



(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 18 ATEX 2002 X**

**Issue: 0**

(4) Product: Surface-mounting temperature sensor, type SensyTemp TSP341-N

(5) Manufacturer: ABB Automation Products GmbH

(6) Address: Schillerstrasse 72, 32425 Minden, 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 18-28038.

(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 IIC T6...T1 Ga or II 2 G Ex ib IIC T6...T1 Gb**

Konformitätsbewertungsstelle Sektor Explosionsschutz  
On behalf of PTB:

Braunschweig, August 2, 2018

Dr.-Ing. F. Lienesch  
Direktor und Professor



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EU-Type Examination Certificates without signature and official stamp shall not be valid. The certificates may be circulated only without alteration. Extracts or alterations are subject to approval by the Physikalisch-Technische Bundesanstalt. In case of dispute, the German text shall prevail.

(13) **SCHEDULE**

(14) **EU-Type Examination Certificate Number PTB 18 ATEX 2002 X, Issue: 0**

(15) Description of Product

The surface-mounting temperature sensor, type SensyTemp TSP341-N is used for the determination of the medium temperature by measuring the surface temperatures on e.g. pipings or vessels containing the medium. It consists of an enclosure made of aluminum or stainless steel and it can be provided alternatively with or without a display.

The measured temperature values are available as a 4 mA ... 20 mA current signal and as a signal according to the HART-protocoll.

The temperature sensor is supplied from a circuit certified in type of protection Intrinsic Safety Ex ia or Ex ib. The device can be operated as category 1 equipment (EPL Ga) or as category 2-equipment (EPL Gb).

The ambient temperature range of the temperature sensor depends on the type of installation, the material of the head and the medium temperature.

For assignment of the maximum permissible ambient temperature  $T_{amb}$  at the enclosure (head) to the surface temperature  $T_{surf}$  at the measuring point and the temperature class, reference is made to the following table:

	$T_{surf} / ^\circ C$	$T_{amb} / ^\circ C$			
		aluminum enclosure		stainless steel enclosure	
		without insulation	with insulation	without insulation	with insulation
T6	72	52	55	54	57
T4	122	77	81	75	81
T3	187	71	78	64	74
T2	282	62	74	49	65
T1	432	48	67	26	50

**SCHEDULE TO EU-TYPE EXAMINATION CERTIFICATE PTB 18 ATEX 2002 X, Issue: 0**

Electrical data:

Supply circuit  
terminals "8+" and "7-"

Type of protection Intrinsic Safety Ex ia or Ex ib  
Only for connection to a certified intrinsically safe circuit

Maximum values:

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

$$I_i = 130 \text{ mA}$$

$$P_i = 0.8 \text{ W}$$

$$C_i = 0.57 \text{ nF}$$

$$L_i = 0.5 \text{ mH}$$

Measuring circuit

Internal circuit in type of protection Intrinsic Safety.

The measuring circuit is safely electrically isolated from the supply circuit and the display / service interface up to a peak value of the total voltage of 30 V.

(16) Test Report PTB Ex18-28038

(17) Specific conditions of use

If the variants provided with an aluminum enclosure are operated in areas where equipment protection level EPL Ga is required, they shall be installed in a way that they are protected against mechanical stress due to impact or friction.

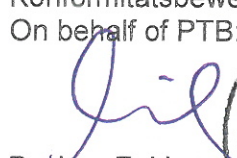
The equipment shall be included in the equipotential bonding system using the terminal intended for this purpose.

(18) Essential health and safety requirements

Met by compliance with the aforementioned standards.

Konformitätsbewertungsstelle, Sektor Explosionsschutz  
On behalf of PTB:

Braunschweig, August 2, 2018

  
Dr. Ing. F. Lienesch  
Direktor und Professor

