



Safety Shoe Light



EN | Data sheet

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Technical data

Safety Shoe Light	SP/W
Testing basis	ISO 13856-2
Switching characteristics at $v_{test} = 100 \text{ mm/s}$	
Switching type	NO contact
Switching operations	10,000
Actuation force	
Test piece (rod) Ø 20 mm	< 50 N
Test piece (cylinder) Ø 80 mm	< 150 N
Actuation distance	
Test piece (cylinder) Ø 80 mm	15 mm
Actuation angle	
Test piece (cylinder) Ø 80 mm	±45°
Finger detection	Yes
Safety classifications	
ISO 13849-1: B _{10D}	2× 10 ⁶
Mechanical operating conditions	
Sensor size (W × H × D)	435 × 100 × 100 mm
With handle	470 × 130 × 100 mm
Cable length (min. / max.)	10 cm / 100 m
Operating velocity	
(min. / max.)	10 mm/s / 100 mm/s
Max. load capacity (signal)	600 N
Tensile load, cable (max.)	20 N
IEC 60529: degree of protection	IP67
Operating temperature	-15 to +55 °C
Storage temperature	-40 to +80 °C
Weight	2.1 kg
Electrical operating conditions	
Terminal resistance	8k2 ±1%
Nominal output (max.)	250 mW
Contact transition resistance	< 400 ohms (per sensor)
Number of BK-type sensors	Max. 3 in series
Switching voltage (max.)	DC 24 V
Switching current (min. / max.)	1 mA / 10 mA

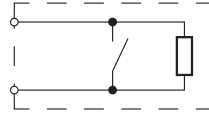
Physical resistance

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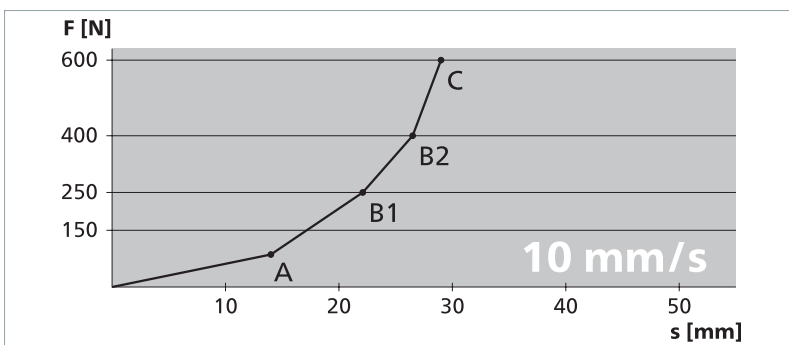
Chemical resistance

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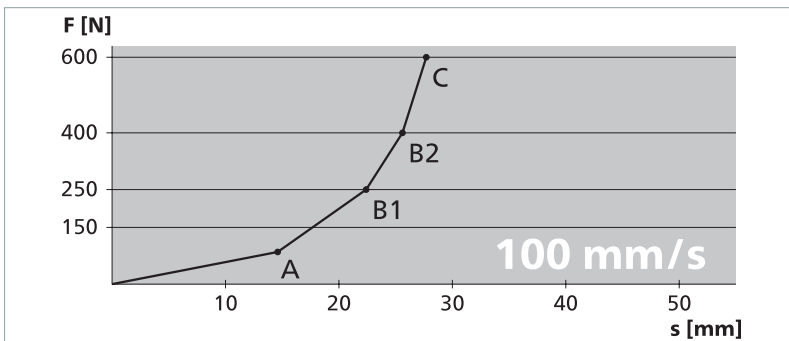
**/W-type sensor
with 1 line**



Force-distance ratios



Test velocity	10 mm/s
Actuation force	86 N
Response time	1400 ms
Actuation distance (A)	14.0 mm
Overtravel distance	
up to 250 N (B1)	8.1 mm
up to 400 N (B2)	12.5 mm
up to 600 N (C)	15.0 mm
Total deformation	29.0 mm



Test velocity	100 mm/s
Actuation force	85 N
Response time	146 ms
Actuation distance (A)	14.6 mm
Overtravel distance	
up to 250 N (B1)	7.8 mm
up to 400 N (B2)	11.0 mm
up to 600 N (C)	13.1 mm
Total deformation	27.7 mm

Sensor surface

The resistance ratings listed here apply to the SP 57 sensor (when under the protective cover).

The resistance ratings listed below (at a room temperature of 23 °C) depend on the sensor having an undamaged surface.

Physical resistance

	SP
IEC 60529: degree of protection	IP67
Ozone resistance	Yes
UV resistance	Yes

Chemical resistance

Explanation of symbols:

- + = resistant
- ± = resistant to a certain extent
- = not resistant

	SP
Acetone	-
Formic acid	-
Armor All	+
Car shampoo	+
Petrol	-
Brake fluid	+
Buraton	+
Butanol	-
Sodium hypochlorite	-
Disinfectant 1%	+
Diesel	-
Acetic acid 10%	-
Ethanol	+
Ethyl acetate	-
Ethylene glycol	+
Greases	±
Anti-frost agent	+
Skin cream	+
Incidin	+
Incidin Plus	+
Cooling lubricant	-
Plastic cleaner	+
Lyso FD 10	+
Metal working oil	-
Microbac	+
Microbac forte	+
Minutil	+
Saline solution 5%	+
Spirit (ethyl alcohol)	+
Terralin	+
Centring oil	-

To an extent, the product is resistant to normal chemical influences over an exposure time of 24 hours.

The values in the table are the results of tests carried out in our laboratory. You must always conduct your own practical tests to verify that our products are suitable for your specific area of application.