



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

- (2) Equipment or protective system intended for use in potentially explosive atmospheres - **Directive 2014/34/EU**
- (3) Certificate number: **SEV 15 ATEX 0118**
- (4) Product: Resistance thermometer, Type: 902820/**/***362***
- (5) Manufacturer: JUMO GmbH & Co. KG
- (6) Address: Moritz-Juchheim-Strasse 1, 36039 Fulda, Germany
- (7) The equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.
- (8) Eurofins, notified body No. 1258, in accordance with article 17 of Directive 2014/34/EU of the European parliament and of the council, dated 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 confidential report no 22CH-00503.X02
- (9) Compliance with the essential health and safety requirements has been assured by compliance with:

EN IEC 60079-0:2018
EN 60079-1:2014
EN 60079-11:2012
EN 60079-26:2015
EN 60079-31:2014

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 subjected to special conditions for safe use specified in the schedule to this certificate. The sign “U” is placed after the certificate number. It indicates that this certificate must not be mistaken for a certificate intended for an equipment or protective system. This partial certification may be used as a basis for certification of an equipment or protective system.
- (11) This EU type examination certificate relates only to design and construction of the specified product. Further requirements of this 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:



See appendix to the certifiat
Siehe Anlage zum Zertifikat
Voir l'annexe du certificat

Eurofins Electric & Electronic Product Testing AG
Notified Body ATEX

Martin Plüss
Product Certification

(13)

Appendix

(14)

EU-Type Examination Certificate no. SEV 15 ATEX 0118

(15) **Description of product**

Resistance thermometers from JUMO type 902820/**/***362*** are intrinsically safe electrical equipment with one resistor element for connection to a certified intrinsically safe circuit, and serve for temperature measurement in potentially explosive atmospheres.

Alternatively, a separately certified connection head in type of protection "Ex d IIC" and "Ex tb IIIC", type XD-AD, certificate FTZU 03 ATEX 0074U, or type XD-SD certificate FTZU 14 ATEX 00004U, or other connection head with equivalent certification, with separately certified cable entry, in type of protection "Ex d IIC" and "Ex tb IIIC" is also used. The flameproof types "Ex d IIC" do not have to be connected to an intrinsically safe circuit. Nonetheless, it must be ensured in any event that heating of the thermometer is limited.

A separate ATEX certified head transmitter is or can be installed in the connection head and/or separate ATEX certified display (current loop) can be fitted. They must be connected to a certified intrinsically safe circuit.

The various types must be designed according to the "General design requirements for Ex i , Ex d and Ex t" – drawing number 90282000A47Z001K000.

Rated ambient temperature range

Depends on the device configuration and is defined in the type drawings, and datasheets.

Details of Rating(s):

measurement and supply circuit of Ex i resistance thermometers

In type of protection intrinsically safe: Ex ia IIC, Ex ib IIC only to connect to an certified intrinsically safe circuit:

Maximum ratings:

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

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

$$P_i \leq 750 \text{ mW}$$

$$C_i = 0$$

$$L_i = 0$$

The maximum values of the allowable external capacitance (C_a or C_o) and inductance (L_a or L_o) can be found on the nameplate or the certificate of the supply unit.

or

measurement and supply circuit of Ex i resistance thermometers for dust applications

In type of protection intrinsically safe: Ex ia IIIC, Ex ib IIIC only to connect to an certified intrinsically safe circuit:

Maximum ratings:

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

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

$$P_i \leq 750 \text{ mW}$$

$$C_i = 0$$

$$L_i = 0$$

The maximum values of the allowable external capacitance (C_a or C_o) and inductance (L_a or L_o) can be found on the nameplate or the certificate of the supply unit.

Or
measurement and supply circuit of Ex d
resistance thermometers

In type of protection flameproof: Ex d IIC

Maximum ratings:

$$U_{\max} \leq 30 \text{ V}$$

$$I_{\max} \leq 100 \text{ mA}$$

$$P_{\max} \leq 750 \text{ mW}$$

Appropriate measures shall be taken to ensure that the above values even in case of failure of the measuring and supply circuits are not exceeded.

or
measurement and supply circuit of Ex t resistance
thermometers for dust applications

In type of protection: Ex tb IIIC

Maximum ratings:

$$U_{\max} \leq 30 \text{ V}$$

$$I_{\max} \leq 100 \text{ mA}$$



$$P_{\max} \leq 750 \text{ mW}$$

Used certified components			
Description:	Ident. No.:	Certificate / Marking:	Manufacturer:
Connection head	Type XD-A**	IECEX FTZU 14.0003U Ex db IIC Gb Ex tb IIIC Db FTZU 03 ATEX 0074U II 2G Ex db IIC Gb II 2D Ex tb IIIC Db	Limatherm Components Sp. Z.o.o.
Connection head	Type XD-S**	IECEX FTZU 17.0008U Ex db I Mb Ex db IIC Gb Ex tb IIIC Db FTZU 14 ATEX 0004U I M2 Ex db I Mb II 2G Ex db IIC Gb II 2D Ex tb IIIC Db	Limatherm Components Sp. Z.o.o.
Compression Type Cable Gland	A Range of Cable Glands with Compression Seals	IECEX CML 19.0045X Ex db IIC Gb Ex eb IIC Gb Ex tb IIIC Db CML 19ATEX1167X II 2G D Ex db IIC Gb Ex eb IIC Gb Ex tb IIIC Db	Hawke International



Used certified components			
Description:	Ident. No.:	Certificate / Marking:	Manufacturer:
Compression Type Cable Gland	Ranges of Barrier and Diaphragm Seal Hybrid Cable Glands	IECEX CML 18.0131X Ex db IIC Gb Ex eb IIC Gb Ex tb III C Db IP66 Ex nR IIC Gc CML 18ATEX1268X II 2G D Ex db IIC Gb Ex eb IIC Gb Ex tb IIIC Db	Hawke International
Temperature transmitter	Type dTRANS T07	IECEX EPS 17.0075 Ex ia IIC T6... T4 Ga Ex ia IIC T6... T4 Gb Ex ib [ia Ga] IIC T6... T4 Gb EPS 17 ATEX 1129X II 1G Ex ia IIC T6... T4 Ga II 2G Ex ia IIC T6... T4 Gb II 2(1)G Ex ib [ia Ga] IIC T6... T4 Gb	Jumo GmbH & Co. KG
Display module	Type dTRANS T07 BD7	IECEX EPS 18.0048X Ex ia IIC T6... T4 Gb EPS 18 ATEX 1113X II 2G Ex ia IIC T6... T4 Gb	Jumo GmbH & Co. KG
Temperature transmitter	Type iTEMP TM82- **A1/2/** and TMT82- **A3/4/5**	IECEX EPS 17.0039X Ex ia IIC T6... T4 Ga Ex ia IIC T6... T4 Gb Ex ib [ia Ga] IIC T6... T4 Gb EPS 17 ATEX 1074X II 1G Ex ia IIC T6... T4 Ga II 2G Ex ia IIC T6... T4 Gb II 2(1)G Ex ib [ia Ga] IIC T6... T4 Gb	Endress+Hauser Wetzler GmbH & Co. KG
Display	Type TID10-.. and OTID10-..	IECEX PTB 09.0013 Ex ia IIC T6... T4 Gb PTB 08 ATEX 2007 II 2 G Ex ia IIC T6... T4 Gb	Endress+Hauser Wetzler GmbH & Co. KG
Cable entries	Type SKINTOP K-M / KR-M / ATEX plus and SKINTOP SDV-M / SDVR-M / ATEX	IECEX IBE 13.0027X Ex eb IIC Ex ta IIIC IBExU08ATEX1063 X II 2G Ex eb IIC II 1D Ex ta IIIC	U.I. Lapp GmbH

(20) **Marking**



Versions "Ex ia" with separation elements TZ292

	II 1/2 G	Ex ia IIC T6 ... T1 Ga/Gb
	II 1/2 D	Ex ia IIIC T80°C ... T400°C Da/Db



Versions "Ex ib" with separation elements TZ292

	II 1/2 G	Ex ib IIC T6 ... T1 Ga/Gb
	II 1/2 D	Ex ib IIIC T80°C ... T400°C Da/Db



Versions "Ex ia" without separation elements

	II 1/2 G	Ex ia IIC T6 ... T1 Ga/Gb
	II 1/2 D	Ex ia IIIC T80°C ... T400°C Da/Db


Versions "Ex ib" without separation elements

	II 2 G	Ex ib IIC T6 ... T1 Gb
	II 2 D	Ex ib IIIC T80°C ... T400°C Db



Versions "Ex ia" without separation elements with connection head "Ex d IIC", "Ex tb IIIC"

	II 1/2 G	Ex ia/db IIC T6 ... T1 Ga/Gb
	II 1/2 D	Ex ia/tb IIIC T80°C ... T400°C Da/Db





Versions "Ex ib" without separation elements with connection head "Ex d IIC", "Ex tb IIIC"

	II 2 G	Ex ib/db IIC T6 ... T1 Gb
	II 2 D	Ex ib/tb IIIC T80°C ... T400°C Db

Versions without separation elements, with connection head "Ex d IIC", "Ex tb IIIC"

	II 2 G	Ex db IIC T6 ... T1 Gb
	II 2 D	Ex tb IIIC T80°C ... T400°C Db

Versions with separation elements TZ292 and connection head "Ex d IIC", "Ex tb IIIC"

	II 1/2 G	Ex db IIC T6 ... T1 Ga/Gb
	II 1/2 G	Ex ia/db IIC T6 ... T1 Ga/Gb* Ex ib/db IIC T6 ... T1 Ga/Gb*
	II 1/2 D	Ex tb IIIC T80°C ... T400°C Da/Db
	II 1/2 D	Ex ia/tb IIIC T80°C ... T400°C Da/Db * Ex ib/tb IIIC T80°C ... T400°C Da/Db *

* Or the combination of both

(* Note: when using connection head and power supply via certified intrinsically safe circuit!)