

AIR PRESSURE SENSOR WITH SDI-12



SP1A air pressure transmitter is ready for installations in wide temperature range and offers measurement range of 600...1100 hPa. It may be used for multiple applications for indoor as well as outdoor applications. Thanks to the SDI-12 compatibility, it is suitable for PM Ecology data loggers or can be integrated with other manufacturers' equipment.

APPLICATION

Placing the sensor in an IP65 housing enables wide scope of installation methods which include wall mounting or fixing the sensor to the mast or a mast boom. The high quality enclosure made of ABS and optionally a polycarbonate one, make the sensor sturdy and impact resistant.

Thanks to the pressure compensation element, the housing keeps its waterproof qualities, allowing pressure and temperature equalization at the same time.

High qualities of the housing and electronic components make the sensor fully suitable for meteorological, agricultural, industrial any other applications.

FEATURES

**Operating range: 600...1100 hPa [mbar],
-40 ... +60°C**

Accurate measurement

**Waterproof housing with IP65 protects
against sprayed water**

**Protection from particles, oils and liquids
with pressure compensation element**

**Compatible with logging devices with SDI-12
standard**

Low power consumption

OUTPUT SIGNAL

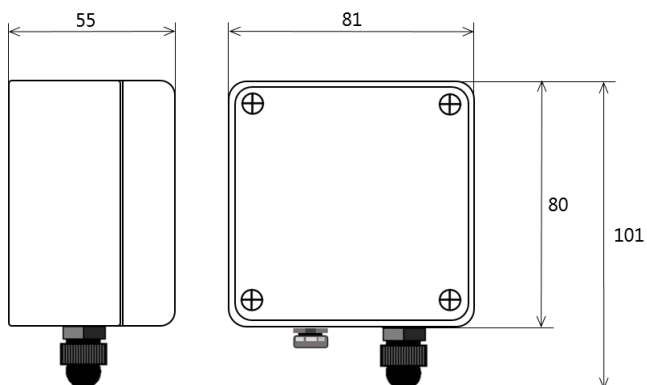
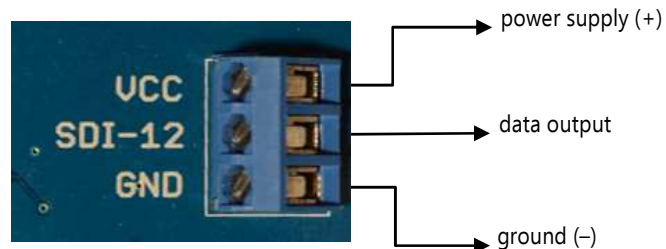
The sensor is equipped with an SDI-12 output and is compatible with all data loggers using this communication standard.

SDI-12 (Serial Digital Interface at 1200 baud) is a serial communications protocol used in environmental measurements. The operating principle is that only an SDI-compatible device with the digital addressing system will communicate with a the pre-configured sensors. Unless the sensor has a matching configuration, it will not respond and stay in a sleep mode. SDI-12 sensors have a three wire connection.

MAINTENANCE

Every sensor is individually calibrated at two temperatures and two pressures before leaving the manufacturer.

Capacitive sensitive element from the sensor can be calibrated if required with the use of specialist equipment. For more information about functional calibration contact PM Ecology directly.

DIMENSIONS (mm)

CONNECTION SCHEMA

TECHNICAL SPECIFICATION

Type	SP1A
Working temperature	-40 ... +60°C
Measuring element	Piezoresistive pressure measuring cell
Measuring range	600 ... 1100 hPa [mbar]
Accuracy	±0,5 hPa at 25°C
Resolution	0,05 hPa
Long term stability	≤0,2% FSO*/year
Output type	SDI-12
Power supply	4 ... 16 Vdc
Current consumption	<1mA at 12V
Housing	ABS, Polycarbonate available on request
Ingress protection	IP 65
Weight	138g
Cable	optional
Cable glands	1 or 2 possible to use the sensor as a junction box

* FSO (Full Scale Output) describes the difference of the upper and the lower limit of the pressure range

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