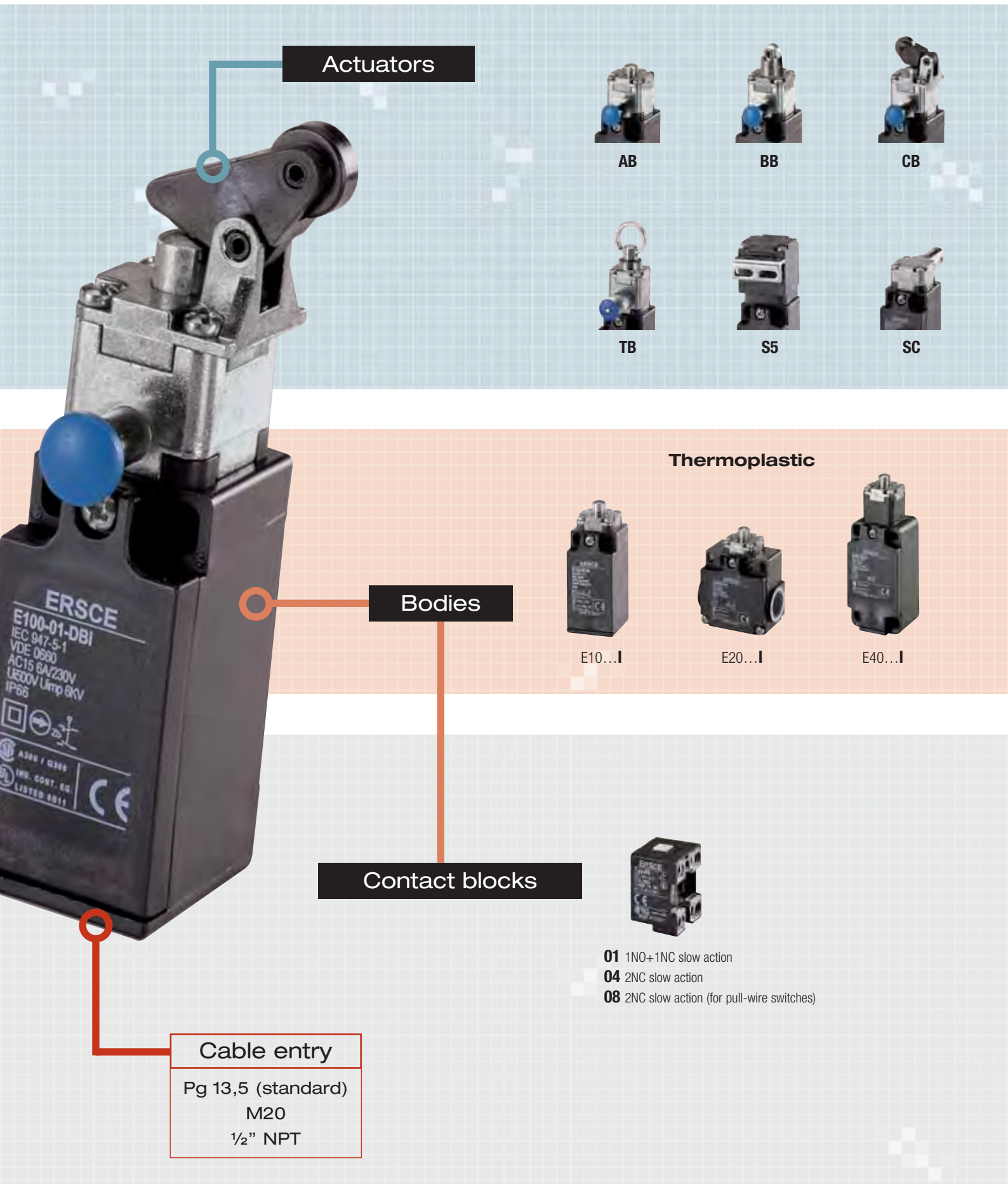




Safety
switches



Actuators



AB

BB

CB



TB



S5



SC

Thermoplastic



E10...I



E20...I



E40...I

Bodies

Contact blocks



- 01** 1NO+1NC slow action
- 04** 2NC slow action
- 08** 2NC slow action (for pull-wire switches)

Cable entry
Pg 13,5 (standard)
M20
1/2" NPT



DB



EB



IB



FB



FB-50



FBR-50

Metal



E10...M



E30...M



E40...M

Part no. structure

E10 0 01 FB I 50

Series

- E100** 1 cable entry, thermoplastic/metal
- E200** 2 cable entries, thermoplastic
- E300** 3 cable entries, metal
- E400** 1 cable entry, thermoplastic/metal

Cable entry

- 0** Pg 13,5 (standard)
- 1** M20
- 2** 1/2" NPT

Contact blocks

- 01** 1NO+1NC slow action
- 04** 2NC slow action
- ...

Option

- 50** With Ø50 mm roller

Body material

- I** Thermoplastic
- M** Metal

Actuator type

- AB** Steel plunger with reset
- BB** Steel roller plunger with reset
- ...

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

General characteristics

Safety switches are conceived for applications related to the protection of automated installations and are available in 4 different product families: with reset, pull-wire, 5 way key and for hinge actuation.

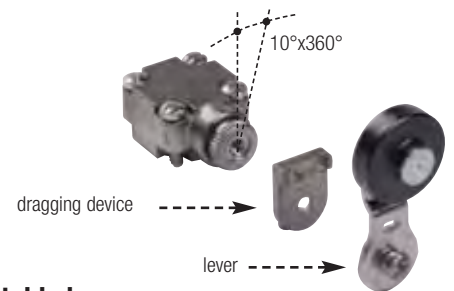


- thermoplastic or metal body
- IP66
- contact blocks with positive opening of the NC contact according to IEC EN 60947-5-1 e VD 0660-200



Rotating heads

Possibility to supply, on request, the limit switch lever rotated by 180° steps, and the actuator by 90° steps.



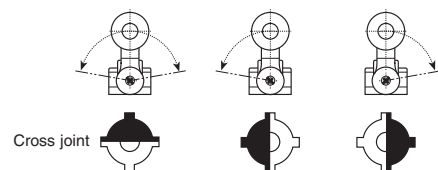
Adjustable levers

Possibility to adjust the lever in 10° steps for 360° by moving the lever and the dragging device



Overturning levers

all the levers can be fastened on switches on straight or reverse side, to obtain two different work plans of the lever.



Unidirectional actuation

The lever can be moved to the left or right only or in both directions by adjusting the cross joint

Technical data

Insulation resistance		500 V DC	MΩ	100
Dielectric strength		50/60 Hz for 1' *	V AC	2500
Rated insulation voltage	Ui	IEC947-5-1	V AC	500
Rated thermal current	Ithe	IEC947-5-1	A	10
Rated operating current		IEC947-5-1/EN60947-5-1		
Category AC15 A300	le	24 V	A	10
		125 V	A	6
		230 V	A	6
		400 V	A	3
Category DC13 Q300	le	24 V	A	6
		48 V	A	4
		120 V	A	1
		250 V	A	0,4
Contact resistance	IEC255-7 cat.3	initial value	mΩ	25
Short circuit protective devices	IEC269 (IEC947-5-1)	gl or gG type fuse	A	10
Rated conditionals short circuit current	IEC947-5-1		A	1000
Pollution degree	IEC947-5-1			3
Protection degree	EN 60529			IP66
Protection against electric shock		plastic	cycles	II
		metal	cycles	I
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		at 250 V AC 6A with resistance load cos φ=1	cycles	500.000
		at 250 V AC 6A with inductive load cos φ=0,4	cycles	500.000
Distance between contacts		snap action type	mm	2x1,25
		low action type	mm	2x2
Terminals		type		Screw with combined notch and retravtable plate (notch Ph. size 1)
		screw	M	3,5
		protection degree		IP20
		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
		with prod terminal		In accordance with EN50013
Air ambient temperature		operational	°C	-35 ÷ +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



IEC EN 60947

E100	•	•	+
E200	•	•	+
E300	•	•	+
E400	•	•	+

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

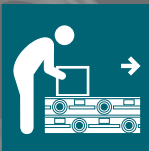


Pull wire safety switches are essential for the continuous control of a long line of machines or parts extending over a considerable length. They guarantee the safety of the operator, who is able to control the immediate stop of the machinery from any point in the operating zone when no or few automatic systems to cut off the power supply are present. This kind of actuator is available on the series **E100-E200-E400** with thermoplastic or metal body and metal head, with **IP66** protection degree.

In conformity with standards

IEC EN 60947-5-1 • EN 60947-1 • UNI EN 1088
EN ISO 12100-1 • EN ISO 12100-2 • IEC 529
EN 60529 • VDE 0660-200 • VDE 0113 • UNI EN 13850

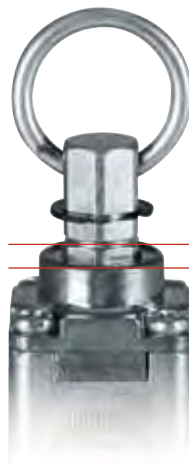
Applications



Long lines of machines: conveyor belts, textile machines, printing machines, etc...

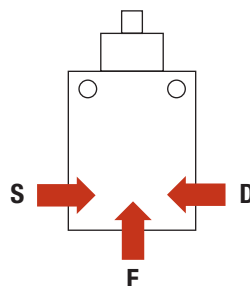
Wire tension indicator

For the exact cable tension, check that the notch on the drive shaft is in line with the head.



Reset button

Block reset that guarantees the locking of the NC head in the open position after a single operation.



Cable entry

	F	S	D
E100	•		
E200		•	•
E300	•	•	•
E400	•		

Fixing

E100	20/22 mm
E200	20/22 and 40/42 mm
E300	40 mm
E400	30 mm

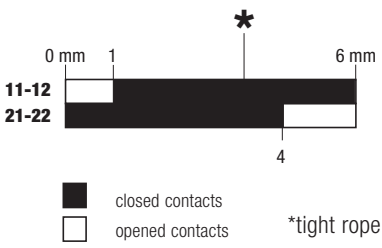
Thread

Series part no.

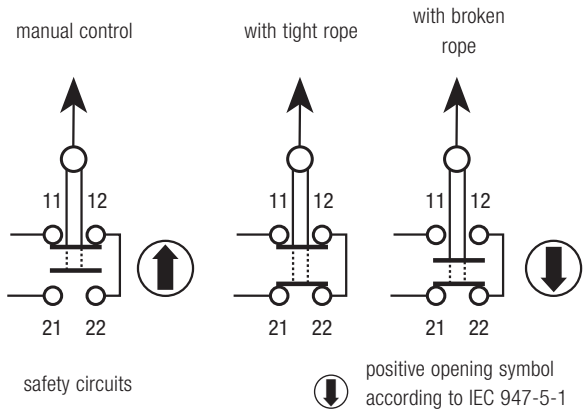
Pg 13,5	E100...	E200...	E300...	E400...
M20 (on request)	E101...	E201...	E301...	E401...
1/2" NPT (on request)	E102...	E202...	E302...	E402...

Dedicated contact block

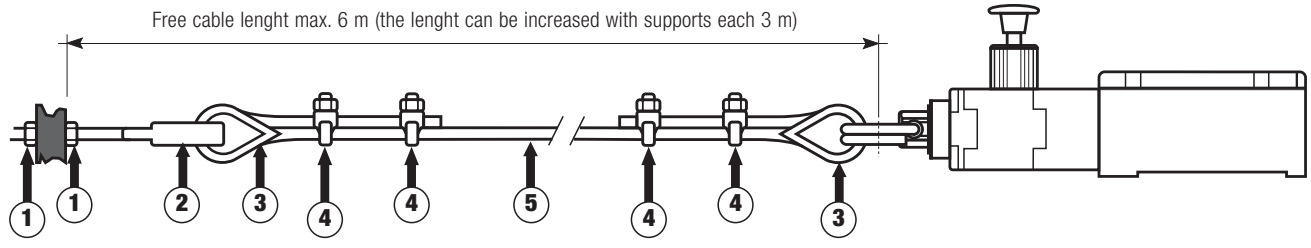
Dedicated contact block 08 with longer travel for pull-wire switches: cable vibrations will have no influence on the correct operation of the limit switch.



Contacts position during operation for contact block 08



NOTE: the contacts 11-12 and 21-22 have to be connected in series



Examples of connection

Free cable length max. 6 m (increase the length with supports each 3 m).

Notes

- ① BM 10 DIN 439 hexagonal nut
- ② part no. 005 - BM 10 DIN 439 ring with thread
- ③ part no. R05 - B - 5 mm DIN 6899 noose
- ④ part no. M05 - 5 mm DIN 1480 clamp
- ⑤ part no. F05 - PVC steel cable, Ø 5 mm



E100



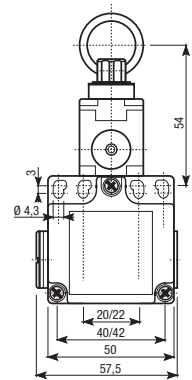
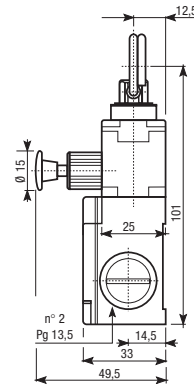
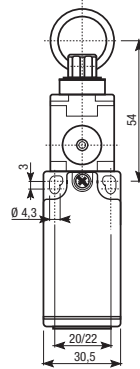
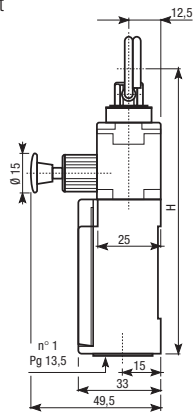
E200

Contact block	
2NC slow action 08	
Weight	kg
Pack	pcs
Cable entry	
H	mm

Thermoplastic	Metal	Contact travel
E10008TBI	E10008TBM	 mm 6 * 4 1 mm 0 11-12 21-22
0,195	0,290	
1		
Pg 13,5		
111,5	109	

Thermoplastic	Contact travel
E20008TBI	 mm 6 * 4 1 mm 0 11-12 21-22
0,220	
1	
Pg 13,5	

standard article article on request





E400

Contact block	
2NC slow action 	08
Weight	kg
Pack	pcs
Cable entry	

Thermoplastic	Metal	Contact travel
E40008TBI	E40008TBM	
0,240	0,465	
1		
Pg 13,5		

standard article
 article on request

