

Selection table for safety hinges ESH

Switching element	
Two contacts	1 NC ⊖ + 1 NO or
	2 NC ⊖



Switching element two contacts		Page
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Safety hinge ESH

- Hinge with integrated safety function
- Suitable for profile assembly

Plug connector M12
4-pin + PE



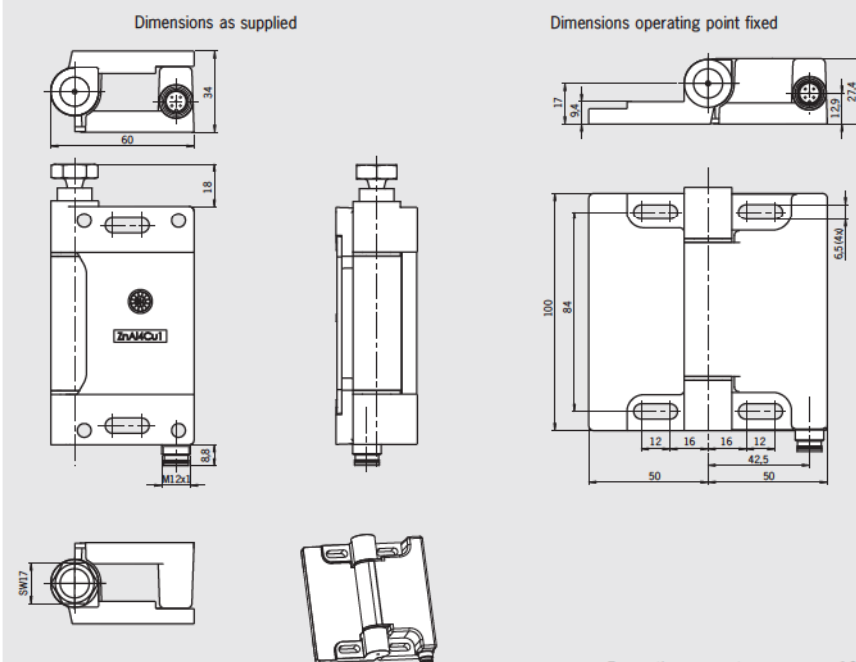
The safety hinges ESH are safety devices for monitoring movable safety guards, such as doors or covers on machinery or systems. Safety hinges comply with the regulations of EN 60947-5-1 Annex K and comply with the requirements of the employers' liability insurance associations for machines, installations and personnel protection. The safety switch signals that the safety guard is closed. The switch does not perform guard locking!

Important: During mounting the axes of the hinges used must be exactly aligned.

Switching elements

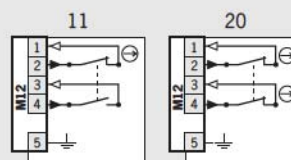
- **20** Snap-action switching element
2 NC ⊖
- **11** Snap-action switching element
1 NC ⊖ + 1 NO

Dimension drawing



For mating connectors see page 124

Wiring diagrams



Ordering table

Designation	Switching element	Version	Order No.
Safety hinge ESH-PRO	11 1 NC ⊖ + 1 NO	Plug connector M12	095 895 ESH-PRO-11A-1205
	20 2 NC ⊖	Plug connector M12	095 894 ESH-PRO-20A-1205
	-	Plain hinge	096 007 ESH-PRO

Safety switch ESH



The technical data on switches and switching elements apply to all connections. Further technical data are given for the connection selected.

Switch

Parameter	Value	Unit
Housing material	Die-cast zinc	
Ambient temperature	- 25 ... + 70	°C
Weight	Approx. 0.77	kg
Pivoting angle	- 10 ... 180	°
Max. load as per mechanical life test acc. to EN 1935	Grade 12 (100 kg door weight)	

Switching element

Parameter	Value	Unit
Switching principle	Snap-action switching element	
Switching element with 2 switching elements	20 2 NC \rightarrow	11 1 NC \rightarrow + 1 NO
Mechanical life	1 x 10 ⁶ operating cycles	
Operating point	4° from fixing point	
Positively driven	Approx. 10° from fixing point	
Actuation frequency	max. 1200/h	
Degree of contamination (external, according to EN 60947)	3 (industrial)	
Min. switching current at 24 V DC	1	mA
Rated impulse withstand voltage U _{imp}	2.5	kV
Contact material	Silver alloy	

Connection, plug connector M12



Parameter	Value	Unit
Connection	Plug connector	
Version	M12 (4-pin + PE)	
Degree of protection according to IEC 60529	IP 67 ¹⁾	
Rated insulation voltage U _i	60	V AC/DC
Conventional thermal current I _n	3	A
Short circuit protection according to IEC 60269-1 (control circuit fuse)	2	A gG
Utilization category to IEC 60947-5-1	AC-15 DC-13	
	I _e 1.5 A U _e 30 V I _e 2 A U _e 24 V	

1) Screwed tight with the related plug connector (see page 124)