

## Pressure Sensor Fluid PSS-10R

This sensor is designed to measure the pressure of media in relation to the ambient pressure (e.g. Diesel, gasoline, water, engine oil, transmission oil, air). The sensor is available for two different supply voltage ranges.

The sensor uses stainless steel measuring cells with piezo-resistive measuring bridges in thin layer technique, which are hermetically welded together with stainless steel pressure ports. This guarantees a complete media compatibility.

The main benefit of this sensor is the high quality of a production part at a low price.



Application	
Application	0 ... 10 bar (r)
Pressure Reference Type	relative
Max. Pressure	20 bar
Operating Temp. Range	[1] -40 ... 125 °C (140 °C) [2] -40 ... 125 °C
Media Temp. Range	[1] -40 ... 125 °C (140 °C) [2] -40 ... 125 °C
Storage Temp. Range	-20 ... 50 °C
Bio fuel compatibility	-
Max. Vibration	100 m/s <sup>2</sup> rms @ 10 ... 2,000 Hz

Electrical Data	
Power Supply U <sub>S</sub>	[1] 4.75 ... 5.25 V [2] 8 ... 30 V
Max Power Supply U <sub>s</sub> max	± 30 V
Full Scale Output U <sub>A</sub>	[1] 10 ... 90 % U <sub>s</sub> ratiometric [2] 0.5 ... 4.5 V non-ratiometric
Current I <sub>s</sub>	8 mA

Mechanical Data	
Male Thread	M10x1
Wrench Size	17 mm
Installation torque	15 Nm
Weight w/o wire	45 g
Sealing	O-ring 7.65 x 1.63 mm

Characteristic	
Response Time T <sub>10/90</sub>	[1] 1.5 ms [2] 1.0 ms
Compensated Range	0 ... 90 °C
Tolerance (FS) @ U <sub>s</sub> = 5 V	± 0.1 bar
Tolerance (FS)	± 1 %
Sensitivity	[1] 400 mV/bar @ U <sub>s</sub> = 5 V [2] 400 mV/bar
Offset	[1] 500 mV @ U <sub>s</sub> = 5 V [2] 500 mV

Connectors and Wires	
Connector	Bosch Compact
Mating connector	[1] D 261 205 339 [2] D 261 205 334
Pin 1	Gnd
Pin 2	Sig
Pin 3	Us
Pin 4	-
Pin 5	-
Sleeve	DR-25
Wire size	AWG 24
Wire length L	13 ... 95 cm
Various motorsport and automotive connectors are available on request.	
Please specify the required wire length with your order.	

Application Hint
The PSS-10R can be connected directly to most control units.
The sensor has a protection for over voltage, reverse polarity and short-circuit.
Each mounting orientation is possible.
The sensor meets all EMV, EMC and ESD automotive standards.
Please find further application hints in the offer drawing ( <a href="http://www.bosch-motorsport.com">http://www.bosch-motorsport.com</a> ).
Free download of the sensor configuration file (*.sdf) for the Bosch Data Logging System ( <a href="http://www.bosch-motorsport.com">http://www.bosch-motorsport.com</a> ).

Part Numbers	
PSS-10R [1]	<b>F 01T A21 312-01</b>
PSS-10R [2]	<b>F 01T A21 307</b>

