Physikalisch-Technische Bundesanstalt
Braunschweig und Berlin
Nationales Metrologieinstitut

(1) # EU-TYPE-EXAMINATION CERTIFICATE

(Translation)

(2) Equipment or Protective Systems Intended for Use in Potentially Explosive Atmospheres - **Directive 2014/34/EU**

(3) EU-Type Examination Certificate Number:

PTB 01 ATEX 2149 **Issue: 1**

(4) Product: Measuring transducer JUMO dTRANS T02 Ex, type 707025/...

(5) Manufacturer: JUMO GmbH & Co. KG

(6) Address: Moritz-Juchheim-Str. 1, 36039 Fulda, Germany

(7) This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

(8) The Physikalisch-Technische Bundesanstalt, notified body No. 0102 in accordance with Article 17 of the 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 the confidential Test Report PTB Ex 17-26157.

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

EN 60079-0:2012 + A11:2013 **EN 60079-11:2012**

(10) If the sign "X" is placed after the certificate number, it indicates that the product is subject to the Specific Conditions of 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 in accordance to the Directive 2014/34/EU. 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 (1) G [Ex ia Ga] IIC or II (1) D [Ex ia Da] IIIC

Konformitätsbewertungsstelle, Sektor Explosionsschutz Braunschweig, February 16, 2017
On behalf of PTB:

Dr.-Ing. F. Lienesch
Regierungsdirektor

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(13) # SCHEDULE

(14) **EU-Type Examination Certificate Number PTB 01 ATEX 2149, Issue: 1**

(15) Description of Product

The measuring transducer JUMO dTRANS T02 Ex, type 707025/... is used to convert signals from resistance thermometers, thermoelements as well as resistive, voltage and current sensors into standardized signals 0...20 mA, 4...20 mA or 0...10 V.

Input, output and further configuration parameters are freely adjustable via an interface using a PC-program.

The measuring transducer is intended for installation on a mounting rail outside of the hazardous area.

The maximum permissible ambient temperature is -10 °C ...+ 60 °C.

Electrical data:

Supply circuit ..... (terminals L1(L+), N(L-) and PE)	U	=	230	V AC ± 10 %
	U_m	=	253	V
	or			
	U	=	20...53	V AC / DC, 48...63 Hz
	U_m	=	253	V
Output circuit ..... (terminals 9(+) and 10(-))	I	=	0...20	mA
	U_m	=	253	V
Output circuit ..... (terminals 11(-) and 12(+))	U	=	0...10	V
	U_m	=	253	V
Setup circuit..... (terminal posts X405_1, X405_2, X405_3 and X405_4)	U	=	5	V TTL-level
	U_m	=	253	V

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Sensor circuit..... type of protection Intrinsic Safety Ex ia IIC
(terminals 1 through 5) or Ex ia IIIC
Maximum values:

U_o = 6 V
I_o = 18.9 mA
P_o = 28.4 mW

linear characteristic

L_i negligibly low
C_i negligibly low

The maximum permissible values for the simultaneous occurrence of both types of effective external reactances depend on the equipment group as follows:

	IIC	IIB	IIA
L_o	20mH	20mH	20mH
C_o	1.3µF	7.1µF	10µF

The intrinsically safe sensor circuit is safely electrically isolated from all non-intrinsically safe circuits up to a peak value of the nominal voltage of 375 V.

Modifications with respect to previous editions

- Adaption to the current state of the standards
- Correction of electrical data (supply circuit)
- Discontinuation of the original type code 956525/... ; only type code 707025/... that was introduced later (as an alternative) continues to apply
- Alteration of resistance values to improve the function of the opto-couplers
- Revision of the test documents; specification of the test voltage of capacitors (intrinsically safe circuit to ground)
- Summarization of the above mentioned changes and the specifications from the initial certificate and 1st to 4th supplement to represent the latest state of production

(16) Test Report PTB Ex16-26157

(17) Specific conditions of use

none

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(18) Essential health and safety requirements

Met by compliance with the aforementioned standards.

According to Article 41 of Directive 2014/34/EU, EC-type examination certificates which have been issued according to Directive 94/9/EC prior to the date of coming into force of Directive 2014/34/EU (April 20, 2016) may be considered as if they were issued already in compliance with Directive 2014/34/EU. By permission of the European Commission supplements to such EC-type examination certificates and new issues of such certificates may continue to hold the original certificate number issued before April 20, 2016.

Konformitätsbewertungsstelle, Sektor Explosionsschutz — Braunschweig, February 16, 2017
On behalf of PTB:

Dr.-Ing. F. Lienesch
Regierungsdirektor