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# Техническое описание термометра сопротивления TEMPERIX S Clamp FAFNIR

# FAFNIR Sensors and Systems

## Reliable, Universal Solutions for Your Level, Pressure and Temperature Measurement Requirements

**FAFNIR** prides itself on providing the highest-quality measurement solutions to all its customers, regardless of application complexity and size. After trading for approximately 45 years, driving industry innovation, and listening to our customers and their requirements, we are pleased to present FAFNIR's German-made, high-precision level, pressure and temperature measurement devices for the petroleum, pharmaceutical, chemical and food industries to you, our customers.

## Why Buy FAFNIR Sensors and Systems?



### Reliability, Accuracy and Ease of Installation as Standard

- + All our sensors are calibrated and stringently tested before they reach you, ensuring you receive only the best
- + With FAFNIR's "plug-and-play" sensors, installation is quick and easy
- + With pre-calibration, once installed, no adaptation to the liquid is required
- + Our sensor lifespan and failure rate is second to none. FAFNIR's field-proven sensors are installed globally



### With 45 Years' Engineering and Manufacturing Experience, Customer Service is Key

- + Regardless of order complexity or size, we will find a solution for your business
- + We have listened to the market and we know you need the full solution from one supplier
- + We have extended our product portfolio to include pressure and temperature measurement so FAFNIR is at the forefront of your measurement needs
- + The FAFNIR team are experts. We design, manufacture and calibrate all of our products to the highest quality

The logo for FAFNIR, featuring the company name in a bold, sans-serif font with a trademark symbol, positioned above three horizontal lines. The logo is contained within a white circular graphic.

**FAFNIR™**

### **Difficult Installation Conditions Are No Challenge for FAFNIR.**

- + Designed to meet every requirement, our sensors fit the smallest to the largest openings
- + Our extensive range of sensors means we will have a solution for you, even when other suppliers don't

### **Extreme Process Conditions?**

- + Our sensors are proven in temperatures of up to 450 °C or with up to 200 bar of pressure
- + With a response time of less than 0.2 s and information regarding the filling levels with an accuracy of  $\pm 0.3$  mm, you have constant visibility of your liquid stock
- + Reliability assured in corrosive, toxic and viscous substances

# Temperature Measurement

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Measuring the medium temperature is a common task in the pharmaceutical as well as in the chemical industry.

Due to the need to process the measurement result and meet the documentation requirements, almost all measuring devices used are electronic. This measurement is usually achieved with invasive measuring systems which reach into the process area.

When it comes to relatively small pipe diameters, a sensor tip reaching into the process area can be a significant obstacle to the flow. Therefore, the measurement of the pipe surface can be a better solution, as offered by FAFNIR, without any interference to the process.

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# TEMPERIX S Clamp

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## Resistance Thermometer Temperature Measurement for Pipes, Featuring "Clamp-On" Technology

The resistance thermometer for pipes; "Clamp-On" technology is used for temperature sensing and process control, mainly for sterile applications.

The resistance thermometer can be quickly and easily fitted to all existing pipework. There are no changes necessary to the piping and no welding required. The resistance thermometer can also be supplied with a built-in transmitter.

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### Main Features and Benefits

- + Temperature measurement, no contact to medium, for pipe diameter between 4 and 57 mm
- + Measuring system patented
- + High accuracy, fast response
- + Quick and cost-efficient installation
- + No welding, no interruption of process
- + Measuring range: -40 °C up to +150 °C



## TEMPERIX S Clamp – Technical Data

### Probe head

Protection class	IP68
Material	Stainless steel 303
Cable terminal	M12 x 1.5 cable gland for cable diameter 3 to 6.5 mm M16 x 1.5 cable gland for cable diameter 5 to 10 mm M12 Connector
Ambient temperature	-40 °C to +85 °C

### Probe tube

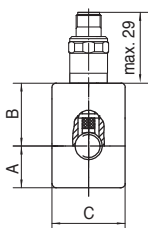
Material	Stainless steel 316 Ti; other on request
Process connection	"Clamp-On" for piping from 4 mm to 57 mm diameter
Measurement technology	PT 100
Accuracy class	A
Temperature range	-40 °C to +150 °C

### Electrical connection

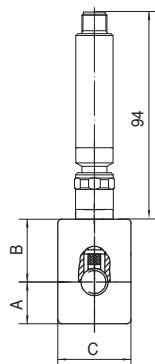
Output	3-wire PT 100 2-wire 4 to 20 mA 2-wire 4 to 20 mA/HART®
Optional	ATEX Certificate

### Datasheet temperature transmitter

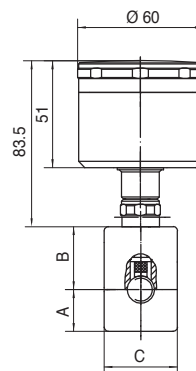
Ambient temperature	Up to +400 °C
Voltage	-40 °C to +85 °C
Signal	8.5 to 36 V <sub>DC</sub> , Ex version 8.5 to 30 V <sub>DC</sub>
Response time	Power output: 4 to 20 mA/HART®
Offset	<0.7 sec
Accuracy	Configurable -100 °C to +100 °C
Temperature effect	>0.25 °C or 0.1 % of nominal range
Optional	<0.01 %/°C



TEMPERIX S Clamp with 3-wire PT100 output and an M12 connector



TEMPERIX S Clamp with 2-wire 4-20 mA output and an M12 connector



TEMPERIX S Clamp with field housing (required for HART® output)

Pipe-Ø	A	B	C
4-17.2	20	30	35
18-38	30	40	70
38.1-57	40	50	85

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