

Temperature Sensor NTC M12-L

www.bosch-motorsport.com



BOSCH
Invented for life



- ▶ Measurement range: -40 to 140°C
- ▶ Air temperature measurement
- ▶ Robust design

This sensor is designed to measure air temperature e.g. in the air box or ambient temperature. The 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 140°C
Storage temp. range	-30 to 60°C
Bio fuel compatibility	E85/M22
Max. vibration	300 m/s ² at 50 to 250 Hz

Technical Specifications

Mechanical Data

Male thread	M12x1.5
Wrench size	19 mm
Installation torque	15 Nm
Weight w/o wire	24.6 g
Sealing	Not included

Electrical Data

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

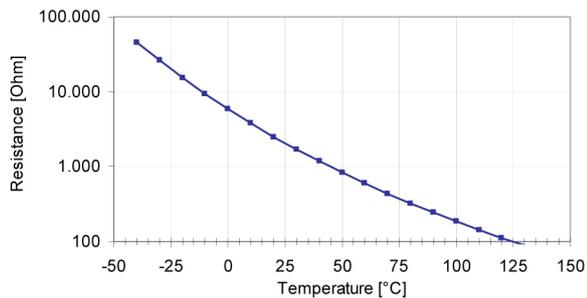
Characteristic

Accuracy at 25°C	± 1.4°C
Accuracy at 100°C	± 3.4°C
Response time tau 63 in still water	< 10 s

Characteristic Application

T [°C]	R [Ω]
-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
140	71



Connectors and Wires

Connector	Bosch Compact
Mating connector 2-pole Jetronic	D 261 205 288-01
Pin 1	SIG+
Pin 2	SIG-

Installation Notes

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

Any mounting orientation is possible.

Please find further application hints in the offer drawing and free download of the sensor configuration file (*.sdf) for the Bosch Data Logging System at our homepage.

Safety Note

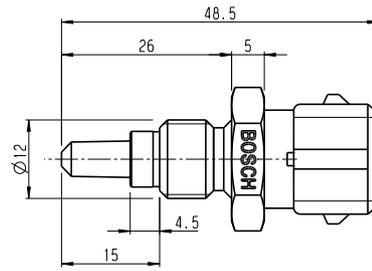
The sensor is not intended to be used for safety related applications without appropriate measures for signal validation in the application system.

Ordering Information

Temperature Sensor NTC M12-L

Order number **0 280 130 039**

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
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
www.bosch-motorsport.com

Latin America:
Robert Bosch Ltda
Motorsport
Av Juscelino Kubitscheck de
Oliveira 11800
Zip code 81460-900
Curitiba - Parana
Brasilia
Tel.: +55 41 3341 2057
Fax: +55 41 3341 2779

Asia-Pacific:
Bosch Engineering Japan K.K.
Motorsport
18F Queen's Tower C, 2-3-5 Minato Mirai
Nishi-ku, Yokohama-shi
Kanagawa 220-6218
Japan
Tel.: +81 45 650 5610
Fax: +81 45 650 5611
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