



Translation

(1) **EU-Type Examination Certificate**

(2) Equipment and protective systems intended for use in potentially explosive atmospheres, **Directive 2014/34/EU**

(3) **Certificate Number** TÜV 21 ATEX 201293 X **Issue:** 00

(4) for the product: See type code for details

(5) of the manufacturer: **Müller Industrie-Elektronik GmbH**

(6) Address: Justus-von Liebig-Straße 24
31535 Neustadt am Rübenberge
Germany

Order number: 8000472564

Date of issue: See date of signature

(7) The design of this product and any acceptable variation thereto are specified in the schedule to this EU-Type Examination Certificate and the documents therein referred to.

(8) The TÜV NORD CERT GmbH, Notified Body No. 0044, in accordance with Article 17 of the Directive 2014/34/EU of the European Parliament and the Council of 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential ATEX Assessment Report No. 21 203 201293.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN IEC 60079-0:2018/AC:2020-02 EN 60079-11:2012 EN 60079-26:2015

except in respect of those requirements listed at item 18 of the schedule.

(10) If the sign "X" is placed after the certificate number, it indicates that the product is subject to the Specific Conditions for Use specified in the schedule to this certificate.

(11) This EU-Type Examination Certificate relates only to the design, and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this equipment. These are not covered by this certificate.

(12) The marking of the product shall include the following:

 **See type code for details**

TÜV NORD CERT GmbH, Am TÜV 1, 45307 Essen, notified by the central office of the countries for safety engineering (ZLS), Ident. Nr. 0044, legal successor of the TÜV NORD CERT GmbH & Co. KG Ident. Nr. 0032

The deputy of the head of the notified body

(13) **SCHEDULE**

(14) **EU-Type Examination Certificate No. TÜV 21 ATEX 201293 X**

Issue 00

(15) **Description of product:**

• **Universal transmitter type ADMA-UCEX**

The universal transmitter can be designed in several variants with different electrical connections. As an output signal, either an intrinsically safe 2-wire output (4 – 20 mA) is available, or an intrinsically safe 3-wire output (0–10 V).

• **Temperature sensor type MITS-Ex**

The temperature sensor MITS-Ex can be designed in several variants with different electrical connections. The output signal is either the sensor signal directly, an intrinsically safe 2-wire output (4 – 20 mA), or an intrinsically safe 3-wire output (0–10 V).

• **Universal transmitter type MIUT-Ex**

The MIUT-Ex is an universal transmitter with which the signals of many different sensor types, such as bridge sensors, RTDs, thermocouples and others, are measured and scaled. The universal transmitter can be designed in several variants with different electrical connections. As an output signal, either an intrinsically safe 2-wire output (4 – 20 mA) is available, or an intrinsically safe 3-wire output (0–10 V).

• **Universal transmitter type UH-ATUEX**

The UH-ATUEX is a universal transmitter for mounting in connection heads with which the signals of many different sensor types, such as dms, RTDs, thermocouples and others, are measured and scaled. As an output signal an intrinsically safe 2-wire output (4 – 20 mA) is available.

• **Level sensor type MELS-FTEX**

The MELS-FTEX is a level sensor and can be designed in several variants with different process and electrical connections. Either an intrinsically safe 2-wire output (4 - 20 mA) or an intrinsically safe 3-wire output (0-10 V) is available as an output signal.

• **Pressure sensor type MEPS-TEX**

The MEPS-TEX is a pressure sensor and can be designed in several variants with different process and electrical connections. As an output signal, either an intrinsically safe 2-wire output (4 – 20 mA) is available, or an intrinsically safe 3-wire output (0–10 V).

• **Temperature sensor type METS-WTEX**

The METS-WTEX is a resistance temperature sensor and can be designed in several variants with different process and electrical connections. As an output signal, either an intrinsically safe 2-wire output (4 – 20 mA) is available, or an intrinsically safe 3-wire output (0–10 V).

• **Temperature sensor type MKTS-Ex**

The MKTS-Ex is a temperature sensor and can be designed in several variants with different electrical connections, installation lengths, process connections and sensor elements. The output signal is an intrinsically safe 2-wire output (4 – 20 mA), an intrinsically safe 3-wire output (0–10 V), or the sensor signal directly (without measuring amplifier).

• **Thermocouple cable sensor type TE-K1GEx**

The TE-K1G-Ex is an intrinsically safe thermocouple cable sensor with the option of a screw in clamp. Furthermore, there are several options for the design of the protective tube and the connection cable. As an output signal, the direct sensor signal of a thermocouple of type J or K is available.

• **Sheated cable thermocouple type TE-MK1GEx**

The TE-MK1G-Ex is an intrinsically safe sheated cable thermocouple with the option of a screw-in clamp. Furthermore, there are several options for the design of the protective tube and the connection cable. As an output signal, the direct sensor signal of a thermocouple of type J or K is available.

- **Thermocouple with terminal head B type TE-MR1GEx**
 The temperature sensor TE-MR1G-Ex can be designed in several variants as both a screw-in and an immersion sensor with screw-in clamp. Furthermore, there are several options for the type of the protective tube and the process connection. As an output signal, the direct sensor signal of one or two thermocouples of type K or J is available.
- **Resistor cable sensor type WT-K1GEx**
 The WT-K1GEx is an intrinsically safe resistance cable sensor with the option of a compression fitting. Furthermore, there are several options for the design of the protective tube as well as the connection cable. The direct sensor signal of one or two Pt100 or Pt1000, in 2-, 3- or 4-wire connection, is available as output signal.
- **Sheated cable resistance thermometer type WT-MK1GEx**
 The WT-MK1G-Ex is an intrinsically safe sheated cable resistance thermometer with the option of a screw in clamp. Furthermore, there are several options for the design of the protective tube and the connection cable. As an output signal, the direct sensor signal of one or two Pt100 or Pt1000 in 2-, 3- or 4-wire version is available.
- **Resistance thermometer with connection head B type WT-MR1GEx**
 The WT-MR1GEx temperature sensor can be designed in several variants both as a screw-in and as an immersion sensor with screw-in clamp. Furthermore, there are several options for the execution of the protective tube and the process connection. As an output signal, the direct sensor signal of one or two Pt100, or Pt1000 in 2-, 3- or 4-wire version is available.

Type code:

Variants	Marking
<ul style="list-style-type: none"> • Universal transmitter type ADMA-UCEX • Universal transmitter type MIUT-Ex • Universal transmitter type UH-ATUEX 	II 1 G Ex ia [ia] IIC T6...T1 Ga II 2 G Ex ia [ib] IIC T6...T1 Gb
<ul style="list-style-type: none"> • Temperature sensor type MITS-Ex 	II 1 G Ex ia IIC T6...T1 Ga II 2 G Ex ia IIC T6...T1 Gb
<ul style="list-style-type: none"> • Level sensor type MELS-FTEEx • Pressure sensor type MEPS-TEEx • Temperature sensor type METS-WTEEx • Temperature sensor type MKTS-Ex • Thermocouple cable sensor type TE-K1GEx • Sheated cable thermocouple type TE-MK1GEx • Thermocouple with terminal head B type TE-MR1GEx • Resistor cable sensor type WT-K1GEx • Sheated cable resistance thermometer type WT-MK1GEx • Resistance thermometer with connection head B type WT-MR1GEx 	II 1 G Ex ia IIC T6...T1 Ga II 1/2 G Ex ia IIC T6...T1 Ga/Gb II 2 G Ex ia IIC T6...T1 Gb

Electrical data:

All variants with Transmitter applications:

Supply (Plug) (Terminals) In type of protection intrinsic safety Ex ia IIC
Only for connection to certified intrinsically safe circuits.
Maximum values:

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

$$I_i = 110 \text{ mA}$$

$$P_i = 1 \text{ W}$$

Effective internal capacitance C_i Capacitance of the 330m-Cable = 66 nF
Effective internal inductance L_i Inductance of the 330m-Cable = 330 μH

ADMA-UCEEx, MIUT-Ex and UH-ATUEEx with Transmitter applications:

Output circuit (U+, S+, S-, AGnd) (M12; 4-pin; Socket) (Terminals) In type of protection intrinsic safety Ex ia IIC resp. Ex ib IIC with following maximum values:

$$U_o = 4.1 \text{ V}$$

$$I_o = 51 \text{ mA}$$

$$P_o = 52 \text{ mW}$$

Characteristic line: Linear
Effective internal capacitance C_i is negligibly small
Effective internal inductance L_i is negligibly small

The maximum permissible values for the external inductance L_o and the external capacitance C_o can be found in the following table:

Ex ia IIC Ex ib IIC	L_o	23 mH	10 mH	0.5 mH	0.2 mH
	C_o	1.7 μF	3 μF	6.4 μF	8.1 μF

All variants with transmitter applications (UH-ATUEEx excluded):

Output circuit (Voltage output only) U_{out} (Plug) (Cable tail) (Terminals) In type of protection intrinsic safety Ex ia IIC resp. Ex ib IIC with following maximum values:

$$U_o = 12.6 \text{ V}$$

$$I_o = 48 \text{ mA}$$

$$P_o = 148 \text{ mW}$$

Characteristic line: Linear
Effective internal capacitance C_i is negligibly small
Effective internal inductance L_i is negligibly small

The maximum permissible values for the external inductance L_o and the external capacitance C_o can be found in the following table:

Ex ia IIC Ex ib IIC	L _o	22 mH	10 mH	0.5 mH	0.2 mH
	C _o	0.22 µF	0.36 µF	0.86 µF	0.97 µF

MIT-S-Ex; MKTS-Ex; TE-K1GEx; TE-MK1GEx; TE-MR1G-Ex; WT-K1GEx; WT-MK1GEx and WT-MR1G-Ex without Transmitter applications:

Supply (Cable tail) In type of protection intrinsic safety Ex ia IIC.
Only for connection to certified intrinsically safe circuits.

Maximum values:

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

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

$$P_i = 100 \text{ mW}$$

Effective internal capacitance C_i

Capacitance of the 330m-Cable = 66 nF

Effective internal inductance L_i

Inductance of the 330m-Cable = 330 µH

Thermal data:

For EPL Ga or EPL Gb applications, the permissible ambient temperature range depending on the variant and temperature class is given in the following tables:

Variant: Universal transmitter type ADMA-UCEEx:

Temperature class	Ambient temperature range (With Current output (2-wire))
T1	-40 °C ... +75 °C
T2	-40 °C ... +75 °C
T3	-40 °C ... +75 °C
T4	-40 °C ... +75 °C
T5	-40 °C ... +(95 °C - P _i x 45 K/W); max. +75 °C
T6	-40 °C ... +(80 °C - P _i x 45 K/W); max. +75 °C

Temperature class	Ambient temperature range (With Voltage output (3-wire))
T1	-40 °C ... +50 °C
T2	-40 °C ... +50 °C
T3	-40 °C ... +50 °C
T4	-40 °C ... +50 °C
T5	-40 °C ... +(95 °C - P _i x 55 K/W); max. +50 °C
T6	-40 °C ... +(80 °C - P _i x 55 K/W); max. +50 °C

Variant: Temperature sensor type MIT-S-Ex:

Temperature class	Ambient temperature range (With Transmitter and Current output (2-wire))
T1	-20 °C ... +75 °C
T2	-20 °C ... +75 °C
T3	-20 °C ... +75 °C
T4	-20 °C ... +75 °C
T5	-20 °C ... +(95 °C - P _i x 45 K/W); max +75 °C
T6	-20 °C ... +(80 °C - P _i x 45 K/W); max +75 °C

Temperature class	Ambient temperature range (With Transmitter and Voltage output (3-wire))
T1	-20 °C ... +50 °C
T2	-20 °C ... +50 °C
T3	-20 °C ... +50 °C
T4	-20 °C ... +50 °C
T5	-20 °C ... +(95 °C - $P_i \times 55 \text{ K/W}$); max +50 °C
T6	-20 °C ... +(80 °C - $P_i \times 55 \text{ K/W}$); max +50 °C

Temperature class	Ambient temperature range (Without Transmitter)
T1	-20 °C ... +90 °C
T2	-20 °C ... +90 °C
T3	-20 °C ... +90 °C
T4	-20 °C ... +90 °C
T5	-20 °C ... +(95 °C - $P_i \times 200 \text{ K/W}$); max +90 °C
T6	-20 °C ... +(80 °C - $P_i \times 200 \text{ K/W}$); max. +80°C

Variant: Universal transmitter type MIUT-Ex:

Temperature class	Ambient temperature range (With Transmitter and Current output (2-wire))
T1	-20 °C ... +75°C
T2	-20 °C ... +75°C
T3	-20 °C ... +75°C
T4	-20 °C ... +75°C
T5	-20 °C ... +(95 °C - $P_i \times 45 \text{ K/W}$); max. +75 °C
T6	-20 °C ... +(80 °C - $P_i \times 45 \text{ K/W}$); max. +75 °C

Temperature class	Ambient temperature range (With Transmitter and Voltage output (3-wire))
T1	-20 °C ... +50°C
T2	-20 °C ... +50°C
T3	-20 °C ... +50°C
T4	-20 °C ... +50°C
T5	-20 °C ... +(95 °C - $P_i \times 55 \text{ K/W}$); max. +50 °C
T6	-20 °C ... +(80 °C - $P_i \times 55 \text{ K/W}$); max. +50 °C

Variant: Universal transmitter type UH-ATUEx (No 3-wire voltage output available):

Temperature class	Ambient temperature range (With Transmitter and Current output (2-wire))
T1	-20 °C ... +75°C
T2	-20 °C ... +75°C
T3	-20 °C ... +75°C
T4	-20 °C ... +75°C
T5	-20 °C ... +(95 °C - $P_i \times 45 \text{ K/W}$); max. +75 °C
T6	-20 °C ... +(80 °C - $P_i \times 45 \text{ K/W}$); max. +75 °C

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For EPL Ga or EPL Ga/Gb or EPL Gb with transmitter applications, the permissible temperature range at the electronics/at the measuring sensor depends on the variant and the temperature class of the following tables:

Variant: Level sensor type MELS-FTE_x:

Temperature class	Ambient temperature range (With Transmitter and Current output (2-wire))	Medium temperature range (Reed switch)
T1	-20 °C ... +75 °C	0 °C ... +100 °C
T2	-20 °C ... +75 °C	0 °C ... +100 °C
T3	-20 °C ... +75 °C	0 °C ... +100 °C
T4	-20 °C ... +75 °C	0 °C ... +100 °C
T5	-20 °C ... +(95 °C - P _i x 45 K/W); max. +75 °C	0 °C ... +85 °C
T6	-20 °C ... +(80 °C - P _i x 45 K/W); max. +75 °C	0 °C ... +70 °C

Temperature class	Ambient temperature range (With Transmitter and Voltage output (3-wire))	Medium temperature range (Reed switch)
T1	-20 °C ... +50 °C	0 °C ... +100 °C
T2	-20 °C ... +50 °C	0 °C ... +100 °C
T3	-20 °C ... +50 °C	0 °C ... +100 °C
T4	-20 °C ... +50 °C	0 °C ... +100 °C
T5	-20 °C ... +(95 °C - P _i x 55 K/W); max. +50 °C	0 °C ... +85 °C
T6	-20 °C ... +(80 °C - P _i x 55 K/W); max. +50 °C	0 °C ... +70 °C

Variant: Pressure sensor type MEPS-TE_x:

Temperature class	Ambient temperature range (With Transmitter and Current output (2-wire))	Medium temperature range (Tip of pressure sensor)
T1	-20 °C ... +75 °C	0 °C ... +100 °C
T2	-20 °C ... +75 °C	0 °C ... +100 °C
T3	-20 °C ... +75 °C	0 °C ... +100 °C
T4	-20 °C ... +75 °C	0 °C ... +100 °C
T5	-20 °C ... +(95 °C - P _i x 45 K/W); max. +75 °C	0 °C ... +85 °C
T6	-20 °C ... +(80 °C - P _i x 45 K/W); max. +75 °C	0 °C ... +70 °C

Temperature class	Ambient temperature range (With Transmitter and Voltage output (3-wire))	Medium temperature range (Reed switch)
T1	-20 °C ... +50 °C	0 °C ... +100 °C
T2	-20 °C ... +50 °C	0 °C ... +100 °C
T3	-20 °C ... +50 °C	0 °C ... +100 °C
T4	-20 °C ... +50 °C	0 °C ... +100 °C
T5	-20 °C ... +(95 °C - P _i x 55 K/W); max. +50 °C	0 °C ... +85 °C
T6	-20 °C ... +(80 °C - P _i x 55 K/W); max. +50 °C	0 °C ... +70 °C

Variant: Temperature sensor type METS-WTE_x:

Temperature class	Ambient temperature range (With Transmitter and Current output (2-wire))	Medium temperature range (Measuring sensor)
T1	-20 °C ... +75 °C	-50 °C ... +425 °C
T2	-20 °C ... +75 °C	-50 °C ... +275 °C
T3	-20 °C ... +75 °C	-50 °C ... +180 °C
T4	-20 °C ... +75 °C	-50 °C ... +115 °C
T5	-20 °C ... +(95 °C - P _i x 45 K/W); max. +75 °C	-50 °C ... +80 °C
T6	-20 °C ... +(80 °C - P _i x 45 K/W); max. +75 °C	-50 °C ... +65 °C

Temperature class	Ambient temperature range (With Transmitter and Voltage output (3-wire))	Medium temperature range (Measuring sensor)
T1	-20 °C ... +50 °C	-50 °C ... +425 °C
T2	-20 °C ... +50 °C	-50 °C ... +275 °C
T3	-20 °C ... +50 °C	-50 °C ... +180 °C
T4	-20 °C ... +50 °C	-50 °C ... +115 °C
T5	-20 °C ... +(95 °C - P _i x 55 K/W); max. +50 °C	-50 °C ... +80 °C
T6	-20 °C ... +(80 °C - P _i x 55 K/W); max. +50 °C	-50 °C ... +65 °C

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Variant: Temperature sensor type MKTS-Ex:

Temperature class	Ambient temperature range (With Transmitter and Current output (2-wire))	Medium temperature range (With Transmitter)
T1	-40 °C ... +75 °C	-50 °C ... +425 °C
T2	-40 °C ... +75 °C	-50 °C ... +275 °C
T3	-40 °C ... +75 °C	-50 °C ... +180 °C
T4	-40 °C ... +75 °C	-50 °C ... +115 °C
T5	-40 °C ... +(95 °C - P _i x 45 K/W); max. +75 °C	-50 °C ... +80 °C
T6	-40 °C ... +(80 °C - P _i x 45 K/W); max. +75 °C	-50 °C ... +65 °C

Temperature class	Ambient temperature range (With Transmitter and Voltage output (3-wire))	Medium temperature range (Measuring sensor)
T1	-40 °C ... +50 °C	-50 °C ... +425 °C
T2	-40 °C ... +50 °C	-50 °C ... +275 °C
T3	-40 °C ... +50 °C	-50 °C ... +180 °C
T4	-40 °C ... +50 °C	-50 °C ... +115 °C
T5	-40 °C ... +(95 °C - P _i x 55 K/W); max. +50 °C	-50 °C ... +80 °C
T6	-40 °C ... +(80 °C - P _i x 55 K/W); max. +50 °C	-50 °C ... +65 °C

Temperature class	Ambient temperature range (Without Transmitter)	Medium temperature range (Without Transmitter)
T1	-50 °C ... +100 °C	-50 °C ... +(440 °C - P _i x 200 K/W)
T2	-50 °C ... +100 °C	-50 °C ... +(290 °C - P _i x 200 K/W)
T3	-50 °C ... +100 °C	-50 °C ... +(195 °C - P _i x 200 K/W)
T4	-50 °C ... +100 °C	-50 °C ... +(130 °C - P _i x 200 K/W)
T5	-50 °C ... +95 °C	-50 °C ... +(95 °C - P _i x 200 K/W)
T6	-50 °C ... +80 °C	-50 °C ... +(80 °C - P _i x 200 K/W)

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For EPL Ga or EPL Ga/Gb or EPL Gb without transmitter applications, the permissible temperature range at the connection cable or at the connection head B/at the measuring sensor can be taken from the following tables depending on the variant and the temperature class:

Variant: Thermocouple cable sensor type TE-K1GEx:

Temperature class	Ambient temperature range (Connection cable)			
	Clamp fitting			
	GVxxxxx0xxx	GVxxxxx1xxx	GVxxxxx2xxx GVxxxxx3xxx	GVxxxxx4xxx
T1	-5 °C...+70 °C	-45 °C...+180 °C	-75 °C ... +250 °C	-60 °C ... +440 °C
T2	-5 °C...+70 °C	-45 °C...+180 °C	-75 °C ... +250 °C	-60 °C ... +290 °C
T3	-5 °C...+70 °C	-45 °C...+180 °C	-75 °C ... +195 °C	-60 °C ... +195 °C
T4	-5 °C...+70 °C	-45 °C...+130 °C	-75 °C ... +130 °C	-60 °C ... +130 °C
T5	-5 °C...+70 °C	-45 °C...+95 °C	-75 °C ... +95 °C	-60 °C ... +95 °C
T6	-5 °C...+70 °C	-45 °C...+80 °C	-75 °C ... +80 °C	-60 °C ... +80 °C

Note: The ambient temperature range depends on the cable type:

PVC: -5...+70°C / Silicone: -45...+180 °C / PTFE: -75...+250 °C / Glass silk/VA braid: -60...+550 °C

Temperature class	Medium temperature range (Measuring sensor)
T1	-200 °C ... +(440 °C - P _i x 200 K/W)
T2	-200 °C ... +(290 °C - P _i x 200 K/W)
T3	-200 °C ... +(195 °C - P _i x 200 K/W)
T4	-200 °C ... +(130 °C - P _i x 200 K/W)
T5	-200 °C ... +(95 °C - P _i x 200 K/W)
T6	-200 °C ... +(80 °C - P _i x 200 K/W)

Variant: Sheated cable thermocouple type TE-MK1GEx:

Temperature class	Ambient temperature range (Connection cable)			
	Clamp fitting			
	GTxxxxx0xxx	GTxxxxx1xxx	GTxxxxx2xxx GTxxxxx3xxx	GTxxxxx4xxx
T1	-5 °C...+70 °C	-45 °C...+180 °C	-75 °C ... +250 °C	-60 °C ... +440 °C
T2	-5 °C...+70 °C	-45 °C...+180 °C	-75 °C ... +250 °C	-60 °C ... +290 °C
T3	-5 °C...+70 °C	-45 °C...+180 °C	-75 °C ... +195 °C	-60 °C ... +195 °C
T4	-5 °C...+70 °C	-45 °C...+130 °C	-75 °C ... +130 °C	-60 °C ... +130 °C
T5	-5 °C...+70 °C	-45 °C...+95 °C	-75 °C ... +95 °C	-60 °C ... +95 °C
T6	-5 °C...+70 °C	-45 °C...+80 °C	-75 °C ... +80 °C	-60 °C ... +80 °C

Note: The ambient temperature range depends on the cable type:

PVC: -5...+70°C / Silicone: -45...+180 °C / PTFE: -75...+250 °C / Glass silk/VA braid: -60...+550 °C

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Temperature class	Medium temperature range (Measuring sensor)
T1	-200 °C ... +(440 °C - P _i x 200 K/W)
T2	-200 °C ... +(290 °C - P _i x 200 K/W)
T3	-200 °C ... +(195 °C - P _i x 200 K/W)
T4	-200 °C ... +(130 °C - P _i x 200 K/W)
T5	-200 °C ... +(95 °C - P _i x 200 K/W)
T6	-200 °C ... +(80 °C - P _i x 200 K/W)

Variant: Thermocouple with terminal head B type TE-MR1G-Ex:

Temperature class	Ambient temperature range (Connection head B)	Medium temperature range (Measuring sensor)
T1	-40 °C ... +100°C	-200 °C ... +(440 °C - P _i x 200 K/W)
T2	-40 °C ... +100°C	-200 °C ... +(290 °C - P _i x 200 K/W)
T3	-40 °C ... +100°C	-200 °C ... +(195 °C - P _i x 200 K/W)
T4	-40 °C ... +100°C	-200 °C ... +(130 °C - P _i x 200 K/W)
T5	-40 °C ... +95 °C	-200 °C ... +(95 °C - P _i x 200 K/W)
T6	-40 °C ... +80 °C	-200 °C ... +(80 °C - P _i x 200 K/W)

For EPL Ga or EPL Ga/Gb or EPL Gb without transmitter applications, the following temperature classifications and ambient temperature ranges apply:

Variant: Resistor cable sensor type WT-K1GEx:

Temperature class	Ambient temperature range (Connection cable)			
	Clamp fitting			
	GXxxxxxxx0xxx	GXxxxxxxx1xxx	GXxxxxxxx2xxx GXxxxxxxx3xxx	GXxxxxxxx4xxx
T1	-5 °C...+70 °C	-45 °C...+180 °C	-75 °C ... +250 °C	-60 °C ... +440 °C
T2	-5 °C...+70 °C	-45 °C...+180 °C	-75 °C ... +250 °C	-60 °C ... +290 °C
T3	-5 °C...+70 °C	-45 °C...+180 °C	-75 °C ... +195 °C	-60 °C ... +195 °C
T4	-5 °C...+70 °C	-45 °C...+130 °C	-75 °C ... +130 °C	-60 °C ... +130 °C
T5	-5 °C...+70 °C	-45 °C...+95 °C	-75 °C ... +95 °C	-60 °C ... +95 °C
T6	-5 °C...+70 °C	-45 °C...+80 °C	-75 °C ... +80 °C	-60 °C ... +80 °C

Note: The ambient temperature range depends on the cable type:

PVC: -5...+70°C / Silicone: -45...+180 °C / PTFE: -75...+250 °C / Glass silk/VA braid: -60...+550 °C

Temperature class	Medium temperature range (Measuring sensor)
T1	-200 °C ... +(440 °C - P _i x 200 K/W)
T2	-200 °C ... +(290 °C - P _i x 200 K/W)
T3	-200 °C ... +(195 °C - P _i x 200 K/W)
T4	-200 °C ... +(130 °C - P _i x 200 K/W)
T5	-200 °C ... +(95 °C - P _i x 200 K/W)
T6	-200 °C ... +(80 °C - P _i x 200 K/W)

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Variant: Sheathed cable resistance thermometer type WT-MK1GEx:

Temperature class	Ambient temperature range (Connection cable)			
	Clamp fitting			
	GUxxxxxx0xxx	GUxxxxxx1xxx	GUxxxxxx2xxx GUxxxxxx3xxx	GUxxxxxx4xxx
T1	-5 °C...+70 °C	-45 °C...+180 °C	-75 °C ... +250 °C	-60 °C ... +440 °C
T2	-5 °C...+70 °C	-45 °C...+180 °C	-75 °C ... +250 °C	-60 °C ... +290 °C
T3	-5 °C...+70 °C	-45 °C...+180 °C	-75 °C ... +195 °C	-60 °C ... +195 °C
T4	-5 °C...+70 °C	-45 °C...+130 °C	-75 °C ... +130 °C	-60 °C ... +130 °C
T5	-5 °C...+70 °C	-45 °C...+95 °C	-75 °C ... +95 °C	-60 °C ... +95 °C
T6	-5 °C...+70 °C	-45 °C...+80 °C	-75 °C ... +80 °C	-60 °C ... +80 °C

Note: The ambient temperature range depends on the cable type:

PVC: -5...+70 °C / Silicone: -45...+180 °C / PTFE: -75...+250 °C / Glass silk/VA braid: -60...+550 °C

Temperature class	Medium temperature range (Measuring sensor)
T1	-200 °C ... +(440 °C - P _i x 200 K/W)
T2	-200 °C ... +(290 °C - P _i x 200 K/W)
T3	-200 °C ... +(195 °C - P _i x 200 K/W)
T4	-200 °C ... +(130 °C - P _i x 200 K/W)
T5	-200 °C ... +(95 °C - P _i x 200 K/W)
T6	-200 °C ... +(80 °C - P _i x 200 K/W)

Variant: Resistance thermometer with connection head B type WT-MR1G-Ex:

Temperature class	Ambient temperature range (Connection head B)	Medium temperature range (Measuring sensor)
T1	-40 °C ... +100 °C	-200 °C ... +(440 °C - P _i x 200 K/W)
T2	-40 °C ... +100 °C	-200 °C ... +(290 °C - P _i x 200 K/W)
T3	-40 °C ... +100 °C	-200 °C ... +(195 °C - P _i x 200 K/W)
T4	-40 °C ... +100 °C	-200 °C ... +(130 °C - P _i x 200 K/W)
T5	-40 °C ... +95 °C	-200 °C ... +(95 °C - P _i x 200 K/W)
T6	-40 °C ... +80 °C	-200 °C ... +(80 °C - P _i x 200 K/W)

(16) Drawings and documents are listed in the ATEX Assessment Report No. 21 203 201293.

(17) Specific Conditions for Use:

1. The single wires and the free cable ends have to be comply with the requirements of clause 9 of EN 60079-14.
2. For EPL Ga/Gb applications, reverse heat flow from the process exceeding the permissible ambient temperature is not allowed and shall be avoided by suitable thermal insulation or suitable neck length of the tubing.
3. For EPL Ga/Gb applications and at risks by pendulum or vibration the respective parts have to be secured effectively against these dangers.
4. For EPL Ga/Gb applications any ignition hazards caused by impact or friction has to be excluded.
5. The ambient temperature range depending on temperature class is to be taken from the operating instructions.
6. The medium tangent materials have to be resistant to the media.
7. For EPL Ga/Gb applications the whole device shall be mounted in a way that allows an installation that results in a sufficient tight joint (IP66 or IP67) or a flameproof joint (IEC 60079-1) in the direction of the less endangered area.
8. The installation in the partition wall between areas with EPL Ga/Gb requirements has to be carried out in such a way that all metal parts are conductively connected to the metallic container wall, or in the case of containers made of plastic, all insulated metal parts have to be included in the potential equalization.
9. For EPL Ga, EPL Ga/Gb and EPL Gb applications, the temperature sensor type MITS Ex, the universal transmitter type MIUT-Ex, the level sensor type MELS-FTEEx, the pressure sensor type MEPS-TEEx and the temperature sensor type METS-WTEEx have to be installed and used in such a way that electrostatic charges due to operation, maintenance and cleaning are excluded.
Only for EPL Ga applications, the Universal transmitter type UH-ATUEx resp. the Resistor cable sensor type WT-K1GEx, resp. the Sheated cable resistance thermometer type WT-MK1GEx, resp. the Thermocouple cable sensor type TE-K1GEx, resp. the Sheated cable thermocouple type TE-MK1GEx resp. the Temperature sensor type MKTS-Ex resp. the nameplates of all variants have be installed and used in such a way that electrostatic discharges are excluded.

(18) Essential Health and Safety Requirements:

No additional ones.

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