

Pressure Sensor Combined PST-F 2 280 bar



- ▶ Pressure: 0 to 280 bar
- ▶ Temperature: -40 to 140°C
- ▶ Power supply: 5 V
- ▶ Weight: 36 g

This sensor is designed to measure absolute gasoline pressure and gasoline temperature in direct injection systems.

The pressure measurement is based on the expansion of a steel diaphragm, where strain gauges are placed to a Wheatstone bridge. The measured signal is proportional to the pressure and is processed in an application specific integrated circuit.

The temperature measurement is conducted by an NTC thermistor. The main feature of this sensor is its compact design and the integration of two functions (temperature and pressure measurements) in a common housing.

Application

0 to 280 bar
Absolute
340 bar
-40 to 140°C
10 kOhm
-40 to 140°C
-40 to 140°C
-40 to 60°C
E26, E85
210 m/s ² RMS at 147 to 1,350 Hz 175 m/s ² RMS at 1,350 to 2,000 Hz

Technical Specifications

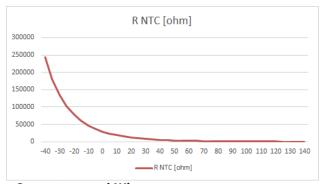
Mechanical Data

Male thread

M10x1

Weight without wire	36 g
Wrench size	27 mm
Installation torque	37.5 ± 2.5 Nm
Sealing	Sealed cone
Electrical Data	
Power supply U _s	4.75 to 5.25 V
Max power supply U _s max	16 V (18 V for max. 1 h)
Full scale output U_A	0.5 to 4.5 V $\rm U_{\rm S}$ ratiometric
Current I _s	12 mA
Characteristic 1	
Response time T10/90	Pressure: 0.2 to 0.8 ms Temperature: 9 s (response time of temperature signal in oil dip bath 20 to 100°C)
Compensated range	-40 to 130°C
Tolerance (FS) at U _s	+/- 1 % at 0 to 100°C +/- 1.5 % at -40 to 0°C and 100 to 130°C
Sensitivity at U _s = 5 V	14.3 mV/bar
Offset	500 mV at U_s = 5 V
Characteristic 2	
T [°C]	R [Ohm]
-40	243,241
-30	135,753
-20	78,716
-10	47,258
0	29,287
10	18,684

20	12,240
25	10,000
30	8,218
40	5,642
50	3,955
60	2,826
70	2,055
80	1,519
90	1,141
100	868.4
110	669.9
120	523.2
130	413.3
140	330.0

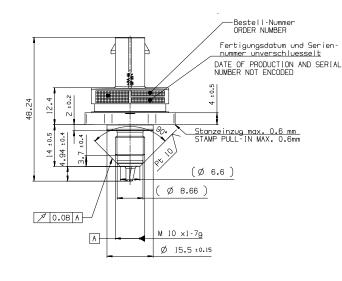


Hirschmann

Connectors and Wires

Connector

Dimensions



SW 27

Represented by:

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Mating connectorF02U.B00.596-01Pin 1GroundPin 2Pressure SignalPin 3Temperature SignalPin 4Power Supply

Various motorsport and automotive connectors are available on request.

Installation Notes

The sensor can be connected directly to most control units.

For temperature measurement please use a pull-up resistor with an optimal value of 4.6 kOhm.

The sensor has a protection for overvoltage, reverse polarity and short-circuit.

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

Pressure Sensor Combined PST-F 2 280 bar Order number 0261.545.115

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