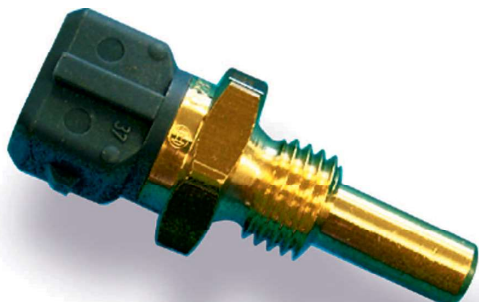


Temperature Sensor NTC M12



- ▶ Application: -40 to 130°C
- ▶ Accuracy at 25°C: $\pm 1.4^\circ\text{C}$
- ▶ Accuracy at 100°C: $\pm 3.4^\circ\text{C}$
- ▶ Male thread: M12 x 1.5
- ▶ Nominal resistance: 2.5 kOhm $\pm 5\%$ (at 20°C)

This sensor is designed to measure fluid temperature e.g. oil, water or fuel. This signal may be used as a control value for engine control units or as a measurement value which is logged in a data acquisition system.

The NTC sensing element has a negative temperature coefficient. This means, that with increasing temperature the conductivity rises. The sensing element of the temperature sensor is made of semiconducting heavy metal oxide and oxidized mixed crystals, which are equipped with a protective housing.

The main benefit of the sensor is the combination of a high quality production part and a robust and compact design.

Application

| | |
|------------------------|----------------------|
| Application | -40 to 130°C |
| Storage temp. range | 0 to 100°C |
| Bio fuel compatibility | E85/M22 |
| Max. vibration | 600 m/s ² |

Technical Specifications

Mechanical Data

| | |
|---------------------|--------------|
| Male thread | M12x1.5 |
| Wrench size | 19 mm |
| Installation torque | 25 Nm |
| Weight w/o wire | 29 g |
| Sealing | Not included |

Electrical Data

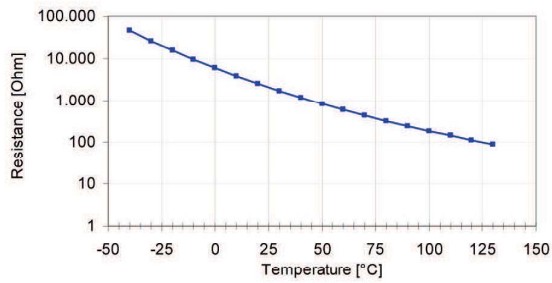
| | |
|----------------------------|--------------------|
| Characteristic | NTC |
| Nominal resistance at 20°C | 2.5 kOhm $\pm 5\%$ |

Characteristic

| | |
|-------------------------------------|-------------------------|
| Accuracy at 25°C | $\pm 1.4^\circ\text{C}$ |
| Accuracy at 100°C | $\pm 3.4^\circ\text{C}$ |
| Response time tau 63 in still water | < 15 s |

Characteristic Application

| T [°C] | R [Ohm] |
|--------|---------|
| -40 | 45,313 |
| -30 | 26,114 |
| -20 | 15,462 |
| -10 | 9,397 |
| 0 | 5,896 |
| 10 | 3,792 |
| 20 | 2,500 |
| 30 | 1,707 |
| 40 | 1,175 |
| 50 | 834 |
| 60 | 596 |
| 70 | 436 |
| 80 | 323 |
| 90 | 243 |
| 100 | 187 |
| 110 | 144 |
| 120 | 113 |
| 130 | 89 |



Connectors and Wires

| | |
|------------------|-----------------|
| Connector | Bosch Jetronic |
| Mating connector | D261.205.288-01 |
| 2-pole Jetronic | |
| Pin 1 | SIG+ |
| Pin 2 | SIG- |

Installation Notes

The NTC M12 can be connected directly to most control units using a pull-up resistor (typically 1 or 3 kOhm).

Any mounting orientation is possible.
 Please find further application hints in the offer drawing.
www.bosch-motorsport.com
 Free download of the sensor configuration file (*.sdf) for the Bosch Data Logging at our homepage.

Safety Note

The sensor is not intended to be used for safety related applications without appropriate measures for signal validation in the application system.

Legal Restrictions

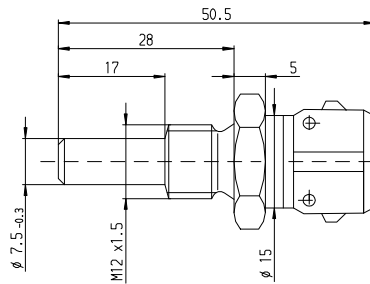
Due to embargo restrictions, sale of this product in Russia, Belarus, Iran, Syria, and North Korea is prohibited.

Ordering Information

Temperature Sensor NTC M12

Order number **0280.130.026**

Dimensions



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