

- 3 Type**
- A** Connector plug at the top
  - B** Connector plug from the bottom
  - C** Connector plug at the back, (with 0,2 m cable)
  - AK** Connector cable at the top
  - BK** Connector cable from the bottom
  - CK** Connector cable at the back

1		2				4								
$l_1$		$l_2$	$l_3$	$l_4$	$l_5$		$l_6$	$h_1$	$h_2$	$m_1$	$m_2$	$m_3$		
small hinge wing	broad hinge wing				small hinge wing	broad hinge wing	Cable length in meter Type AK / BK / CK					small hinge wing	broad hinge wing	
49	79	101	30	81	15	30	2 5	12	22,5	71	17	27	50	

**Specification**

- Zinc die casting plastic coated silver metallic
- Pin Stainless Steel AISI 303
- **RoHS compliant**

**Accessories**

- Cable with connection coupling 8-pin, 5 and/or 10 meter long:
  - GN 330-M12x1-8-G-5
  - GN 330-M12x1-8-G-10
- Mounting plates GN 139.3 / GN 139.4

**On request**

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

**Information**

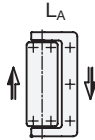
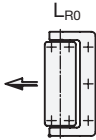

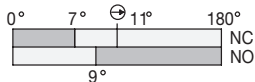
Hinges GN 139.1 with integrated safety switches have been designed for monitoring doors and covers of machines and plants. Opening the door will activate the switch contacts which, in turn, will then e.g. interrupt a protective circuit via break contact (NC) and at the same time signal the door opening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

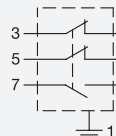
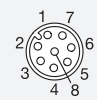
Together with the integrated contact blocks, the hinges are a compact, easy to mount unit with an attractive design. The mounting from the back make the hinge more tamper-proof.

Hinges **GN 139.2** without switching function act as additional hinges e.g. for larger doors or gates where several hinges are required.

<b>Hinge with safety switch</b>		1	$l_1$
		2	$l_2$
<b>GN 139.1-49-101-AK-5</b>		3	<b>Type</b>
		4	$l_6$

<b>Hinge without safety switch</b>		1	$l_1$
<b>GN 139.2-79-101</b>		2	$l_2$

Mechanical features			
<b>Maximum load</b> Information with safety factor  Examples of calculation → see operating instruction	Load direction		
			
	$I_1 = 49$	1500 N	1000 N
	$I_1 = 79$	750 N	500 N
<b>Fixing</b>	from the back, 7 x threads M5, 6 mm deep		
<b>Recommended torque</b>	5 Nm (Screws M5)		
<b>Protection class</b>	IP67 / IP69K (Mind the cable conduit!)	acc. to EN 60529	
<b>Switching principle, contact opening</b>	Slow-action contacts force-fitted, with positive opening	acc. to IEC 60947-5-1, K	
<b>Contact material</b>	Silver alloy		
<b>Operating travel diagram (scheme)</b>	The switching points are adjustable up to 4° in direction of 0°. see operating instruction		
<b>Maximum operating frequency</b>	600 operating cycles / hour	acc. to IEC 60947-5-1,	
<b>Mechanical life span</b>	10 <sup>6</sup> operating cycles	one operating cycle	
<b>Actuating speed</b>	min. 2° / second, max. 90° / second	includes one opening / closing action	

Electrical features / Safety features			
<b>Utilization category</b>	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	
<b>Contacts, termination</b> 8-pole connector M12 or cable with 2 m or 5 m length			
<b>Pin and cable assignment</b>		1 - green-yellow 3 - black      4 - black-white 5 - red        6 - red-white 7 - brown      8 - blue	
<b>Type of cable</b>	Type N 7 x0,5 mm <sup>2</sup> , jacket PVC H05VV-F	acc. to IEC 60332-1-2 et seqq.	
<b>Short-circuit current</b>	1000 A	acc. to EN 60947-5-1	
<b>Rated insulation voltage</b>	30 V AC / 36 V DC (connector plug) / 250 Vac (cable)		
<b>Short-circuit protection</b>	2 A, 500 V, Typ gG (connector plug) / 6 A, 500 V, Typ gG (cable)		
<b>Ambient temperature</b>	- 25 °C up to + 80 °C		
<b>Degree of pollution, external</b>	3	acc. to EN 60947-5-1	
<b>Mission time (T<sub>M</sub>)</b>	20 years	acc. to EN ISO 13849-1	
<b>Number of cycles (B10 d)</b>	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
<b>Safety applications</b>	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 hinges which are included with every hinge and which are also available as PDF downloads from „www.ganter-griff.com“ under „Service“.

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. Otto Ganter GmbH & Co. KG will assume no statutory liability for missing or incorrect information and for any consequences arising therefrom.