

Hinge safety switch

TESK



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Safe solutions for your industry

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Securing rotating protective equipment

In 1996 the Schmersal Group first presented a new type of safety switch that was designed to monitor the position of revolving mounted doors, protection flaps and protective covers: the Safety Hinge Switch. This allowed the monitoring of the protection equipment directly at the hinge.

This principle has proven to be successful because it offers decisive benefits.

- Optimal integration in the surrounding construction
- Minimal assembly effort, especially with the common aluminium profile systems
- Principally hardly any mechanical wear
- Considerable protection against manipulation
- Suitable for use with shuttle valves

Now with the TESK the fourth generation of hinged safety switches are available. The switching angle is freely adjustable over the whole working range. The user can select different contact variants with up to four contacts and between cable connection and plug connection. For use on transparent protection doors for example out of PC and PMMA there is a version with extended plug connection available. The appearance of the TESK is also completely convincing. Therefore the new hinged safety switch is the ideal solution for position monitoring of protection doors on design-oriented machines. A mounting tool provides quick alignment on doors and posts.

Fields of application

- Packing machines
- Printing and paper machines
- Tool machines and metal working industry
- Electrical industry
- Special machine construction
- Measurement technology, process engineering, testing and laboratory equipment
- Plastics processing machinery
- Enclosures / profile systems
- Food processing machinery



| Technical data | |
|----------------------------|---|
| Standards: | IEC 60947-5-1; EN ISO 13849-1; EN 1088; BG-GS-ET-15 |
| Enclosure: | Zinc diecast, enclosure cover self-extinguishing thermoplastic |
| Hinge bolt: | Galvanised steel / zinc die-cast C45 |
| Contact type: | Change-over contact with double break Zb |
| Switching system: | ⊖ IEC 60947-5-1; slow action, positive break NC contact |
| Connection: | Connector plug M12 or cable |
| Connector plug: | M12, 5 or 8 pin, A - coded |
| Switching angle: | 3° from the set zero point |
| Positive break angle: | 10° from the set zero point |
| Max. swivel angle: | 270° |
| Actuating speed: | max. 180° / 0.3 s |
| Mechanical life: | > 1 million operations |
| Ambient temperature: | -25 °C ... +65 °C |
| Protection class: | IP 65 to IEC/EN 60529 |
| Utilisation category: | AC-15, DC-13 |
| Ie/Ue: | 2 A / 230 VAC cable versions 1 A / 24 VDC cable and built-in connector versions |
| Ui: | 300 V cable versions 30 V M12 - plug 8 - pin (PELV corresponds to DIN EN 60204-1) 60 V M12 - plug 5 - pin |
| U _{imp} : | 2.5 kV cable versions 0.8 kV plug 5-pin |
| I _{the} : | 2.5 A |
| U _e max: | 230 V cable versions 30 V plug 8-pin 60 V plug 5-pin |
| Switching of low voltages: | 1 mA / 3VDC |
| Dimensions H x W x D: | TESK-S... 20 x 78 x 116 mm ; TESK-L... 20 x 98 x 116 mm |

Ordering code

Hinged safety switches

TESK-①②③④⑤

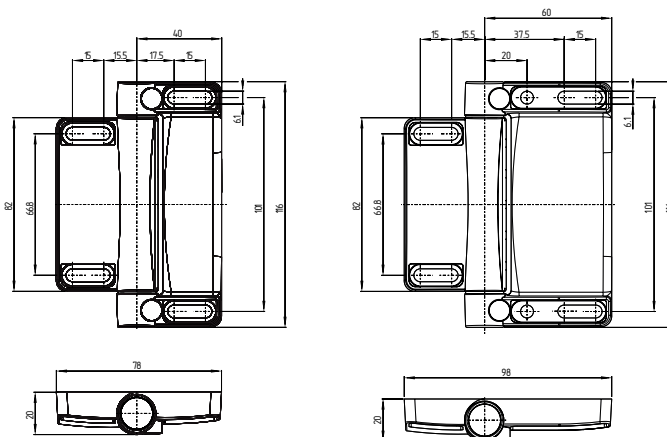
| No. | Option | Description |
|-----|--------|--|
| ① | S | Standard hinge |
| | L | Long hinge half |
| ② | A | preset for outside assembly |
| | I | preset for inside assembly |
| | U | freely adjustable switching angle |
| ③ | 02 | 2 NC contacts |
| | 11 | 1 NO contact / 1 NC contact |
| | 12 | 1 NO contact / 2 NC contacts |
| | 13 | 1 NO contact / 3 NC contacts |
| | 22 | 2 NC contacts / 2 NO contacts |
| ④ | L1 | Cable downwards |
| | L2 | Cable upwards |
| | ST1 | Connector plug bottom |
| | ST2 | Connector plug top |
| ⑤ | 3M | Cable length 3 meters (only L1 / L2) other cable lengths upon request |

Additional hinge

TESK-①

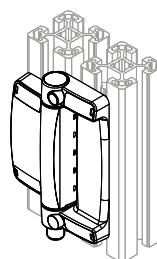
| No. | Option | Description |
|-----|--------|----------------------------------|
| ① | ZS | Standard additional hinge |
| | ZL | Additional hinge long hinge half |

Dimensional drawings

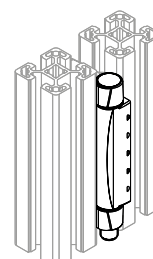


The additional hinges have the same appearance and the same dimensions

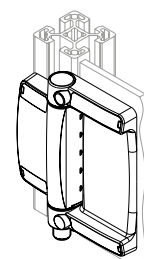
Mounting possibilities



Mounting:
Standard hinge
outdoor mounting



Mounting:
Standard hinge
indoor mounting



Mounting:
Long hinge half for plas-
tic and metal doors as
well as flaps for outdoor
assembly



The Schmersal Group

For many years the privately owned Schmersal Group has been developing and manufacturing products to enhance occupational safety. What started out with the development and manufacture of a very wide variety of mechanical and non-contact switchgear has now become the world's largest range of safety systems and solutions for the protection of man and machine. Over 1,500 employees in more than 50 countries around the world are developing safety technology solutions in close cooperation with our customers, thus contributing to a safer world.

Motivated by the vision of a safe working environment, the Schmersal Group's engineers are constantly working on the development of new devices and systems for every imaginable application and requirement of the different industries. New safety concepts require new solutions and it is necessary to integrate new detection principles and to discover new paths for the transmission and evaluation of the information provided by these principles. Furthermore, the set of ever more complex standards, regulations and directives relating to machinery safety also requires a change in thinking from the manufacturers and users of machines.

These are the challenges which the Schmersal Group, in partnership with machinery manufacturers, is tackling and will continue to tackle in the future.

Product ranges



Safe switching and monitoring

- Guard door monitoring safety switches
- Command devices with safety function
- Tactile safety devices
- Optoelectronic safety devices

Safe signal processing

- Safety monitoring modules
- Safety controllers
- Safety bus systems

Automation

- Position detection
- Command and signalling devices

Industries



- Elevators and escalators
- Packaging
- Food
- Machine tools
- Heavy industry

Services



- Application advice
- CE conformity assessment
- Risk assessment in accordance with the Machinery Directive
- Stop time measurements
- Training courses

Competences



- Machine safety
- Automation
- Explosion protection
- Hygienic design

Precautions have been taken to assure accuracy of the information in this catalogue. Typographic or pictorial errors that are brought to our attention will be corrected in subsequent issues.

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