



PAULWEGENER
MESSTECHNIK SEIT 1921

Operating manual

Data acquisition system

PWBlogg

Pressure transducer DS1/420



1 Description and use

The pressure transducer DS1/420 converts the physical quantity pressure into an electric signal (4...20 mA) and is designed for use in gas explosive areas of zone 2. The pressure transducer with the ignition protection type nA is a non-sparking electrical resource with low power input subject to DIN EN 60 079-15.

Please take the properties of the pressure transducer from the paragraph „Technical specifications“ of this manual and from the agreed specifications.

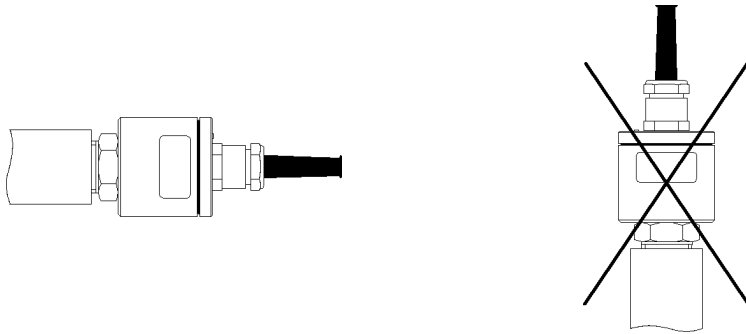
2 Mounting notes

Please check whether the ambient conditions correspond to the safety level of the data logger (ambient temperature, gas group, temperature class etc.) before installing the transducer in the hazard area. The valid erection and operating specifications must be followed.

When mounting, please mind clean and undamaged sealing surfaces at device and measurement point. Screw/unscrew the device with an appropriate tool only.

Relative pressure transducers are equipped with a pressure equalization element (DAE) and should preferably be horizontally positioned. This DAE is on the transducer's cover lid as little round label.

Note that this DAE is not removed or damaged.



3 Electrical connection

When connecting the transducer electrically, please note that this one won't ever be connected to intrinsically safe circuits. Following connecting conditions subject to DIN EN 60 079-15 paragraph 23 must be met:

- Any live parts of the transducer must be surrounded with enclosure protection degree of at least IP54. That means, if there are open cable heads with electrical connection within the ex-zone, these ones must be protected by an appropriate terminal enclosure.
- The rated voltage of the transducer's voltage supply must not exceed 60VAC and 75VAC respectively.
- Even temporary exceeding the rated voltage by 40% must be prevented by appropriate measures.

The device should be grounded via pressure port. If not possible, keep sufficient electrical grounding via connector or shield.

The pin and cable assignment are printed on the type label of the device.

4 Maintenance and troubleshooting

PWB pressure transducers are maintenance-free. The recalibration cycle depends on the operational conditions.

Devices which are designed for use in explosive areas must not be modified.

Device repairs must only be carried out by skilled and authorized specialists.

5 Technical specifications

Pressure measuring range:

Supply:

12...30 VDC

Output signal:

4...20 mA

Measurement accuracy:

0,2 %FS

Storage/operating temperature:

-20 °C...80 °C

Compensated temperature range:

-20 °C...80 °C

Enclosure material:

Rustproof steel 1.4301

Degree of protection of enclosure:

IP67 subject to DIN EN 60529

Process port:

G1/2A

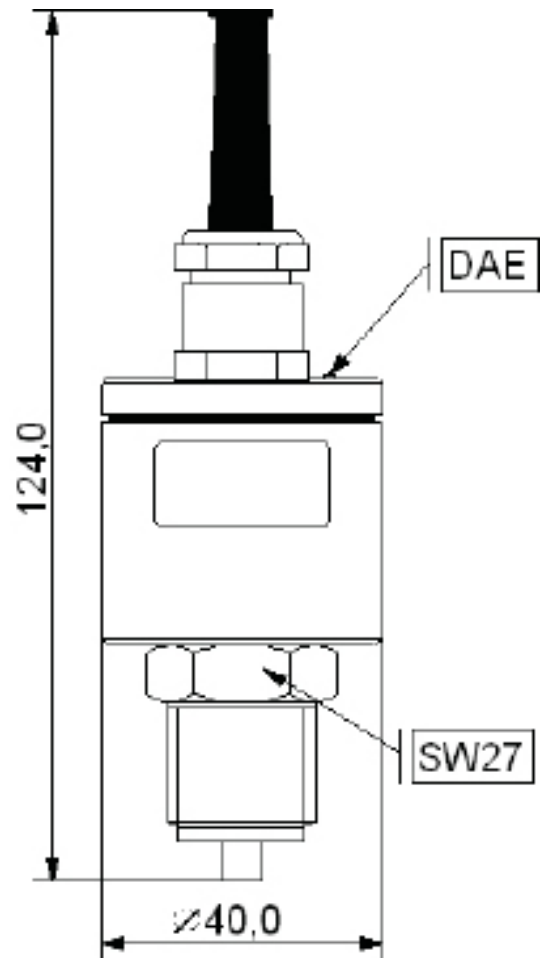
Media-touching materials:

Al₂O₃, viton, X5CrNi18.10,

X10CRNiS18.9

Explosion protection (optional):

Non-sparking ATEX II3G nA IIB T4 for safe use in explosion-hazardous areas of the zone 2.



EU-DECLARATION OF CONFORMITY

For the following product:

Pressure transducer DS1/420


is herewith confirmed that this one complies with following EU directives:

EMC directive 2014/30/EU
Ex-protection directive ATEX 2014/34/EU

And developed and examined based on following standards:

- EN 61000-6-3:2011-09** subject basic standard for emitted interference – emitted interference for living quarters, business- and trade as well as small firms
- EN 61000-6-2:2011-06** subject standard for interference resistance– industrial sector
- EN 60079-0:2014-06** electrical equipment for explosion-hazard areas, section 0: general requirements
- EN 60079-15:2011-02** electrical equipment for explosion-hazard areas, section 15: construction, test and marking of electrical equipment of ignition protection type „n“

Marking as category 3 - equipment for use in explosion-hazard areas of the zone 2:

 **II3G Ex nA IIB T4 X**
-20 °C ≤ Ta ≤ +60 °C

Manufacturer:

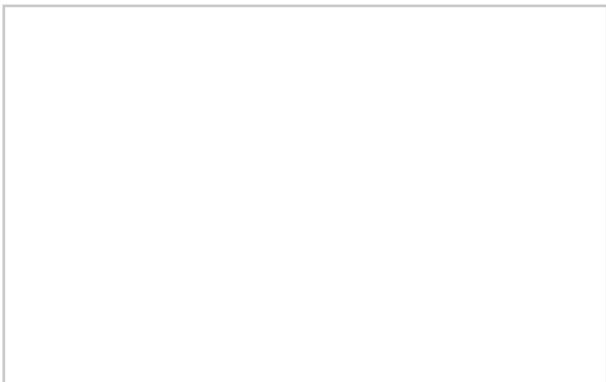
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The safety advice of the product documentation must be followed!

Ballenstedt, 20.04.2016



Wegener
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