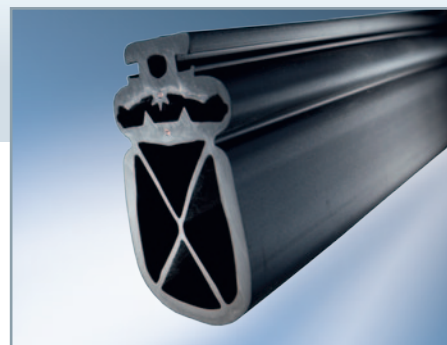


Contact-Optima-Profile

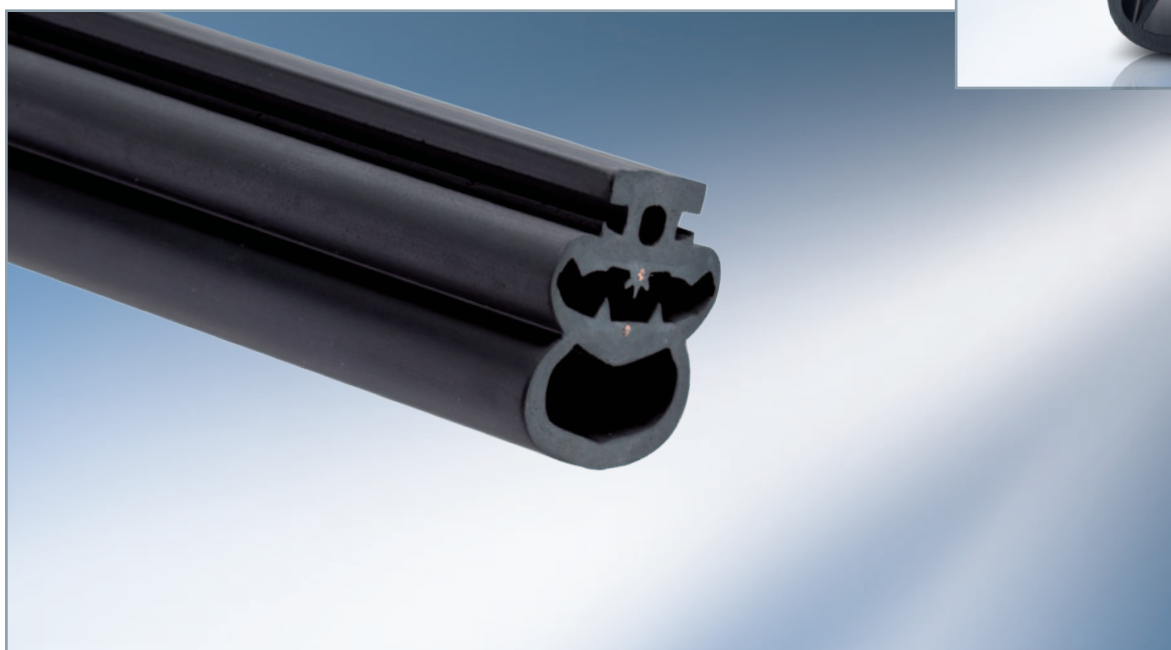
3100.4026

Functional description of the system

The evaluation electronics monitor the safety strip, which is equipped with a terminating resistor and operates using the closed circuit principle. An amount of current defined by the resistance (8.2 kOhm) flows through the safety strip. When mechanical pressure causes the resistance in the safety strip to drop below 5.5 kOhm, this is recognised as an actuation (evaluation electronics: LED RED). When contact resistance or a broken cable raises the resistance in the safety strip above 11.5 kOhm, this condition is recognised as a broken cable and/or fault (evaluation electronics: LED YELLOW). In both cases, the system stops (evaluation electronics: safety relays K1 and K2 open)



Contact-Optima 3100.4053



Contact-Optima 3100.4026

Contact-Optima-Profile		
Article no.	3100.4026	
Material	EPDM	
Shore hardness	Non-conductive mixture:	60 +/- 5 Shore A
	Conductive mixture:	65 +/- 5 Shore A
Finger safety (EN 1760-2)	Yes	
Level of protection	Protection class IP 66, IP 67 and IP 69K (DIN 40050-9)	
Registration no. EC type-examination certificate	44 205 10555702 001	
Tested according to	2006/42/EC	Machinery Directive
	EN 1760-2:2001 + A1:2009	Safety of machinery – Pressure-sensitive protective devices Part 2: Switch terminal strips and bars
	EN 12978:2003 + A1:2009	Protective devices for force-actuated doors and gates Test method requirements
	EN ISO 13849-1:2008	Safety of machinery – Safety-related components of control systems Part 1: General design principles

Contact-Optima-Profile

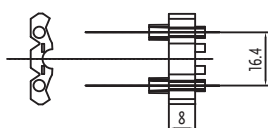
3100.4026



Contact-Optima 3100.4053

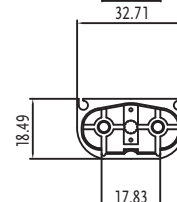
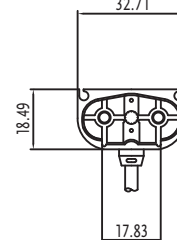
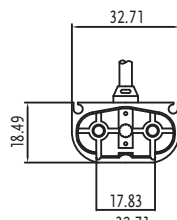
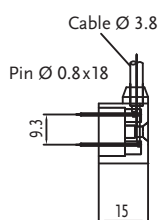
Optima-Plus connectors, internal element:

supplied with Article 3020.400xC /
3020.410xC and 3031.4006C
incl. Torx screws



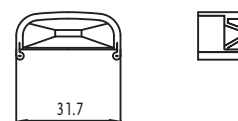
Optima-Plus connectors, external element:

3020.400xC discharge to compensation chamber
3020.410xC discharge to C-rail
3031.4006C resistor

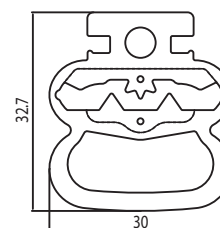


Rubber cap:

3050.4026
for profile 3100.4026
(fits all external elements)



Contact-Optima 3100.4026:



Certified characteristic data

Response travel at max. speed	7.5 mm
Compensation travel 250 N	8 mm
Compensation travel 400 N	10 mm
Deformation travel 600 N	16 mm
Actuation angle	+/- 45°
Max. operating speed	200 mm/s
Climatic conditions	-10 °C to +50 °C
Response time of the evaluation electronics	< 12 ms

Deformation travels

Test temperature	20 °C	20 °C	20 °C	-10 °C	+50 °C
Speed	10 mm/s	100 mm/s	200 mm/s	10 mm/s	10 mm/s
Actuation force	22.8 N	23.2 N	38.2 N	23.8 N	17.6 N
Response travel A	3.7 mm	3.3 mm	7.5 mm	2.9 mm	3.7 mm
Total deformation at 250 N B1	14.6 mm	13.6 mm	14.0 mm	13.0 mm	15.1 mm
Total deformation at 400 N B2	15.7 mm	14.9 mm	15.8 mm	14.3 mm	16.3 mm
Total deformation at 600 N C	16.5 mm	17.0 mm	17.5 mm	16.0 mm	18.4 mm
Compensation travel at 250 N	10.8 mm	10.3 mm	6.5 mm	10.2 mm	11.4 mm
Compensation travel at 400 N	11.9 mm	11.6 mm	8.3 mm	11.4 mm	12.5 mm
Max. stopping distance	9.9 mm	9.7 mm	6.9 mm	9.5 mm	10.4 mm

Contact-Optima-Profile

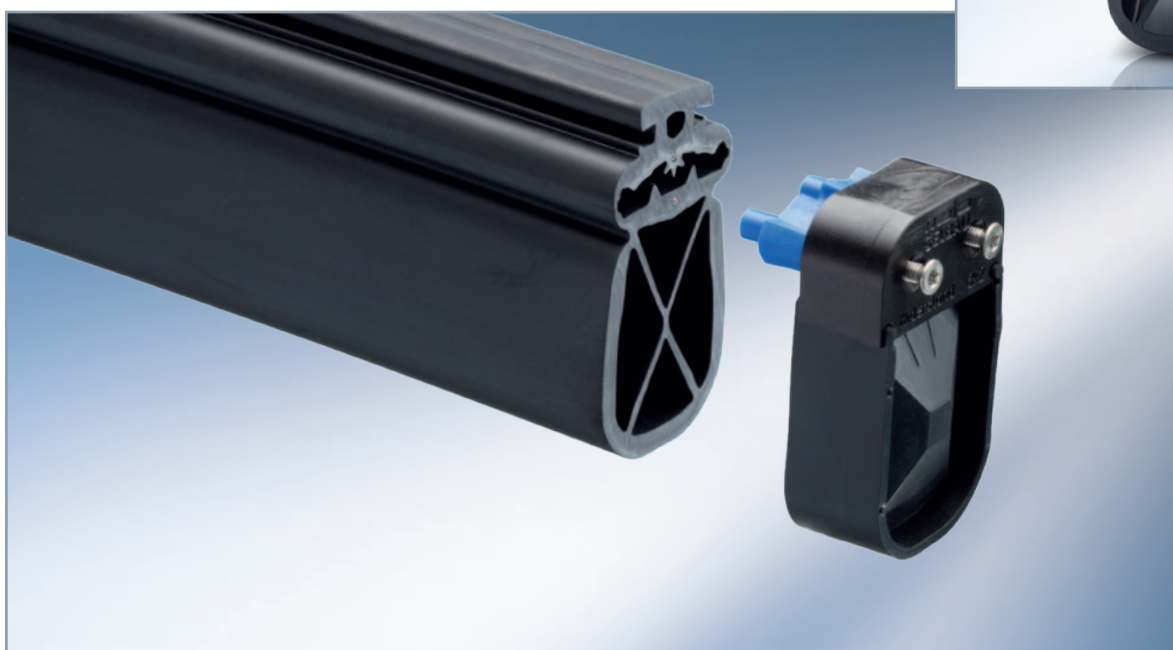
3100.4053

Functional description of the system

The evaluation electronics monitor the safety strip, which is equipped with a terminating resistor and operates using the closed circuit principle. An amount of current defined by the resistance (8.2 kOhm) flows through the safety strip. When mechanical pressure causes the resistance in the safety strip to drop below 5.5 kOhm, this is recognised as an actuation (evaluation electronics: LED RED). When contact resistance or a broken cable raises the resistance in the safety strip above 11.5 kOhm, this condition is recognised as a broken cable and/or fault (evaluation electronics: LED YELLOW). In both cases, the system stops (evaluation electronics: safety relays K1 and K2 open)



Contact-Optima 3100.4053

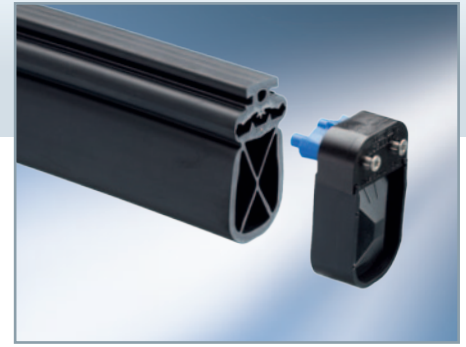


Contact-Optima 3100.4053

Contact-Optima-Profile		
Article no.	3100.4053	
Material	EPDM	
Shore hardness	Non-conductive mixture:	60 +/- 5 Shore A
	Conductive mixture:	65 +/- 5 Shore A
Finger safety (EN 1760-2)	Yes	
Level of protection	Protection class IP 66, IP 67 and IP 69K (DIN 40050-9)	
Registration no. EC type-examination certificate	44 205 10555702 002	
Tested according to	2006/42/EC	Machinery Directive
	EN 1760-2:2001 + A1:2009	Safety of machinery – Pressure-sensitive protective devices Part 2: Switch terminal strips and bars
	EN 12978:2003 + A1:2009	Protective devices for force-actuated doors and gates Test method requirements
	EN ISO 13849-1:2008	Safety of machinery – Safety-related components of control systems Part 1: General design principles

Contact-Optima-Profile

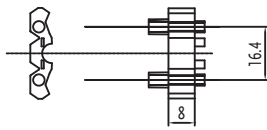
3100.4053



Contact-Optima 3100.4053

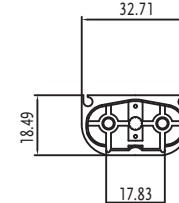
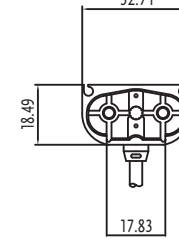
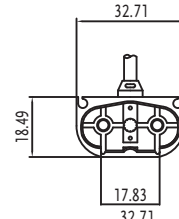
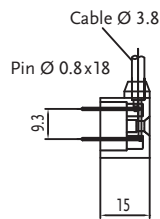
Optima-Plus connectors, internal element:

supplied with Article 3020.400xC /
3020.410xC and 3031.4006C
incl. Torx screws



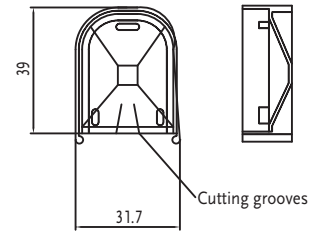
Optima-Plus connectors, external element:

3020.400xC discharge to compensation chamber
3020.410xC discharge to C-rail
3031.4006C resistor

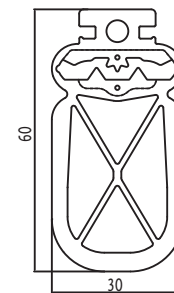


Rubber cap:

3050.4053
for profile 3100.4053
(fits all external elements)



Contact-Optima 3100.4053:



Certified characteristic data

Response travel at max. speed	14 mm
Compensation travel 250 N	27 mm
Compensation travel 400 N	29 mm
Deformation travel 600 N	39 mm
Actuation angle	+/- 90°
Max. operating speed	200 mm/s
Climatic conditions	-10 °C to +50 °C
Response time of the evaluation electronics	< 12 ms

Deformation travels

Test temperature	20 °C	20 °C	20 °C	-10 °C	+50 °C
Speed	10 mm/s	100 mm/s	200 mm/s	10 mm/s	10 mm/s
Actuation force	46.05 N	65.36 N	65.99 N	64.3 N	49.4 N
Response travel A	4.4 mm	9.8 mm	14.3 mm	6.4 mm	7.6 mm
Total deformation at 250 N B1	36.3 mm	36.9 mm	39.7 mm	34.4 mm	36.8 mm
Total deformation at 400 N B2	38.4 mm	39.1 mm	41.4 mm	37.4 mm	38.8 mm
Total deformation at 600 N C	40.5 mm	40.5 mm	42.7 mm	39.1 mm	40.0 mm
Compensation travel at 250 N	31.9 mm	27.1 mm	25.4 mm	27.9 mm	29.3 mm
Compensation travel at 400 N	34.0 mm	29.3 mm	27.1 mm	31.0 mm	31.2 mm
Max. stopping distance	28.3 mm	24.5 mm	22.6 mm	25.8 mm	26.0 mm