

Selection table for safety hinge ESH

Switching element	
Two contacts	1 NC ⊖ + 1 NO or 2 NC ⊖
	
Switching element	Page
Two contacts	
●	114



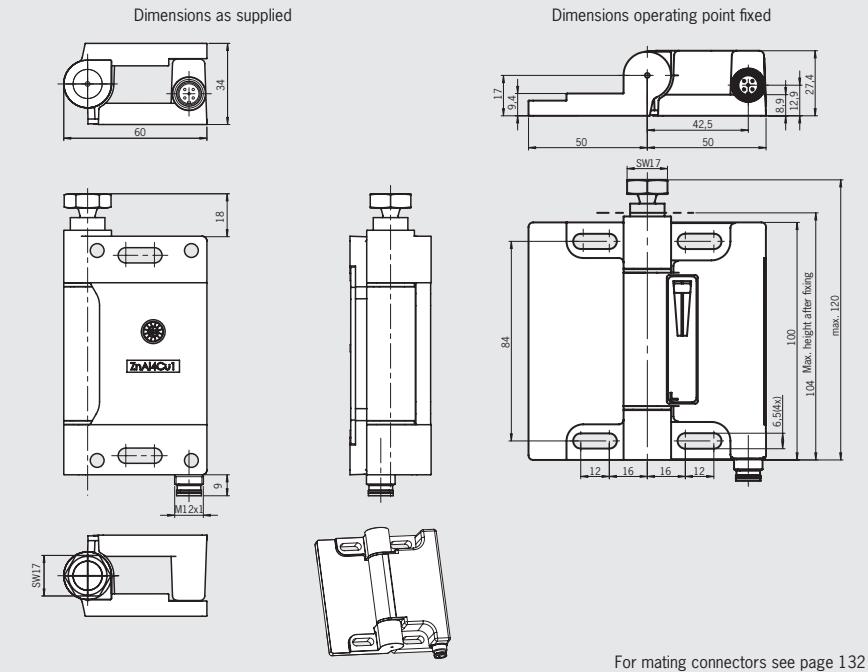
Hinge ESH

- Hinge with integrated safety function
- Suitable for profile assembly



Plug connector M12 4-pin + PE

Dimension drawing



For mating connectors see page 132

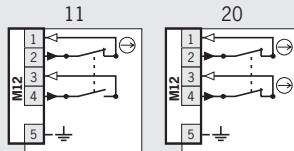
The safety hinges ESH are safety devices for monitoring movable safety guards, such as doors or covers on machinery or systems. On the safety hinges ESH-ARO... the operating point can be adjusted as often as necessary.

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

Switching elements

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

Wiring diagrams

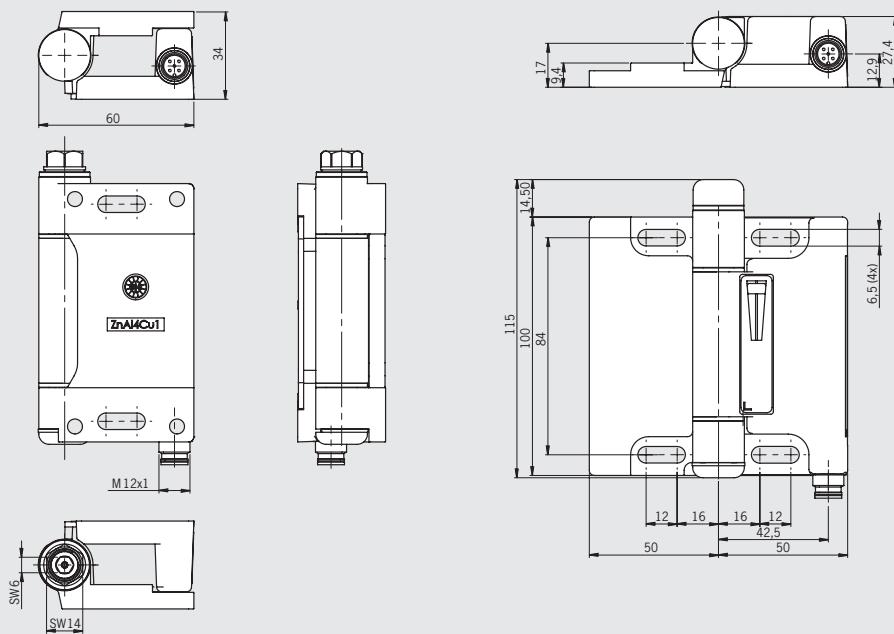


Ordering table

Series	Switching element	Version	Order no./item
Safety hinge ESH-PRO	11 1 NC ⊖ + 1 NO	Plug connector M12	095895 ESH-PRO-11A-1205
	20 2 NC ⊖	Plug connector M12	095894 ESH-PRO-20A-1205
	-	Matching hinge (without safety function)	096007 ESH-PRO

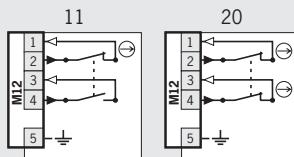
Plug connector M12 4-pin + PE

Dimension drawing



For mating connectors see page 132

Wiring diagrams



Ordering table

Series	Switching element	Version	Order no./item
Safety hinge ESH-ARO	11 1 NC \ominus + 1 NO	Plug connector M12	109409 ESHARO-11A-1205
	20 2 NC \ominus	Plug connector M12	106548 ESH-ARO-20A-1205
	-	Matching hinge (without safety function)	096007 ESH-PRO
	-	Replacement protective cap	110443 INSTALLATION KIT CAP

Safety hinge ESH



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

Reliability values acc. to EN ISO 13849-1

Parameter	Value	Unit
B10d	2 x 10 ⁶ operating cycles	

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)	m/min

Switching element

Parameter	Value	Unit
Switching principle	Slow-action switching contact	
Switching element with 2 switching contacts	20 2 NC ⊖ 11 1 NC ⊖ + 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 SVM 5 (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 _{th}	3	A
Short circuit protection acc. to IEC 60269-1 (control circuit fuse)	2	A gG
Utilization category according to IEC 60947-5-1	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