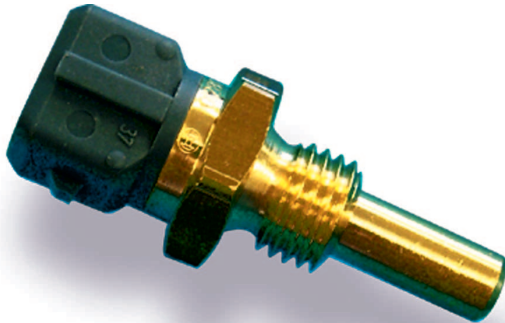


# Temperature Sensor NTC M12



- ▶ Application: -40 to 130°C
- ▶ Accuracy at 25°C: ± 1.4°C
- ▶ Accuracy at 100°C: ± 3.4°C
- ▶ Male thread: M12 x 1.5
- ▶ Nominal resistance: 2.5 kOhm ± 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 <sup>2</sup>

## 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

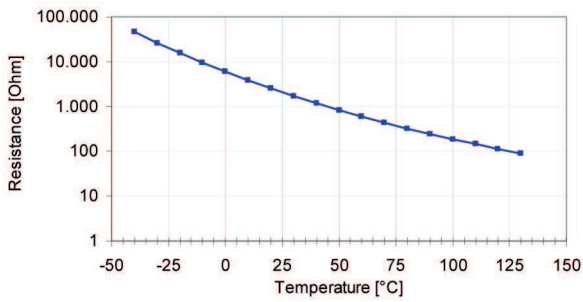
Characteristic	NTC
Nominal resistance at 20°C	2.5 kOhm ± 5 %

## Characteristic

Accuracy at 25°C	± 1.4°C
Accuracy at 100°C	± 3.4°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](http://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**

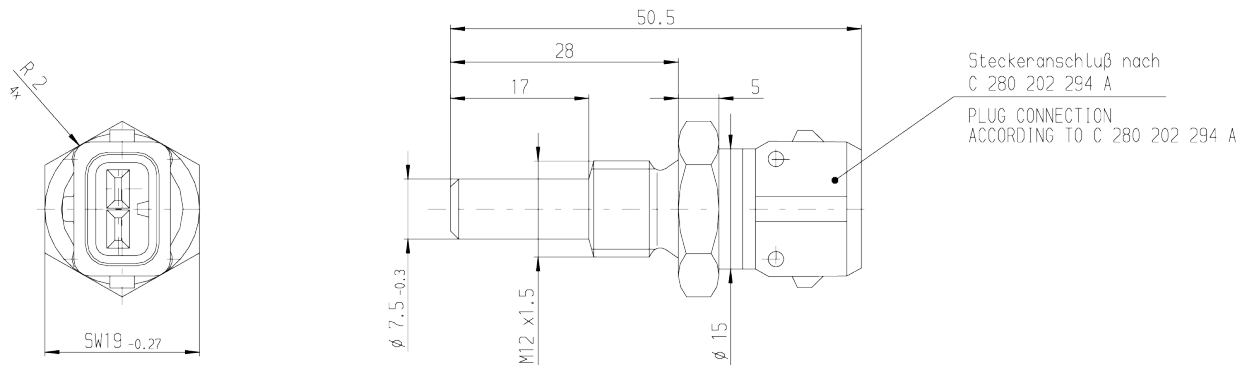
Due to embargo restrictions, sale of this product in Russia, Belarus, Iran, Syria, and North Korea is prohibited.

**Ordering Information**

**Temperature Sensor NTC M12**

Order number **0280.130.026**

**Dimensions**



**Represented by:**

**Europe:**  
 Bosch Engineering GmbH  
 Motorsport  
 Robert-Bosch-Allee 1  
 74232 Abstatt  
 Germany  
 Tel.: +49 7062 911 9101  
 Fax: +49 7062 911 79104  
[motorsport@bosch.com](mailto:motorsport@bosch.com)  
[www.bosch-motorsport.de](http://www.bosch-motorsport.de)

**North America:**  
 Bosch Engineering North America  
 Motorsport  
 38000 Hills Tech Drive  
 Farmington Hills, MI 48331-3417  
 United States of America  
 Tel.: +1 248 876 2977  
 Fax: +1 248 876 7373  
[motorsport@bosch.com](mailto:motorsport@bosch.com)  
[www.bosch-motorsport.com](http://www.bosch-motorsport.com)

**Asia-Pacific:**  
 Bosch Engineering Japan K.K.  
 Motorsports Department  
 1-9-32 Nakagawa Chuo, Tsuzuki-ku  
 Yokohama City  
 Kanagawa Prefecture 224-8601  
 Japan  
 Tel.: +81 45 605 3032  
 Fax: +81 45 605 3059  
[www.bosch-motorsport.jp](http://www.bosch-motorsport.jp)

**Australia, New Zealand and South Africa:**  
 Robert Bosch Pty. Ltd  
 Motorsport  
 1555 Centre Road  
 Clayton, Victoria, 3168  
 Australia  
 Tel.: +61 (3) 9541 3901  
[motor.sport@au.bosch.com](mailto:motor.sport@au.bosch.com)