

## Bimetallic switches

- switching points up to +200°C
- standard tolerance  $\pm 5$  K, ( $\pm 2,5$  K available)
- switching current up to 25 A
- vacuum-tight versions
- high response sensitivity
- special designs on request, also UL - approved



|                                       |   |
|---------------------------------------|---|
| <b>version:</b>                       | single, double or triple bimetallic switches, normally closed or normally open                    |
| <b>nominal switching temp. (NST):</b> | +60°C ... +200°C<br>special versions from 0°C to +450°C   |
| <b>resetting temperature:</b>         | $\geq 30^\circ\text{C} \pm 15$ K below NST  |
| <b>standard tolerances:</b>           | $\pm 5$ K for respective NST  |
| <b>nominal/ switching current:</b>    | 2.5 A / 6.3 or 10 A / 25 A  |
| <b>dielectric strength:</b>           | up to 2 kV with insulation cap  |
| <b>dimensions:</b>                    | e.g. $\varnothing$ 9.4 mm x 4.8 mm x 16 mm  |
| <b>supply line:</b>                   | e.g. single litzes, FEP- or PTFE-insulated  |
| <b>length:</b>                        | 300 mm (standard) other length on request   |
| <b>cross section:</b>                 | 0,25 mm <sup>2</sup> ... 0,75 mm <sup>2</sup>   |
| <b>designs:</b>                       | shrinking tube insulated, Mylar-, Mylar-Nomex cap, metal sleeve, screw-in housing, flange housing |

## Our expertise for your product

EPHYMESS GmbH is a competent solution partner of all manufacturers of electrical machines and drives. We consult, develop and produce for our customers individual sensor solutions for safety and control requirements. Our focus is on the following market segments: rail technology, renewable energy and the general industrial segment.

Since 1955 the mid-sized and family-owned company, located in Wiesbaden, manufactures high-quality sensor solutions for monitoring electric drives and machines. Our sensors are used by customers of the following sectors: industry and plant engineering, heavy equipment construction, traffic engineering, wind power stations, refrigeration engineering, air-conditioning technology as well as in the measurement and control technology or in laboratory and research facilities. The product portfolio contains platinum and nickel measuring resistors, thermocouples, PTC / NTC thermistors, KTY sensors, bimetallic switches electric band heaters as well as speed sensors and oil level gauges for use in rolling stock.

Intensive research and development as well as a highly developed quality management ensure our high product standards. EPHYMESS has numerous utility models and patents, IECEx and ATEX certifications, certifications acc. DIN EN ISO 9001, DIN EN ISO 14001 and ISO/TS 22163 (IRIS), TR certificates, Metrological Certificates and 1st Calibration as well as certifications according to UL/CSA (NEC500 / 505) CCC and INMETRO.

## Your contact at EPHYMESS GmbH

**Marketing & Sales**  
Peter Wanieck  
Telefon: +49 6122 9228-21  
peter.wanieck@ephymess.de

**Internet Address**  
[www.ephymess.de](http://www.ephymess.de)  
Berta-Cramer-Ring 1  
65205 Wiesbaden

**Phone** +49 6122 9228 -0  
**Fax** +49 6122 9228 -99  
**Mail** [info@ephymess.de](mailto:info@ephymess.de)



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# EPHYMESS

Bespoke sensor technology. Worldwide.

## Wind power sensors

for use in wind turbines, hydro power plants and renewable energies

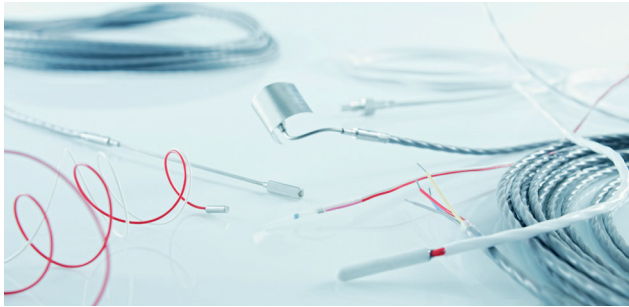


- ▶ for geared and direct drive on- and offshore systems
- ▶ kV- resistant versions up to 10 kV
- ▶ redundant versions with 4 ... 20 mA
- ▶ individual special solutions
- ▶ resistant to shock, pressure and vibration



## Cable resistance thermometers

- custom-made sensors
- kV- resistant versions up to 10 kV
- temperature range up to +400°C / +752°F
- for the use in hazardous areas
- special versions on request



|                             |  |
|-----------------------------|--|
| <b>version:</b>             | resistance thermometer insulated with shrinking tube or built in metal or ceramic sleeve   |
| <b>temperature range:</b>   | -60°C ... +260°C/-94°F ... 500°F   |
| <b>measuring resistant:</b> | Pt100, Pt500, Pt1000, 2x-Pt100   |
| <b>mode of connection:</b>  | 2, 3 and 4 wire circuit  |
| <b>measuring current:</b>   | recommended 0.3 to 1.0 mA, max. 25 mA  |
| <b>dielectric strength:</b> | from 0.5 kV / AC 50 Hz / 1min. (higher kV-resistance on demand)  |
| <b>dimensions, e.g.:</b>    | <ul style="list-style-type: none"> <li>∅ 3.0 x 15 mm</li> <li>∅ 3.2 x 40 mm</li> <li>∅ 4.9 x 30 mm</li> <li>∅ 6.0 x 60 mm</li> </ul> |
| <b>supply line:</b>         | e.g. single litzes, hose lines AWG30 to AW14, also screened versions   |
| <b>length:</b>              | according to customers specification   |
| <b>special design:</b>      | screw-in housing   |

## Screw-in resistance thermometers

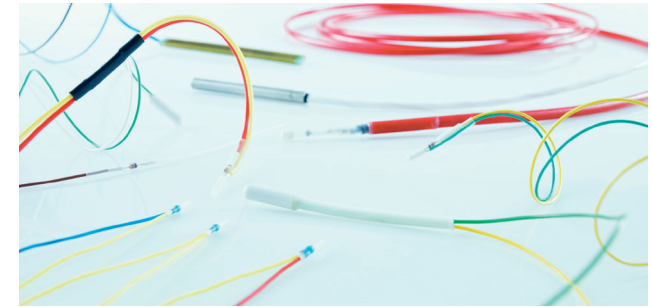
- versions with Pt measuring resistors, PTC thermistors or thermocouples
- either with fixed or adjustable process connection
- simple and quick installation with clamp screw connection
- mounting with adapter or flange
- version with spring-loaded immersion sheath on request
- optional with integrated head-mounted transmitter (4-20 mA)
- for use in hazardous areas



|                             |  |
|-----------------------------|--|
| <b>version:</b>             | screw-in housing and EM24 / EM38 head made of brass, aluminum or stainless steel, DIN connector head Type A / B / BUS / BUZ / MA, bayonet lock, industrial connector |
| <b>temperature range:</b>   | -60°C ... +400°C / -94°F ... +752°F  |
| <b>nominal resistance:</b>  | 100 Ω at 0°C   |
| <b>mode of connection:</b>  | 2-, 3- or 4-wire circuit or plug connector   |
| <b>measuring current:</b>   | recommended 0.3 to 1.0 mA max. 25 mA   |
| <b>dielectric strength:</b> | from 0.5 kV / AC 50 Hz / 1 min., shrinking tube on request   |
| <b>insulation:</b>          | e.g. single litzes, hose line AWG28 - AW20   |
| <b>supply line:</b>         | according to customers specification   |
| <b>length:</b>              | according to customers specification   |
| <b>special design:</b>      | dust- and waterproof versions (IP66)   |

## Thermistors (PTC resistors)

- high temperature stability
- custom-made versions
- with screw-in housing
- special designs on request
- for use in hazardous areas



|                                      |   |
|--------------------------------------|---|
| <b>version:</b>                      | single-, triple- thermistors, shrinking tube insulated, in metal or ceramic sleeve  |
| <b>operating temperature:</b>        | -25°C ... T <sub>NRT</sub> +23K   |
| <b>nominal response temp. (NRT):</b> | +60°C ... +190°C/140°F...374°F acc. DIN VDE V 0898-1-401  |
| <b>tolerance:</b>                    | ±5 K (up to. NRT 160°C) ±7 K (from NRT 170°C)   |
| <b>dielectric strength:</b>          | min. 0,5 kV / AC 50 Hz / 1min. insulated with shrinking tube, or stainless steel sleeve, with ceramic sleeve up to 5 kV depending on the design |
| <b>dimensions:</b>                   | e.g. single litzes, PTFE-insulated, AWG26/7 or screened hose line   |
| <b>supply line:</b>                  | 500 mm or 2000 mm (standard) or acc. to customer specification  |
| <b>length:</b>                       | 500 mm or 2000 mm (standard) or acc. to customer specification  |
| <b>special design:</b>               | dust- and waterproof versions (IP66), dielectric strength up to 10 kV, screw-in housing   |