PRIGNITZ

MIKROSYSTEMTECHNIK

Product
OVERVIEW

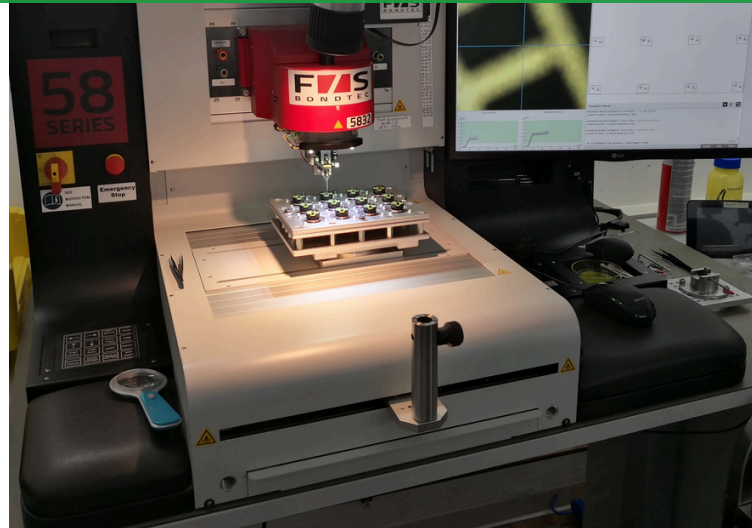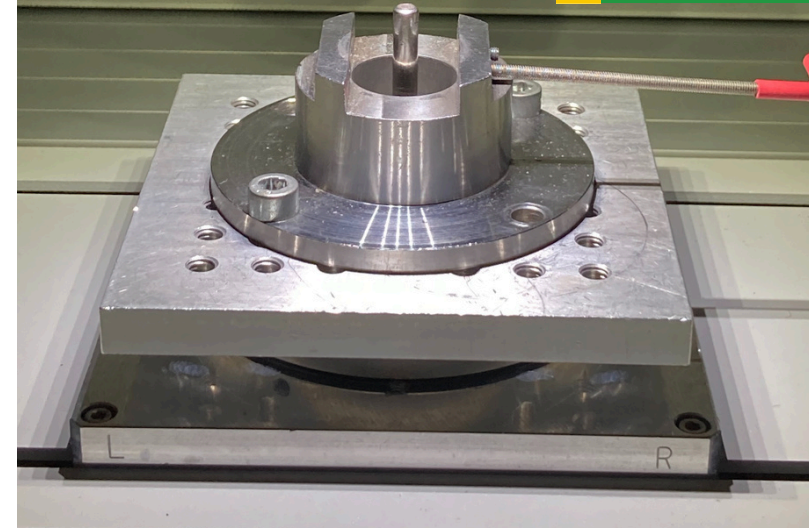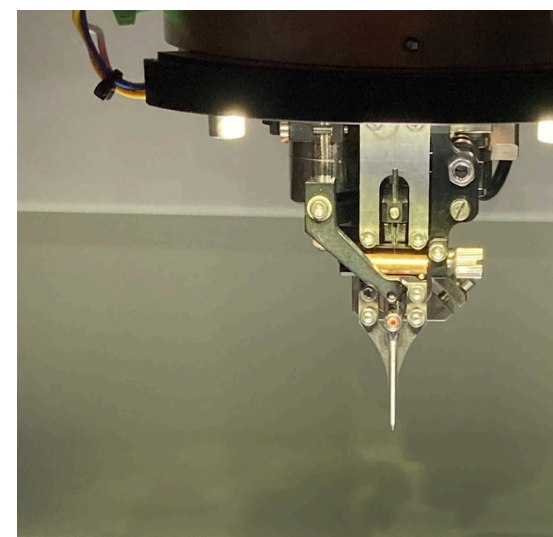## TEMPERATURE
SENSOR
SOLUTIONS

Prignitz Mikrosystemtechnik develops, manufactures, and sells pressure sensors, temperature transmitters, and level probes with very high added value "from chip to calibrated transmitter". We have a sales and service network covering more than 40 countries.

Based on our R&D, we offer our customers from a variety of industries the best possible customized solutions that fully meet their needs.

We are based on our unique scientific developments. Employees of our company have international patents, which make our products highly competitive and unique in the market. The world's largest companies in the fields of off-road mobile equipment, renewable energy, transport, marine and offshore, industrial automation, and medical technology trust our technologies and solutions.
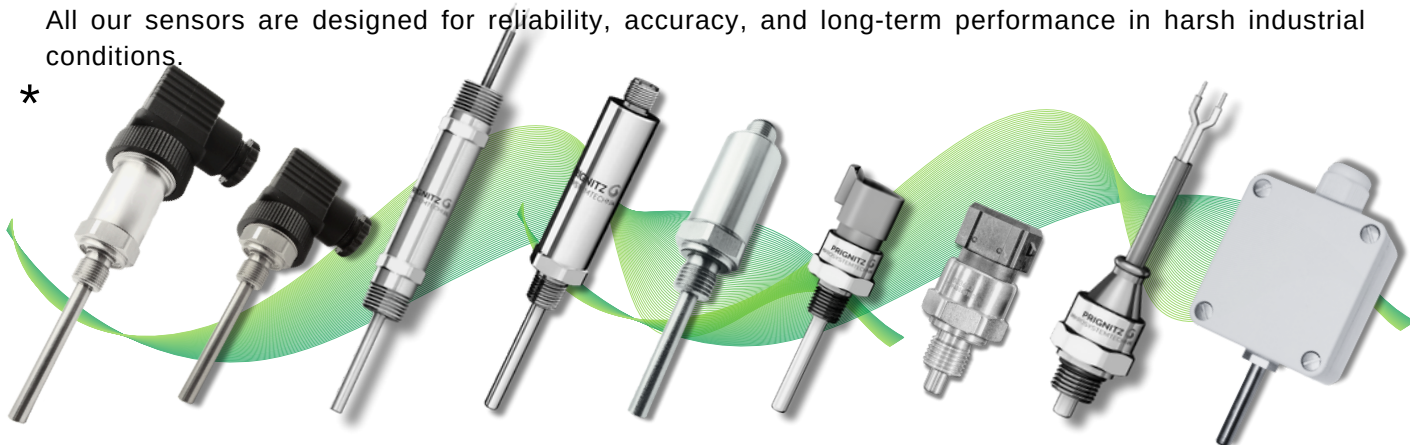
We invite you to our Galaxy!

Overview of Functions and Technical Parameters

Prignitz Mikrosystemtechnik develops and manufactures high-quality temperature sensor solutions for demanding industrial applications. Our product portfolio includes:

- **Temperature sensors with integrated signal transmitters for precise and stable temperature measurement**
- **Compact temperature sensors**
- **Temperature sensors for explosion-hazardous areas, certified for safe use in critical environments**

All our sensors are designed for reliability, accuracy, and long-term performance in harsh industrial conditions.

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* *The images shown are for illustrative purposes only and serve to demonstrate possible design versions, connection types, and construction options. The actual appearance of the products depends on the selected configuration*

Measuring element:	Pt100, class B; options: Pt1000, others on request
Measuring ranges:	from -40 to 200 °C
Output signal:	Current output:4–20 mA (2-wire) Voltage output: 0–5 V / 1–5 V; 0–6 V / 1–6 V; 0–10 V / 1–10 V Ratiometric output: 0.5–4.5 V Resistance output: PT100, Class B (PMT-C111 series)
Sensor length:	5...500 mm (standard versions); 5...30 mm (Hydrogen versions)
Housing material:	stainless steel
Max. static pressure:	160 bar
Process connection:	G1/2" (on request), G1/4", 1/4"-18 NPT, 9/16-18 UNF SAE J514
Supply voltage:	10...32 V (4–20 mA); 8...32 V (0–5 V); 14...32 V (0–10 V); 5 V ±5% (ratiometric); 12...27 V (Exi CSA); 20...27 V (Exi ATEX)
Electrical connection:	EN 175 301-803-A (3-pin, IP65–IP67); EN 175 301-803-C (3-pin, IP65); M12x1 (Binder S763, 4-pin, IP67); Deutsch DT04-3P (3-pin, IP67); Packard Metri-Pack (3-pin, IP67); MIL-C-26482 (Exi versions); Cable outlet (3/4-pin, IP67–IP68); 2-pin connector (-pin interface available upon request, implementation depends on customer specification)
Duct / channel versions:	Duct insertion probes with extended probe lengths and customer-specific mounting options are available on request.
OEM & cable assemblies:	Pre-assembled sensor solutions with customized cable lengths, connectors and pinouts for OEM and system integration applications.
Protection class:	IP65–IP68 (depending on connector)
Certifications:	ATEX, IECEx, CSA (Exi versions)/ applicable for Hydrogen
Additional functions:	customized outputs, connectors, cable assemblies, special materials and certifications (on request)

Temperature sensors with integrated signal transmitters

PMT-S111 / PMT-S111-H (for Hydrogen)

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DATASHEETS

PMT-S111

PMT-S111-H

Sensor type:	PT100 temperature transmitter, Class B Hydrogen-compatible version (PMT-S111-H)
Typical applications:	Neutral and aggressive media. Industrial process control, Hydrogen applications (fuel cells, gas technology)
Measurement range:	-40 ... +200 °C (media) -40 ... +125 °C (ambient) Hydrogen version: same temperature range
Output signal:	4–20 mA (2-wire); 0–5 V / 1–5 V; 0–6 V / 1–6 V; 0–10 V / 1–10 V; 0.5–4.5 V (ratiometric)
Sensor length:	5 ... 500 mm (standard versions) 5 ... 30 mm (Hydrogen versions)
Measurement error:	≤ 1% FS at 25°C, ≤ 2% FS over the full measuring range
Sensor material:	Stainless steel Wetted parts: 316L (Hydrogen-compatible)
Max. static pressure:	160 bar
Process connection:	G1/4 Form E; 1/4"-18 NPT; 7/16"-20 UNF; 9/16"-18 UNF; (custom threads on request)
Electrical connection:	EN 175 301-803-A (3-pin, IP65–IP67); EN 175 301-803-C (3-pin, IP65); M12x1 Binder S763 (4-pin, IP67); Deutsch DT04-3P (3-pin, IP67); Packard Metri-Pack (3-pin, IP67); Cable outlet (3/4-pin, IP67–IP68); 2-pin connector (custom, on request)

Temperature sensors with integrated signal transmitters for hazard areas

PMT-S111-Exi / PMT-S111-Exi-H (for Hydrogen)

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DATASHEETS

PMT-S111-Exi

PMT-S111-Exi-H

Sensor type:	PT100 temperature transmitter, Class B Intrinsically safe version (Exi) Hydrogen-compatible version available (PMT-S111-Exi-H)
Typical applications:	Hazardous areas (ATEX / IECEx / CSA) Wide range of liquids and gases Hydrogen applications (fuel cells, gas technology)
Measurement range:	-40 ... +200 °C (media) -40 ... +85 °C (ambient, Exi limitation) Hydrogen version: same temperature range
Output signal:	4–20 mA (2-wire); 0–5 V / 1–5 V; 0–6 V / 1–6 V; 0–10 V / 1–10 V; 0.5–4.5 V (ratiometric)
Sensor length:	5 ... 500 mm (standard versions) 5 ... 30 mm (Hydrogen versions)
Measurement error:	≤ 1% FS at 25°C, ≤ 2% FS over the full measuring range
Sensor material:	Stainless steel Wetted parts: 316L (Hydrogen-compatible)
Max. static pressure:	160 bar
Process connection:	G1/4 Form E; 1/4"-18 NPT; 7/16"-20 UNF; 9/16"-18 UNF; (custom threads on request)
Electrical connection:	EN 175 301-803-A (3-pin, IP65–IP67); M12x1 Binder S763 (4-pin, IP67); MIL-C-26482 (3-pin, IP67, Exi versions); Cable outlet (3-pin, IP68); 2-pin connector (custom, on request)
Certification:	CSA, ATEX II 2G Ex ia IIC T3 Gb -40°C <= Ta <= 85°C

Compact temperature sensors

PMT-C111 / PMT-C111-H (for Hydrogen)

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Sensor type:	PT100 temperature sensor, Class B Hydrogen-compatible version available (PMT-C111-H)
Typical applications:	Wide range of liquids and gases Hydrogen applications (fuel cells, gas technology)
Measurement range:	-50 ... +150 °C (PMT-C111) -40 ... +200 °C (PMT-C111-H) Ambient: -40 ... +125 °C
Output signal:	• Resistance output: PT100, Class B (2-wire). • 4–20 mA (2-wire); 0–5 V / 1–5 V; 0–6 V / 1–6 V; 0–10 V / 1–10 V; 0.5–4.5 V (ratiometric)
Sensor length:	10 ... 500 mm (standard versions) 5 ... 30 mm (Hydrogen versions)
Measurement error:	≤ 1% FS at 25°C, ≤ 2% FS over the full measuring range
Sensor material:	Stainless steel Wetted parts: 316L (Hydrogen-compatible)
Max. static pressure:	160 bar
Process connection:	G1/4 Form E; 1/4"-18 NPT; 7/16"-20 UNF; 9/16"-18 UNF; (custom threads on request)
Electrical connection:	EN 175 301-803-A (3-pin, IP65–IP67) EN 175 301-803-C (3-pin, IP65) M12x1 Binder S763 (4-pin, IP67) Deutsch DT04-3P (3-pin, IP67) Packard Metri-Pack (3-pin, IP67) Cable outlet (3-pin, IP67)

DATASHEETS

PMT-C111   PMT-C111-H

The strength of Prignitz Mikrosystemtechnik lies in its extensive expertise, long-standing experience, and broad range of applied technologies, as well as in its ability to design and manufacture sensors with customized technical parameters tailored to specific customer requirements.

Depending on the application, various design options are available, including special probe lengths, non-standard process connections, customized electrical interfaces, cable assemblies, special materials, as well as adapted output signals and certifications.

For ordering information and a complete overview of all available configurations for each sensor, please refer to the corresponding datasheet. The datasheets can be accessed by scanning the QR codes above or by visiting our website at www.prignitz-mst.de.

If you do not find the required configuration in the datasheet, please contact our engineering team — we will be pleased to support you in selecting the most suitable technical solution for your application.

PRIGNITZ

MIKROSYSTEMTECHNIK

PRESSURE

LEVEL

TEMPERATURE

CALIBRATION & SERVICE

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