative humidity	operational			95% max

* between terminals of the same polarity: between terminals with different polarity: between live mechanical parts and ground;
between live mechanical parts and non-current-carrying metal parts

Approvals



- UL approval file E72861
- CSA approval file 026716-0-000
- Approved
- + Conforms to requirements

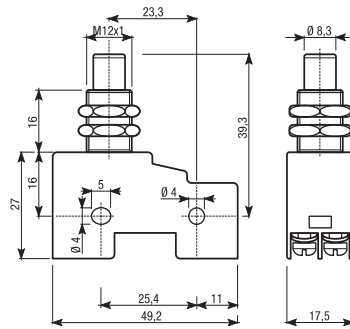


Steel plunger Ø8,3 mm

Contact block	
1NO+1NC snap action	
Weight pack	kg
Pack	pcs

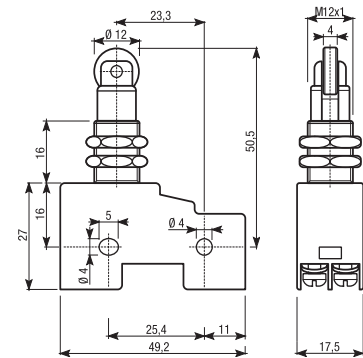
Part no. / Type	Contact travel
ER200380 <i>M304NONC</i>	
0,925	
5	

standard article article on request

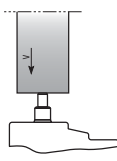


Steel roller plunger

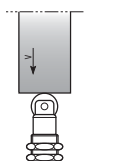
Part no. / Type	Contact travel
ER200390 <i>M305NONC</i>	
1,105	
5	



Drive cam operating parameters



04



05

Min. force (N)	
for tripping	4
for positive opening	16

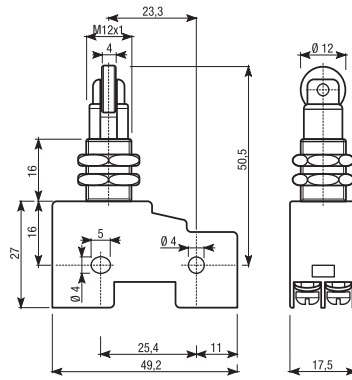


Steel roller plunger turned 90°

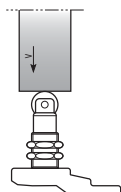
Contact block	
1NO+1NC snap action	
13 21	
Zb	
14 22	
Weight pack	kg
Pack	pcs

Part no. / Type	Contact travel
ER200400 M306NONC	
1,105	
5	

standard article article on request



Drive cam operating parameters



Min. force (N)	
for tripping	4
for positive opening	16



Lever length 54 mm

Contact block	
1NO+1NC snap action	
13 21	
Zb	
14 22	

Weight pack	kg
Pack	pcs

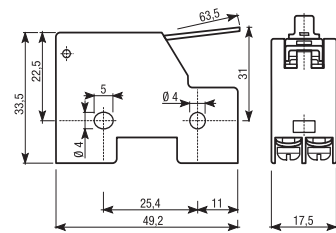
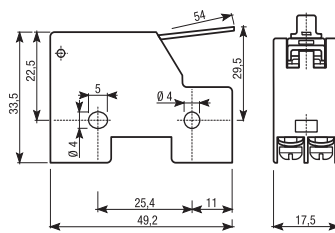
Part no. / Type	Contact travel
ER200420 <i>M308NONC</i>	
0,360	
5	



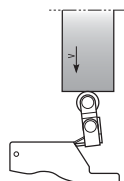
Lever length 63,5 mm

Part no. / Type	Contact travel
ER200430 <i>M309NONC</i>	
0,365	
5	

standard article article on request



Drive cam operating parameters



Min. force (cNm)	
for tripping	1,6
for positive opening	12



Thermoplastic roller lever length 26,6 mm

Contact block	
1NO+1NC snap action	
13 21	
Zb	
14 22	
Weight pack	kg
Pack	pcs

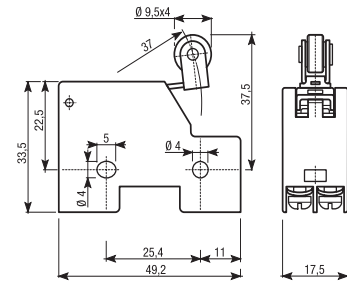
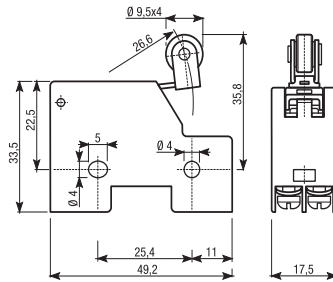
Part no. / Type	Contact travel
ER200450 M311NONC	
0,735	
5	



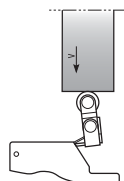
Thermoplastic roller lever length 37 mm

Part no. / Type	Contact travel
ER200470 M313NONC	
0,745	
5	

standard article article on request



Drive cam operating parameters



Min. force (cNm)	
for tripping	2
for positive opening	13

Min. force (cNm)	
for tripping	1,6
for positive opening	12

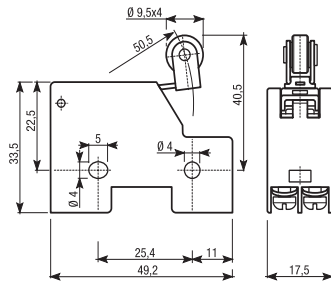


Thermoplastic roller lever length 50,5 mm

Contact block	
1NO+1NC snap action	
Weight pack	kg
Pack	pcs

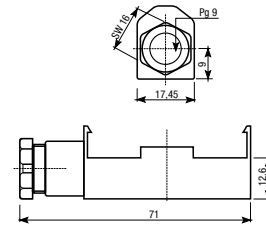
Part no. / Type	Contact travel
ER200480 <i>M314NONC</i>	
0,755	
5	

standard article article on request

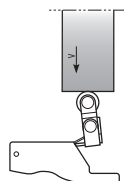


Accessory: terminal cover for M3 series

Part no. / Type
ER200690 <i>M3PROTA</i>
0,195
5



Drive cam operating parameters



Min. force (cNm)	
for tripping	1,3
for positive opening	11