

Translation

Type Examination Certificate Supplement 1

2 Equipment intended for use in potentially explosive atmospheres
Directive 2014/34/EU

3 Type Examination Certificate Number: **BVS 17 ATEX E 011 X**

4 Product: **Temperaturfühler type **-4.48.***.** und **-4.91.***.****

5 Manufacturer: **Dittmer Temperaturfühler GmbH & Co. KG**

6 Address: **Carl Zeiss-Strasse 19, 47475 Kamp-Lintfort, Germany**

7 This supplementary certificate extends Type Examination Certificate No. BVS 17 ATEX E 011 X to apply to products designed and constructed in accordance with the specification set out in the appendix of the said certificate but having any variations specified in the appendix attached to this certificate and the documents referred to therein.

8 DEKRA Testing and Certification GmbH 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 Report No. PP 17.2009 EU.


9 The Essential Health and Safety Requirements are assured in consideration of:

EN IEC 60079-0:2018	General requirements
EN IEC 60079-7:2015/A1:2018	Increased Safety "e"
EN 60079-15:2010	Type of Protection "n"

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

11 This 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 product. These are not covered by this certificate.

12 The marking of the product shall include the following:

 **II 3G Ex nA IIC T4 Gc**
II 3G Ex ec IIC T4 Gc

DEKRA Testing and Certification GmbH
Bochum, 2021-01-21

Signed: Jörg-Timm Kilisch

Managing Director

13 Appendix

14 Type Examination Certificate

BVS 17 ATEX E 011 X Supplement 1

15 Product description

15.1 Subject and type

Temperature sensor type **-4.48.**.**

1)-4.48..** (**2). (**3)

**1) Version

ec Type of Protection Increased Safety „ec“

nA Type of Protection „n“

**2) Tube length in mm x 10 (max. 1000 mm)

**3) Wire length in mm x 100 (max. 20000 mm)

Temperature sensor type **-4.91.**.**

1)-4.91..** (**2). (**3)

**1) Version

ec Type of Protection Increased Safety „ec“

nA Type of Protection „n“

**2) Flexible length in mm x 100 (max. 5000 mm)

**3) Wire length in mm x 100 (max. 20000 mm)

15.2 Description

The temperature sensors **-4.48.**.** and **-4.91.**.** are used for stationary purposes in hazardous areas of equipment and machinery. The sensors are available with one or two Pt100 sensors or either one or two thermocouples. The measuring circuit can be carried out with 2 up to 8 wires depending on the variants. All variations are equipped with a fixed connection cable and all connections are insulated against the housing. All wire ends are dismantled and the conductors are crimped with end sleeves.

For type **-4.48.**.** the sensor is fixed in a rigid sealed stainless steel tube and will be equipped with a separately certified cable gland. The temperature sensor is fixed in the sensor tip.

For type **-4.91.**.** a flexible wire is used instead of a rigid tube. The sensor tip is cemented to the wire end. The probe is extended by an internal wire and connected to the connection cable by a brazed joint.

The junctions to the connection cable are also created with a brazed joint and insulation and are all potted in epoxy resin.

Reason for the supplement:

- Update of the standard
 - o EN 60079-0:2012 + A11:2013 to EN IEC 60079-0:2018
- Extension by the ignition protection type “ec”
- Change of company name from “Dittmer GbR” to “Dittmer Temperaturfühler GmbH & Co. KG”

15.3 **Parameters**

Type **** -4.48.**** and type **** -4.91.****

15.3.1 Design with one or two Pt100 Resistors

Rated Voltage	U	40 V AC/DC
Rated Current	I	40 mA

15.3.2 Design with one or two thermocouples

Rated Voltage	U	40 V AC/DC
	U (200 °C)	15 mV
Rated Current	I	40 mA

15.3.3 Thermal data

15.3.3.1 Measuring temperature range at sensor tip: -40 °C up to +130 °C

15.3.3.2 Ambient temperature range:

Sensor type ** -4.48.**	-40 °C ≤ T _{amb} ≤ +100 °C
Sensor type ** -4.91.**	-40 °C ≤ T _{amb} ≤ +80 °C

16 **Report Number**

BVS PP 17.2009 EU, as of 2021-01-21

17 **Special Conditions for Use**

- The temperature sensor must be installed in a way that it is protected against mechanical damage.
- The installation cable must be installed with a suitable strain relief and by fixed cable installation.
- The electrical connection must be carried out in a separately certified terminal box for this purpose (f.e. in type of protection "d", "e" or "nA").
- The temperature sensor must be protected with appropriate measures against transients.
- If the mounting is carried out in insulating material, a separate potential equalization must be ensured.
- Sensors of type **ec-4.**.**** must be installed in pollution degree 2 or better according to IEC 60664-1.

18 **Essential Health and Safety Requirements**

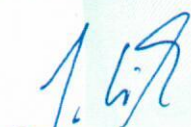
The Essential Health and Safety Requirements are covered by the standards listed under item 9.

19 **Drawings and Documents**

Drawings and documents are listed in the confidential report.

We confirm the correctness of the translation from the German original.
In the case of arbitration only the German wording shall be valid and binding.

DEKRA Testing and Certification GmbH
Bochum, 2021-01-21
BVS-Ret/Mu A 20201031



Managing Director