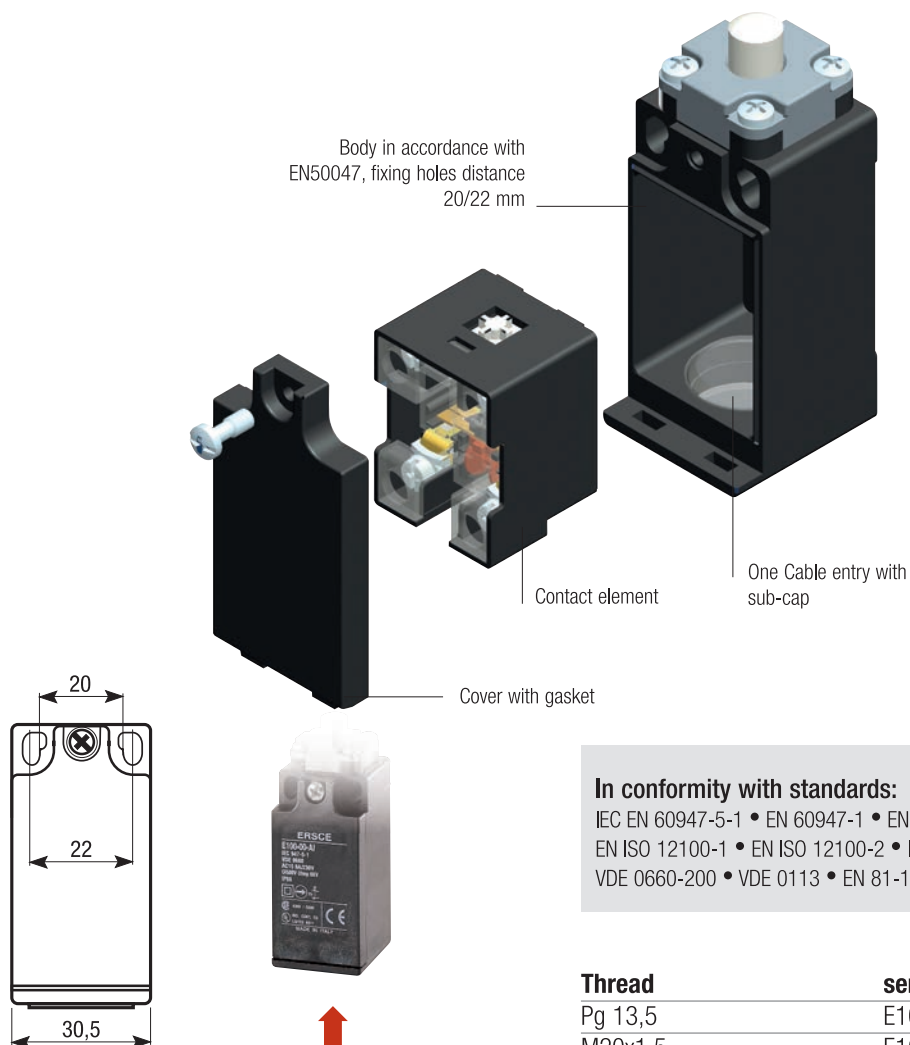


# Limit switches E100 series



## E100 series

The **E100** series is the most compact of Bremas 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.



### 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:

### 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 • EN 81-1 • EN 81-2

### Thread

Pg 13,5  
M20x1,5  
1/2" NPT (on request)  
Pg 11 (on request)  
M16x1,5 (on request)  
M12 connector (on request)

### series part no.

E100...  
E101...  
E102...  
E103...  
E104...  
E100...M12

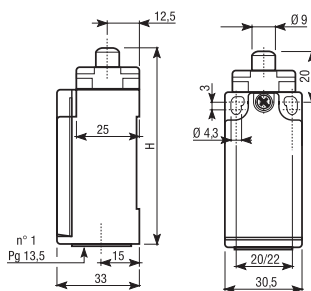


Steel plunger

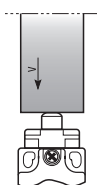
Contact element		Cable entry						Contact travel
		PG 13,5			M20 x 1,5			
		Plastic head Plastic body	Metal head Plastic body	Metal head Metal body	Plastic head Plastic body	Metal head Plastic body	Metal head Metal body	
1NO+1NC snap action  13 21 14 22 Zb	00	E10000AP*	E10000AI*	E10000AM*	E10100AP*	E10100AI*	E10100AM*	
1NO+1NC slow action  21 13 22 14 Zb	01	E10001AP*	E10001AI*	E10001AM*	E10101AP*	E10101AI*	E10101AM*	
1NO+1NC slow overlap.  25 17 26 18 Zb	02	E10002AP	E10002AI	E10002AM	E10102AP	E10102AI	E10102AM	
2NO slow action  13 23 14 24 X+X	03	E10003AP	E10003AI	E10003AM	E10103AP	E10103AI	E10103AM	
2NC slow action  11 21 12 22 Y+Y	04	E10004AP	E10004AI	E10004AM	E10104AP	E10104AI	E10104AM	
2NC snap action  11 21 12 22 Y+Y	05	E10005AP	E10005AI	E10005AM	E10105AP	E10105AI	E10105AM	
Weight	kg	0,067	0,095	0,185	0,067	0,095	0,185	
Pack	pcs	1	1	1	1	1	1	
H	mm	77,5	77,5	75	77,5	77,5	75	

standard article

\* form conforming to EN50047



Drive cam operating parameters



V max (m/s)	0,5
Drive forces	
Minimum command force	9 N
Minimum forced opening force	26 N

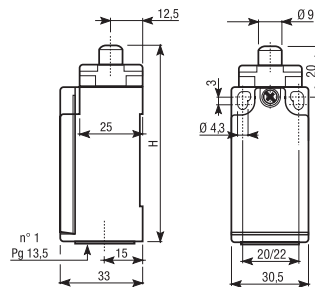
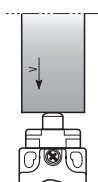

**Steel plunger with rubber gasket**

Contact element	
1NO+1NC snap action  13 21 14 22	<b>00</b>
1NO+1NC slow action  21 13 22 14	<b>01</b>
1NO+1NC lenta sovrapp.  25 17 26 18	<b>02</b>
2NO slow action  13 23 14 24	<b>03</b>
2NC slow action  11 21 12 22	<b>04</b>
2NC snap action  11 21 12 22	<b>05</b>
<b>Weight</b>	<b>kg</b>
<b>Pack</b>	<b>pcs</b>
<b>H</b>	<b>mm</b>

Cable entry							Contact travel
PG 13,5			M20 x 1,5				
Plastic head Plastic body	Metal head Plastic body	Metal head Metal body	Plastic head Plastic body	Metal head Plastic body	Metal head Metal body		
E10000APS1*	E10000AIS1*	E10000AMS1*	E10100APS1*	E10100AIS1*	E10100AMS1*		
E10001APS1*	E10001AIS1*	E10001AMS1*	E10101APS1*	E10101AIS1*	E10101AMS1*		
E10002APS1	E10002AIS1	E10002AMS1	E10102APS1	E10102AIS1	E10102AMS1		
E10003APS1	E10003AIS1	E10003AMS1	E10103APS1	E10103AIS1	E10103AMS1		
E10004APS1	E10004AIS1	E10004AMS1	E10104APS1	E10104AIS1	E10104AMS1		
E10005APS1	E10005AIS1	E10005AMS1	E10105APS1	E10105AIS1	E10105AMS1		
0,067	0,095	0,185	0,067	0,095	0,185		
1	1	1	1	1	1		
77,5	77,5	75	77,5	77,5	75		

standard article

\* form conforming to EN50047


**Drive cam operating parameters**


V max (m/s)	0,5
Drive forces	
Minimum command force	9 N
Minimum forced opening force	26 N

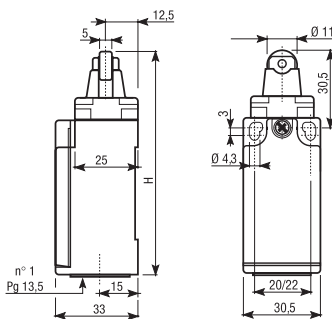


Steel roller plunger

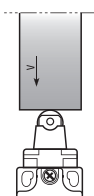
Contact element		Cable entry						Contact travel
		PG 13,5			M20 x 1,5			
		Plastic head Plastic body	Metal head Plastic body	Metal head Metal body	Plastic head Plastic body	Metal head Plastic body	Metal head Metal body	
1NO+1NC snap action	00	E10000BP*	E10000BI*	E10000BM*	E10100BP*	E10100BI*	E10100BM*	
1NO+1NC slow action	01	E10001BP*	E10001BI*	E10001BM*	E10101BP*	E10101BI*	E10101BM*	
1NO+1NC slow overlap.	02	E10002BP	E10002BI	E10002BM	E10102BP	E10102BI	E10102BM	
2NO slow action	03	E10003BP	E10003BI	E10003BM	E10103BP	E10103BI	E10103BM	
2NC slow action	04	E10004BP	E10004BI	E10004BM	E10104BP	E10104BI	E10104BM	
2NC snap action	05	E10005BP	E10005BI	E10005BM	E10105BP	E10105BI	E10105BM	
Weight	kg	0,07	0,105	0,195	0,07	0,105	0,195	
Pack	pcs	1	1	1	1	1	1	
H	mm	88	88	85,5	88	88	85,5	

standard article

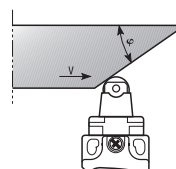
\* form conforming to EN50047



Drive cam operating parameters



V max (m/s)	0,5
Drive forces	
Minimum command force	9 N
Minimum forced opening force	28 N



$\varphi$	V max (m/s)
20°	1
30°	0,5
Drive forces	
Minimum command force	9 N
Minimum forced opening force	28 N



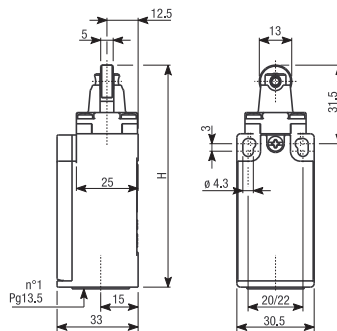
Ø13 mm steel roller plunger

Contact element	
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
<b>Weight</b>	<b>kg</b>
<b>Pack</b>	<b>pcs</b>
<b>H</b>	<b>mm</b>

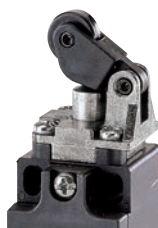
Cable entry							Contact travel
PG 13,5			M20 x 1,5				
Plastic head Plastic body	Metal head Plastic body	Metal head Metal body	Plastic head Plastic body	Metal head Plastic body	Metal head Metal body		
E10000BP13	E10000BH13	E10000BM13	E10100BP13	E10100BH13	E10100BM13		
E10001BP13	E10001BH13	E10001BM13	E10101BP13	E10101BH13	E10101BM13		
E10002BP13	E10002BH13	E10002BM13	E10102BP13	E10102BH13	E10102BM13		
E10003BP13	E10003BH13	E10003BM13	E10103BP13	E10103BH13	E10103BM13		
E10004BP13	E10004BH13	E10004BM13	E10104BP13	E10104BH13	E10104BM13		
E10005BP13	E10005BH13	E10005BM13	E10105BP13	E10105BH13	E10105BM13		
0,07	0,105	0,195	0,07	0,105	0,195		
1	1	1	1	1	1		
89	89	85,5	89	89	86,5		

standard article

\* form conforming to EN50047



Drive cam operating parameters													
	<table border="0"> <tr> <td>V max (m/s)</td> <td>0,5</td> </tr> <tr> <td>Drive forces</td> <td></td> </tr> <tr> <td>Minimum command force</td> <td>9 N</td> </tr> <tr> <td>Minimum forced opening force</td> <td>28 N</td> </tr> </table>	V max (m/s)	0,5	Drive forces		Minimum command force	9 N	Minimum forced opening force	28 N				
V max (m/s)	0,5												
Drive forces													
Minimum command force	9 N												
Minimum forced opening force	28 N												
	<table border="0"> <tr> <td><math>\varphi</math></td> <td>V max (m/s)</td> </tr> <tr> <td>20°</td> <td>1</td> </tr> <tr> <td>30°</td> <td>0,5</td> </tr> <tr> <td>Drive forces</td> <td></td> </tr> <tr> <td>Minimum command force</td> <td>9 N</td> </tr> <tr> <td>Minimum forced opening force</td> <td>28 N</td> </tr> </table>	$\varphi$	V max (m/s)	20°	1	30°	0,5	Drive forces		Minimum command force	9 N	Minimum forced opening force	28 N
$\varphi$	V max (m/s)												
20°	1												
30°	0,5												
Drive forces													
Minimum command force	9 N												
Minimum forced opening force	28 N												

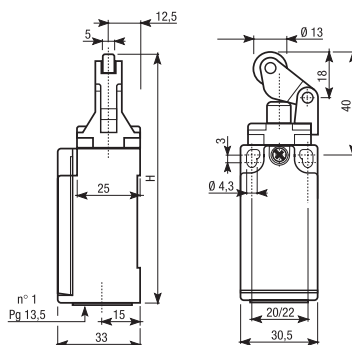


Thermoplastic roller lever, side actuation

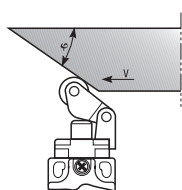
Contact element	Cable entry						Contact travel
	PG 13,5			M20 x 1,5			
	Plastic head Plastic body	Metal head Plastic body	Metal head Metal body	Plastic head Plastic body	Metal head Plastic body	Metal head Metal body	
1NO+1NC snap action  13 21 14 22 Zb	<b>E10000CP*</b>	<b>E10000CI*</b>	<b>E10000CM*</b>	<b>E10100CP*</b>	<b>E10100CI*</b>	<b>E10100CM*</b>	
1NO+1NC slow action  21 13 22 14 Zb	<b>E10001CP*</b>	<b>E10001CI*</b>	<b>E10001CM*</b>	<b>E10101CP*</b>	<b>E10101CI*</b>	<b>E10101CM*</b>	
1NO+1NC slow overlap.  25 17 26 18 Zb	<b>E10002CP</b>	<b>E10002CI</b>	<b>E10002CM</b>	<b>E10102CP</b>	<b>E10102CI</b>	<b>E10102CM</b>	
2NO slow action  13 23 14 24 X+X	<b>E10003CP</b>	<b>E10003CI</b>	<b>E10003CM</b>	<b>E10103CP</b>	<b>E10103CI</b>	<b>E10103CM</b>	
2NC slow action  11 21 12 22 Y+Y	<b>E10004CP</b>	<b>E10004CI</b>	<b>E10004CM</b>	<b>E10104CP</b>	<b>E10104CI</b>	<b>E10104CM</b>	
2NC snap action  11 21 12 22 Y+Y	<b>E10005CP</b>	<b>E10005CI</b>	<b>E10005CM</b>	<b>E10105CP</b>	<b>E10105CI</b>	<b>E10105CM</b>	
Weight	kg	0,071	0,105	0,195	0,071	0,105	0,195
Pack	pcs	1	1	1	1	1	1
H	mm	97,5	97,5	95	97,5	97,5	95

standard article

\* form conforming to EN50047



Drive cam operating parameters



$\varphi$	V max (m/s)
20°	1
30°	0,5

Drive forces	
Minimum command force	9 N
Minimum forced opening force	28 N

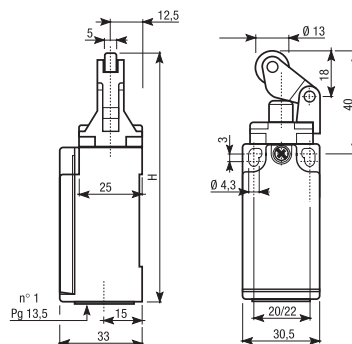


Thermoplastic roller lever with rubber gasket, side actuation

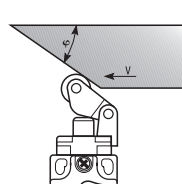
Contact element	Cable entry						Contact travel
	PG 13,5			M20 x 1,5			
	Plastic head Plastic body	Metal head Plastic body	Metal head Metal body	Plastic head Plastic body	Metal head Plastic body	Metal head Metal body	
<b>1NO+1NC snap action</b>  <b>00</b>	E10000CPS1*	E10000CIS1*	E10000CMS1*	E10100CPS1*	E10100CIS1*	E10100CMS1*	
<b>1NO+1NC slow action</b>  <b>01</b>	E10001CPS1*	E10001CIS1*	E10001CMS1*	E10101CPS1*	E10101CIS1*	E10101CMS1*	
<b>1NO+1NC slow overlap.</b>  <b>02</b>	E10002CPS1	E10002CIS1	E10002CMS1	E10102CPS1	E10102CIS1	E10102CMS1	
<b>2NO slow action</b>  <b>03</b>	E10003CPS1	E10003CIS1	E10003CMS1	E10103CPS1	E10103CIS1	E10103CMS1	
<b>2NC slow action</b>  <b>04</b>	E10004CPS1	E10004CIS1	E10004CMS1	E10104CPS1	E10104CIS1	E10104CMS1	
<b>2NC snap action</b>  <b>05</b>	E10005CPS1	E10005CIS1	E10005CMS1	E10105CPS1	E10105CIS1	E10105CMS1	
<b>Weight</b> kg	0,071	0,105	0,195	0,071	0,105	0,195	
<b>Pack</b> pcs	1	1	1	1	1	1	
<b>H</b> mm	97,5	97,5	95	97,5	97,5	95	

standard article

\* form conforming to EN50047



Drive cam operating parameters



$\varphi$	V max (m/s)
20°	1
30°	0,5

Drive forces	
Minimum command force	9 N
Minimum forced opening force	26 N

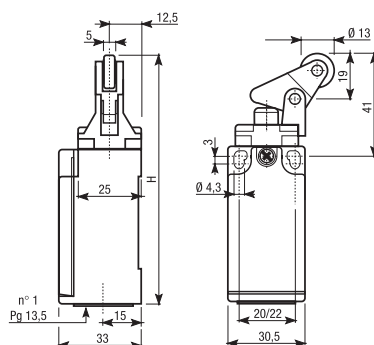


Thermoplastic roller lever, vertical actuation

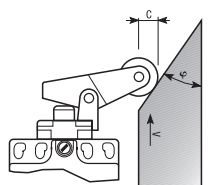
Contact element	Cable entry						Contact travel	
	PG 13,5			M20 x 1,5				
	Plastic head Plastic body	Metal head Plastic body	Metal head Metal body	Plastic head Plastic body	Metal head Plastic body	Metal head Metal body		
1NO+1NC snap action Zb 13 21 14 22	<b>00</b>	E1000DP	E1000DI	E1000DM	E1010DP	E1010DI	E1010DM	
1NO+1NC slow action Zb 21 13 22 14	<b>01</b>	E10001DP	E10001DI	E10001DM	E10101DP	E10101DI	E10101DM	
1NO+1NC slow overlap. Zb 25 17 26 18	<b>02</b>	E10002DP	E10002DI	E10002DM	E10102DP	E10102DI	E10102DM	
2NO slow action X+X 13 23 14 24	<b>03</b>	E10003DP	E10003DI	E10003DM	E10103DP	E10103DI	E10103DM	
2NC slow action Y+Y 11 21 12 22	<b>04</b>	E10004DP	E10004DI	E10004DM	E10104DP	E10104DI	E10104DM	
2NC snap action Y+Y 11 21 12 22	<b>05</b>	E10005DP	E10005DI	E10005DM	E10105DP	E10105DI	E10105DM	
Weight	kg	0,072	0,105	0,195	0,072	0,105	0,195	
Pack	pcs	1	1	1	1	1	1	
H	mm	98,5	96	96	98,5	96	96	

standard article

\* form conforming to EN50047



Drive cam operating parameters



$\varphi$	V max (m/s)
20°	1
30°	0,5

Drive forces	
Minimum command force	9 N
Minimum forced opening force	26 N



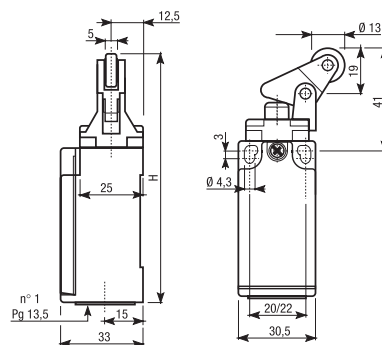


Thermoplastic roller lever with rubber gasket, vertical actuation

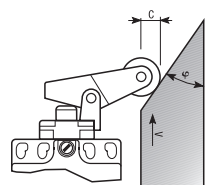
Contact element	Cable entry						Contact travel
	PG 13,5			M20 x 1,5			
	Plastic head Plastic body	Metal head Plastic body	Metal head Metal body	Plastic head Plastic body	Metal head Plastic body	Metal head Metal body	
<b>1NO+1NC snap action</b>  <b>00</b>	E10000DPS1	E10000DIS1	E10000DMS1	E10100DPS1	E10100DIS1	E10100DMS1	
<b>1NO+1NC slow action</b>  <b>01</b>	E10001DPS1	E10001DIS1	E10001DMS1	E10101DPS1	E10101DIS1	E10101DMS1	
<b>1NO+1NC slow overlap.</b>  <b>02</b>	E10002DPS1	E10002DIS1	E10002DMS1	E10102DPS1	E10102DIS1	E10102DMS1	
<b>2NO slow action</b>  <b>03</b>	E10003DPS1	E10003DIS1	E10003DMS1	E10103DPS1	E10103DIS1	E10103DMS1	
<b>2NC slow action</b>  <b>04</b>	E10004DPS1	E10004DIS1	E10004DMS1	E10104DPS1	E10104DIS1	E10104DMS1	
<b>2NC snap action</b>  <b>05</b>	E10005DPS1	E10005DIS1	E10005DMS1	E10105DPS1	E10105DIS1	E10105DMS1	
<b>Weight</b> kg	0,072	0,105	0,195	0,072	0,105	0,195	
<b>Pack</b> pcs	1	1	1	1	1	1	
<b>H</b> mm	98,5	96	96	98,5	96	96	

standard article

\* form conforming to EN50047



Drive cam operating parameters



$\varphi$	$V \text{ max (m/s)}$
20°	1
30°	0,5
Drive forces	
Minimum command force	9 N
Minimum forced opening force	26 N

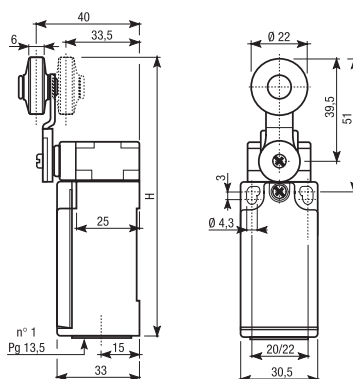


Thermoplastic roller lever

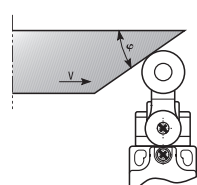
Contact element		Cable entry						Contact travel
		PG 13,5			M20 x 1,5			
		Plastic head Plastic body	Metal head Plastic body	Metal head Metal body	Plastic head Plastic body	Metal head Plastic body	Metal head Metal body	
1NO+1NC snap action	00	E10000EP*	E10000EI*	E10000EM*	E10100EP*	E10100EI*	E10100EM*	
1NO+1NC slow action	01	E10001EP*	E10001EI*	E10001EM*	E10101EP*	E10101EI*	E10101EM*	
1NO+1NC slow overlap.	02	E10002EP	E10002EI	E10002EM	E10102EP	E10102EI	E10102EM	
2NO slow action	03	E10003EP	E10003EI	E10003EM	E10103EP	E10103EI	E10103EM	
2NC slow action	04	E10004EP	E10004EI	E10004EM	E10104EP	E10104EI	E10104EM	
2NC snap action	05	E10005EP	E10005EI	E10005EM	E10105EP	E10105EI	E10105EM	
Weight	kg	0,081	0,135	0,225	0,081	0,135	0,225	
Pack	pcs	1	1	1	1	1	1	
H	mm	108,5	108,5	106	108,5	108,5	106	

standard article

\* form conforming to EN50047



Drive cam operating parameters



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

Drive forces

Minimum command force	15 Ncm
Minimum forced opening force	35 Ncm

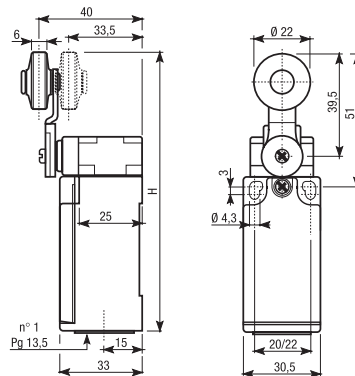


Steel roller lever

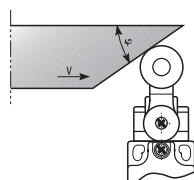
Contact element		
1NO+1NC snap action  13 21 14 22	00	Zb
1NO+1NC slow action  21 13 22 14	01	Zb
1NO+1NC slow overlap.  25 17 26 18	02	Zb
2NO slow action  13 23 14 24	03	X+X
2NC slow action  11 21 12 22	04	Y+Y
2NC snap action  11 21 12 22	05	Y+Y
Weight	kg	
Pack	pcs	
H	mm	

Cable entry							Contact travel
PG 13,5			M20 x 1,5				
Plastic head Plastic body	Metal head Plastic body	Metal head Metal body	Plastic head Plastic body	Metal head Plastic body	Metal head Metal body		
E10000EPRA	E10000EIRA	E10000EMRA	E10100EPRA	E10100EIRA	E10100EMRA		
E10001EPRA	E10001EIRA	E10001EMRA	E10101EPRA	E10101EIRA	E10101EMRA		
E10002EPRA	E10002EIRA	E10002EMRA	E10102EPRA	E10102EIRA	E10102EMRA		
E10003EPRA	E10003EIRA	E10003EMRA	E10103EPRA	E10103EIRA	E10103EMRA		
E10004EPRA	E10004EIRA	E10004EMRA	E10104EPRA	E10104EIRA	E10104EMRA		
E10005EPRA	E10005EIRA	E10005EMRA	E10105EPRA	E10105EIRA	E10105EMRA		
0,081	0,135	0,225	0,081	0,135	0,225		
1	1	1	1	1	1		
108,5	108,5	106	108,5	108,5	106		

standard article



Drive cam operating parameters



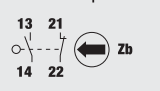
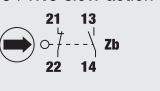
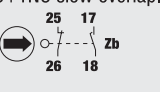
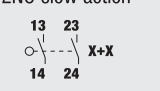
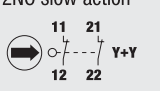
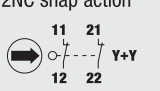
$\varphi$	V max (m/s)
30°	1,5
45°	1
60°	0,75
60-90°	0,25

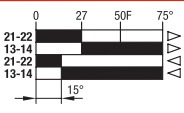
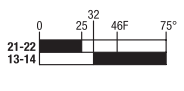
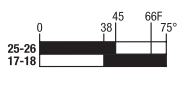
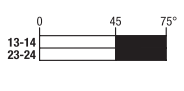
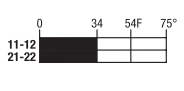
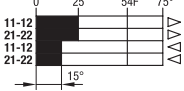
Drive forces

Minimum command force 15 Ncm  
Minimum forced opening force 35 Ncm

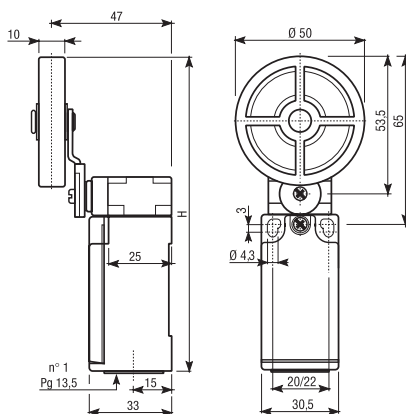


Ø50 mm rubber roller lever

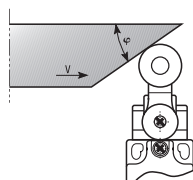
Contact element	
1NO+1NC snap action 	<b>00</b>
1NO+1NC slow action 	<b>01</b>
1NO+1NC slow overlap. 	<b>02</b>
2NO slow action 	<b>03</b>
2NC slow action 	<b>04</b>
2NC snap action 	<b>05</b>
<b>Weight</b>	<b>kg</b>
<b>Pack</b>	<b>pcs</b>
<b>H</b>	<b>mm</b>

Cable entry							Contact travel
PG 13,5			M20 x 1,5				
Plastic head Plastic body	Metal head Plastic body	Metal head Metal body	Plastic head Plastic body	Metal head Plastic body	Metal head Metal body		
E10000EP50	E10000EI50	E10000EM50	E10100EP50	E10100EI50	E10100EM50		
E10001EP50	E10001EI50	E10001EM50	E10101EP50	E10101EI50	E10101EM50		
E10002EP50	E10002EI50	E10002EM50	E10102EP50	E10102EI50	E10102EM50		
E10003EP50	E10003EI50	E10003EM50	E10103EP50	E10103EI50	E10103EM50		
E10004EP50	E10004EI50	E10004EM50	E10104EP50	E10104EI50	E10104EM50		
E10005EP50	E10005EI50	E10005EM50	E10105EP50	E10105EI50	E10105EM50		
0,095	0,15	0,24	0,095	0,15	0,24		
1	1	1	1	1	1		
122,5	122,5	120	122,5	122,5	120		

 standard article



Drive cam operating parameters



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

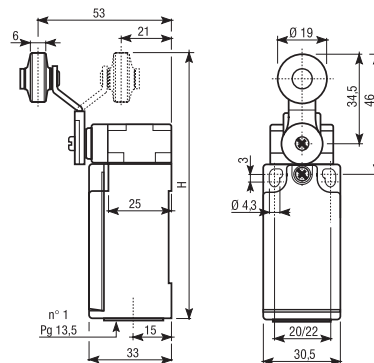
Drive forces  
 Minimum command force 15 Ncm  
 Minimum forced opening force 35 Ncm



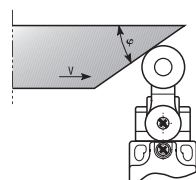
Thermoplastic roller lever

Contact element	Cable entry						Contact travel
	PG 13,5			M20 x 1,5			
	Plastic head Plastic body	Metal head Plastic body	Metal head Metal body	Plastic head Plastic body	Metal head Plastic body	Metal head Metal body	
<b>1NO+1NC snap action</b>  <b>00</b>	<b>E10000IP</b>	<b>E10000II</b>	<b>E10000IM</b>	<b>E10100IP</b>	<b>E10100II</b>	<b>E10100IM</b>	
<b>1NO+1NC slow action</b>  <b>01</b>	<b>E10001IP</b>	<b>E10001II</b>	<b>E10001IM</b>	<b>E10101IP</b>	<b>E10101II</b>	<b>E10101IM</b>	
<b>1NO+1NC slow overlap.</b>  <b>02</b>	<b>E10002IP</b>	<b>E10002II</b>	<b>E10002IM</b>	<b>E10102IP</b>	<b>E10102II</b>	<b>E10102IM</b>	
<b>2NO slow action</b>  <b>03</b>	<b>E10003IP</b>	<b>E10003II</b>	<b>E10003IM</b>	<b>E10103IP</b>	<b>E10103II</b>	<b>E10103IM</b>	
<b>2NC slow action</b>  <b>04</b>	<b>E10004IP</b>	<b>E10004II</b>	<b>E10004IM</b>	<b>E10104IP</b>	<b>E10104II</b>	<b>E10104IM</b>	
<b>2NC snap action</b>  <b>05</b>	<b>E10005IP</b>	<b>E10005II</b>	<b>E10005IM</b>	<b>E10105IP</b>	<b>E10105II</b>	<b>E10105IM</b>	
<b>Weight</b> kg	0,079	0,13	0,225	0,079	0,13	0,225	
<b>Pack</b> pcs	1	1	1	1	1	1	
<b>H</b> mm	103,5	103,5	101	103,5	103,5	101	

standard article



Drive cam operating parameters



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

Drive forces

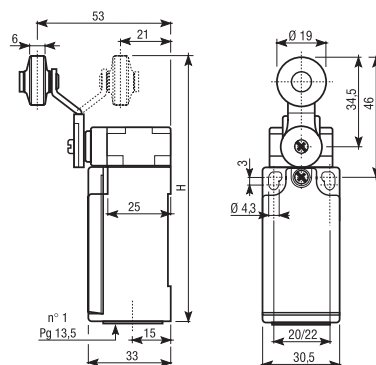
Minimum command force 15 Ncm  
 Minimum forced opening force 35 Ncm



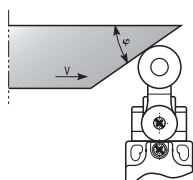
Steel roller lever

Contact element		Cable entry						Contact travel
		PG 13,5			M20 x 1,5			
		Plastic head Plastic body	Metal head Plastic body	Metal head Metal body	Plastic head Plastic body	Metal head Plastic body	Metal head Metal body	
1NO+1NC snap action	00	E10000IPRA	E10000IIRA	E10000IMRA	E10100IPRA	E10100IIRA	E10100IMRA	
1NO+1NC slow action	01	E10001IPRA	E10001IIRA	E10001IMRA	E10101IPRA	E10101IIRA	E10101IMRA	
1NO+1NC slow overlap.	02	E10002IPRA	E10002IIRA	E10002IMRA	E10102IPRA	E10102IIRA	E10102IMRA	
2NO slow action	03	E10003IPRA	E10003IIRA	E10003IMRA	E10103IPRA	E10103IIRA	E10103IMRA	
2NC slow action	04	E10004IPRA	E10004IIRA	E10004IMRA	E10104IPRA	E10104IIRA	E10104IMRA	
2NC snap action	05	E10005IPRA	E10005IIRA	E10005IMRA	E10105IPRA	E10105IIRA	E10105IMRA	
Weight	kg	0,079	0,13	0,225	0,079	0,13	0,225	
Pack	pcs	1	1	1	1	1	1	
H	mm	103,5	103,5	101	103,5	103,5	101	

standard article



Drive cam operating parameters



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

Drive forces  
 Minimum command force 15 Ncm  
 Minimum forced opening force 35 Ncm

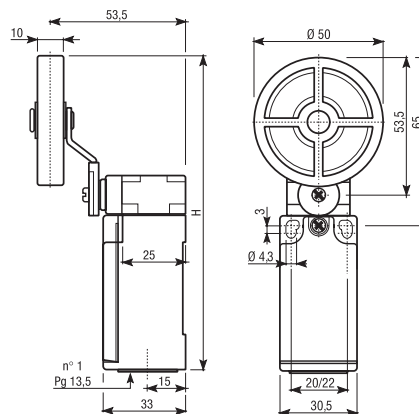


Ø50 mm rubber roller lever

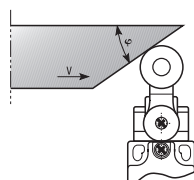
Contact element	
1NO+1NC snap action  13 21 14 22 Zb <b>00</b>	
1NO+1NC slow action  21 13 22 14 Zb <b>01</b>	
1NO+1NC slow overlap.  25 17 26 18 Zb <b>02</b>	
2NO slow action  13 23 14 24 X+X <b>03</b>	
2NC slow action  11 21 12 22 Y+Y <b>04</b>	
2NC snap action  11 21 12 22 Y+Y <b>05</b>	
<b>Weight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

Cable entry							Contact travel
PG 13,5			M20 x 1,5				
Plastic head Plastic body	Metal head Plastic body	Metal head Metal body	Plastic head Plastic body	Metal head Plastic body	Metal head Metal body		
E10000IP50	E10000II50	E10000IM50	E10100IP50	E10100II50	E10100IM50	 0 27 50F 75° 21-22 13-14 21-22 13-14 15°	
E10001IP50	E10001II50	E10001IM50	E10101IP50	E10101II50	E10101IM50	 0 25 32 46F 75° 21-22 13-14	
E10002IP50	E10002II50	E10002IM50	E10102IP50	E10102II50	E10102IM50	 0 38 45 66F 75° 25-26 17-18	
E10003IP50	E10003II50	E10003IM50	E10103IP50	E10103II50	E10103IM50	 0 45 75° 13-14 23-24	
E10004IP50	E10004II50	E10004IM50	E10104IP50	E10104II50	E10104IM50	 0 34 54F 75° 11-12 21-22	
E10005IP50	E10005II50	E10005IM50	E10105IP50	E10105II50	E10105IM50	 0 25 54F 75° 11-12 21-22 11-12 21-22 15°	
<b>Weight</b>	0,095	0,145	0,24	0,095	0,145	0,24	
<b>Pack</b>	1	1	1	1	1	1	
<b>H</b>	122,5	122,5	120	122,5	122,5	120	

standard article



Drive cam operating parameters



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

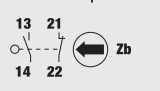
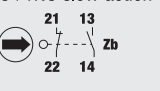
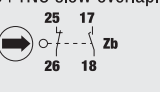
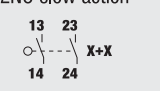
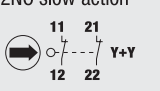
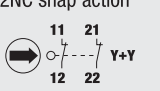
Drive forces

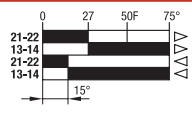
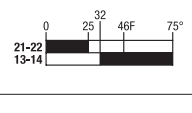
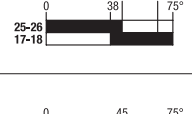
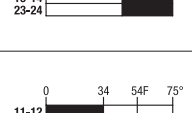
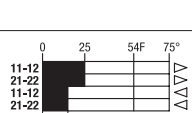
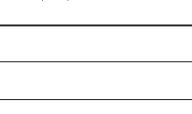
Minimum command force 15 Ncm  
 Minimum forced opening force 35 Ncm



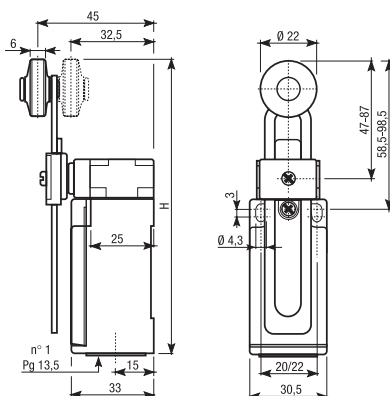
F

Thermoplastic roller variable length lever

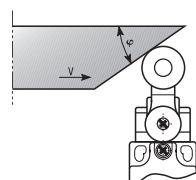
Contact element	
1NO+1NC snap action 	00
1NO+1NC slow action 	01
1NO+1NC slow overlap. 	02
2NO slow action 	03
2NC slow action 	04
2NC snap action 	05
Weight	kg
Pack	pcs
H	mm

Cable entry							Contact travel
PG 13,5			M20 x 1,5				
Plastic head Plastic body	Metal head Plastic body	Metal head Metal body	Plastic head Plastic body	Metal head Plastic body	Metal head Metal body		
E10000FP	E10000FI	E10000FM	E10100FP	E10100FI	E10100FM		
E10001FP	E10001FI	E10001FM	E10101FP	E10101FI	E10101FM		
E10002FP	E10002FI	E10002FM	E10102FP	E10102FI	E10102FM		
E10003FP	E10003FI	E10003FM	E10103FP	E10103FI	E10103FM		
E10004FP	E10004FI	E10004FM	E10104FP	E10104FI	E10104FM		
E10005FP	E10005FI	E10005FM	E10105FP	E10105FI	E10105FM		
0,099	0,15	0,24	0,079	0,13	0,225		
1	1	1	1	1	1		
116 ÷ 156	116 ÷ 156	113,5 ÷ 153,5	116 ÷ 156	116 ÷ 156	113,5 ÷ 153,5		

 standard article



Drive cam operating parameters



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

Drive forces  
 Minimum command force 15 Ncm  
 Minimum forced opening force 35 Ncm

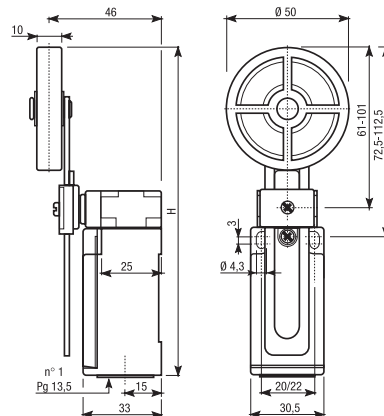
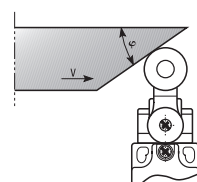



**Ø50 mm rubber roller variable length lever**

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

Cable entry							Contact travel
PG 13,5			M20 x 1,5				
Plastic head Plastic body	Metal head Plastic body	Metal head Metal body	Plastic head Plastic body	Metal head Plastic body	Metal head Metal body		
E10000FP50	E10000FI50	E10000FM50	E10100FP50	E10100FI50	E10100FM50	 0 27 50F 75° 21-22 13-14 21-22 13-14 15°	
E10001FP50	E10001FI50	E10001FM50	E10101FP50	E10101FI50	E10101FM50	 0 25 32 46F 75° 21-22 13-14	
E10002FP50	E10002FI50	E10002FM50	E10102FP50	E10102FI50	E10102FM50	 0 38 45 66F 75° 25-26 17-18	
E10003FP50	E10003FI50	E10003FM50	E10103FP50	E10103FI50	E10103FM50	 0 45 75° 13-14 23-24	
E10004FP50	E10004FI50	E10004FM50	E10104FP50	E10104FI50	E10104FM50	 0 34 54F 75° 11-12 21-22	
E10005FP50	E10005FI50	E10005FM50	E10105FP50	E10105FI50	E10105FM50	 0 25 54F 75° 11-12 21-22 11-12 21-22 15°	
<b>Weight</b>	<b>kg</b>	0,114 0,16 0,25	0,114 0,16 0,25				
<b>Pack</b>	<b>pcs</b>	1 1 1	1 1 1				
<b>H</b>	<b>mm</b>	130 ÷ 170 130 ÷ 170 127,5 ÷ 167,5	130 ÷ 170 130 ÷ 170 127,5 ÷ 167,5				

standard article


**Drive cam operating parameters**


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

**Drive forces**

Minimum command force 15 Ncm  
 Minimum forced opening force 35 Ncm

FR•50

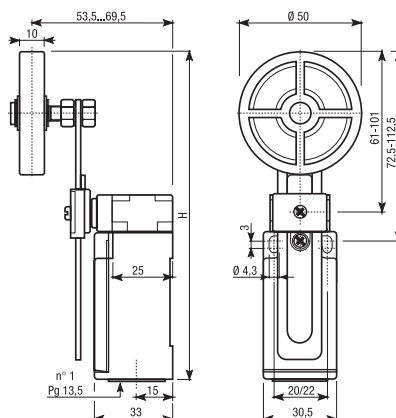


Ø50 mm rubber roller adjustable lever

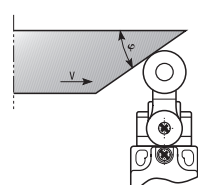
Contact element	
1NO+1NC snap action  <b>00</b>	
1NO+1NC slow action  <b>01</b>	
1NO+1NC slow overlap.  <b>02</b>	
2NO slow action  <b>03</b>	
2NC slow action  <b>04</b>	
2NC snap action  <b>05</b>	
<b>Weight</b>	<b>kg</b>
<b>Pack</b>	<b>pcs</b>
<b>H</b>	<b>mm</b>

Cable entry							Contact travel
PG 13,5			M20 x 1,5				
Plastic head Plastic body	Metal head Plastic body	Metal head Metal body	Plastic head Plastic body	Metal head Plastic body	Metal head Metal body		
E10000FRP50	E10000FRI50	E10000FRM50	E10100FRP50	E10100FRI50	E10100FRM50		
E10001FRP50	E10001FRI50	E10001FRM50	E10101FRP50	E10101FRI50	E10101FRM50		
E10002FRP50	E10002FRI50	E10002FRM50	E10102FRP50	E10102FRI50	E10102FRM50		
E10003FRP50	E10003FRI50	E10003FRM50	E10103FRP50	E10103FRI50	E10103FRM50		
E10004FRP50	E10004FRI50	E10004FRM50	E10104FRP50	E10104FRI50	E10104FRM50		
E10005FRP50	E10005FRI50	E10005FRM50	E10105FRP50	E10105FRI50	E10105FRM50		
0,124	0,17	0,25	0,124	0,17	0,25		
1	1	1	1	1	1		
130 ÷ 170	130 ÷ 170	127,5 ÷ 167,5	130 ÷ 170	130 ÷ 170	127,5 ÷ 167,5		

standard article



Drive cam operating parameters



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

Drive forces  
 Minimum command force 15 Ncm  
 Minimum forced opening force 35 Ncm

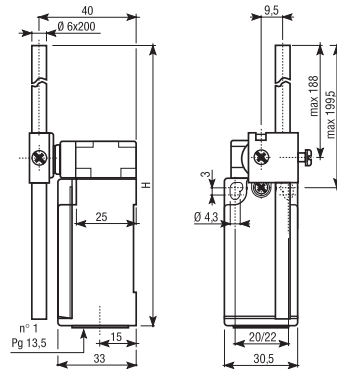


Side rotary adjustable Ø6 mm glass fiber rod

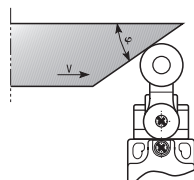
Contact element	
1NO+1NC snap action  13 21 14 22	Zb
1NO+1NC slow action  21 13 22 14	Zb
1NO+1NC slow overlap.  25 17 26 18	Zb
2NO slow action  13 23 14 24	X+X
2NC slow action  11 21 12 22	Y+Y
2NC snap action  11 21 12 22	Y+Y
<b>Weight</b>	<b>kg</b>
<b>Pack</b>	<b>pcs</b>
<b>H</b>	<b>mm</b>

Cable entry							Contact travel
PG 13,5			M20 x 1,5				
Plastic head Plastic body	Metal head Plastic body	Metal head Metal body	Plastic head Plastic body	Metal head Plastic body	Metal head Metal body		
E10000GP	E10000GI	E10000GM	E10100GP	E10100GI	E10100GM	 0 27 50F 75° 15°	
E10001GP	E10001GI	E10001GM	E10101GP	E10101GI	E10101GM	 0 25 32 46F 75° 15°	
E10002GP	E10002GI	E10002GM	E10102GP	E10102GI	E10102GM	 0 38 45 66F 75° 15°	
E10003GP	E10003GI	E10003GM	E10103GP	E10103GI	E10103GM	 0 45 75° 15°	
E10004GP	E10004GI	E10004GM	E10104GP	E10104GI	E10104GM	 0 34 54F 75° 15°	
E10005GP	E10005GI	E10005GM	E10105GP	E10105GI	E10105GM	 0 25 54F 75° 15°	
0,124	0,17	0,27	0,124	0,17	0,27		
1	1	1	1	1	1		
97,5 ÷ 257,5	97,5 ÷ 257,5	95 ÷ 255	97,5 ÷ 257,5	97,5 ÷ 257,5	95 ÷ 255		

standard article



Drive cam operating parameters



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

Drive forces

Minimum command force 15 Ncm  
 Minimum forced opening force 35 Ncm

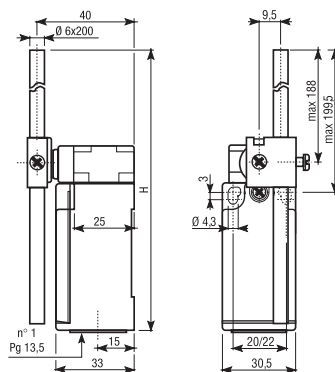


Side rotary adjustable Ø6 mm aluminium rod

Contact element	
1NO+1NC snap action 	<b>00</b>
1NO+1NC slow action 	<b>01</b>
1NO+1NC slow overlap. 	<b>02</b>
2NO slow action 	<b>03</b>
2NC slow action 	<b>04</b>
2NC snap action 	<b>05</b>
<b>Weight</b>	<b>kg</b>
<b>Pack</b>	<b>pcs</b>
<b>H</b>	<b>mm</b>

Cable entry						Contact travel
PG 13,5			M20 x 1,5			
Plastic head Plastic body	Metal head Plastic body	Metal head Metal body	Plastic head Plastic body	Metal head Plastic body	Metal head Metal body	
E10000HP	E10000HI	E10000HM	E10100HP	E10100HI	E10100HM	
E10001HP	E10001HI	E10001HM	E10101HP	E10101HI	E10101HM	
E10002HP	E10002HI	E10002HM	E10102HP	E10102HI	E10102HM	
E10003HP	E10003HI	E10003HM	E10103HP	E10103HI	E10103HM	
E10004HP	E10004HI	E10004HM	E10104HP	E10104HI	E10104HM	
E10005HP	E10005HI	E10005HM	E10105HP	E10105HI	E10105HM	
0,124	0,18	0,27	0,124	0,18	0,27	
1	1	1	1	1	1	
97,5 ÷ 257,5	97,5 ÷ 257,5	95 ÷ 255	97,5 ÷ 257,5	97,5 ÷ 257,5	95 ÷ 255	

standard article





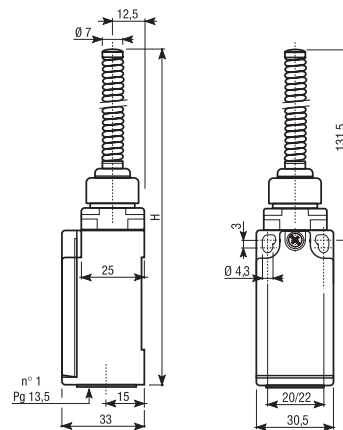
Flexible rod

L

Contact element		
1NO+1NC snap action  13 21 14 22	<b>00</b>	
1NO+1NC slow action  21 13 22 14	<b>01</b>	
1NO+1NC slow overlap.  25 17 26 18	<b>02</b>	
2NO slow action  13 23 14 24	<b>03</b>	
2NC slow action  11 21 12 22	<b>04</b>	
2NC snap action  11 21 12 22	<b>05</b>	
<b>Weight</b>	<b>kg</b>	
<b>Pack</b>	<b>pcs</b>	
<b>H</b>	<b>mm</b>	

Cable entry							Contact travel
PG 13,5			M20 x 1,5				
Plastic head Plastic body	Metal head Plastic body	Metal head Metal body	Plastic head Plastic body	Metal head Plastic body	Metal head Metal body		
E10000LP	E10000LI	E10000LM	E10100LP	E10100LI	E10100LM		
E10001LP	E10001LI	E10001LM	E10101LP	E10101LI	E10101LM		
E10002LP	E10002LI	E10002LM	E10102LP	E10102LI	E10102LM		
E10003LP	E10003LI	E10003LM	E10103LP	E10103LI	E10103LM		
E10004LP	E10004LI	E10004LM	E10104LP	E10104LI	E10104LM		
E10005LP	E10005LI	E10005LM	E10105LP	E10105LI	E10105LM		
0,093	0,145	0,235	0,093	0,145	0,235		
1	1	1	1	1	1		
189	189	186,5	189	189	186,5		


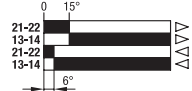

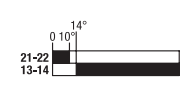

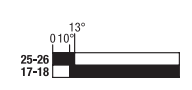

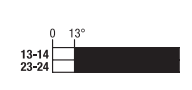

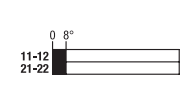

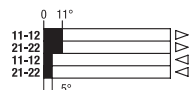
standard article



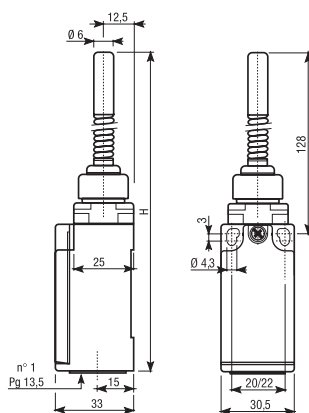
LP



Flexible rod with plastic terminal

Contact element		Cable entry						Contact travel
		PG 13,5			M20 x 1,5			
		Plastic head Plastic body	Metal head Plastic body	Metal head Metal body	Plastic head Plastic body	Metal head Plastic body	Metal head Metal body	
1NO+1NC snap action 	00	E10000LPP	E10000LPI	E10000LPM	E10100LPP	E10100LPI	E10100LPM	
1NO+1NC slow action 	01	E10001LPP	E10001LPI	E10001LPM	E10101LPP	E10101LPI	E10101LPM	
1NO+1NC slow overlap. 	02	E10002LPP	E10002LPI	E10002LPM	E10102LPP	E10102LPI	E10102LPM	
2NO slow action 	03	E10003LPP	E10003LPI	E10003LPM	E10103LPP	E10103LPI	E10103LPM	
2NC slow action 	04	E10004LPP	E10004LPI	E10004LPM	E10104LPP	E10104LPI	E10104LPM	
2NC snap action 	05	E10005LPP	E10005LPI	E10005LPM	E10105LPP	E10105LPI	E10105LPM	
Weight	kg	0,093	0,145	0,235	0,093	0,145	0,235	
Pack	pcs	1	1	1	1	1	1	
H	mm	185,5	185,5	183	185,5	185,5	183	

 standard article





Cat's whisker

Contact element	
1NO+1NC snap action  13 21 14 22 <b>00</b>	
1NO+1NC slow action  21 13 22 14 <b>01</b>	
1NO+1NC slow overlap.  25 17 26 18 <b>02</b>	
2NO slow action  13 23 14 24 <b>03</b>	
2NC slow action  11 21 12 22 <b>04</b>	
2NC snap action  11 21 12 22 <b>05</b>	
<b>Weight</b>	kg
<b>Pack</b>	pcs
<b>H</b>	mm

Cable entry							Contact travel
PG 13,5			M20 x 1,5				
Plastic head Plastic body	Metal head Plastic body	Metal head Metal body	Plastic head Plastic body	Metal head Plastic body	Metal head Metal body		
E10000LSP	E10000LSI	E10000LSM	E10100LSP	E10100LSI	E10100LSM		
E10001LSP	E10001LSI	E10001LSM	E10101LSP	E10101LSI	E10101LSM		
E10002LSP	E10002LSI	E10002LSM	E10102LSP	E10102LSI	E10102LSM		
E10003LSP	E10003LSI	E10003LSM	E10103LSP	E10103LSI	E10103LSM		
E10004LSP	E10004LSI	E10004LSM	E10104LSP	E10104LSI	E10104LSM		
E10005LSP	E10005LSI	E10005LSM	E10105LSP	E10105LSI	E10105LSM		
0,093	0,145	0,235	0,093	0,145	0,235		
1	1	1	1	1	1		
192,5	192,5	190	192,5	192,5	190		

standard article

