SN1120
Differential pressure sensor

Operating and maintenance instructions for the
SN1120-A050, SN1120-A100,
SN1120-A200 & SN1120-A500

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Operating and maintenance instructions

Issue	Date	Author	Comments
1	23 April 2021	F.Pagliarini	First release

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To assure proper usage, we ask you to read these operating instructions carefully before installation and commissioning of the control device.

1.0 Safety Notice

⚠ CAUTION – Safety

The sensor is only suitable for a safety extra low voltage supply of up to 57DC

⚠ Warning – Do not operate in an explosive atmosphere

2.0 Installation

Avoid exposure to vibration and high temperatures. The unit shall be installed according to relevant safety guidelines and requirements. Attention should be paid to local regulations and guidance.

3.0 The Differential Pressure Sensor

The differential pressure sensor uses a high-quality mass flow module to convert the movement of clean air and non-aggressive gases into a 0-10VDC output signal or into a digital format available via a 2-wire I²C interface. The differential pressure sensor also features:

- A wide power supply range with reverse polarity protection.
- No offset and no zero-point drift.
- Hysteresis free.
- Full calibration and temperature compensation (-20°C to +85°C).
- Factory calibration for Air and N_2.

Part Number	SN1120 -A050	SN1120 -A100	SN1120 -A200	SN1120 -A500
Pressure range	0-050Pa	0-100Pa	0-200Pa	0-500Pa
Sensor type	Analogue	Analogue	Analogue	Analogue

Table one - Pressure ranges

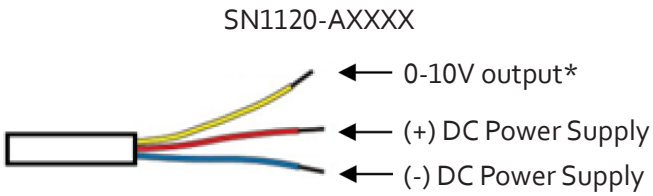
The 0-10VDC signal output of the analogue sensors is proportional to the pressure difference with respect to the sensor's pressure range. For example, a differential pressure of 100Pa measured on a 0-500Pa sensor gives a 2V output but the same differential pressure measured on a 0-200Pa sensor gives a 5V output

4.0 Specification

Product	SN1120-A050, SN1120-A100, SN1120-A200, SN1120-A500
Supply voltage (reverse polarity protected)	SN1120-AXXX: 9.5VDC to 57VDC SN1120-D500: 4.5VDC to 57VDC
Supply current	10mA
Maximum load (SN1120-AXXX)	100KΩ (100uA) when supply voltage < 12Vdc 5kΩ (2mA) when supply voltage >= 12Vdc
I2C SCL frequency (SN1120-D500)	400kHz
Recommended airline tube inner diameter	3.18 to 3.8mm (1/8 to 3/20inch)
Operating protection	1 bar
Accuracy	4.5% of reading
Enclosure / enclosure rating	Wall mount /IP54
Dimensions	See last page
Weight	86g
Operating environment	-20°C to +80°C, 90% RH at 40°C max
Media compatibility	Air, N_2 O_2, non-condensing
EMC compliance	BS EN61000-6-3 (emissions) BS EN61000-6-2 (immunity)

Table two - Specification

5.0 Electrical Connections



*Maximum load values apply - see specification above.

6.0 Deviation of Measured Value Due to Length of Airline Tube

It is recommended to use the shortest possible airline tube length to minimise deviation. The table below shows the approximate deviation of measured values against different airline tube lengths:

Length	Deviation of measured value
0.5m (20 inch)	-0.40%
1.0m (40 inch)	-0.80%
2.0m (80 inch)	-1.60%

Table three - Deviation of measured value

7.0 WEEE (Waste Electrical and Electronic Equipment)

ebm-papst UK Ltd complies with the Waste Electrical and Electronic Equipment (WEEE) Regulations through membership of a Producer Compliance Scheme (PCS) as a B2B producer. EEE Producer registration number: WEE/CA0209WR.

8.0 End of life

This product has been designed to consider end-of-life disposal. If the product has come to the end of its life, the unit can be easily disassembled for the components to be recycled. The product has been designed to meet the requirements of the RoHS directive. Refer to the following when dismantling:

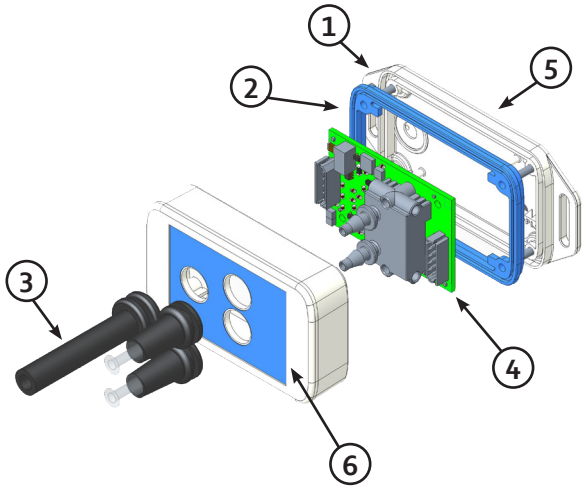


Figure one - Exploded view of product

1. Enclosure – polycarbonate
2. Seal – thermoplastic elastomers
3. Grommet – polyvinyl chloride
4. Printed Circuit Board Assembly – epoxy resin boded woven glass
5. Rating Label - polyester
6. Top Label – polyester

9.0 Take Back Policy

As part of our commitment to minimise the disposal of Waste Electrical and Electronic Equipment (WEEE) customers can return the product at the end of its life. Please contact us on +44 1245 468555 for details and issue of an end-of-life RMA number.

10.0 Transport & Storage

- Store in a dry environment
- Storage temperature: -20°C to +85°C

11.0 Dimensions (mm)

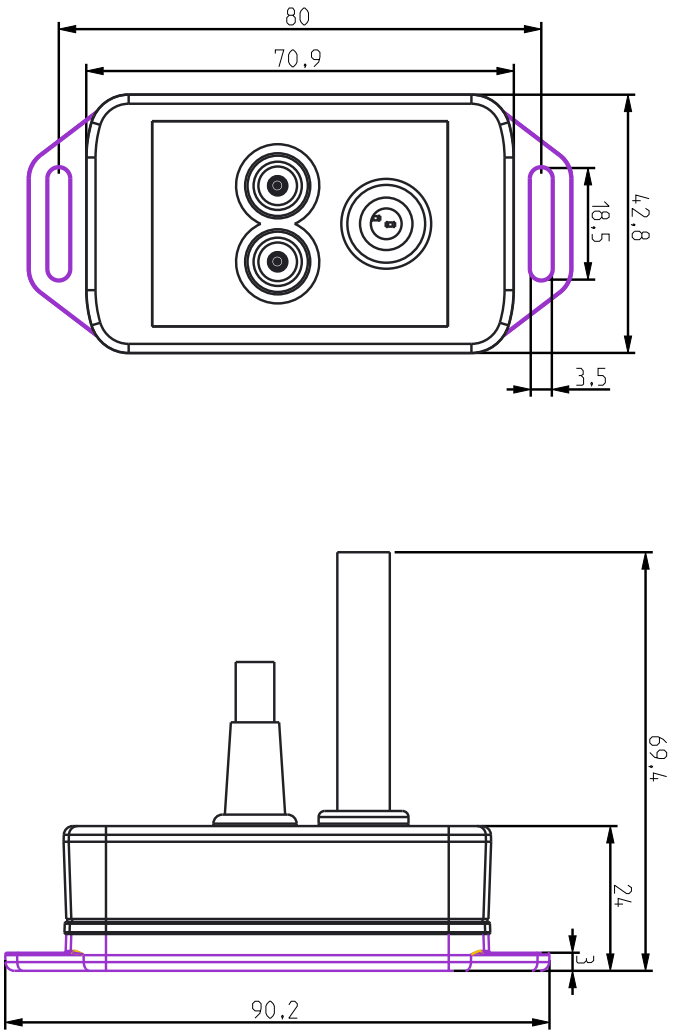


Figure two - Dimensions

12.0 UKCA and CE Certificates

The product has been UKCA and CE marked, certificates are available upon request info@uk.ebmpapst.com.

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