

GN 139.1

Hinges with safety switch



Material

Zinc alloy die-cast, silver metallic epoxy resin coating.

Pin

AISI 303 stainless steel.

Assembly

- Type **A**: Connector plug at the top.
- Type **B**: Connector plug from the bottom.
- Type **C**: Connector plug on the backside, with 0,2 m cable.



Accessories on request

- Hinges without safety switch GN 139.2 in the same design for uniform appearance [see page 605].
- Cables with connector coupling 8-pin, 5 and/or 10 meter long: GN 330-M12x1-8-G-5 and GN 330-M12x1-8-G-10 [see page 206].
- Mounting plates GN 139.3 / GN 139.4 [see page 606 and 607].

Features and applications

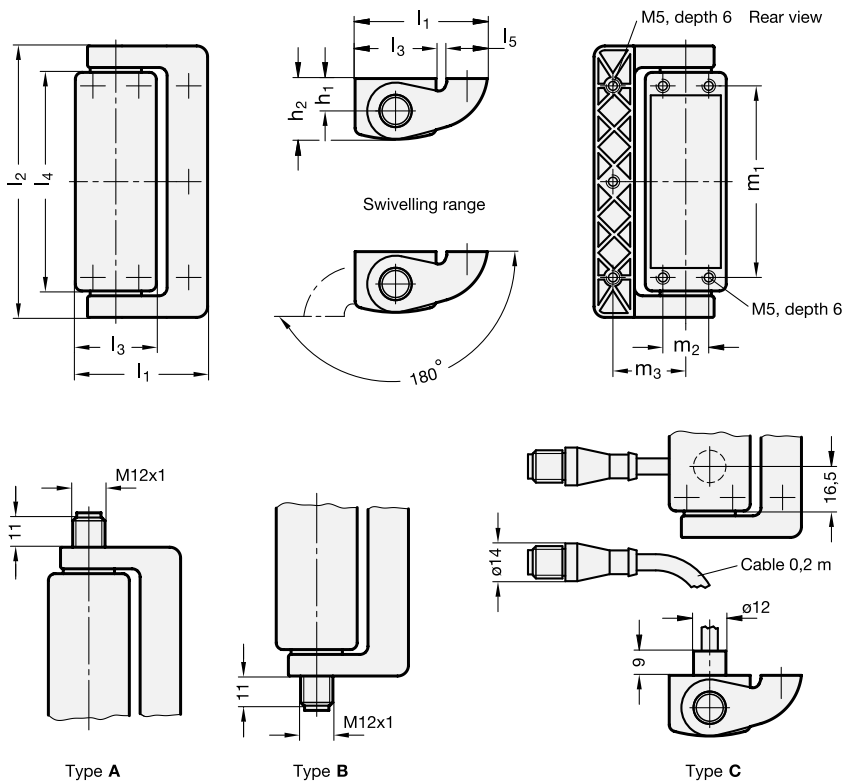
Hinges GN 139.1 with integrated safety switches have been designed for monitoring doors and covers of machines and plants. Opening the door will activate the switch contacts which, in turn, will then e.g. interrupt a protective circuit via break contact (NC) and at the same time signal the door opening 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.

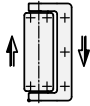
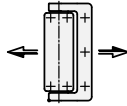

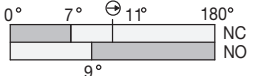
Special execution on request

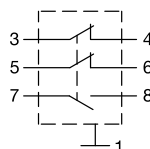
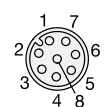
(For sufficient quantities)


- Hinges with operating angle 0°.
- Hinges with other contact loadings.



Standard Elements	Main dimensions										△△
	l ₁	l ₂	l ₃	l ₄	l ₅	h ₁	h ₂	m ₁	m ₂	m ₃	
GN 139.1-49-101-A	49	101	30	81	15	12	22.5	71	17	27	325
GN 139.1-49-101-B	49	101	30	81	15	12	22.5	71	17	27	325
GN 139.1-49-101-C	49	101	30	81	15	12	22.5	71	17	27	364
GN 139.1-79-101-A	79	101	30	81	30	12	22.5	71	17	50	425
GN 139.1-79-101-B	79	101	30	81	30	12	22.5	71	17	50	427
GN 139.1-79-101-C	79	101	30	81	30	12	22.5	71	17	50	427

Mechanical features				
Maximum load Information with safety factor Examples of calculation => see operating instruction		L_A 	L_{R0} 	L_{R90} 
	$l_1 = 49$	1500 N	1000 N	1000 N
	$l_1 = 79$	750 N	500 N	500 N
Fixing	from the back, 7 x threads M5, 6 deep			
Recommended torque	5 Nm (Screws M5)			
Protection class	IP67 (Type A / B, connector on the housing) IP69K (Type C with connector cable)	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 Ag 999			
Operating travel diagram (scheme)	The switching points are adjustable up to 4° in direction of 0°. see operating instruction			
Maximum operating frequency	1200 / hour	acc. to IEC 60947-5-1		
Mechanical life span	10 ⁶ operating cycles	acc. to EN 60947-5-1		
Actuating speed	min. 2° / second, max. 90° / second			

Electrical features / Safety features		
Utilization category	DC 13: 24 Vdc / 2 A (with connector plug) AC 15: 24 Vac / 2 A	acc. to EN 60947-5-1
Contact termination 8-pole connector M12 or cable with 2 m or 5 m length Pin and cable assignment	 	
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	
Short-circuit protection	2 A, 500 V, Type gG	
Ambient temperature	- 25 °C up to + 80 °C	
Degree of pollution, external	3	acc. to EN 60947-5-1
Mission time (TM)	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 instructions for GN 139.1 hinges which are included with every hinge and which are also available as PDF at "www.elesa-ganter-griff.com" in "Instruction manuals".

The hinges with safety switch must be mounted and commissioned by qualified technical personnel in compliance with the details given in the operating instructions 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.



Hinges with safety switch GN 139.1 (see page 602)
Hinges without safety switch GN 139.2 (see page 605)
Mounting plate GN 139.3 (see page 606)
Mounting plate GN 139.4 (see page 607)