

EX Instructions

Number of EC type examination certificate

TÜV 02 ATEX 1971 X

Number of IECEx-Certificate

IECEx TUN 04.0008X

Number of ANZEx-Certificate

ANZEx 15.2002X

Amendment to operating instructions for these type series

| Type | Description | Instructions |
|--------|---------------------------------------|--------------|
| Cx1xx1 | Pressure transmitter UNIVERSAL | BA_020 |
| Cx2xx1 | | |
| CX2001 | High temperature pressure transmitter | BA_077 |

ATEX-Marking

- Ex II 2 G Ex ia IIC T4 Gb
- Ex II 2 G Ex ia IIC T4/T5/T6 Gb
- Ex II 1/2 G Ex ia IIC T4 Ga/Gb
- Ex II 1/2 G Ex ia IIC T4/T5/T6 Ga/Gb

IECEx- and ANZEx-Marking

- Ex ia IIC T4/T5/T6 Gb
- Ex ia IIC T4/T5/T6 Ga/Gb
- Ex ia I Ma

- BG: Ако не разбирате указанията за безопасност, можете да изискате превод на вашия език.
- CZ: Pokud těmto bezpečnostním pokynům nerozumíte, můžete si vyžádat jejich překlad do vašeho jazyka.
- DA: Hvis du ikke forstår sikkerhedshenvisningerne, kan du forespørge en oversættelse i dit sprog.
- DE: Wenn Sie diese Sicherheitshinweise nicht verstehen, können Sie eine Übersetzung in Ihrer Landessprache anfordern.
- EL: Εάν δεν καταλαβαίνετε αυτές τις υποδείξεις ασφαλείας, μπορείτε να ζητήσετε μια μετάφραση στη μητρική σας γλώσσα
- ES: Si no entiendes estas indicaciones de seguridad, puede solicitar una traducción en su idioma.
- ET: Kui need ohutusnõuded ei ole teile arusaadavad, võite tellida meilt tõlke oma keelde.
- FI: Jos et ymmärrä näitä turvaohjeita, voi pyytää ne lähetettäväksi omalle kielellesi käännettynä.
- FR: Si vous ne comprenez pas les consignes de sécurité, vous pouvez faire la demande d'une traduction dans votre langue.
- HU: Amennyiben nem érti ezeket a biztonsági utasításokat, akkor kérheti ezeknek az Ön nyelvére lefordított változatát.
- IT: Nel caso non capite queste avvertenze di sicurezza, ne potete richiedere una traduzione nella vs. lingua.
- LT: Jei nesuprantate šių saugos reikalavimų, galite užsisakyti jų vertimą į Jūsų kalbą.
- LV: Ja jūs nesaprotat šos drošības norādījumus, jūs varat pieprasīt tulkojumu jūsu valodā.
- NL: Indien u deze veiligheidsinstructies niet begrijpt, kunt u een vertaling in uw eigen taal aanvragen.
- PL: Jeżeli niniejsze przepisy bezpieczeństwa są niezrozumiałe, można poprosić o tłumaczenie we własnym języku.
- PT: Se não compreender os avisos de segurança, pode solicitar uma tradução no seu idioma.
- RO: Dacă nu înțelegeți aceste instrucțiuni de siguranță puteți cere traducerea acestora în limba dvs.
- SK: Ak ste nepochopili bezpečnostné pokyny, môžete si vyžiadať preklad do svojho jazyka.
- SL: Če teh navodil ne razumete, lahko zahtevate prevod v Vaš jezik.
- SV: Om du inte förstår den här säkerhetsanvisningen kan du begära att få en översättning till ditt språk.

1 General Safety Notes

The installation, set up, service or disassembly of this device must only be done by trained, qualified personnel using suitable equipment and authorized to do so.



Warning

Media can escape if unsuitable devices are used or if the installation is not correct.

Danger of severe injury or damage

- Ensure that the device is suitable for the process and undamaged.

Measuring devices in explosive environments must be installed and commissioned by competent personnel that are familiar with the specialties of explosion protection. Modifications or damage of devices or electrical connections might negatively influence the operating safety or the ex-proofing.

Observe the regulations and standards for erection and operation of electrical installations in explosive atmospheres as well as the installation and safety notes in the corresponding operation instructions.

Avoid electrostatic charge on plastic surfaces, if present.

2 Requirements for intrinsically safe supply

Connect the pressure transmitter to a certified intrinsically safe power circuit.

Permissible maximum values:

$$U_i \leq 30 \text{ V}$$

$$I_i \leq 100 \text{ mA}$$

$$P_i \leq 700 \text{ mW}$$

Depending on the signal mode of the pressure transmitter, the following effective internal capacitances and inductances result:

| Signal mode | C_i | L_i |
|------------------------|-------|------------|
| 2-wire 4 ... 20 mA | 33 nF | 20 μ H |
| 3-wire 0 (2) ... 10 V | 43 nF | 30 μ H |
| 3-wire 0 ... 5 V | 43 nF | 30 μ H |
| 3-wire 0 (4) ... 20 mA | 43 nF | 30 μ H |

Since the intrinsically safe signal circuit is connected with earth potential for safety reasons, potential equalisation has to exist in the complete course of the erection of the intrinsically safe circuit.

The connection cable is not part of the EC type examination certificate and must be considered separately per EN 60079-14:2014 section 16.2.2.2. According to that standard you can assume the following values:

$$C_c \leq 200 \text{ pF/m}$$

$$L_c \leq 1 \text{ } \mu\text{H/m}$$

3 Permissible media and ambient temperatures

| Type | EPL of the pressure transmitter | Class | Media max. | Ambient |
|------|---------------------------------|-------|------------|-------------|
| All | Gb | T4 | 70 °C | -20...70 °C |
| | | T5 | 70 °C | -20...70 °C |
| | | T6 | 55 °C | -20...70 °C |
| | Ga/Gb | T4 | 60 °C | -20...70 °C |
| | | T5 | 60 °C | -20...70 °C |
| | | T6 | 40 °C | -20...70 °C |
| | Ex ia I Ma | | 70 °C | -20...70 °C |

For temperature classes T1, T2 and T3 the temperature limits for T4 apply.

The permissible media and ambient temperatures depend on the device type and its configuration as documented in the data sheet as well as the ignition temperature of the explosive atmosphere. Consider both aspects! The permissible range lies between the lowest value of the upper limit and the highest value of the lower limit.

4 Additional Requirements

If category 1 requirements apply the pressure transmitter measuring insert must only be operated at atmospheric conditions (Temperature from -20 °C to 60 °C, pressure from 0,8 bar to 1,1 bar).



Lösungen nach Maß für industrielle Druck- und Temperaturmessungen in den Bereichen Food, Pharma, Biotechnik, Chemie, Petrochemie, Energie, Umweltschutz und Seeschifffahrt.
"Made to Measure" Process Instrumentation for Pressure and Temperature Measurement in the Food, Pharmaceutical, Bio-Technology, Chemical, Petro-Chemical, Power, Environmental and Maritime Industries.

EU-Konformitätserklärung EU Declaration of Conformity

KE_021

Hersteller / Manufacturer

LABOM Mess- und Regeltechnik GmbH
Im Gewerbepark 13, 27798 Hude

Die CE-Kennzeichnung der Geräte

The CE symbol on the devices

Druckmessumformer UNIVERSAL der
Typenreihen

Pressure transmitter UNIVERSAL type series

CB1(2)02x, CE1(2)01x, CB1(2)03x, CC1(2)02x, CD1(2)02x, CX1(2)xxx, CP131x

weist auf die Übereinstimmung mit den relevanten
Richtlinien hin.

*indicates their compliance with the relevant
directives.*

Folgende Richtlinien werden angewandt:

The following directives are applied:

| | | | |
|------------|-------------|---|---|
| 2014/68/EU | DGRL PED | PS > 200 bar: Modul A, druckhaltendes Ausrüstungsteil PS > 200 bar: Module A, pressure accessory | |
| 2011/65/EU | RoHS | EN 50581:2012 | |
| 2014/30/EU | EMV EMC | EN 61326-1:2013 | |
| 2014/34/EU | ATEX | EN 60079-0:2012/A11:2013 EN 60079-11:2012 EN 60079-26:2015 EN 1127-1:2011 | Für Typenreihe / For type series Cx1(2)xx1 Nr. der EG-Baumusterprüfbescheinigung EC-type examination certificate |

TÜV 02 ATEX 1971 X

Ausgestellt von / issued by
0044 TÜV NORD CERT

Hude, 28.12.2017

ppa. Dr. Thomas Köster
Leiter Bereich Entwicklung / R & D Director

benannte Stellen für Auditierung des QS-Systems nach
notified bodies for auditing the QS-system according to

ATEX
Zertifikat / certificate

0044 TÜV NORD CERT
TÜV 00 ATEX 1582 Q

DGRL / PED
Zertifikat / certificate

0045 TÜV NORD Systems
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