PRESSURIX D

**Technical Data**

**Case design**
- stainless steel design:
  - st. steel case with right angle plug
  - st. steel field housing

**Temperature ranges**
- storage temperature range: -25...+80 °C
- limiting temperature range: -25...+70 °C
- rated temperature range: depending on type (measuring range, design and system filling)

**Measuring accuracy**
- linearity error incl. hysteresis ≤±0.3 % f.s.
- temperature effect see data sheet

**Auxiliary energy supply**
- standard version:
  - nominal voltage: 24 V DC
  - function range:
    - 2-wire technology: 14...30 V DC
    - 3-wire technology: 16...30 V DC
  - max. permiss. operating voltage: 30 V DC

**Output signal**
- 4...20 mA, 2-wire technology
- 0...20 mA/0...10 V/4...20 mA, 3-wire technology

**Current limitation in output signal**
- max. output current approx. at 30 mA

**Adjusting range**
- approx. ±10 % f.s.
- zero point and measuring span separately adjustable

**Electrical data**
- Sum of maximum values in the intrinsically safe circuits:
  - \( U_i = 30 \) V
  - \( I_i = 100 \) mA
  - \( P_i = 0.7 \) W

The table shows the values for different pressure transmitter signals:

<table>
<thead>
<tr>
<th>signal mode</th>
<th>( C ) [nF]</th>
<th>( L ) [µH]</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-wire 4...20 mA</td>
<td>33</td>
<td>20</td>
</tr>
<tr>
<td>3-wire 0(2)...10 V</td>
<td>43</td>
<td>30</td>
</tr>
<tr>
<td>3-wire 0(4)...20 mA</td>
<td>43</td>
<td>30</td>
</tr>
</tbody>
</table>

**Caution:**
Make sure that there is equipotential bonding along the entire wiring run both inside and outside the explosion hazardous area.
Switch off device if it is installed in zone 0 and in temperature class T5 and T6 and it fails!

**Burden**
- \( R_a = \frac{U_b - 14 \text{ V}}{20 \text{ mA}} \)
- \( U_b = \) operating voltage
- \( R_a = \) max. permissible burden resistance (incl. lead)

**Burden influence**
- for 500 Ohm burden change: ≤0.1 % f.s.

**System filling**
- standard: silicon oil
- foodstuff oil FD1/FD2 (USDAH1 per FDA)
- vegetable oil FP
- medical white oil FW (USDA-H1 per FDA)

**Installation position**
- any. standard: adjusted at factory for vertical mounting

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**Connection diagram**

Differential pressure transmitter PRESSURIX D.

[Connection diagram image]
These operating instructions refer to installation, commissioning, servicing and adjustment. Statutory regulations, valid standards, additional technical details in the relevant data sheet, details of the type plate and any additional certificates are to be observed along with these operating instructions.

**Safety instructions**

- Installation, operation and maintenance of the instrument may be executed by authorized personnel, only, using suitable equipment.
- Warning: If the instrument is used incorrectly it is possible that serious injuries or damage can occur!
- Prior to the disassembly of the pressure transmitter the impulse ducts between the measuring transmitter and the process have to be locked and relieved from pressure.
- The standard nominal pressure rating of the gasket should be observed for all process connections. Operation outside the allowed nominal pressure rating, especially with clamp connections, is only possible with suitable clamps. In this case, note DIN 32676 for stipulations on heat resistance.
- Pressure transmitters that are mechanically defective can cause injuries or give rise to process faults. Suitable precautions should be taken to avoid this.

**CE marking**

The CE marking on the instruments certifies compliance with valid EU directives for bringing products to market within the European Union.

**Mounting and operating**

- Before mounting the instrument ensure that pressure range, overpressure resistance, media compatibility, thermostability and process port are suitable for the process at hand.
- Conduct process installation before electrical installation.
- Measuring instruments that should not have any oil or grease residues in the pressure port are marked „Free of oil and grease“.
- Gaskets must be chosen that are suited to the process connection and resistant to the measured medium.
- Check for pressure tightness when commissioning the transmitter.
- Do not insulate the temperature decoupler, as this would reduce the decoupling effect. Follow DIN 32676.
- Wire up the instrument with power switched off.
- Instruments with case protection IP67 and pressure ranges to 16 bar/250 psi are aerated through the connection cable. Place an aeratable cable in an aeratable connection chamber during mounting. This will compensate for atmospheric variations.
- The instrument can only be protected against electromagnetic interference (EMC) if the conditions for screening, earthing, wiring and potential isolation are met during installation.
- The mounting position should be taken into consideration when checking the zero output. Standard transmitters are adjusted at the factory for vertical mounting. Changes to the mounting position can cause zero shifts at pressure ranges ≤ 2 bar. These drifts can be corrected by adjustment on site (see zero point correction).
- When the instrument is opened any contact with the electrical connections can affect the signals. This situation can be avoided by switching off the supply voltage or by disconnecting the signal circuit.
- The types of protection IP65/IP67 are only achieved, when threaded rings, caps, plugs or fixing screws have been screwed tight after electrical connection/parameterization.
- The instrument requires no maintenance.

**Instructions for the operation with diaphragm seal**

- To avoid soiling and damage remove protective cap or wrapping in front of the separating diaphragm before mounting.
- Do not touch the flush mounted separating diaphragm, as there is a danger of deformation at measuring ranges to 10 bar/150 psi. Instrument zero point and measuring characteristics could also be affected.
- Measuring instrument and diaphragm seal are a closed system and should not be separated.
- Avoid overtightening the process screw joints as this can result in zero displacements at the pressure transmitter (fixing error).
- When using systems with capillary for vacuum measurements always mount the pressure transmitter underneath the diaphragm seal. The instruments are set at the factory with pressure transmitter and diaphragm seal at the same height. Correct any differences in height between diaphragm seal and pressure transmitter arising from conditions on site on the pressure transmitter when placing the instrument into operation (see zero-point correction). When correcting for elevation be aware of the adjustment limits.
- Be sure to install and securely fasten the capillary to avoid vibrations. Roll up overlengths with a minimum radius of 20-25 cm. Shock and changes in temperature can impact on measurements.
- Process and ambient temperatures can cause zero displacements at the pressure transmitter with some system designs. We can supply you with an error analysis.

**Zero-point correction**

Should the devices require re-adjustment you may access the internal potentiometers for zero point and span underneath the cover in standard housings, and by removing the knurled locking ring in field housings. Trim the zero and span potentiometers using a screwdriver (1.5 x 40) (10 turns = ± 10 % of measuring range). To set the measuring span, you should apply an accurate reference pressure.
EU-Konformitätserklärung
EU Declaration of Conformity
Déclaration UE de Conformité

FAFNIR GmbH
Schnackenburgallee 149 c
22525 Hamburg / Germany

erklärt als Hersteller in alleiniger Verantwortung, dass das Produkt
decrees as manufacturer under sole responsibility that the product
declare sous sa seule responsabilité en qualité de fabricant que le produit
Druckmessumformer
Pressure Transmitter
Transmetteur de pression

PRESSURIX ...

den Vorschriften der europäischen Richtlinien
compiles with the regulations of the European directives
est conforme aux réglementations des directives européennes suivantes

| Directive | Description | Norm |
|-----------|-------------|------|---|
| 2011/65/EU | Beschränkung der Verwendung bestimmter gefährlicher Stoffe in Elektro- und Elektronikgeräten | RoHS |
| 2011/65/EU | Restriction of the use of certain hazardous substances in electrical and electronic equipment | RoHS |
| 2011/65/UE | Limitation de l'utilisation de certaines substances dangereuses dans les équipements électriques et électroniques | RoHS |
| 2014/30/EU | Elektromagnetische Vorträglichkeit | EMV |
| 2014/30/EU | Electromagnetic compatibility | EMC |
| 2014/30/UE | Compatibilité électromagnétique | CEM |
| 2014/34/EU | Geräte und Schutzsysteme zur bestimmungsgemäßen Verwendung in explosionsgefährdeten Bereichen | ATEX |
| 2014/34/EU | Equipment and protective systems intended for use in potentially explosive atmospheres | ATEX |
| 2014/34/UE | Appareils et systèmes de protection destinés à être utilisés en atmosphères explosibles | ATEX |
| 2014/68/EU | Bereitstellung von Druckgeräten auf dem Markt | PED |
| 2014/68/EU | Making available on the market of pressure equipment | DGRRL |
| 2014/68/UE | Mise à disposition sur le marché des équipements sous pression | DESP |

durch die Anwendung folgender harmonisierter Normen entspricht
by applying the harmonised standards
par l'application des normes
RoHS / RoHS / RoHS | EN 50581:2012
EMV / EMC / CEM | EN 61326-1:2013
ATEX / ATEX / ATEX | EN 60079-0:2012
| EN 60079-11:2012
| EN 60079-26:2007

Das Produkt entspricht den EMV-Anforderungen
The product complies with the EMC requirements
Le produit est conforme aux exigences CEM
Störaussetzung / Emission / Emission
Störfestigkeit / Immunity / D'immunité

Die notifizierte Stelle TÜV NORD CERT GmbH, 0044 hat eine EG-Baumusterprüfung durchgeführt und folgende Bescheinigung ausgestellt
The notified body TÜV NORD CERT GmbH, 0044 performed a EC-type examination and issued the certificate
L'organisme notifié TÜV NORD CERT GmbH, 0044 a effectué examen CE de type et a établi l'attestation

PRESSURIX ... Ex ...
TÜV 13 ATEX 118658 X

Das druckhaltende Ausrüstungsteil entspricht dem DGRL-Konformitätsbewertungsverfahren
The pressure accessory complies with the PED conformity assessment procedure
L' accessoire sous pression est conforme avec la procédure d'évaluation DESP de la conformité

PRESSURIX ...

Ort, Datum / Place, Date / Lieu, Date

Geschäftsführer / Managing Director / Gérant: René Albrecht

Seite / Page / Page 1/1

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