

EX Instructions

Number of EC type examination certificate

BVS 04 ATEX E 144 X

Amendment to operating instructions for these type series

<u>Type</u>	<u>Description</u>	<u>Instruction</u>
GA25x1	Resistance Thermometer	BA_015
GFxxx1	Gas Pressure Thermometer with integrated Pt100	BA_070
GA2211	Inline Resistance Thermometer with interchangeable Pt100	BA_067
GA2601	Resistance Thermometer Clamp-On technology with interchangeable Pt100	BTA-011
GA2131 GA2141	Measuring Insert for Resistance Thermometer	<i>see operating instructions for complete device</i>

Marking

 II 2 G Ex ia IIC T4/T6

- 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 vyžádať 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.

2 Requirements for intrinsically safe supply

Connect the Pt100 measuring insert to an intrinsically safe power circuit.

Permissible maximum values:

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

$$P_i \leq 200 \text{ mW}$$

The inner capacity C_i and inductance L_i are negligible small.

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 ambient temperatures

<u>Type</u>	<u>Marking</u>	<u>Class</u>	<u>Ambient</u>
All	II 2 G Ex ia IIC T4/T6	T4	-40...80 °C
		T6	-40...60 °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

Avoid electrostatic charge on plastic surfaces, if present.

In the event of the media temperature deviating from the ambient temperature, the definition of the ambient temperature range or the temperature class is based solely on the connection head or the connection components. Take into particular account the influence of the media temperature on the temperature of the neck tube when the thermometer or measuring insert is in operation.

Ensure that the temperature of the connecting head or the connecting components is not influenced by the media temperature (max. -200...600°C) by taking appropriate measures, for example, by choosing an appropriate pipe length.

Fit the Pt100 measuring insert into a suitable housing that guarantees a minimum IP20 protection class. Ensure that the internal wiring complies with the conditions laid down in section 6.4.11 of EN 50020. Fit the measuring insert in such a way that the air gaps between the bare components of intrinsically safe power circuits and the metallic housing parts are a minimum of 3 mm apart.

Note the instructions for use with regard to permissible process conditions.

Devices with an aluminum housing need to be secured against strikes to avoid sparking.

5 Resistance thermometer with transmitter

Combining a transmitter with a resistance thermometer is an installation per ATEX-guideline. Adhere to the limits and safety instructions of the transmitter when using this combination in an explosion protected environment.



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_005

Hersteller /Manufacturer

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

Die CE-Kennzeichnung der Geräte			<i>The CE symbol on the devices</i>
Widerstandsthermometer der Typenreihen			Resistance thermometer, type series
			GA25xx, GA260x, GFxxxx, GA221x
Messeinsätze für Widerstandsthermometer der Typenreihe			Measuring inserts for resistance thermometers, type series
			GA213x, GA214x, GA310x
weist auf die Übereinstimmung mit den relevanten Richtlinien hin.			<i>indicates their compliance with the relevant directives.</i>
Folgende Richtlinien werden angewandt:			<i>The following directives are applied:</i>
2014/30/EU	EMV EMC	EN 61326-1:2013	Für Messgeräte mit Messumformer <i>For devices equipped with transmitter</i>
2011/65/EU	RoHS	EN 50581:2012	
2014/34/EU	ATEX	EN 60079-0:2012/A11:2013 EN 60079-11:2012	Nr. der EG-Baumusterprüfbescheinigung / <i>EC-type examination certificate</i> BVS 04 ATEX E 144 X Messeinsatz Typen / <i>Measuring insert types:</i> WMX-O**-*, WMX-R**-* Ausgestellt von / <i>issued by</i> 0158 EXAM BBG Prüf- und Zertifizier GmbH Für Typenreihen / <i>For type series</i> GA25x1, GA2601, GFxxx1, GA2211, GA2131, GA2141
		EN 60079-0:2012/A11:2013 EN 60079-11:2012	Nr. der EG-Baumusterprüfbescheinigung / <i>EC-type examination certificate</i> IBExU 13 ATEX 1017 X Ausgestellt von / <i>issued by</i> 0647 Institut für Sicherheitstechnik GmbH Für Typenreihen / <i>For type series</i> GA25x1, GA3101

Hude, 16.11.2017

ppa. Dr. Thomas Köster
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benannte Stelle für Auditierung des QS-Systems nach
notified body for auditing the QS-system according to

ATEX
Zertifikat / *certificate*

0044 TÜV NORD CERT
TÜV 00 ATEX 1582 Q