



MARINE APPLICATIONS

” Measuring Instruments
for Accuracy & Reliability
on High Seas



// CLEVER & SAFE
ON THE HIGH SEAS WITH
SIKA AT YOUR SIDE //

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How it all began

THE MACHINE THERMOMETER MAKES THE BEGINNING

SIKA has been a convincing inventor in the field of measurement instruments for the marine industry since 1939.

The original SIKA thermometer is recognized worldwide on ships and is the epitome of robustness and reliability.

Measuring instruments and calibration solutions for temperature, pressure and flow have also proven themselves on the market through decades of experience. This is why market leaders in the field of marine diesel engines rely on sensors from SIKA, for safe navigation on the high seas.



- Temperature and pressure calibrators from SIKA, which can be recalibrated anywhere – on land or at sea
- Sturdy devices with simple operation and precise results
- The safety standard by the DNV-GL, current tests for the EU-RO certification

- A worldwide network of distributors, for a contact person directly on-site
- A strong partner for clever solutions, who is always searching for optimizations –

just like SIKA

ORIGINAL SIKA THERMOMETER

Easy in construction, tested in harsh environments. SIKA industrial thermometers are the perfect partner for accurate temperature monitoring on-site:

- No external power, no electronic interference fields, no failures – **more safety**
- Minimized stress in the glass, for more stability – **extended durability**
- Measuring accuracy according to DIN 16195, also every instrument must pass a 100% test – **high quality standard**
- They reliably withstand even strong fluctuations in ambient temperature – **universally usable**
- No mechanically moving parts, no material fatigue. Thanks to their high-quality workmanship, they always remain accurate – **lifelong and guaranteed by SIKA**
- Available within a few days through SIKA and a connected distributor network – **fast availability**

So far over 15 million reliable guards of temperature have been produced in Kaufungen - that is quality „Made in Germany“.



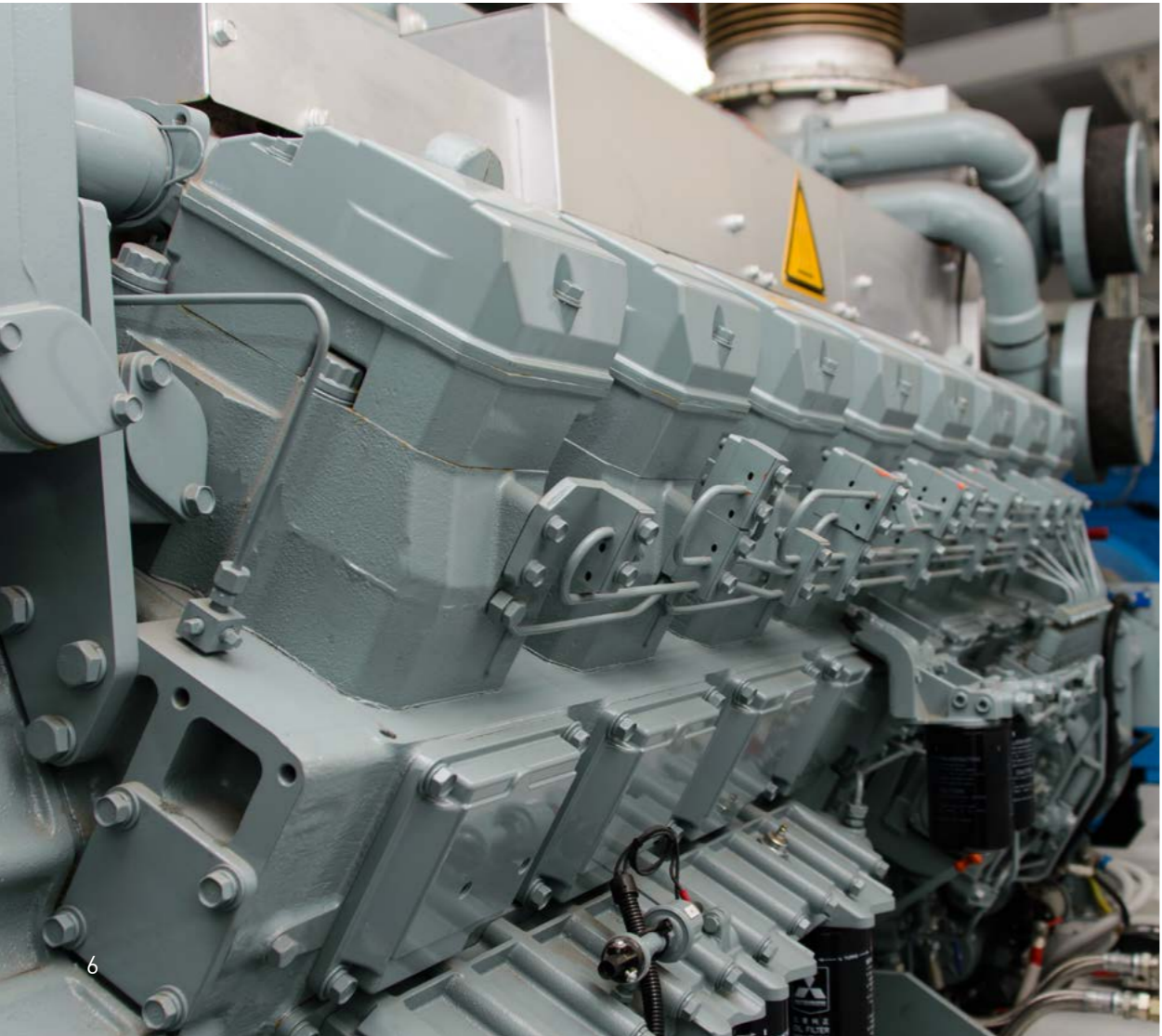
Sensors for Engine Room Applications

MORE THAN "JUST PRODUCTS" WE DELIVER SOLUTIONS

Products for the shipbuilding industry have to work reliably and precisely under rough conditions. Strong vibrations, shocks, high temperature fluctuations and the salty moist sea air put the products to the test on a daily basis. It is therefore particularly important to focus on high-quality and safe products.

WHY SIKA?

Monitoring the **exhaust gas and oil temperatures** as well as the **cooling water pipe** is a daily and above all an important part of the work on the ship. In order to prevent imminent damage, protect against failures and reduce high repair costs, SIKA develops proven products tailored to the special needs of the marine sector.



KOMBITEMP®

The proven functions of the machine thermometer combined with an electrical temperature sensor, for even better temperature monitoring:

- Temperature monitoring with two independent measuring systems – **high measuring reliability**
- One measuring point, two temperature measuring instruments – **low installation costs**

The perfect solution for large diesel engines:

The dial thermometer KombiTemp® type K 8312 combines the advantages of a dial thermometer with an electrical temperature sensor at only one measuring point.

DIAL THERMOMETERS

Can be used anywhere where a higher temperature range is required or a longer distance between measuring point and thermometer has to be covered – SIKA dial thermometers, dial remote-reading thermometers and bi-metal dial thermometers:

- Optional housing liquid, for vibration-free installation – **long service life**
- Withstands strong vibrations and temperature fluctuations – **always precise products**
- Increased safety, as no external energy is required – **no failures**
- Insensitive to environmental influences thanks to crimped-on ring and protection class IP65 – **permanently leak-proof**
- A wide range of possible combinations, for almost any application – **clever solution**
- All thermometer versions comply with DIN EN 13190, Class 1 – **tested and proven**

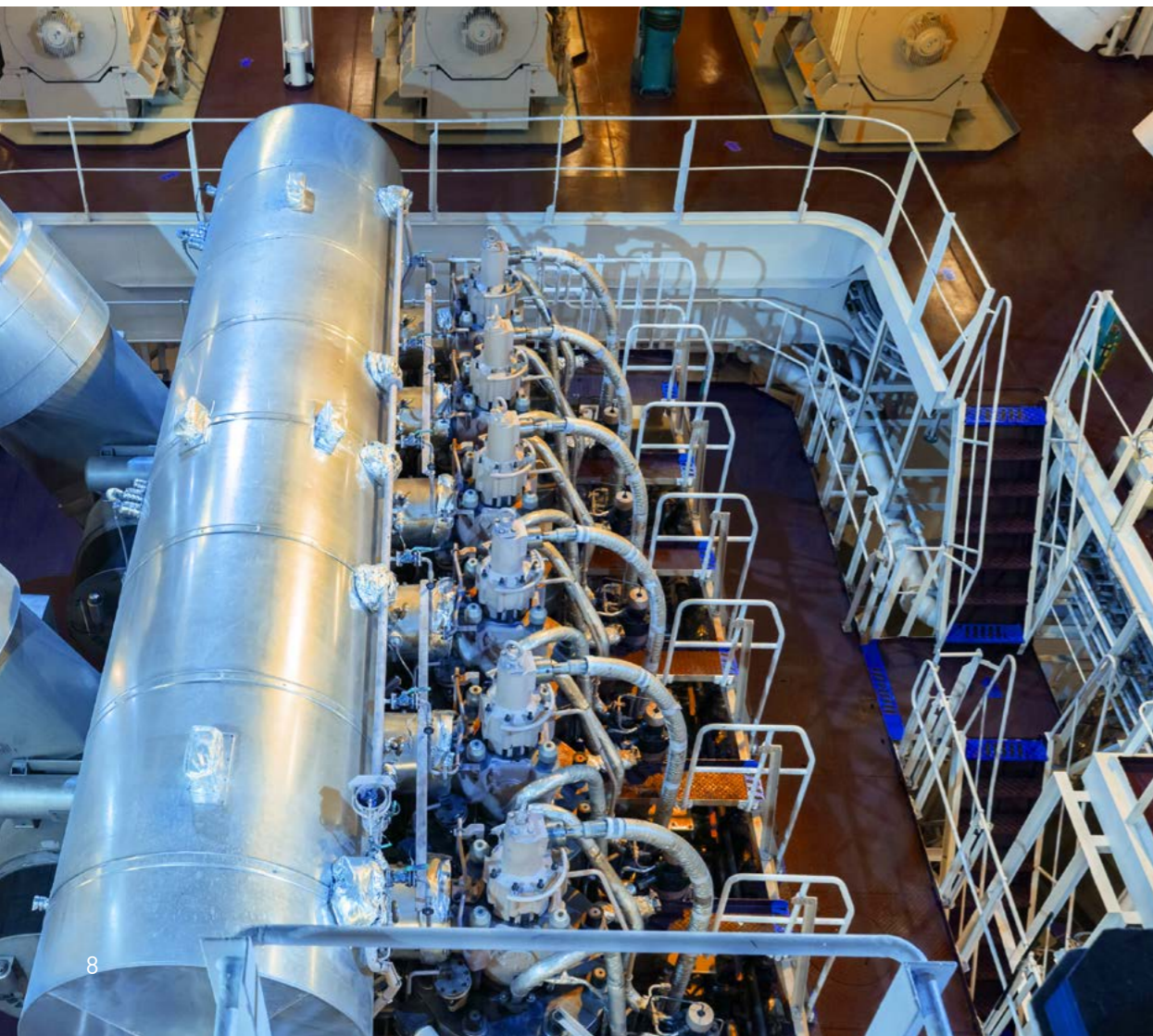


Sensors for Engine Room Applications

TEMPERATURE SENSORS

Precise despite extreme ambient conditions – SIKA temperature sensors for measuring exhaust gas-, oil- or water temperatures:

- Many fields of application thanks to a wide variety of designs – **adapted to the application**
- Sturdy design and reliable production – **long service life**
- Test during and after production by SIKA – **guaranteed quality**
- Certified to DNV-GL, ABS, ClassNK Nippon, BV, RINA type approval – **for your safety**
- Redundant, due to 2 x Pt1000 – **maximum fail safety**



DIGITAL THERMOMETER SOLARTEMP 851

Works reliably, even with low lighting from 80 lux: SIKA SolarTemp with integrated solar modules as power supply for monitoring the exhaust gas temperature:

- Resistant to electromagnetic interference – **EMC shielding for disturbance-free operation**
- Supply via integrated solar cell – **No cabling or battery change necessary**
- Two separate measuring circuits and continuous self-test – **highest operational safety**
- High IP protection class – **protected against foreign bodies and moisture**
- Optional integrated transmitter in the on-site display – **simple integration into a distributed control system**
- Loop supply
- **With EU-R0 approval (pending)**



Sensors for Engine Room Applications

ROOM CONDITION MONITOR RCM 880

The RCM 880 room condition monitor enables simultaneous monitoring of humidity, temperature and pressure in the machine room.

- Multi sensor system – **Simultaneous measuring of humidity, temperature and pressure at one measuring point**
- Integrated Transmitter – **Simple integration into your system by standard signal**
- Graphical trend display of all parameters – **Intuitive recognition of process parameters and trends**
- Robust construction – **Reliable and long-lasting operation also at high mechanical stress**
- Insensitive to electromagnetic interference
- Dirt-proof keyboard – **Use in dusty or oily environments**
- **EU-R0 marine type approval, classified for use in the engine room (pending)**



Magnetic inductive flow sensor for urea dosing

MAGNETIC INDUCTIVE FLOW SENSOR VMI

For a flow rate measurement of electrically conductive liquids without moving parts. The magnetic inductive flow sensor is ideally suited for urea dosing.

- Robust metal housing – **for use under high temperature and pressure**
- Maintenance-free – **no moving parts**
- Variable output - **Frequency or analogue and frequency output**
- EU R0 Mutual Recognition Type Approval Certificate (covers: ABS, BV, CCS, CRS, DNV GL, IRS, KR, LR, ClassNK, PRS, RINA, RS)
- Delivery including works calibration certificate



Calibration Equipment

Questions on the High Seas

Our experience and recurring dialogues within the last decades with our customers worldwide have shown:

*Customer questions repeat themselves.
We have summarized the most important points for you.*

„WHY DO I NEED A CALIBRATOR ON MY SHIP?“

The measuring equipment on ships must be calibrated and safety equipment checked regularly. SIKA refers to the guidelines of SOLAS and DNV-GL. The temperature and pressure calibrators with their own recalibration set increase safety – for carefree work.



„WHY IS CALIBRATION SO IMPORTANT?“

The engine must not fail. The calibration checks for tolerance, safety and functionality to ensure consistent quality and safety at sea.

The recalibration set offers a special advantage in order to maintain the same quality over several years: The ongoing operation does not have to be stopped for recalibration, the products can be recalibrated directly on-site – whether on land or at sea.



„TIME IS MONEY. DO I NEED NEW PERSONNEL TO USE SIKA TEMPERATURE AND PRESSURE CALIBRATORS?“

With only 4 buttons, the temperature calibrator is limited to the essentials: it must be fast and deliver accurate results. With little effort, every member of the ship can operate the calibrators. SIKA offers a suitable calibration insert for marine applications. Our pressure calibrators have a decisive advantage: they convince as the best quality hand pump on the market, with which the calibration can be completed in a few minutes.

„WHY YOU SHOULD RELY ON SIKA CALIBRATION INSTRUMENTS?“

SIKA has been established in the market for decades with products specially tailored to the needs of the marine sector. High-quality, sturdy devices "Made in Germany" convince thanks to their simple operation. Despite harsh conditions, you can rely on reliable results and safety is increased by complying with guidelines. No matter where you are, SIKA is your local contact. A worldwide distributor network offers a carefree journey.



Product overview



Digital thermometer

- Accurate and robust
- Redundant measuring system
- Energy-autonomous display
- Display ranges -40...650 °C
- Loop supply



Temperature sensors

- Various temperature ranges -200...1500 °C
- Exhaust gas and media temperature measurement
- Vibration resistant



KombiTemp®

- Combination of electrical sensor and local display
- Measuring ranges from -30 to 200 °C
- Easy to read display of current reading
- No power supply needed



Industrial thermometers

- Case sizes in 200, 150, 110 mm
- Two standard versions: Straight and 90° angle
- Various scale ranges from -30...50 °C to 0...250 °C



Dial thermometers

- Various scale ranges from -200...100 °C to 50...650 °C
- Nominal sizes: 63 to 100 mm
- Gas-filled or bi-metal version



Protection tubes for dial thermometers

- For screw fitting
- Male process connection
- Made of stainless steel



Room condition monitor

- Multi-sensor-system
- Simultaneous measuring of humidity, temperature and pressure at one measuring point
- Designed for use in harsh environmental conditions



Temperature calibrators

- Dry-block
- Temperature ranges -35...165 or RT...650 °C
- Effective and compact
- DNV-GL approved



Digital pressure gauges

- Display ranges -1...2500 bar
- Display accuracy up to 0.025 %
- Temperature compensated measuring cells and electronics
- Selectable units



Pressure gauges

- Pressure measurement of liquid and gaseous media
- Nominal sizes: 63 to 100 mm
- Various scale ranges -1...4000 bar



Magnetic inductive flow sensors

- Metal version DN 7...DN 20
- Flanged version DN 15...DN 200
- For Urea dosing



Oval gear flow sensors

- For fluids such as lubrication oils, mineral oils, hydraulic oils
- No inlet/outlet sections required
- Long-term stability
- Low pressure drop

A nighttime photograph of a city skyline reflected in a body of water. The lights from the buildings and streetlights create a shimmering effect on the water's surface. The sky is dark with some light clouds.

SIKA

SIKA Dr. Siebert & Kühn GmbH & Co. KG

Struthweg 7-9

34260 Kaufungen/Deutschland

Telefon +49 5605 803-0

Fax +49 5605 803-555

info@sika.net

www.sika.net