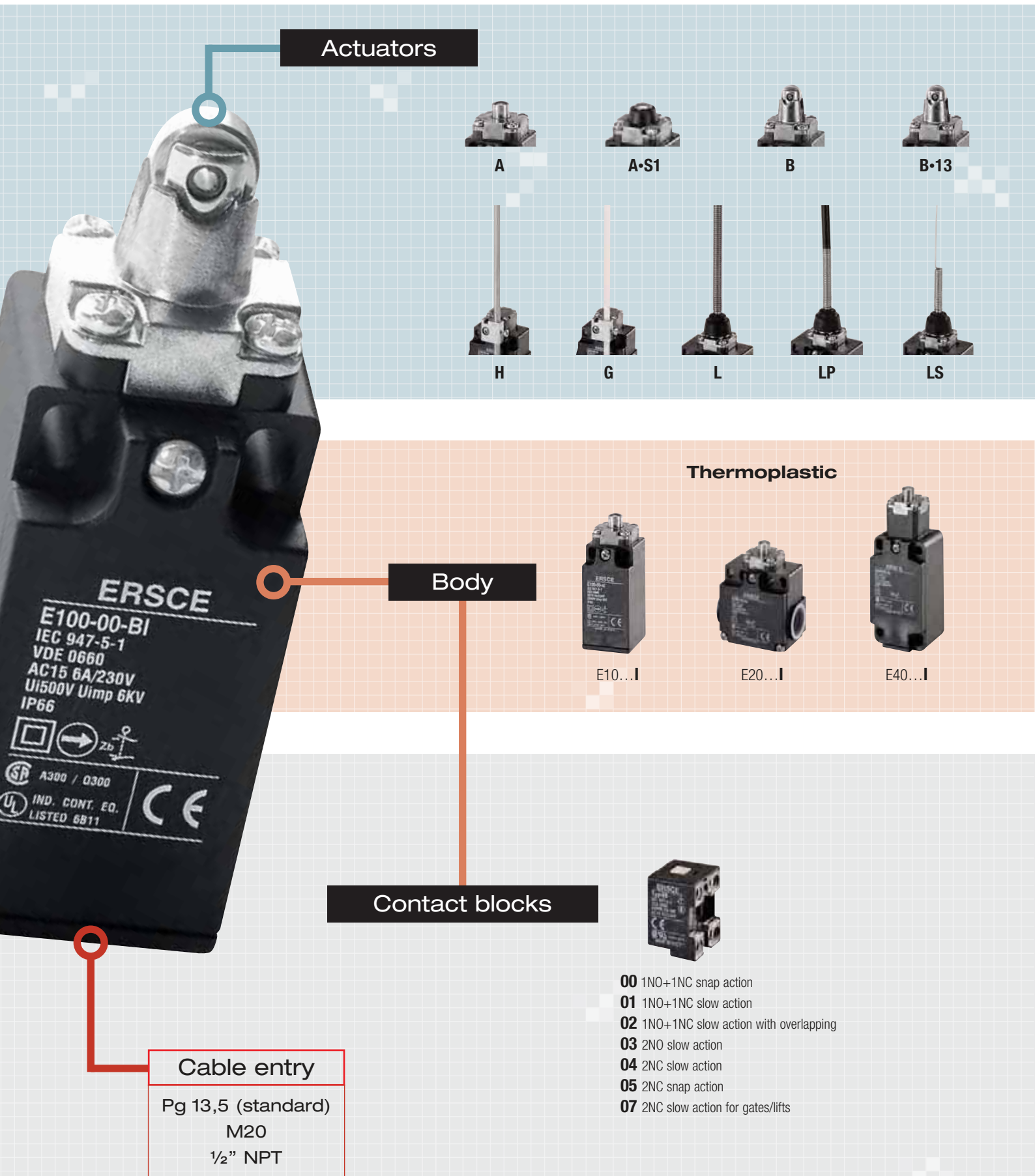




Limit switches







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.

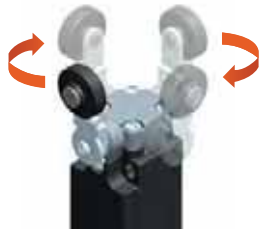


- thermoplastic or metal body
- IP66
- contact blocks with positive opening of the NC contact according to IEC EN 60947-5-1 e VDE 0660-200
- form conforming to EN 50047 (E100 series) and to EN 50041 (E400 series))



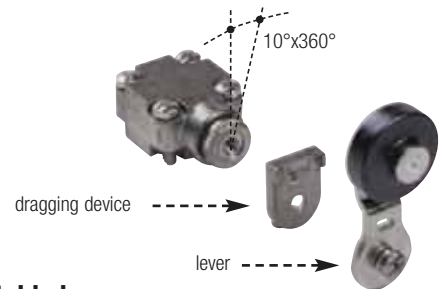
Metal heads

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.



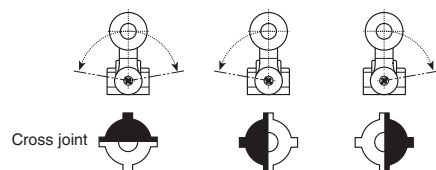
Adjustable levers

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 **E400** series is the most robust of ERSCE position switches. Dimensions are in accordance with CENELEC EN 50041, 4 fixing holes with distance 30 mm. It is equipped with one hole for cable entry on the bottom of the switch. Available with metal actuators and thermoplastic or metal body.

In conformity with standards:

IEC EN 60947-5-1 • EN 60947-1 • EN 500041 • UNI EN 1088 • EN ISO 12100-1
EN ISO 12100-2 • IEC 529 • EN 60529 • VDE 0660-200 • VDE 0113

4 fixing points, 2 with slot to achieve a precise positioning

Body in accordance with CENELEC EN50041, fixing holes distance 30 mm



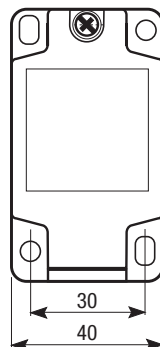
Contact block

One cable entry with sub-cap

Cover with gasket

Fixing

body in accordance with CENELEC EN50041, with 4 fixing holes with 30 mm horizontal distance.



Cable entry

1 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.

E400...
E401...
E402...



Steel plunger

A



Steel plunger with rubber gasket

A•S1

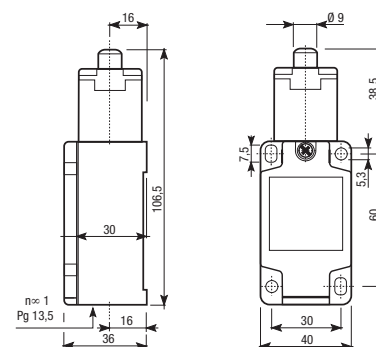
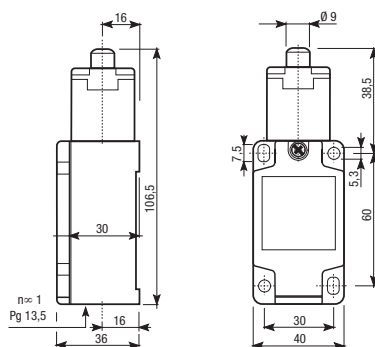
Contact block	
1NO+1NC snap action 13 21 14 22 Zb 00	
1NO+1NC slow action 21 13 22 14 Zb 01	
1NO+1NC slow overlap. 25 17 26 18 Zb 02	
2NO slow action 13 23 14 24 X+X 03	
2NC slow action 11 21 12 22 Y+Y 04	
2NC snap action 11 21 12 22 Y+Y 05	
Weight	kg
Pack	pcs
Cable entry	

Thermoplastic	Metal	Contact travel
E40000AI *	E40000AM *	
E40001AI *	E40001AM *	
E40002AI	E40002AM	
E40003AI	E40003AM	
E40004AI	E40004AM	
E40005AI	E40005AM	
0,245	0,360	
1		
Pg 13,5		

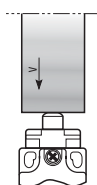
Thermoplastic	Metal	Contact travel
E40000AIS1 *	E40000AMS1 *	
E40001AIS1 *	E40001AMS1 *	
E40002AIS1	E40002AMS1	
E40003AIS1	E40003AMS1	
E40004AIS1	E40004AMS1	
E40005AIS1	E40005AMS1	
0,245	0,360	
1		
Pg 13,5		

standard article article on request

* form conforming to EN 50041



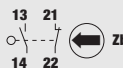
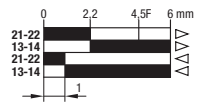
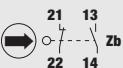
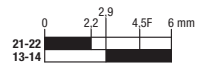
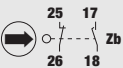
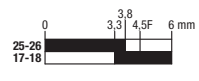
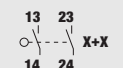
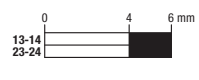
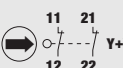
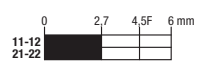
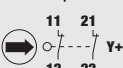
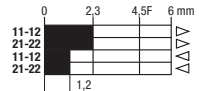
Drive cam operating parameters



V max (m/s)	0.5
Min. force (N)	
for tripping	9
for positive opening	28

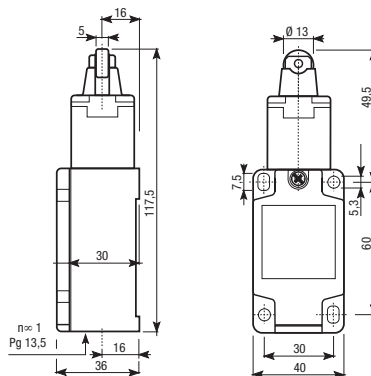


Steel roller plunger

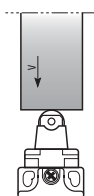
Contact block		Thermoplastic	Metal	Contact travel
1NO+1NC snap action  Zb	00	E40000BI *	E40000BM *	
1NO+1NC slow action  Zb	01	E40001BI *	E40001BM *	
1NO+1NC slow overlap.  Zb	02	E40002BI	E40002BM	
2NO slow action  X+X	03	E40003BI	E40003BM	
2NC slow action  Y+Y	04	E40004BI	E40004BM	
2NC snap action  Y+Y	05	E40005BI	E40005BM	
Weight	kg	0,255	0,370	
Pack	pcs	1		
Cable entry		Pg 13,5		

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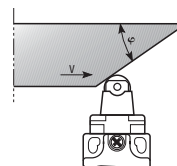
* form conforming to EN 50041



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

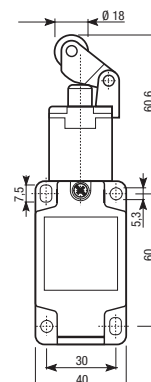
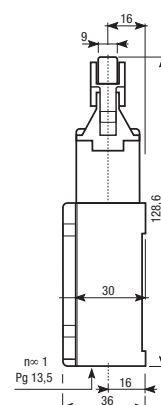
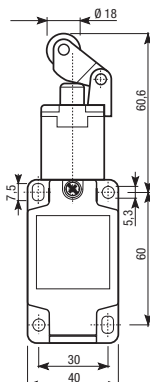
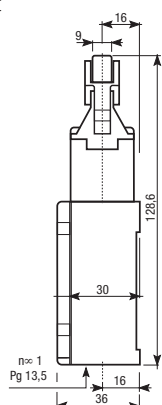
Thermoplastic roller lever with rubber gasket, side actuation

Contact block	
1NO+1NC snap action 	00
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	

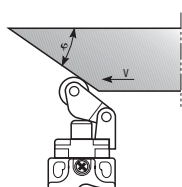
Thermoplastic	Metal	Contact travel
E40000CI	E40000CM	
E40001CI	E40001CM	
E40002CI	E40002CM	
E40003CI	E40003CM	
E40004CI	E40004CM	
E40005CI	E40005CM	
0,255	0,370	
1		
Pg 13,5		

Thermoplastic	Metal	Contact travel
E40000CIS1	E40000CMS1	
E40001CIS1	E40001CMS1	
E40002CIS1	E40002CMS1	
E40003CIS1	E40003CMS1	
E40004CIS1	E40004CMS1	
E40005CIS1	E40005CMS1	
0,255	0,370	
1		
Pg 13,5		

standard article article on request



Drive cam operating parameters




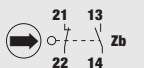
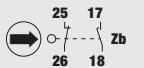
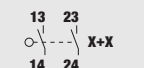
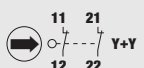
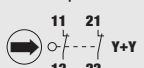
φ	V max (m/s)
20°	1
30°	0,5

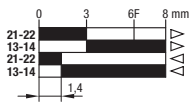
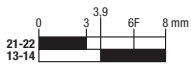
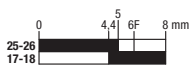
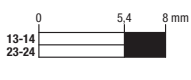
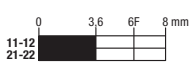
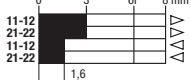
Min. force (N)	
for tripping	9
for positive opening	26



D

Thermoplastic roller lever, vertical actuation

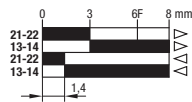
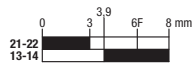
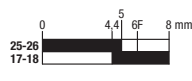
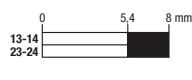
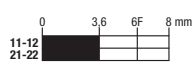

Contact block		
1NO+1NC snap action 	00	Zb
1NO+1NC slow action 	01	Zb
1NO+1NC slow overlap. 	02	Zb
2NO slow action 	03	X+X
2NC slow action 	04	Y+Y
2NC snap action 	05	Y+Y
Weight	kg	
Pack	pcs	
Cable entry		



Thermoplastic	Metal	Contact travel
E40000DI	E40000DM	
E40001DI	E40001DM	
E40002DI	E40002DM	
E40003DI	E40003DM	
E40004DI	E40004DM	
E40005DI	E40005DM	
0,255	0,370	
1		
Pg 13,5		

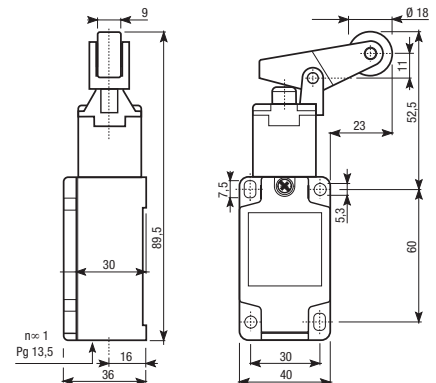
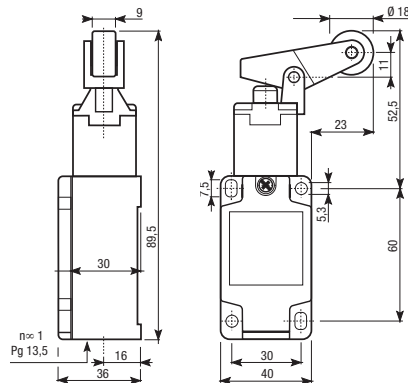


D•S1

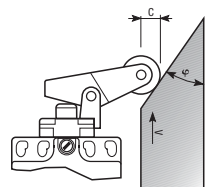
Thermoplastic roller lever with rubber gasket, vertical actuation

Thermoplastic	Metal	Contact travel
E40000DIS1	E40000DMS1	
E40001DIS1	E40001DMS1	
E40002DIS1	E40002DMS1	
E40003DIS1	E40003DMS1	
E40004DIS1	E40004DMS1	
E40005DIS1	E40005DMS1	
0,255	0,370	
1		
Pg 13,5		

 standard article  article on request



Drive cam operating parameters



φ	V max (m/s)
20°	1
30°	0,5

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



Thermoplastic roller lever

E



Steel roller lever

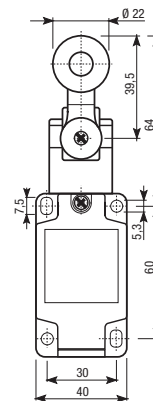
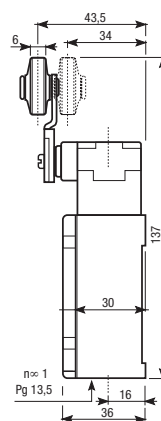
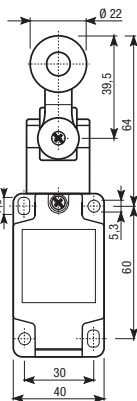
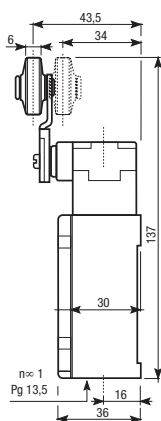
E•RA

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	

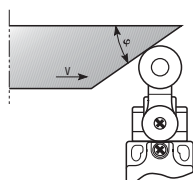
Thermoplastic	Metal	Contact travel
E40000EI	E40000EM	
E40001EI	E40001EM	
E40002EI	E40002EM	
E40003EI	E40003EM	
E40004EI	E40004EM	
E40005EI	E40005EM	
0,285	0,400	
1		
Pg 13,5		

Thermoplastic	Metal	Contact travel
E40000EIRA	E40000EMRA	
E40001EIRA	E40001EMRA	
E40002EIRA	E40002EMRA	
E40003EIRA	E40003EMRA	
E40004EIRA	E40004EMRA	
E40005EIRA	E40005EMRA	
0,285	0,400	
1		
Pg 13,5		

standard article article on request



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	25
for positive opening	45

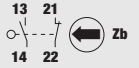
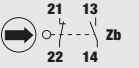
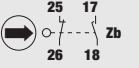
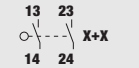
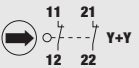
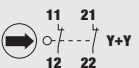


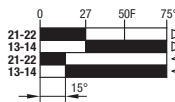
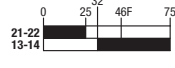

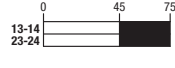
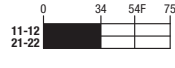

E•50

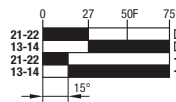
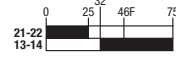
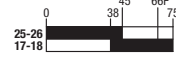

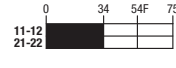

Ø50 mm rubber roller lever



Thermoplastic roller lever

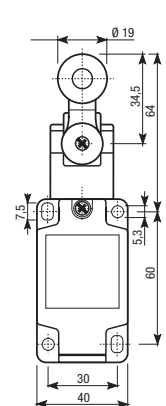
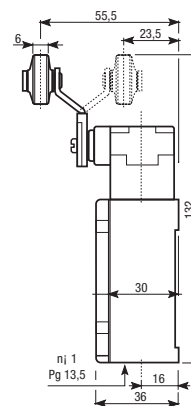
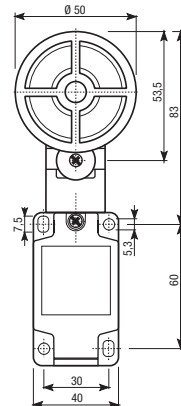
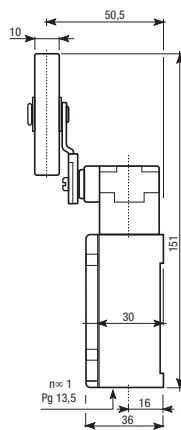
Contact block		
1NO+1NC snap action 	00	Zb
1NO+1NC slow action 	01	Zb
1NO+1NC slow overlap. 	02	Zb
2NO slow action 	03	X+X
2NC slow action 	04	Y+Y
2NC snap action 	05	Y+Y
Weight	kg	
Pack	pcs	
Cable entry		

Thermoplastic	Metal	Contact travel
E40000EI50	E40000EM50	
E40001EI50	E40001EM50	
E40002EI50	E40002EM50	
E40003EI50	E40003EM50	
E40004EI50	E40004EM50	
E40005EI50	E40005EM50	
0,295	0,410	
1		
Pg 13,5		

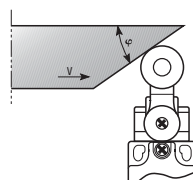
Thermoplastic	Metal	Contact travel
E40000II *	E40000IM *	
E40001II *	E40001IM *	
E40002II	E40002IM	
E40003II	E40003IM	
E40004II	E40004IM	
E40005II	E40005IM	
0,285	0,400	
1		
Pg 13,5		

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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	25
for positive opening	45



I•RA

Steel roller lever



I•50

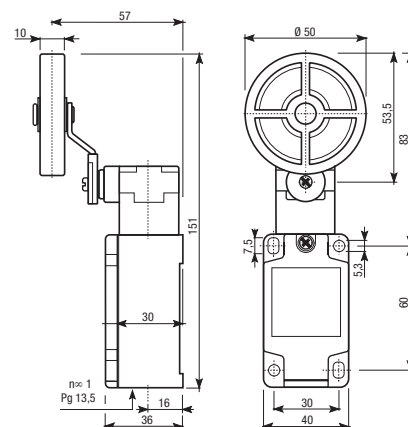
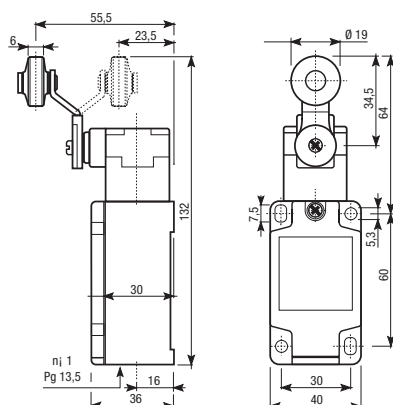
Ø50 mm rubber roller lever

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

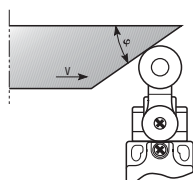
Thermoplastic	Metal	Contact travel
E40000IIRA	E40000IMRA	
E40001IIRA	E40001IMRA	
E40002IIRA	E40002IMRA	
E40003IIRA	E40003IMRA	
E40004IIRA	E40004IMRA	
E40005IIRA	E40005IMRA	
0,285	0,400	
1		
Pg 13,5		

Thermoplastic	Metal	Contact travel
E40000I150	E40000IM50	
E40001I150	E40001IM50	
E40002I150	E40002IM50	
E40003I150	E40003IM50	
E40004I150	E40004IM50	
E40005I150	E40005IM50	
0,295	0,410	
1		
Pg 13,5		

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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	25
for positive opening	45



F

Thermoplastic roller variable length lever



F•50

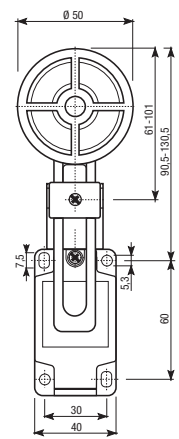
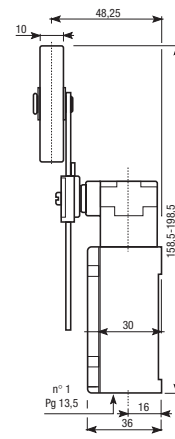
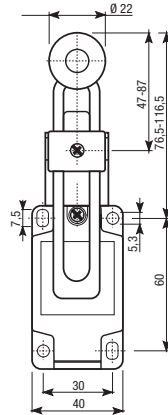
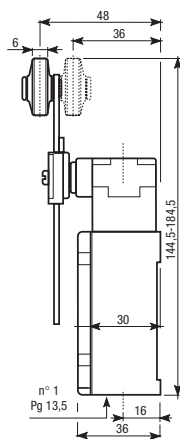
Ø50 mm rubber roller variable length lever

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	

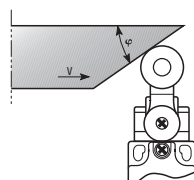
Thermoplastic	Metal	Contact travel
E40000FI	E40000FM	
E40001FI	E40001FM	
E40002FI	E40002FM	
E40003FI	E40003FM	
E40004FI	E40004FM	
E40005FI	E40005FM	
0,305	0,420	
1		
Pg 13,5		

Thermoplastic	Metal	Contact travel
E40000FI50	E40000FM50	
E40001FI50	E40001FM50	
E40002FI50	E40002FM50	
E40003FI50	E40003FM50	
E40004FI50	E40004FM50	
E40005FI50	E40005FM50	
0,315	0,430	
1		
Pg 13,5		

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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	25
for positive opening	45



FR•50

Ø50 mm rubber roller adjustable lever



G

Side rotary adjustable Ø6 mm glass fiber rod

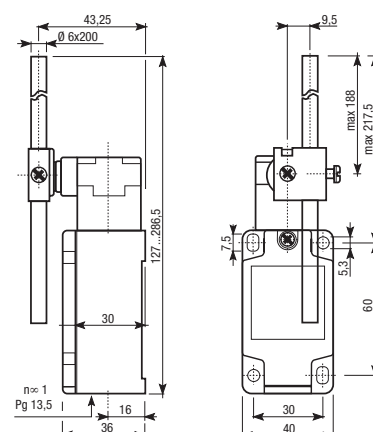
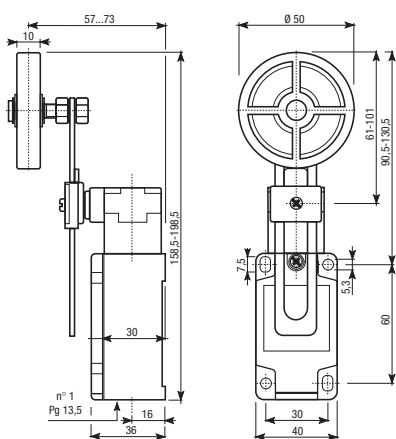
Contact block		
1NO+1NC snap action 13 21 14 22	Zb	00
1NO+1NC slow action 21 13 22 14	Zb	01
1NO+1NC slow overlap. 25 17 26 18	Zb	02
2NO slow action 13 23 14 24	X+X	03
2NC slow action 11 21 12 22	Y+Y	04
2NC snap action 11 21 12 22	Y+Y	05
Weight	kg	
Pack	pcs	
Cable entry		

Thermoplastic	Metal	Contact travel
E4000FRI50	E4000FRM50	
E40001FRI50	E40001FRM50	
E40002FRI50	E40002FRM50	
E40003FRI50	E40003FRM50	
E40004FRI50	E40004FRM50	
E40005FRI50	E40005FRM50	
0,325	0,440	
1		
Pg 13,5		

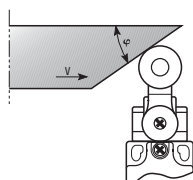
Thermoplastic	Metal	Contact travel
E4000GI *	E4000GM *	
E40001GI *	E40001GM *	
E40002GI	E40002GM	
E40003GI	E40003GM	
E40004GI	E40004GM	
E40005GI	E40005GM	
0,210	0,425	
1		
Pg 13,5		

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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	25
for positive opening	45




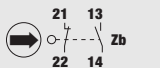
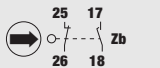
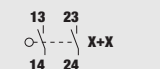
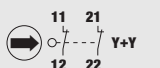
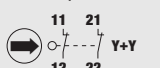
H

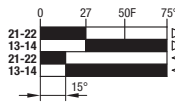
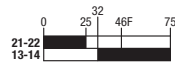
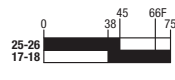
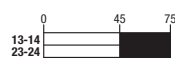
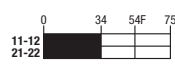

Side rotary adjustable Ø6 mm aluminium rod

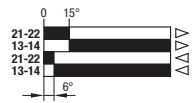
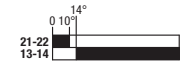
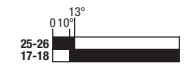
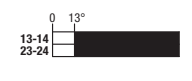
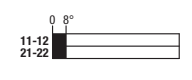
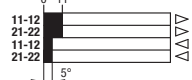



L

Flexible rod

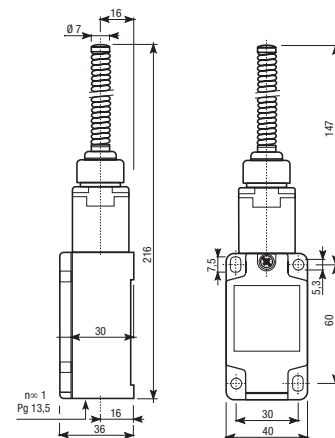
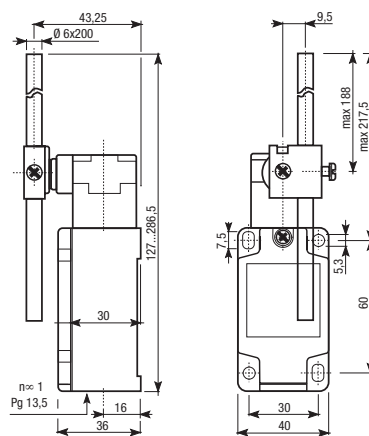
Contact block	
1NO+1NC snap action 	00
1NO+1NC slow action 	01
1NO+1NC slow overlap. 	02
2NO slow action 	03
2NC slow action 	04
2NC snap action 	05
Weight	kg
Pack	pcs
Cable entry	

Thermoplastic	Metal	Contact travel
E40000HI *	E40000HM *	
E40001HI *	E40001HM *	
E40002HI	E40002HM	
E40003HI	E40003HM	
E40004HI	E40004HM	
E40005HI	E40005HM	
0,210	0,425	
1		
Pg 13,5		

Thermoplastic	Metal	Contact travel
E40000LI	E40000LM	
E40001LI	E40001LM	
E40002LI	E40002LM	
E40003LI	E40003LM	
E40004LI	E40004LM	
E40005LI	E40005LM	
0,280	0,395	
1		
Pg 13,5		

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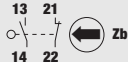
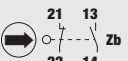
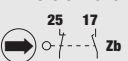
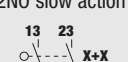
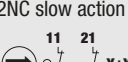
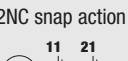
LP

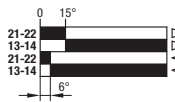
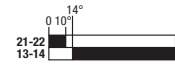
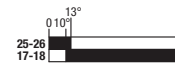
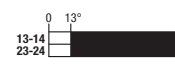
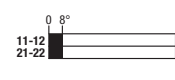

Flexible rod with plastic terminal

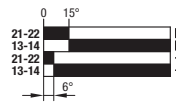
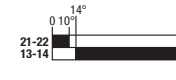
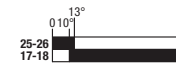
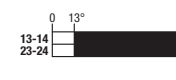
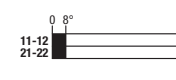



LS

Cat's whisker

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		

Thermoplastic	Metal	Contact travel
E40000LPI	E40000LPM	
E40001LPI	E40001LPM	
E40002LPI	E40002LPM	
E40003LPI	E40003LPM	
E40004LPI	E40004LPM	
E40005LPI	E40005LPM	
0,280	0,395	
1		
Pg 13,5		

Thermoplastic	Metal	Contact travel
E40000LSI	E40000LSM	
E40001LSI	E40001LSM	
E40002LSI	E40002LSM	
E40003LSI	E40003LSM	
E40004LSI	E40004LSM	
E40005LSI	E40005LSM	
0,280	0,395	
1		
Pg 13,5		

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