

3 Identification no.

- 1 Contact block with 2NC / 2NO
- 2 Contact block with 3NC / 1NO

4 Type

- AS** Connector plug at the top
- BS** Connector plug from the bottom
- CS** Connector from the back
- CSK** Connector from the back (with 0,2 m cable)
- AK** Cable at the top
- BK** Cable from the bottom
- CK** Cable from the back

1		2						5						
l_1	l_2	GN 239.6	GN 239.7	h_1	h_2	h_3	GN 239.6	GN 239.7	l_3	Cable length in meter Type AK / BK / CK	m_1	m_2	GN 239.6	GN 239.7
60	-	-	70	25	15	-	-	15	-	-	42	-	-	50
60 +1	110	110	110	25	15	12	12	15	2	5	42	91	91	91

Specification

- **Housing**
Plastic (Polyamide PA-HP)
- Glass fiber reinforced
- Black, matte finish
- Temperature resistant up to 80 °C (GN 239.6)
- Temperature resistant up to 100 °C (GN 239.7)
- **Pin and mounting bushings**
Plastic (Polyamide PA)
- Glass fiber reinforced
- Black, matte finish
- Temperature resistant up to 80 °C (GN 239.6)
- Temperature resistant up to 100 °C (GN 239.7)
- **Plastic Characteristics** → Page 2158
- **RoHS**

Accessory

- Cable with Connector Coupling → Page 1412
8-pole, 5 or 10 meter long:
- GN 330-M12x1-8-G-5
- GN 330-M12x1-8-G-10

On request

- Hinge with operation angle > 0°
- Hinge with other contact block
- Housing in gray, RAL 7040

Information

Hinges GN 239.6 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 operating travel diagram).

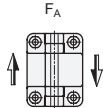
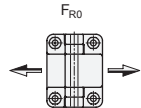
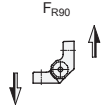
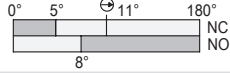
Together with the integrated contact blocks, the hinges are a compact, tamper-proof and easy to mount unit.

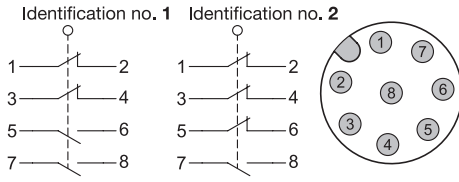
Operating instructions showing more important technical information are included with every hinge.

Hinges **GN 239.7** without switching function act as additional hinges e.g. for larger doors or gates where several hinges are required.

How to order (With switch)	1 l_1
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	5 l_3
GN 239.6-60-110-1-BK-2	

How to order (Without switch)	1 l_1
	2 l_2
GN 239.7-60-70	

Mechanical features				
Maximum load Information without safety factor	Load direction			
	Examples of calculation → see operating instruction	GN 239.6 GN 239.7	2100 N 4500 N	2800 N 7600 N
Fixing	from the front, with countersunk screws or socket cap screws, e.g. DIN 7991 / DIN 912 from the back, with hexagon head screws or nuts, e.g. DIN 933 / DIN 934			
Recommended torque	5 Nm (Screws and nuts M6)			
Protection class	IP67	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	600 operating cycles / hour	acc. to IEC 60947-5-1,		
Mechanical life span	10 ⁶ operating cycles	one operating cycle includes one opening and one closing action		
Actuating speed	min. 2° / second, max. 90° / second			

Electrical features			
Utilization category	acc. to IMQ	DC 13: 24 V DC / 2 A (connector plug) AC 15: 400 V AC / 4 A / DC 13: 250 V AC / 0,3 A (cable)	acc. to EN 60947-5-1 acc. to EN 60947-5-2
	acc. to UL	Plug - C 300 / Q 300: AC / DC Control signals 24 V / 2 A electrical circuit cat. 2 Cable - C 300: 240 V AC / 0,75 A / Q 300: 250 V DC / 0,27 A / therm. current 2,5 A	
Contact termination 8-pole connector M12 or cable with 2 m or 5 m length	Identification no. 1 Identification no. 2 		
Pin and cable assignment	1 - red 2 - pink 3 - brown 4 - gray 5 - yellow 6 - blue 7 - green 8 - white		
Type of cable	UL/CSA STYLE 2587 8X AWG 22		
Short-circuit current	1000 A	acc. to IQM	
Rated insulation voltage	30 V AC/DC (connector plug) and 400 AC (cable)		
Short-circuit protection	4 A, 500 V, Type gG		
Ambient temperature	- 20 °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)	2 000 000	acc. to EN 61820-2	

Approvals, Conformities, Applicability		
Low-voltage switchgear and controlgear CE declaration IMQ: CA02.04800 UL: E 360222	  	EN 60947-1/2007 EN 60947-1-5 : 2004 + A1/2009
Safety applications	bis SIL 3 / PL e	nach EN ISO 13849-1

Other important details and hints are given in the operating instructions for GN 239.6 hinges which are included with every hinge and which are also available as PDF downloads from „www.ganternorm.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.