

Temperature Sensor NTC M5-HS

This sensor is designed to measure temperatures up to 300 °C of oil, water, fuel or air. This signal is 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 and the resistance decreases. To improve a good protection against the ambient temperature, the housing is made of stainless steel and partly filled with an isolation-paste.

The main benefit of the sensor is a very compact design and its very short response time.



Application	
Application	-55 ... 300 °C
Storage temperature range	0 ... 100 °C
Bio fuel compatibility	-

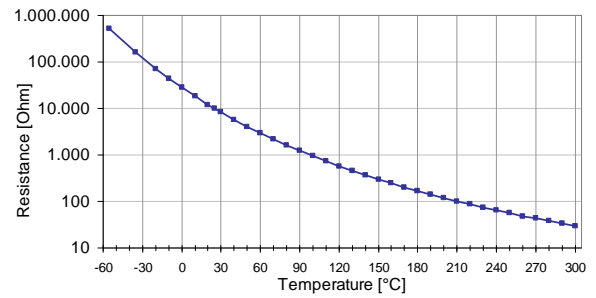
Electrical Data	
Characteristic	NTC
Nominal resistance	10 kΩ

Mechanical Data	
Male thread	M5x1
Wrench size	8 mm
Installation torque	8 Nm
Weight w/o wire	6 g
Sealing	O-Ring 4 x 1 mm

Characteristic	
Accuracy @ 25 °C (homogeneous cond.)	± 0.3 °C
Accuracy @ 100 °C (homogeneous cond.)	± 1.3 °C
Relative resistance tolerance @ 25 °C	1 %
Response time τ_{63}	< 4 s

Characteristic Application

T [°C]	R [Ω]
-55	519,910
-35	158,090
-20	71,668
-10	44,087
0	27,936
10	18,187
20	12,136
25	10,000
30	8,284
40	5,774
50	4,103
60	2,967
70	2,182
80	1,629
90	1,234
100	946.6
120	578.1
140	368.8
160	244.4
180	167.6
200	118.5
220	86.08
240	64.08
260	48.76
280	37.86
300	29.94



Connectors and Wires

Connector	ASL 6-06-05PN-HE
Mating connector	ASL 0-06-05SN-HE
Pin 1	-
Pin 2	Sig-
Pin 3	Sig+
Pin 4	-
Pin 5	-
Various motorsport and automotive connectors are available on request.	
Wire size	AWG 24
Wire length L	15 ... 50 cm
Please specify the required wire length with your order.	

Application Hint

The NTC M5-HS can be connected directly to most control units using a pull-up resistance (typically 1 or 3 kOhm)

Any mounting orientation is possible.

Please find further application hints in the offer drawing (<http://www.bosch-motorsport.com>).

Free download of the sensor configuration file (*.sdf) for the Bosch Data Logging System (<http://www.bosch-motorsport.com>).

Part Number

Temperature Sensor NTC M5-HS **F 02U V00 510-01**

