

**ITEM 091008 SN02D16-1508-M**

Description	Technical data	Accessories	Downloads
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### Features

- › plunger spacing 16 mm
- › Upright housing, small flange
- › Degree of protection IP67 according to IEC 60529

### Switching elements

**ES 502 E** Snap-action switching contact 1 NC + 1 NO

**ES 508** Slow-action switching contact 1 NC $\ominus$

On the usage of safety switching elements, the dog distance  $\text{\textcircled{3.05}}$  must be maintained to achieve the positively driven travel. The dogs must be positively mounted according to EN ISO 14119, i.e. riveted, welded or secured in some other way against becoming loose.

### Approvals



## Mechanical values and environment

Design	Upright
Housing material	Die-cast aluminum, anodized
Weight	
	Net 0,45 kg
Ambient temperature	-5 ... 80 °C
Degree of protection	IP67
Mechanical life	30 x 10 <sup>6</sup>
Contact material	Silver alloy, gold flashed
Switching principle	
	Slow-action switching contact [1]
	Snap-action switching contact [2]
Plunger spacing	16 mm
Installation position	Any
Number of switching elements	2
Number of positively driven contacts	1
Number of NC contacts	1
Number of NO contacts	1
Connection	
	2 x M20 x 1.5
Approach speed	
	max. 0,01 ... 40 m/min
Actuating element	Chisel plunger [3]
Actuating force	min.20 N

## Electrical connection ratings

Rated thermal current I <sub>th</sub>	8 A
Utilization category according to EN 60947-5-1	
	AC-15 6A 230V
	DC-13 6A 24V
	AC-12 8 A, 250 V [4]
Short circuit protection according to IEC 60269-1	
	(Fuse) 8A gG
Rated insulation voltage U <sub>i</sub>	250 V
Rated impulse withstand voltage U <sub>imp</sub>	2,5 kV
Switching current	
	Min. at DC 24V min.10 mA [5]
	Min. at DC 12V min.10 mA [6]
Connection cross-section	0,34 ... 1,5 mm <sup>2</sup>

## Miscellaneous

Additional information	Mixed contact assembly [7]
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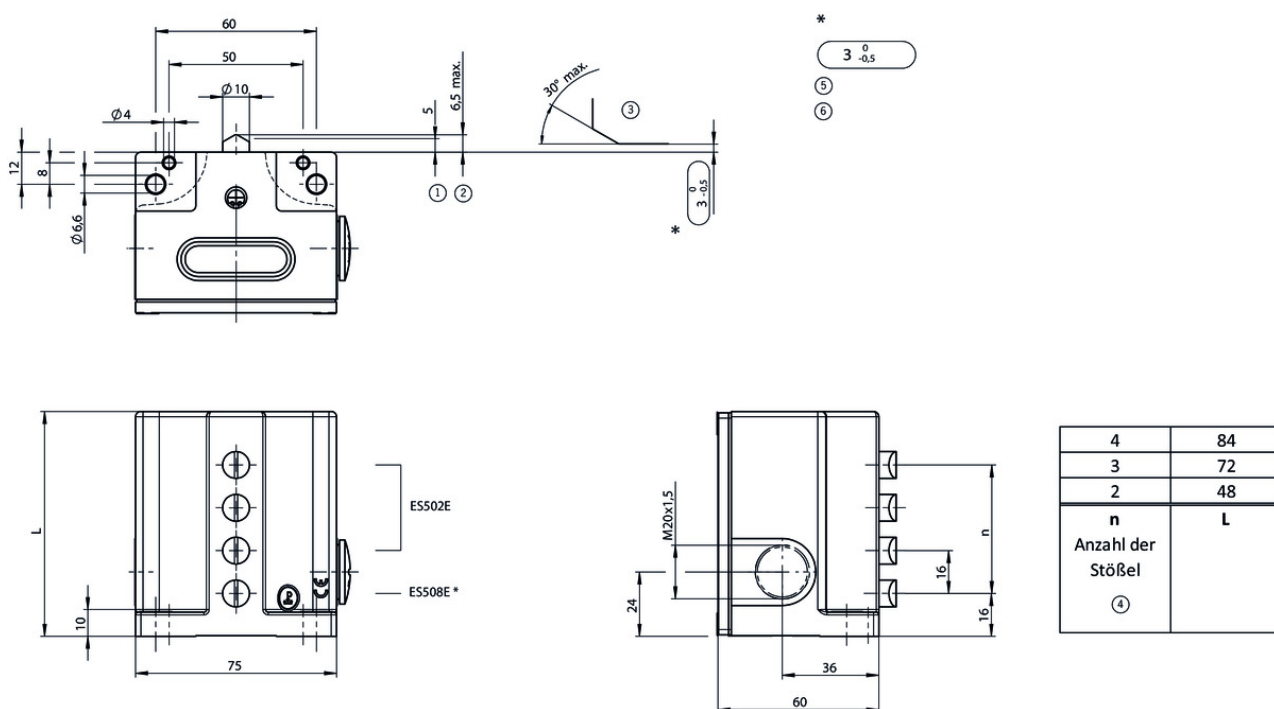
## Reliability values acc. to EN ISO 13849-1

B10D

20 x 10<sup>6</sup>

- [1, 5] Applies for station 1 with switching element ES508
- [2] Contact closing time < 4ms, contact bounce time < 3ms, applies from station 2 with switching element ES502E
- [3] Operating point accuracy ± 0.002. The reproducible switching point accuracy refers to the axial travel of the plunger after the switching element ES 502 E has been run-in with approx. 2000 operating cycles.
- [4, 6] Applies from station 2 with switching element ES502E
- [7] On upright multiple limit switches it is necessary to start with the safety station/s on the flange side. If several safety stations are to be fitted, these must be fitted directly one after the other.

### Dimension drawing



### Legende

- 1 Operating point
- 2 Free position
- 3 Dog
- 4 n Number of plungers
- \* Safety switching element ES 508E positively driven. Positive opening function is dependent on maintaining this distance.
- 5 Actuators (dogs) must be connected to the machine in a flush position.
- 6 Switch can be replaced only with the same type.

Switching element

# ES 502 E



