



Your solution provider for inertial sensors

ASC GmbH, located near Munich, is one of the leading manufacturers of acceleration, gyroscopic and tilt sensors as well as IMUs (Inertial Measurement Units). From Germany to all over the world, we deliver our high-quality sensors. As an owner-managed, medium-sized high-tech company, ASC sees itself as your competent and innovative partner for your future sensor applications with proven, reliable and precise inertial sensors.

Safe and efficient rail traffic is only possible through continuous monitoring of trains and infrastructure. ASC's inertial sensors detect the most subtle changes in vehicles and structures, store the position of trains and ensure a high level of travel comfort. With the smart sensor systems ASC AiSys®, ASC is taking the next step in digitalization: Sensors not only record measured values and digitise them, they also process and analyse the measured data while still on site! This makes integration into digital twins, for instance, very easy, as only the required data needs to be transmitted either by cable or wirelessly. ASC AiSys® is thus the link between the real and the virtual world.

With the VibroTherm, a joint development of ASC GmbH together with EPHY-MESS GmbH, ASC demonstrates the flexible integrability and combinability of ASC AiSys® modules. In addition to the vibration measurement, the temperature is also recorded, digitised and transmitted via a common CAN bus. Data evaluation for both vibration measurement and temperature monitoring is carried out on the sensor.

Your contact at ASC GmbH

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Gesellschaft für Elektro-Physikalische Meßgeräte mbH



Your solution partner for temperature sensors

EPHY-MESS 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. EPHY-MESS has numerous utility models and patents, IECEx and ATEX certifications, certifications acc. DIN EN ISO 9001, DIN EN ISO 14001 and IRIS / ISO TS 22163 (International Railway Industry Standard), TR certificates, Metrological Certificate and the 1st Calibration as well as the certifications according to NEC500 / 505 and INMETRO.

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VibroTherm®

**A smart sensor combination
for detection of
vibration and temperature**



**A joint development of
ASC GmbH
and
EPHY-MESS GmbH**

VibroTherm® - Smart monitoring of vibration and temperature values

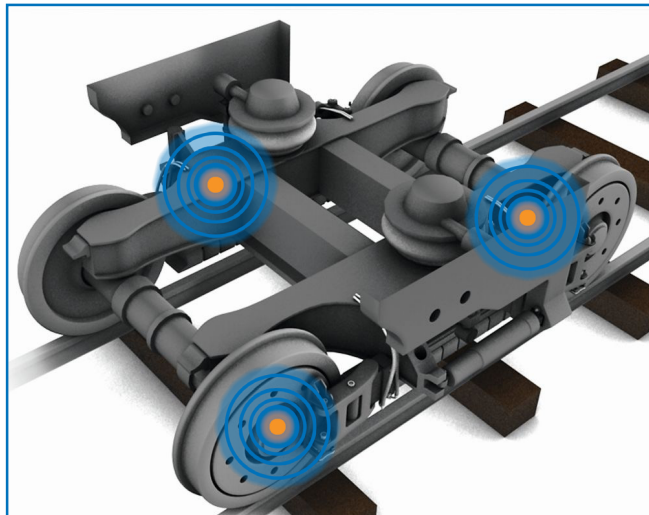
ASC AiSys® vibration measurement

- Different measuring ranges for acceleration measurement
- Frequency range from 0 ... 1,9 kHz (3 dB)
- Adjustable sample rates (up to 4 kHz)
- 20 Bit resolution
- Digital filters

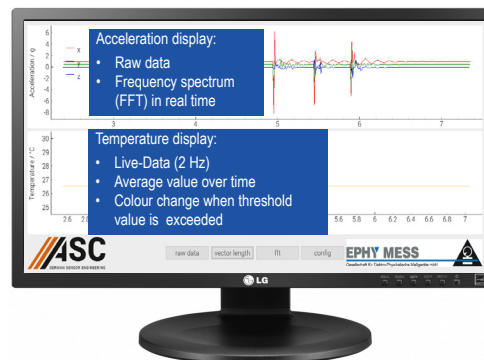
EPHY-MESS temperature measurement

- 1x or 2x Pt100 measuring resistors
- Measuring range -40 °C ... +125 °C
- Shock- & vibration resistant acc. DIN EN 61373 cat.3
- Protective sleeve Ø 5 mm ... 12 mm
- 2-, 3- or 4-wire circuit
- Cable protection made of corrugated plastic, metal or rubber fabric hoses
- Fire behaviour acc. DIN EN 45545

Applications



- **Wheel-set bearings**
- **Gears**
- **Traction motors**



Smart functions

- Evaluation algorithms in the sensor (e.g. Fast-Fourier-Transformation)
- Threshold monitoring of individual signals or evaluation results
- Alarm function
- CAN Bus

Configuration options

- Multiple configuration options for individual adaptation

Your advantages

- Halving of the installation effort
- Reduction of cabling due to CAN Bus
- Qualitative status message, e.g. threshold value exceeded
- Shock detection through local data processing in the sensor
- Frequency analysis