



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 11 ATEX 556139 X **Issue:** 00
 (4) for the product: Safety temperature limiter / safety temperature monitor JUMO safetyM STB/STW type 701155 / * - ** - **** - **** - 23 / ** , ** and type 701155 / * - ** - **** - **** - 25 / ** , **
 (5) of the manufacturer: **JUMO GmbH & Co. KG**
 (6) Address: Moritz-Juchheim-Straße 1, 36039 Fulda, Germany
 Order number: 8003014583
 Date of issue: 2021-10-12

(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. 20 203 261400.

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


EN IEC 60079-0:2018 **EN ISO 80079-36:2016** **EN 50495:2010**
EN 60079-11:2012 **EN ISO 80079-37:2016**

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:

 **II (1) G [Ex ia Ga] IIC or II (1) D [Ex ia Da] IIIC or**
II (1) G [Ex h Ga] IIC or II (1) D [Ex h Da] IIIC or
II (2) G [Ex eb Gb] IIC or II (1) D [Ex ta Da] IIIC or
II (2) D [Ex tb Db] IIIC or II (2) G [Ex db Gb] IIC

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

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Schedule to EU-Type Examination Certificate No. TÜV 11 ATEX 556139 X Issue 00

Electrical data:

For types STB/STW 701155 / * - ** - ** - **** - 23 / *** , ***:**

Supply circuit (Terminals N and L1) only for the connection to a non-intrinsically safe circuit with a safety-related maximum voltage of:

$$U_N = 110 \text{ up to } 240 \text{ V a.c } +10\% / -15\%, 48 \text{ up to } 63 \text{ Hz}$$

$$U_m = 264 \text{ V}$$

For types STB/STW 701155 / * - ** - ** - **** - 25 / *** , ***:**

Supply circuit (Terminals L- and L+) only for the connection to a non-intrinsically safe circuit with a safety-related maximum voltage of:

$$U_N = 20 \text{ up to } 30 \text{ V d.c or a.c, } 48 \text{ up to } 63 \text{ Hz}$$

$$U_m = 250 \text{ V}$$

For all types:

Binary connection (Terminals 4 and 5) only for the connection to a non-intrinsically safe circuit with a safety-related maximum voltage of:

$$U_m = 250 \text{ V}$$

Analogue connection (Terminals 9 and 10) only for the connection to a non-intrinsically safe circuit with a safety-related maximum voltage of:

$$U_m = 250 \text{ V}$$

Relay connection (Terminals 11, 12, 13) only for the connection to a non-intrinsically safe circuit with a safety-related maximum voltage and current of:

$$U_m = 250 \text{ V}$$

$$I_{\max} = 3 \text{ A}$$

Relay connection (Terminals 14, 15, 16) only for the connection to a non-intrinsically safe circuit with a safety-related maximum voltage and current of:

$$U_m = 250 \text{ V}$$

$$I_{\max} = 3 \text{ A}$$

USB connection (USB-socket) only for the connection to a non-intrinsically safe circuit with a safety-related maximum voltage and current of:

$$U_m = 250 \text{ V}$$

Output circuit (Terminals 1, 2, 3 and 6, 7, 8) in type of protection intrinsic safety Ex ia IIC resp. Ex ia IIIC with the following maximum values per circuit:

$$U_o = 6 \text{ V}$$

$$I_o = 41.2 \text{ mA}$$

$$P_o = 61.8 \text{ mW}$$

Characteristic line: linear
The effective internal capacitance C_i is 3.7 μF .
The effective internal inductance L_i is negligibly small.

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The maximum permissible values for the external inductance L_o and the external capacitance C_o have to be taken from the following table:

Ex ia IIC	L_o [mH]	0.2	0.1	0.05	0.02	0.01	0.001
	C_o [μF]	0.2	1	2.1	4.3	7.3	36.3
Ex ia IIIC	L_o [mH]	100	50	20	10	0.2	0.001
	C_o [μF]	3.6	5.4	7.3	8.3	27.3	996.3

The values of the table below are only applicable, if the internal inductance L_i (without the cable) or the internal capacitance C_i (without the cable) of the connected equipment is $\leq 1\%$ of the below specified values.

If L_i (without the cable) and C_i (without the cable) of the connected equipment are $> 1\%$ of the specified values, the specified values of L_o shall be reduced to 50 %.

The reduced capacitance of the external circuit (including cable) shall not exceed 1 μF for group IIIC and 600 nF for group IIC.

Ex ia	IIC	IIIC
Maximum permissible external inductance	20 mH	83 mH
Maximum permissible external capacitance	36.3 μF	996.3 μF

For the temperature probes listed below, which have to be considered as simple apparatus and which to be operated with the device, the limit value for the maximum permissible upper limit of the ambient temperature according to the temperature class resp. the maximum surface temperature has to be taken from the following table:

Temperature class resp. maximum surface temperature	Upper limit of the medium and ambient temperature for applications requiring devices of equipment protection level Gb resp. Db		Upper limit of the medium and ambient temperature for applications requiring devices of equipment protection level Ga resp. Da	
	Temperature probes with PT100	Temperature probes with thermocouple	Temperature probes with PT100	Temperature probes with thermocouple
T1 / 445 °C	432.5 °C	439.1 °C	342.5 °C	349.1 °C
T2 / 295 °C	282.5 °C	289.1 °C	222.5 °C	229.1 °C
T3 / 195 °C	187.5 °C	194.1 °C	147.5 °C	154.1 °C
T4 / 130 °C	122.5 °C	129.1 °C	95.5 °C	102.1 °C
T5 / 95 °C	87.5 °C	94.1 °C	67.5 °C	74.1 °C
T6 / 80 °C	72.5 °C	79.1 °C	55.5 °C	62.1 °C

The following temperature probes of the manufacturer with PT100 resistor-type thermometer are intended to be operated with the device:

Type designation of the manufacturer	Replacement character xxx
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902006/65-228-1003-1-15-xxx-668/922 902006/55-228-1003-1-15-xxx-254/922 902006/65-228-2003-1-15-xxx-668/922 902006/55-228-2003-1-15-xxx-254/922	500, 710 and 1000
902006/10-402-1003-1-9-xxx-104/922 902006/10-402-2003-1-9-xxx-104/922	100, 150 and 200
902006/10-226-1003-1-9-xxx-104/922 902006/10-226-2003-1-9-xxx-104/922	250
902006/54-227-1003-1-15-xxx-254/922 902006/54-227-2003-1-15-xxx-254/922	710
902006/53-505-2003-1-12-xxx-815/922 902006/53-505-1003-1-12-xxx-815/922	190
902006/53-507-2003-1-12-xxx-815/922	100, 160, 190 and 220
902006/53-507-1003-1-12-xxx-815/922 902006/53-505-3003-1-12-xxx-815/922 902006/40-226-1003-1-12-xxx-815/922	100, 160 and 220
902006/10-390-1003-1-8-xxx-104/922	250

The following temperature probes of the manufacturer with thermocouple are intended to be operated with the device:

Type designation of the manufacturer	Replacement character xxx
901006/65-547-2043-15-xxx-668/922 901006/65-546-2042-15-xxx-668/922	500, 710 and 1000
901006/66-550-2043-6-xxx-668/922 901006/66-880-1044-6-xxx-668/922 901006/66-880-2044-6-xxx-668/922 901006/66-953-1046-6-xxx-668/922 901006/66-953-2046-6-xxx-668/922	250, 355 and 500
901006/54-544-2043-15-xxx-254/922 901006/54-544-1043-15-xxx-254/922 901006/54-544-2042-15-xxx-254/922 901006/54-544-1042-15-xxx-254/922	710
901006/53-543-1042-12-xxx-815/922 901006/53-543-2042-12-xxx-815/922	220
901006/45-551-2043-2-xxx-11-1000...20000/922	50...2000

Thermal data:

Permissible ambient temperature range during operation $0\text{ °C} \leq T_a \leq +55\text{ °C}$

(16) Drawings and documents are listed in the ATEX Assessment Report No. 20 203 261400

(17) Specific Conditions for Use:

For applications that require EPL Ga or EPL Da devices, safety temperature limiter / safety temperature monitor must be used redundantly (HFT > 0).

Only for applications that require EPL Gb or EPL Db devices, the safety temperature limiter / safety temperature monitor is used as single-channel (HFT = 0).

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This refers to equipment which does not provide an ignition source in fault-free operation, but has no fault tolerance with regard to ignition protection.

For alternative concepts / applications, the requirements / options according to EN ISO 80079-37 resp. EN 50495 have to be taken into account.

(18) Essential Health and Safety Requirements:

No additional ones.

- End of EU-Type Examination Certificate -