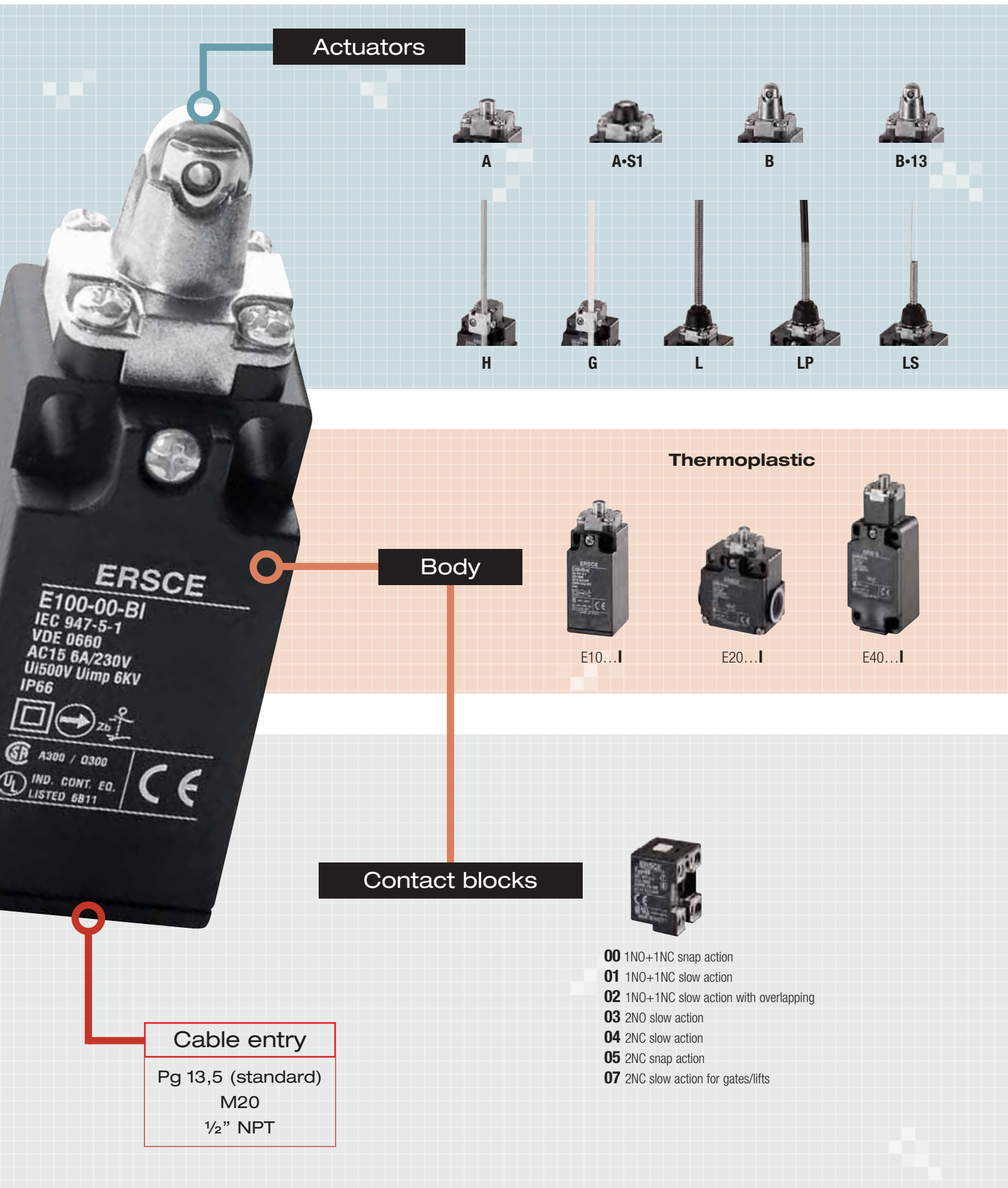




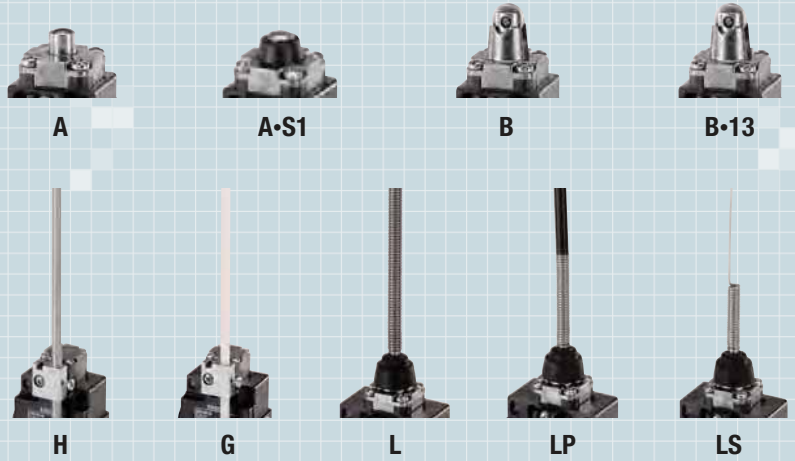
ERSCE
E100-00-B1
IEC 947-5-1
VDE 0660
AC15 6A/230V
UI500V Uimp 6kV
IP66
A308 / 0300
IND. CONT. EQ.
LISTED 6811

ERSCE
E400-00-B1
IEC 947-5-1
VDE 0660
AC15 6A/230V
UI500V Uimp 6kV
IP66
A308 / 0300
IND. CONT. EQ.
LISTED 6811

Limit switches

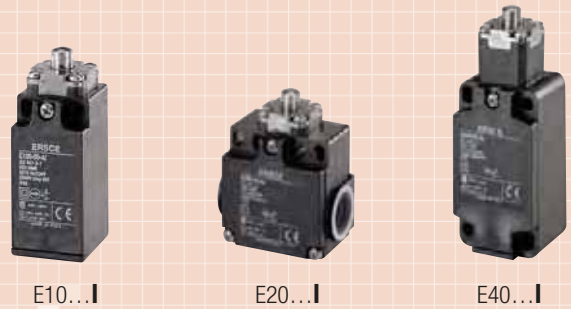


Actuators



Body

Thermoplastic



Contact blocks



- 00** 1NO+1NC snap action
- 01** 1NO+1NC slow action
- 02** 1NO+1NC slow action with overlapping
- 03** 2NO slow action
- 04** 2NC slow action
- 05** 2NC snap action
- 07** 2NC slow action for gates/lifts

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



Metal



Part no. structure

E10 0 00 A I S1

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

- 00** 1NO+1NC snap action
- 01** 1NO+1NC slow action
- ...

Options

- S1** With rubber gasket
- 50** With roller Ø50 mm
- 13** With roller Ø13 mm
- C** For gates/lifts
- 50C** With roller Ø50 mm for gates/lifts
- RA** With steel roller

Body material

- I** Thermoplastic
- M** Metal

Actuator type

- A** Steel plunger
- B** Steel roller plunger
- ...

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

General characteristics

The position switches are ERSCE's main product, and are the result of more than 40 years of experience in industrial automation. They are suitable for use in the most different environmental conditions, thanks to their solid construction, IP66 certified, and proven reliability over decades of fieldwork.

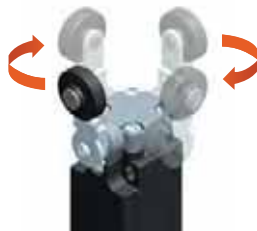


- thermoplastic or metal body
- IP66
- contact blocks with positive opening of the NC contact according to IEC EN 60947-5-1 e VDE 0660-200
- form conforming to EN 50047 (E100 series) and to EN 50041 (E400 series))



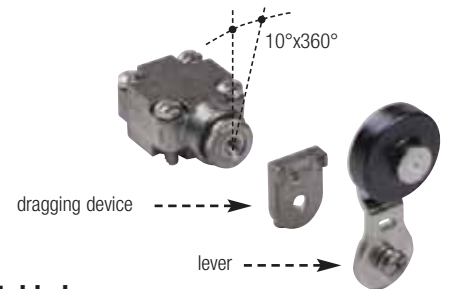
Metal heads

All the heads are made of metal, to ensure maximum performance and lifetime of the switch.



Rotating heads

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



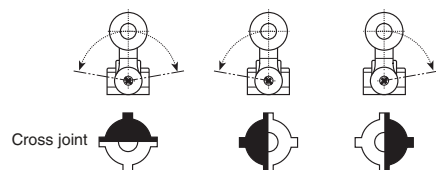
Adjustable levers

Possibility to adjust the lever every 10°, for 360°, by moving the lever and the dragging device.



Overturning levers

Possibility to fasten the lever on the straight or reverse side, maintaining the positive opening of the NC contact.



Unidirectional heads

The lever can be activated 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 per 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	Ie	24 V	A	10	
		125 V	A	6	
		230 V	A	6	
		400 V	A	3	
Category DC13 Q300	Ie	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	class	II	
		metal	class	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	
	protection degree			IP20	
	material			Steel class 8,8/ Galvanized	
	max. screw tightening torque			cNm (Kg cm)	
	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	•	•	+

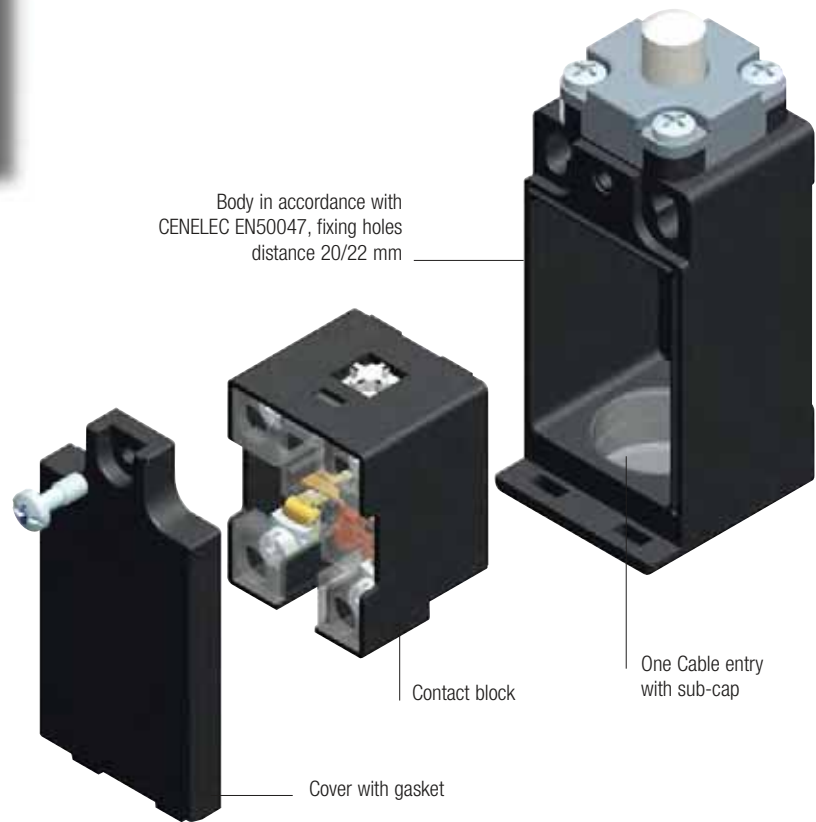
- UL approval file E72861
- CSA approval file 026716-0-000
- Approved
- + Conforms to requirements



The **E100** series is the most compact of ERSCE position switches. Dimensions are in accordance with CENELEC EN50047 that provides two fixing holes with distance 20 or 22mm. There is one hole for Cable entry on the bottom of the switch. Available with thermoplastic or diecast metal alloy body.

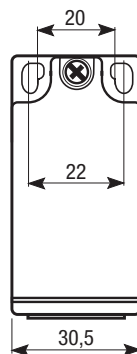
In conformity with standards:

IEC EN 60947-5-1 • EN 60947-1 • EN 50047 • UNI EN 1088 • EN ISO 12100-1
EN ISO 12100-2 • IEC 529 • EN 60529 • VDE 0660-200 • VDE 0113



Fixing

Body in accordance with CENELEC EN50047, fixing holes distance 20/22 mm



Cable entry

One Cable entry on the bottom of the switch with thread:



Thread

Pg 13,5
M20 (on request)
1/2" NPT (on request)

series part no.

E100...
E101...
E102...

A


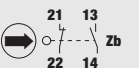
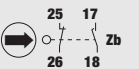
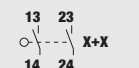
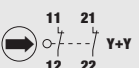
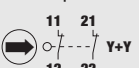
A•S1

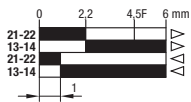
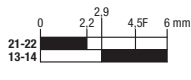
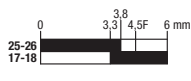
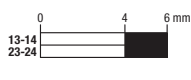
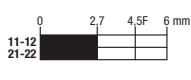
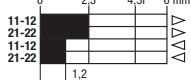


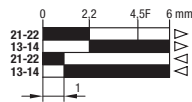
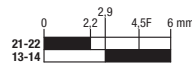
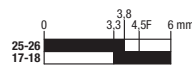
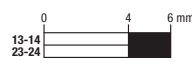
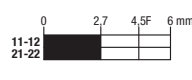

Steel plunger



Steel plunger with rubber gasket

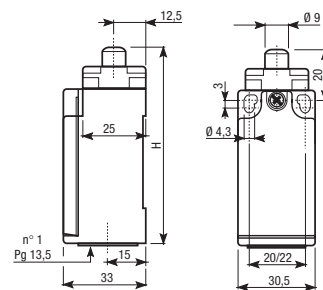
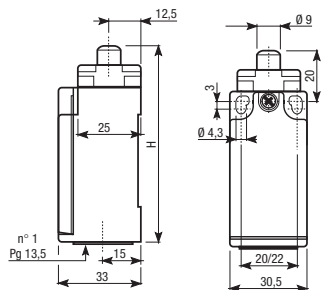
Contact block	
1NO+1NC snap action 	00
1NO+1NC slow action 	01
1NO+1NC slow overlap. 	02
2NO slow action 	03
2NC slow action 	04
2NC snap action 	05
Weight	kg
Pack	pcs
Cable entry	
H	mm

Thermoplastic	Metal	Contact travel
E10000AI *	E10000AM *	
E10001AI *	E10001AM *	
E10002AI	E10002AM	
E10003AI	E10003AM	
E10004AI	E10004AM	
E10005AI	E10005AM	
0,095	0,185	
1		
Pg 13,5		
77,5	75	

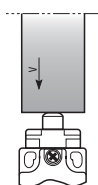
Thermoplastic	Metal	Contact travel
E10000AIS1 *	E10000AMS1 *	
E10001AIS1 *	E10001AMS1 *	
E10002AIS1	E10002AMS1	
E10003AIS1	E10003AMS1	
E10004AIS1	E10004AMS1	
E10005AIS1	E10005AMS1	
0,095	0,185	
1		
Pg 13,5		
77,5	75	

 standard article  article on request

* form conforming to EN 50047



Drive cam operating parameters



V max (m/s)	0,5
Min. force (N)	
for tripping	9
for positive opening	28




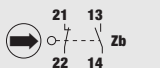
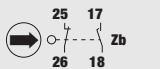
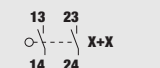
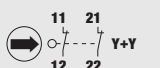
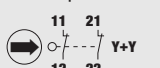
Steel roller plunger

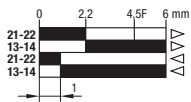
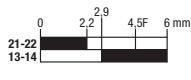
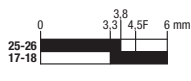
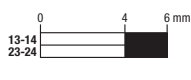
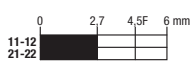
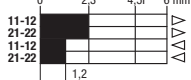
B

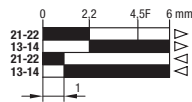
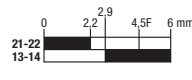
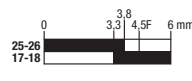
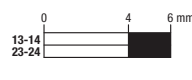
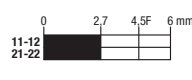





Ø13 mm steel roller plunger

B•13

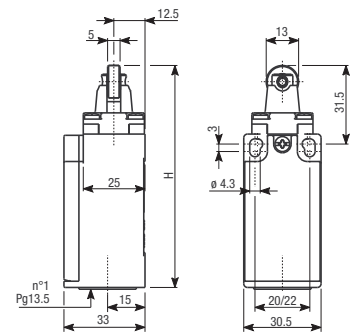
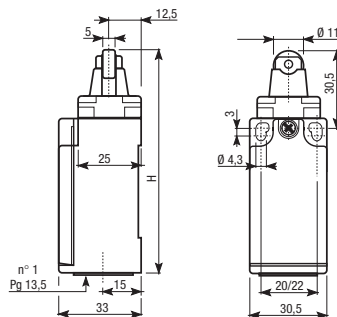
Contact block		
1NO+1NC snap action 	00	
1NO+1NC slow action 	01	
1NO+1NC slow overlap. 	02	
2NO slow action 	03	
2NC slow action 	04	
2NC snap action 	05	
Weight	kg	
Pack	pcs	
Cable entry		
H	mm	

Thermoplastic	Metal	Contact travel
E10000BI *	E10000BM *	
E10001BI *	E10001BM *	
E10002BI	E10002BM	
E10003BI	E10003BM	
E10004BI	E10004BM	
E10005BI	E10005BM	
0,105	0,195	
1		
Pg 13,5		
88	85,5	

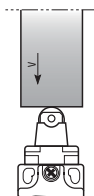
Thermoplastic	Metal	Contact travel
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E10001BI13	E10001BM13	
E10002BI13	E10002BM13	
E10003BI13	E10003BM13	
E10004BI13	E10004BM13	
E10005BI13	E10005BM13	
0,105	0,195	
1		
Pg 13,5		
89	86,5	

 standard article  article on request

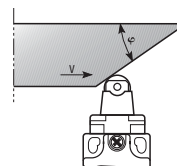
* form conforming to EN 50047



Drive cam operating parameters



V max (m/s)	0,5
Min. force (N)	
for tripping	9
for positive opening	28



φ	V max (m/s)
20°	1
30°	0,5
Min. force (N)	
for tripping	9
for positive opening	28




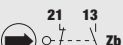
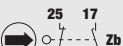
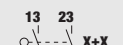
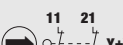
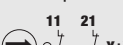
C

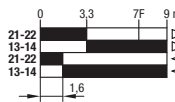
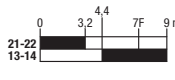
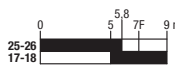
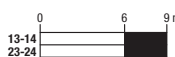
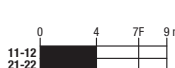
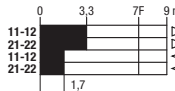
Thermoplastic roller lever, side actuation

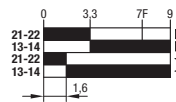
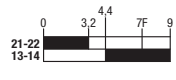
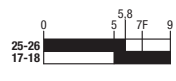
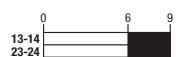

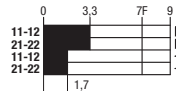


C•S1

Thermoplastic roller lever with rubber gasket, side actuation

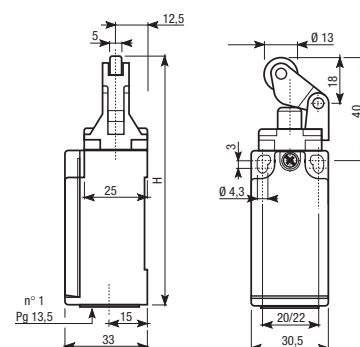
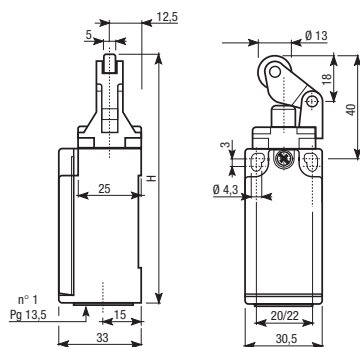
Contact block		
1NO+1NC snap action 	00	Zb
1NO+1NC slow action 	01	Zb
1NO+1NC slow overlap. 	02	Zb
2NO slow action 	03	X+X
2NC slow action 	04	Y+Y
2NC snap action 	05	Y+Y
Weight	kg	
Pack	pcs	
Cable entry		
H	mm	

Thermoplastic	Metal	Contact travel
E10000CI *	E10000CM *	
E10001CI *	E10001CM *	
E10002CI	E10002CM	
E10003CI	E10003CM	
E10004CI	E10004CM	
E10005CI	E10005CM	
0,105	0,195	
1		
Pg 13,5		
97,5	95	

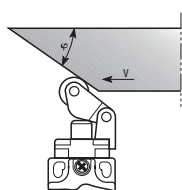
Thermoplastic	Metal	Contact travel
E10000CIS1 *	E10000CMS1 *	
E10001CIS1 *	E10001CMS1 *	
E10002CIS1	E10002CMS1	
E10003CIS1	E10003CMS1	
E10004CIS1	E10004CMS1	
E10005CIS1	E10005CMS1	
0,105	0,195	
1		
Pg 13,5		
97,5	95	

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* form conforming to EN 50047



Drive cam operating parameters




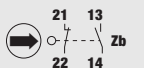
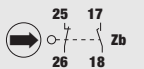
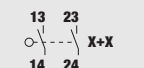
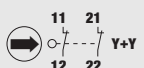
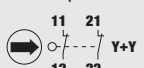
φ	V max (m/s)
20°	1
30°	0,5

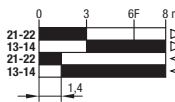
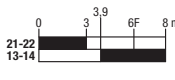
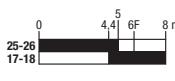
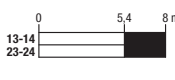
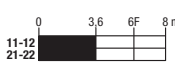

Min. force (N)	
for tripping	9
for positive opening	26



D

Thermoplastic roller lever, vertical actuation

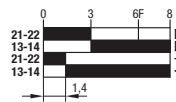
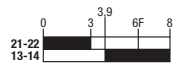
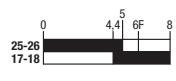
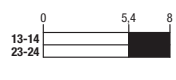
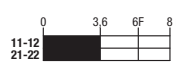
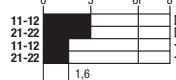
Contact block		
1NO+1NC snap action 	00	
1NO+1NC slow action 	01	
1NO+1NC slow overlap. 	02	
2NO slow action 	03	
2NC slow action 	04	
2NC snap action 	05	
Weight	kg	
Pack	pcs	
Cable entry		
H	mm	

Thermoplastic	Metal	Contact travel
E10000DI	E10000DM	
E10001DI	E10001DM	
E10002DI	E10002DM	
E10003DI	E10003DM	
E10004DI	E10004DM	
E10005DI	E10005DM	
0,105	0,195	
1		
Pg 13,5		
98,5	96	

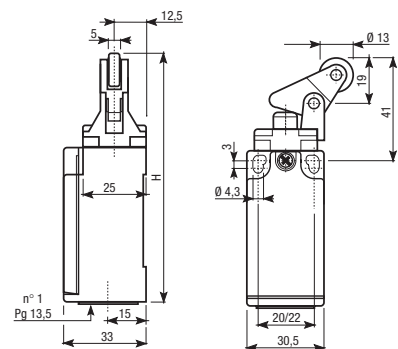
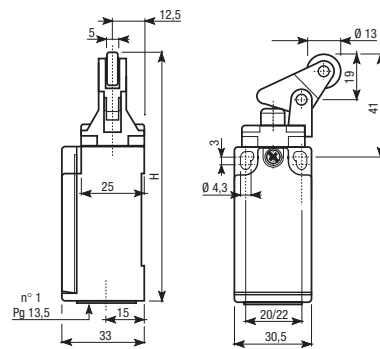


D•S1

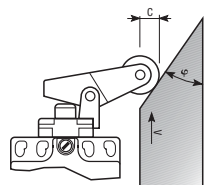
Thermoplastic roller lever with rubber gasket, vertical actuation

Thermoplastic	Metal	Contact travel
E10000DIS1	E10000DMS1	
E10001DIS1	E10001DMS1	
E10002DIS1	E10002DMS1	
E10003DIS1	E10003DMS1	
E10004DIS1	E10004DMS1	
E10005DIS1	E10005DMS1	
0,105	0,195	
1		
Pg 13,5		
98,5	96	

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Drive cam operating parameters



φ	V max (m/s)
20°	1
30°	0,5

Min. force (N)	
for tripping	9
for positive opening	26


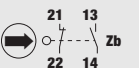
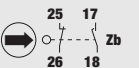
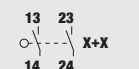
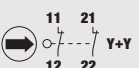
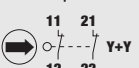


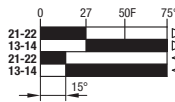
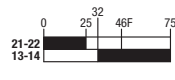
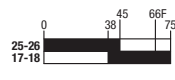
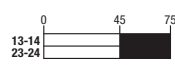
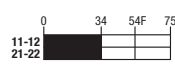

E•50

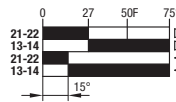
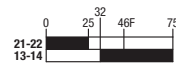
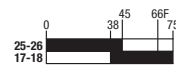
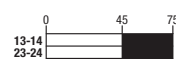
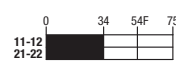

Ø50 mm rubber roller lever





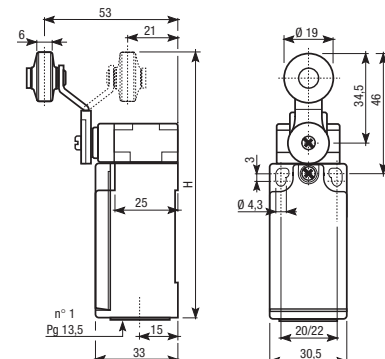
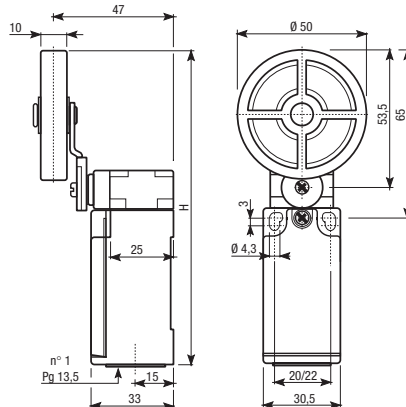
Thermoplastic roller lever

Contact block		
1NO+1NC snap action 	00	Zb
1NO+1NC slow action 	01	Zb
1NO+1NC slow overlap. 	02	Zb
2NO slow action 	03	X+X
2NC slow action 	04	Y+Y
2NC snap action 	05	Y+Y
Weight	kg	
Pack	pcs	
Cable entry		
H	mm	

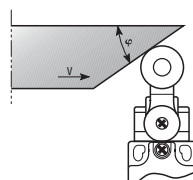
Thermoplastic	Metal	Contact travel
E10000EI50	E10000EM50	
E10001EI50	E10001EM50	
E10002EI50	E10002EM50	
E10003EI50	E10003EM50	
E10004EI50	E10004EM50	
E10005EI50	E10005EM50	
0,150	0,240	
1		
Pg 13,5		
122,5	120	

Thermoplastic	Metal	Contact travel
E10000II	E10000IM	
E10001II	E10001IM	
E10002II	E10002IM	
E10003II	E10003IM	
E10004II	E10004IM	
E10005II	E10005IM	
0,130	0,225	
1		
Pg 13,5		
103,5	101	

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Drive cam operating parameters



φ	V max (m/s)
30°	1,5
45°	1
60°	0,75
60-90°	0,25

Min. force (cNm)	
for tripping	15
for positive opening	35



I•RA

Steel roller lever



I•50

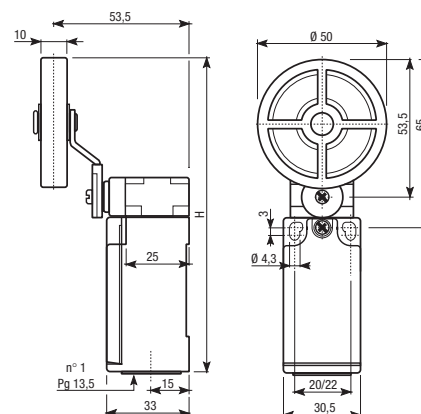
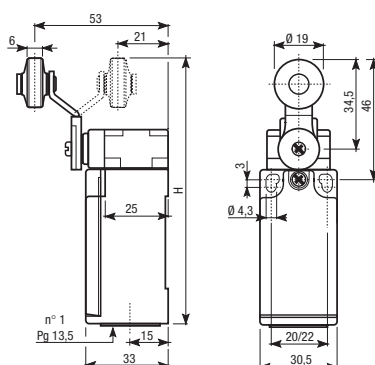
Ø50 mm rubber roller lever

Contact block	
1NO+1NC snap action 13 21 14 22 Zb	00
1NO+1NC slow action 21 13 22 14 Zb	01
1NO+1NC slow overlap. 25 17 26 18 Zb	02
2NO slow action 13 23 14 24 X+X	03
2NC slow action 11 21 12 22 Y+Y	04
2NC snap action 11 21 12 22 Y+Y	05
Weight	kg
Pack	pcs
Cable entry	
H	mm

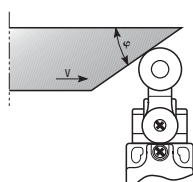
Thermoplastic	Metal	Contact travel
E10000IIRA	E10000IMRA	
E10001IIRA	E10001IMRA	
E10002IIRA	E10002IMRA	
E10003IIRA	E10003IMRA	
E10004IIRA	E10004IMRA	
E10005IIRA	E10005IMRA	
0,130	0,225	
1		
Pg 13,5		
103,5	101	

Thermoplastic	Metal	Contact travel
E10000I150	E10000IM50	
E10001I150	E10001IM50	
E10002I150	E10002IM50	
E10003I150	E10003IM50	
E10004I150	E10004IM50	
E10005I150	E10005IM50	
0,145	0,240	
1		
Pg 13,5		
122,5	120	

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Drive cam operating parameters



φ	V max (m/s)
30°	1,5
45°	1
60°	0,75
60-90°	0,25

Min. force (cNm)	
for tripping	15
for positive opening	35



F

Thermoplastic roller variable length lever



F•50

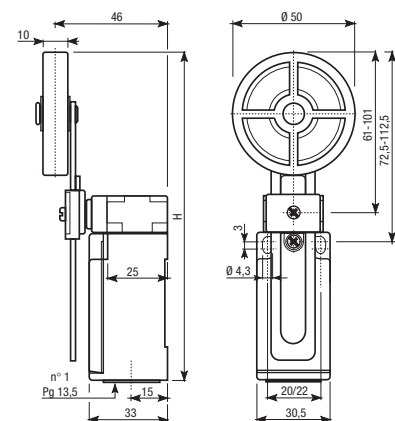
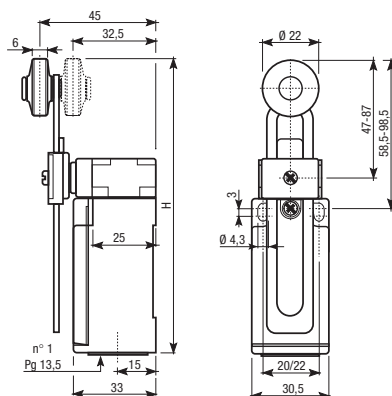
Ø50 mm rubber roller variable length lever

Contact block		
1NO+1NC snap action Zb	00	
1NO+1NC slow action Zb	01	
1NO+1NC slow overlap. Zb	02	
2NO slow action X+X	03	
2NC slow action Y+Y	04	
2NC snap action Y+Y	05	
Weight	kg	
Pack	pcs	
Cable entry		
H	mm	

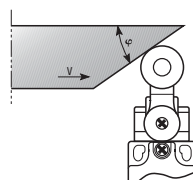
Thermoplastic	Metal	Contact travel
E1000FI	E1000FM	
E10001FI	E10001FM	
E10002FI	E10002FM	
E10003FI	E10003FM	
E10004FI	E10004FM	
E10005FI	E10005FM	
0,150	0,240	
1		
Pg 13,5		
116÷156	113,5÷153,5	

Thermoplastic	Metal	Contact travel
E1000FI50	E1000FM50	
E10001FI50	E10001FM50	
E10002FI50	E10002FM50	
E10003FI50	E10003FM50	
E10004FI50	E10004FM50	
E10005FI50	E10005FM50	
0,160	0,250	
1		
Pg 13,5		
130÷170	127,5÷167,5	

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Drive cam operating parameters



φ	V max (m/s)
30°	1,5
45°	1
60°	0,75
60-90°	0,25

Min. force (cNm)	
for tripping	15
for positive opening	35



FR•50

Ø50 mm rubber roller adjustable lever



G

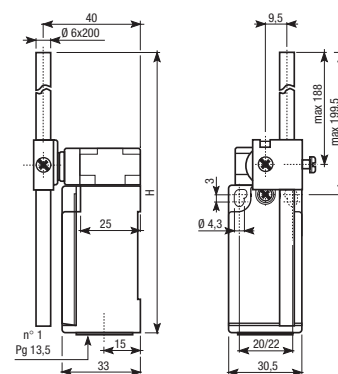
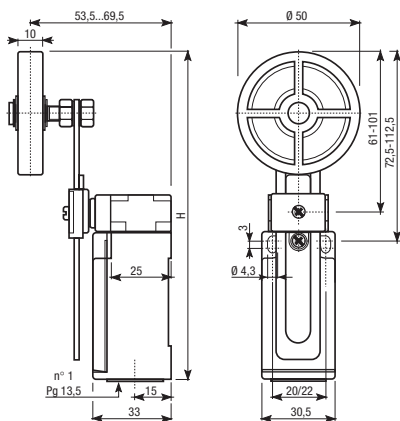
Side rotary adjustable Ø6 mm glass fiber rod

Contact block		
1NO+1NC snap action 13 21 14 22	00	Zb
1NO+1NC slow action 21 13 22 14	01	Zb
1NO+1NC slow overlap. 25 17 26 18	02	Zb
2NO slow action 13 23 14 24	03	X+X
2NC slow action 11 21 12 22	04	Y+Y
2NC snap action 11 21 12 22	05	Y+Y
Weight	kg	
Pack	pcs	
Cable entry		
H	mm	

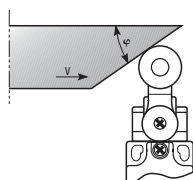
Thermoplastic	Metal	Contact travel
E10000FRI50	E10000FRM50	
E10001FRI50	E10001FRM50	
E10002FRI50	E10002FRM50	
E10003FRI50	E10003FRM50	
E10004FRI50	E10004FRM50	
E10005FRI50	E10005FRM50	
0,170	0,250	
1		
Pg 13,5		
130÷170	127,5÷167,5	

Thermoplastic	Metal	Contact travel
E10000GI	E10000GM	
E10001GI	E10001GM	
E10002GI	E10002GM	
E10003GI	E10003GM	
E10004GI	E10004GM	
E10005GI	E10005GM	
0,170	0,270	
1		
Pg 13,5		
97,5÷257,5	95÷255	

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Drive cam operating parameters



φ	V max (m/s)
30°	1,5
45°	1
60°	0,75
60-90°	0,25

Min. force (cNm)	
for tripping	15
for positive opening	35



H

Side rotary adjustable Ø6 mm aluminium rod



L

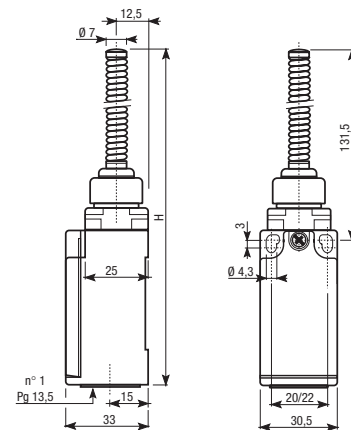
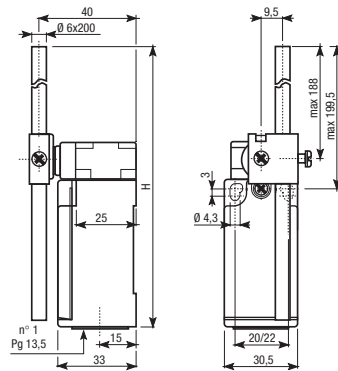
Flexible rod

Contact block		
1NO+1NC snap action 13 21 14 22 Zb	00	
1NO+1NC slow action 21 13 22 14 Zb	01	
1NO+1NC slow overlap. 25 17 26 18 Zb	02	
2NO slow action 13 23 14 24 X+X	03	
2NC slow action 11 21 12 22 Y+Y	04	
2NC snap action 11 21 12 22 Y+Y	05	
Weight	kg	
Pack	pcs	
Cable entry		
H	mm	

Thermoplastic	Metal	Contact travel
E10000HI	E10000HM	
E10001HI	E10001HM	
E10002HI	E10002HM	
E10003HI	E10003HM	
E10004HI	E10004HM	
E10005HI	E10005HM	
0,180	0,270	
1		
Pg 13,5		
97,5÷257,5	95÷255	

Thermoplastic	Metal	Contact travel
E10000LI	E10000LM	
E10001LI	E10001LM	
E10002LI	E10002LM	
E10003LI	E10003LM	
E10004LI	E10004LM	
E10005LI	E10005LM	
0,145	0,235	
1		
Pg 13,5		
189	186,5	

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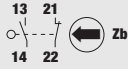
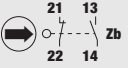
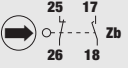
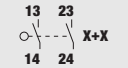
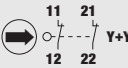
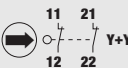
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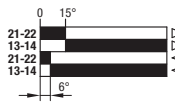
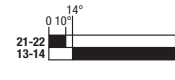
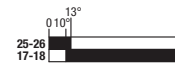
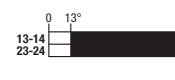
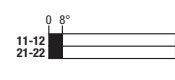

Flexible rod with plastic terminal

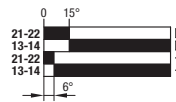
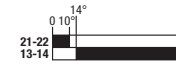
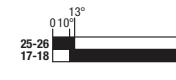
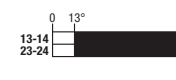
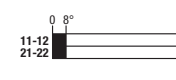



LS

Cat's whisker

Contact block		
1NO+1NC snap action 	00	
1NO+1NC slow action 	01	
1NO+1NC slow overlap. 	02	
2NO slow action 	03	
2NC slow action 	04	
2NC snap action 	05	
Weight	kg	
Pack	pcs	
Cable entry		
H	mm	

Thermoplastic	Metal	Contact travel
E10000LPI	E10000LPM	
E10001LPI	E10001LPM	
E10002LPI	E10002LPM	
E10003LPI	E10003LPM	
E10004LPI	E10004LPM	
E10005LPI	E10005LPM	
0,145	0,235	
1		
Pg 13,5		
185,5	183	

Thermoplastic	Metal	Contact travel
E10000LSI	E10000LSM	
E10001LSI	E10001LSM	
E10002LSI	E10002LSM	
E10003LSI	E10003LSM	
E10004LSI	E10004LSM	
E10005LSI	E10005LSM	
0,145	0,235	
1		
Pg 13,5		
192,5	190	

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