

Hinges with safety switch

Zinc die casting

SPECIFICATION

Types

- Type **A**: Connector plug at the top
- Type **AK**: Cable at the top
- Type **B**: Connector plug from the bottom
- Type **BK**: Cable from the bottom
- Type **C**: Connector plug on the backside, with 0.2 m cable
- Type **CK**: Cable from the back

Zinc die casting
plastic coated
silver metallic

Pin
Stainless Steel AISI 303

INFORMATION

Hinges GN 139.1 with integrated safety switches have been designed for monitoring doors and covers of machines and plants. Opening the door will activate the switch contacts which, in turn, will then e.g. interrupt a protective circuit via break contact (NC) and at the same time signal the door opening by closing a normally open contact element (NO).

The contact blocks are fitted with positive opening slow-action contacts, i.e. they will definitely be separated when activated and have no hysteresis. The angle at which the switching points are reached are adjustable (see contact travel diagram).

Together with the integrated contact blocks, the hinges are a compact, easy to mount unit with an attractive design. The mounting from the back make the hinge more tamper-proof.

ON REQUEST

- Hinges with operation angle $> 0^\circ$
- Hinges with other contact terminations



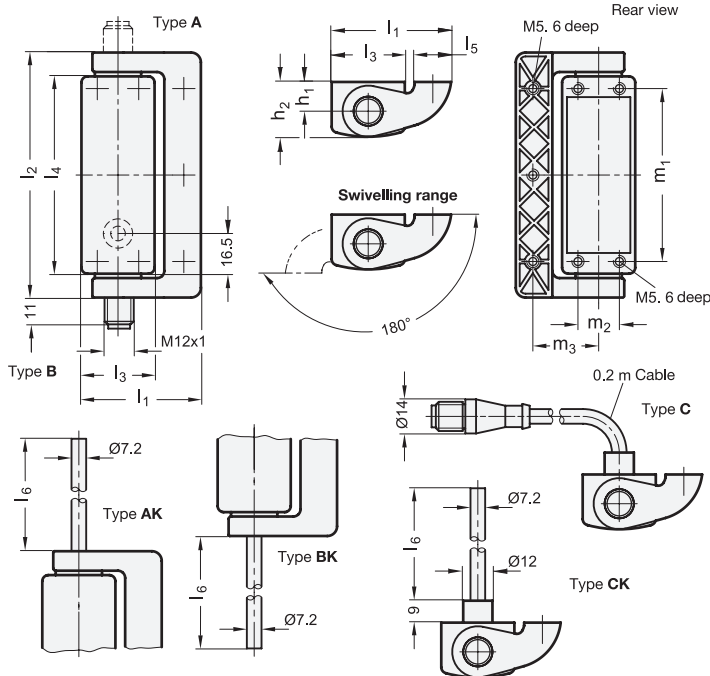
ACCESSORIES

Cable with connection coupling
8-pole, 5 or 10 meters long:

- Cables with connector coupling GN 330-M12x1-8-G-5 (see page 1448)
- Cables with connector coupling GN 330-M12x1-8-G-10 (see page 1448)
- Mounting plates, flat GN 139.3 (see page 1444)
- Mounting plates, angled GN 139.4 (see page 1444)

TECHNICAL INFORMATION

- Load rating information of hinges (see page A40)





Hinges and accessories **12**

GN 139.1

Description	l1	l2	l3	l4	l5	l6 in m	h1	h2	m1	m2	m3	⚖
GN 139.1-49-101-A	49	101	30	81	15	-	12	22.5	71	17	27	325
GN 139.1-79-101-A	79	101	30	81	30	-	12	22.5	71	17	50	425
GN 139.1-49-101-AK-2	49	101	30	81	15	2	12	22.5	71	17	27	511
GN 139.1-79-101-AK-2	79	101	30	81	30	2	12	22.5	71	17	50	612
GN 139.1-49-101-AK-5	49	101	30	81	15	5	12	22.5	71	17	27	729
GN 139.1-79-101-AK-5	79	101	30	81	30	5	12	22.5	71	17	50	829
GN 139.1-49-101-B	49	101	30	81	15	-	12	22.5	71	17	27	325
GN 139.1-79-101-B	79	101	30	81	30	-	12	22.5	71	17	50	427
GN 139.1-49-101-BK-2	49	101	30	81	15	2	12	22.5	71	17	27	512
GN 139.1-79-101-BK-2	79	101	30	81	30	2	12	22.5	71	17	50	612
GN 139.1-49-101-BK-5	49	101	30	81	15	5	12	22.5	71	17	27	729
GN 139.1-79-101-BK-5	79	101	30	81	30	5	12	22.5	71	17	50	828
GN 139.1-49-101-C	49	101	30	81	15	-	12	22.5	71	17	27	364
GN 139.1-79-101-C	79	101	30	81	30	-	12	22.5	71	17	50	457
GN 139.1-49-101-CK-2	49	101	30	81	15	2	12	22.5	71	17	27	519
GN 139.1-79-101-CK-2	79	101	30	81	30	2	12	22.5	71	17	50	618
GN 139.1-49-101-CK-5	49	101	30	81	15	5	12	22.5	71	17	27	742
GN 139.1-79-101-CK-5	79	101	30	81	30	5	12	22.5	71	17	50	843



Mechanical features				
Maximum load Information with safety factor	Load direction			
Examples of calculation	l1 = 49	1500 N	1000 N	1000 N
	l1 = 79	750 N	500 N	500 N
Fixing	from the back, 7 x threads M5, 6 mm deep			
Recommended torque	5 Nm (Screws M5)			
Protection class	IP67 / IP69K (Mind the cable conduit!)		acc. to EN 60529	
Switching principle, contact opening	Slow-action contacts, force-fitted, with positive opening		acc. to IEC 60947-5-1, K	
Contact material	Silver alloy			
Operating travel diagram (scheme)	The switching points are adjustable up to 4° in direction of 0°.			
Maximum operating frequency	600 operating cycles / hour	acc. to IEC 60947-5-1, one operating cycle includes one opening / one closing action		
Mechanical life span	10 ⁶ operating cycles	acc. to IEC 60947-5-1, one operating cycle includes one opening / one closing action		
Actuating speed	min. 2° / second, max. 90° / second		acc. to IEC 60947-5-1, one operating cycle includes one opening / one closing action	

Electrical features / Safety features		
Utilization category	AC 15: 24 Vac / 2A / DC 13: 24 Vdc / 2A (connector plug), AC 15: 250 Vac / 4A / DC 13: 250 Vdc / 0,3 A (cable)	acc. to EN 60947-5-1
Contacts, termination	8-pole connector M12 or cable with 2 m or 5 m length	
Pin and cable assignment	 1 - green-yellow 3 - black 5 - red 7 - brown 4 - black-white 6 - red-white 8 - blue	
Type of cable	Type N 7 x0.5 mm ² , jacket PVC H05VV-F	acc. to IEC 60332-1-2 et seqq.
Short-circuit current	1000 A	acc. to EN 60947-5-1
Rated insulation voltage	30 V AC / 36 V DC (connector plug) / 250 Vac (cable)	
Short-circuit protection	2 A, 500 V, Typ gG (connector plug) / 6 A, 500 V, Typ gG (cable)	
Ambient temperature	- 25 °C up to + 80 °C	
Degree of pollution, external	3	acc. to EN 60947-5-1
Mission time (T_M)	20 years	acc. to EN ISO 13849-1
Number of cycles (B10 d)	5 000 000	acc. to EN 61820-2

Approvals, Conformities, Applicability		
Low-voltage switchgear and controlgear CE declaration IMQ: CA02.03746 UL: E 131787	 	EN 60947-1/2007 EN 60947-1-5 : 2004 + A1/2009
Safety applications	up to SIL 3 / PL e	acc. to EN ISO 13849-1

Other important details and hints are given in the operating instruction for GN 139.1 which is included with every delivery and which is also available as PDF download from „www.elesa-ganter.com“ under „Downloads“.

The hinges with safety switch must be mounted and commissioned by qualified technical personnel in compliance with the details given in the operating instruction and with the national and international rules and regulations and the applicable standards. Elesa+Ganter will assume no statutory liability for missing or incorrect information and for any consequences arising therefrom.