

Pressure Sensor Combined PST-F 1



**Acquisition stop 5/2021, last time buy 3/2022
Please contact us for alternatives.**

- ▶ Pressure: 0 to 10 bar
- ▶ Temperature: -40 to 140°C
- ▶ Power supply: 5 V
- ▶ Weight: 36 g

This sensor is designed to measure relative gasoline pressure and gasoline temperature in port injection systems.

The pressure measurement of the sensor is by means of a piezoresistive element which is acted on by a silicon diaphragm in contact with the fluid being measured. The reference (relative) pressure is provided via an opening in the sensor housing and acts on the active upper side of the silicon diaphragm.

Application

| | |
|-----------------------|---|
| Application 1 | 0 to 10 bar (a) |
| Application 2 | -40 to 140°C |
| Reference | Relative |
| Max. pressure | 20 bar |
| Operating temp. range | -40 to 140°C (140°C) |
| Media temp. range | -40 to 140°C (140°C) |
| Storage temp. range | -30 to 80°C |
| Fuel compatibility | Engine oils, most gasoline and Diesel fuels |
| Max. vibration | 80 m/s ² at 20 to 260 Hz 60 m/s ² at 260 to 520 Hz |

Technical Specifications

Mechanical Data

| | |
|---------------------|-------------|
| Male thread | M10x1 |
| Weight without wire | 36 g |
| Wrench size | 27 mm |
| Installation torque | 40 Nm |
| Sealing | Sealed cone |

Electrical Data

| | |
|----------------------------|--------------------------------|
| Power supply U_s | 4.75 to 5.25 V |
| Max power supply U_s max | 16 V |
| Full scale output U_A | 0.5 to 4.5 V U_s ratiometric |
| Current I_s | 10 mA |

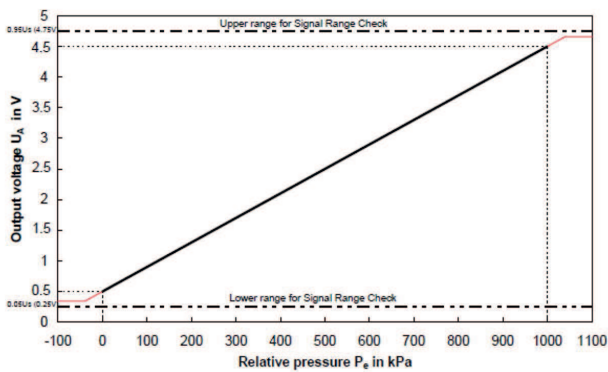
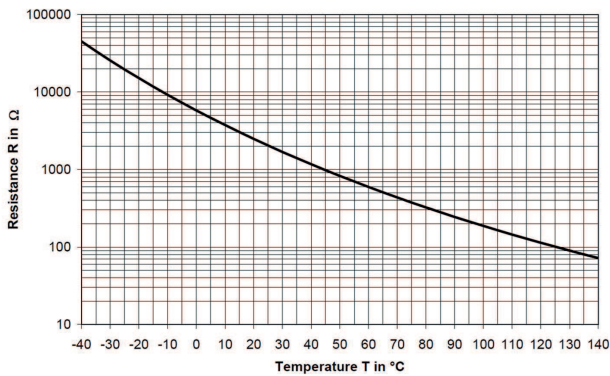
Characteristic 1

| | |
|-------------------------|---|
| Response time T10/90 | Pressure: <5 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 | +/-2 % at 25 to 85°C |
| Sensitivity | 400 mV/bar at $U_s = 5$ V |
| Offset | 500 mV at $U_s = 5$ V |

Characteristic 2

| T [°C] | R [Ohm] |
|--------|---------|
| -40 | 44,864 |
| -30 | 25,524 |
| -20 | 15,067 |
| -10 | 9,195 |
| 0 | 5,784 |
| 10 | 3,740 |
| 20 | 2,480 |
| 30 | 1,683 |
| 40 | 1,167 |
| 50 | 824 |
| 60 | 594 |
| 70 | 434.9 |

| | |
|-----|-------|
| 80 | 323.4 |
| 90 | 244 |
| 100 | 186.6 |
| 110 | 144.5 |
| 120 | 113.3 |
| 130 | 89.9 |
| 140 | 71.9 |



Connectors and Wires

| | |
|------------------|--------------------|
| Connector | Bosch Trapezoid |
| Mating connector | F02U.B00.751-01 |
| Pin 2 | Pressure Signal |
| Pin 3 | Power Supply |
| Pin 4 | Ground |
| Pin 5 | Temperature Signal |

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.

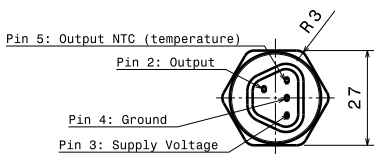
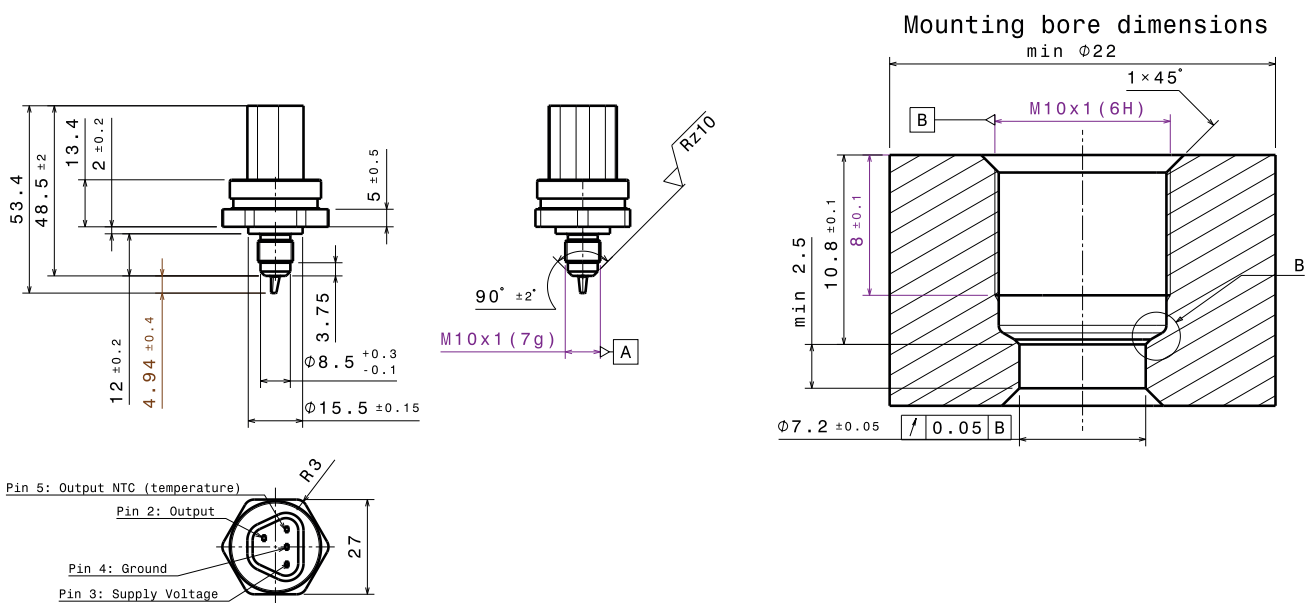
Safety Note

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 1
 Order number **F02U.V0U.194-01**

Dimensions



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