

Hinges with safety switch

Stainless Steel

SPECIFICATION

Types

- Type **A**: Connector plug at the top
- Type **B**: Connector plug from the bottom
- Type **C**: Connector plug at the back (with 0.2 m cable)
- Type **CK**: Cable from the back

Stainless Steel precision casting

- AISI 316L
- polished, Ra < 0.8 µm

Pin

Stainless Steel AISI 316L

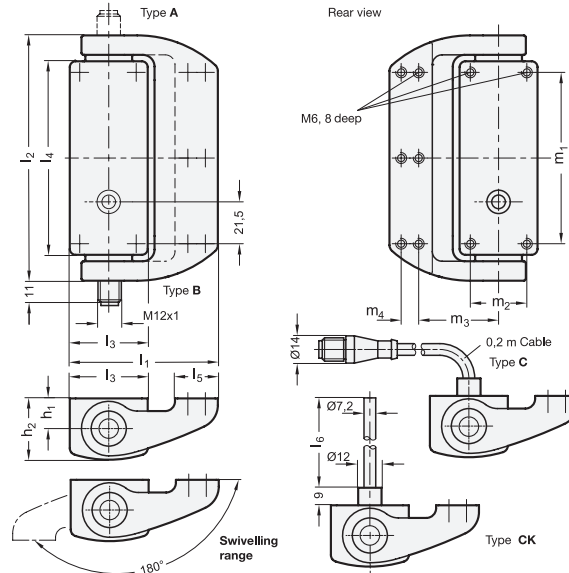
INFORMATION

Hinges GN 139.5 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.

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 139.6 (see page 1447) without switching function act as additional hinges, e.g. for larger doors or gates where several hinges are required.

TECHNICAL INFORMATION

- Stainless Steel characteristics (see page A26)
- Load rating information of hinges (see page A40)



GN 139.5

STAINLESS STEEL

| Description | l1 | l2 | l3 | l4 | l5 | l6 | l7 | l8 | m1 | m2 | m3 | m4 | △ |
|----------------------|----|-----|----|------|----|----|------|------|----|----|----|----|------|
| GN 139.5-76-126-A | 76 | 126 | 40 | 99.4 | 22 | - | 15.5 | 31.5 | 88 | 29 | 41 | 9 | 1055 |
| GN 139.5-76-126-B | 76 | 126 | 40 | 99.4 | 22 | - | 15.5 | 31.5 | 88 | 29 | 41 | 9 | 1058 |
| GN 139.5-76-126-C | 76 | 126 | 40 | 99.4 | 22 | - | 15.5 | 31.5 | 88 | 29 | 41 | 9 | 1100 |
| GN 139.5-76-126-CK-2 | 76 | 126 | 40 | 99.4 | 22 | 2 | 15.5 | 31.5 | 88 | 29 | 41 | 9 | 1034 |
| GN 139.5-76-126-CK-5 | 76 | 126 | 40 | 99.4 | 22 | 5 | 15.5 | 31.5 | 88 | 29 | 41 | 9 | 1283 |





| Mechanical features | | | |
|---|--|--|--------|
| Maximum load Information with safety factor | Load direction | | |
| Examples of calculation | F max. | 2000 N | 2000 N |
| Fixing | from the back, 10 x threads M6, 8 mm deep | | |
| Recommended torque | 10 Nm (Screws M6) | | |
| 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 2° in direction of 0°. | | |
| Maximum operating frequency | 600 operating cycles / hour | acc. to IEC 60947-5-1, one operating cycle includes one opening and one closing action | |
| Mechanical life span | 10 ⁶ operating cycles | acc. to IEC 60947-5-1, one operating cycle includes one opening and one closing action | |
| Actuating speed | min. 2° / second, max. 90° / second | acc. to IEC 60947-5-1, one operating cycle includes one opening and 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 9 wire cable with 2 m or 5 m length Pin and cable assignment | | <ul style="list-style-type: none"> 1 - black 3 - red 5 - brown 7 - purple PE - yellow-green (only type CK) | <ul style="list-style-type: none"> 2 - black-white 4 - red-white 6 - blue 8 - purple-white |
| Type of cable | 9x0,34 mm ² , PVC H05VV-F, black | acc. to IEC 60332-1 | |
| 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) / 3 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 | |
| Safety parameters | B10: 1 000 000, B10 d: 5 000 000, B10 / B10 d: 20% | acc. to EN ISO 13849-1 | |

| Approvals, Conformities, Applicability | | |
|--|--------------------|--|
| Low-voltage switchgear and controlgear CE declaration EAC and UL certified | | 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 139.5 which is included with every delivery and which is also available as PDF downloads from „www.elsa-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 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.