



LLC "SERTIS-CENTER"

PRODUCT CONFORMITY ASSESSMENT BODY (appointed under registration No. UA.TR.115)

09113 Ukraine, Kyiv Region, Bila Tserkva, Fastivska Street 23

Tel./fax: +38 (0456) 381-700, E-mail: info@sertis.com.ua, Web: www.sertis.com.ua

(1) TYPE EXAMINATION CERTIFICATE

(2) **Technical Regulation on equipment and safety systems intended for use in potentially explosive atmospheres (Resolution of the Cabinet of Ministers of Ukraine dated December 28, 2016, No. 1055)**

(3) Certificate No.: **CIJ 19.0467 X**

Revision No.: **0**

(4) Equipment: **Temperature transmitters, models T32.***, with * denoting version, see Annex to the Certificate**

(5) Applicant: **TOV "WIKА PRYLAД"**
Ukraine, 01133 Kyiv, Generala Almazova Street, 18/7, Office 101
EDRPOU code 32645153

(6) Manufacturer: **WIKА Alexander Wiegand SE & Co. KG**
63911 Klingenberg, Deutschland, Alexander-Wiegand-Straße 30,
Germany

(7) Description of the equipment and its permissible variations, and referenced documents are given in the Annex to the Certificate.

(8) LLC "SERTIS-CENTER", a conformity assessment body under registration No. UA.TR.115, appointed to perform work on assessment of product conformity with the requirements set forth by the Technical Regulation approved by the Resolution of the Cabinet of Ministers of Ukraine dated December 28, 2016, No. 1055, hereby certifies that the equipment mentioned above has been found to be in conformity with the essential requirements related to health protection and safety in terms of technical project and design of the equipment intended for use in potentially explosive atmospheres listed in the Technical Regulation.

The results of studies and tests are given in Assessment Report No. 513/OB-19 dated 08.11.2019.

(9) The equipment conformity with the essential requirements related to health protection and safety has been ensured by compliance with the requirements of the standards as follows:

DSTU EN 60079-0:2017 (with Amendment 11:2017), DSTU EN 60079-11:2016, DSTU EN 60079-15:2017

(10) If the certificate number contains an "X" symbol in the end, this certifies that special conditions of use given in the Annex to this Certificate apply to the equipment.

(11) This Certificate is issued based on conformity assessment conducted under Module B (type examination) according to the Technical Regulation, and refers only to technical project and design of the above mentioned equipment in accordance with the agreed technical documentation. Introduction of the above mentioned equipment into circulation according to the Technical Regulation is only possible on condition that additional modules of conformity assessment are applied.

(12) The equipment marking shall contain the following data:



II 1G Ex ia IIC T4/T5/T6 Ga

II 1D Ex ia IIIC T120 °C Da

II 2(1)G Ex ia [ia Ga] IIC T4/T5/T6 Gb

II 2(1)D Ex ia [ia Da] IIIC T120 °C Db

II 3G Ex nA IIC T4/T5/T6 Gc X

II 3G Ex ic IIC T4/T5/T6 G

Director of the Conformity Assessment Body

/signed/
L.S.

K.V. Mezhenkov

/Round seal: "SERTIS-CENTER" Identification Code 39654248 * Limited Liability Company * Ukraine * Kyiv Region * Bila Tserkva/

(13) **ANNEX**

(14) **TO TYPE EXAMINATION CERTIFICATE No. CIQ 19.0467 X** Revision No.: **0**

(15) **Equipment description and technical data**

The model T32.**.*-x temperature transmitters are used for converting a resistance value (from thermal resistor) or a voltage value (from thermocouple) into a proportional current signal 4 ... 20 mA. The nominal electrical values for the head and the rail versions are identical.

The transmitters have code designations as follows:

T32.	*S.	***	-*	
				Not Ex-relevant designations
				0IS- EPL Ga, Gb, Da, Db intrinsically safe circuit Ex ia
				0IC- EPL Gc Db intrinsically safe circuit Ex ic
				1- mounting in thermometer head
				3- mounting on a DIN rail
				Transmitter

Version T32.*S.0IS – intrinsically safe sensor circuit (optional 2-wire, 3-wire or 4-wire configuration) – is intended for operation in Zone 0, 1, 2 and Zone 20, 21, 22 areas.

Version T32.1S.0IS is intended for installation in cases or thermometer connection heads in Zone 1, 2 and Zone 21, 22 areas.

Version T32.3S.0IS is intended for installation in cases which guarantee at least protection class IP20 (for application in Zone 2 areas or installation outside hazardous areas) or IP6x (for application in Zone 22 areas).

Version T32.*S.0NI: non-sparking equipment II 3G Ex nA.

Versions T32.*S.0IC, T32.xS.0IC-x: intrinsically safe equipment of Ex ic level.

In versions T32.1*.0IS, T32.1*.0IS-*, T32.1*.0IC and T32.1*.0IC-* the printed circuit board of the transmitter is filled completely with compound inside the plastic case installed in connection head. On the top of the case, there are terminals for connection of power supply and signal circuits, and terminals for connection of sensor circuit.

In versions T32.3*.0IS, T32.3*.0IS-*, T32.3*.0IC and T32.3*.0IC-* the printed circuit board of the transmitter is filled completely with compound inside the plastic case installed on a DIN rail. On the side faces of the case, there are terminals for connection of power supply and signal circuits, and terminals for connection of sensor circuit.

Explosion-proof marking of the transmitters

Designation, series, type, model	Explosion-proof marking
Temperature transmitters, models T32.*S.000, T32.*S.0IS, T32.*S.0IC, T32.*S.0NI	
T32.1S.0IS-x (head mounting version)	II 1G Ex ia IIC T4/T5/T6 Ga II 1D Ex ia IIIC T120 °C Da
T32.3S.0IS-x (rail mounting version)	II 2(1)G Ex ia [ia Ga] IICT4/T5/T6 Gb II 2(1)D Ex ia [ia Da] IIIC T120 °C Db
T32.xS.0NI	II 3G Ex nA IIC T4/T5/T6 Gc X
T32.1S.0IC-x T32.3S.0IC-x	II 3G Ex ic IIC T4/T5/T6 Gc

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Ambient temperature range:

Application	Ambient temperature range, Ta	Temperature class	Intrinsically safe power, Pi
Group IIC/IIB/IIA	$-50\text{ }^{\circ}\text{C} \leq T_a \leq +85\text{ }^{\circ}\text{C}$	T4	800 mW
	$-50\text{ }^{\circ}\text{C} \leq T_a \leq +75\text{ }^{\circ}\text{C}$	T5	800 mW
	$-50\text{ }^{\circ}\text{C} \leq T_a \leq +60\text{ }^{\circ}\text{C}$	T6	800 mW
Group IIIC	$-50\text{ }^{\circ}\text{C} \leq T_a \leq +40\text{ }^{\circ}\text{C}$	n/a	750 mW
	$-50\text{ }^{\circ}\text{C} \leq T_a \leq +75\text{ }^{\circ}\text{C}$	n/a	650 mW
	$-50\text{ }^{\circ}\text{C} \leq T_a \leq +100\text{ }^{\circ}\text{C}$	n/a	550 mW
n/a = not applicable, maximum surface temperature under given conditions does not exceed 135°C			

Application	Ambient temperature range, Ta	Temperature class
Group IIC/IIB/IIA	$-40\text{ }^{\circ}\text{C} \leq T_a \leq +85\text{ }^{\circ}\text{C}$	T4
	$-40\text{ }^{\circ}\text{C} \leq T_a \leq +70\text{ }^{\circ}\text{C}$	T5
	$-40\text{ }^{\circ}\text{C} \leq T_a \leq +55\text{ }^{\circ}\text{C}$	T6

Specifications and parameters of intrinsically safe circuits of the transmitters

Sensor circuits

Parameter		Transmitter version	
		T32.**.0IS/ T32.**0IS-*	T32.**0IC/ T32.**.0IC-*
		Ex ia IIC/IIB/IIA Ex ia IIIC	Ex ic IIC/IIB/IIA
Connection terminals		1 -4	
Maximum output voltage, Uo		DC 6.5 V	
Maximum output current, Io		9,3 mA	
Maximum output power, Po		15.2 mW	
Maximum external capacitance, Co	IIC	24 nF	325 nF
	IIB / IIIC	0,52 µF	570 µF
	IIA	1,7 µF	1000 µF
Maximum external inductance, Lo	IIC	365 mH	821 mH
	IIB / IIIC	1644 mH	3699 mH
	IIA	3288 mH	7399 mH
Characteristics		Linear	
Note: Uo: max. voltage of any conductor against the other three conductors			
Io: max. output current for the worst connection			
Po: calculated as Uo x Io divided by 4 (linear characteristic)			
Power supply and signal circuits, and sensor circuit shall be considered as being galvanically connected to each other.			

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Power supply and signal circuits (current signal 4...20 mA)

Parameter	Transmitter version	
	T32.**.0IS/ T32.**.0IS-*/ T32.**.0IC / T32.**.0IC*	T32.**0IS/ T32.**.0IS-*
	IIC/IIB/IIA	IIIC
Connection terminals	+ / -	+ / -
Maximum input voltage, Ui	DC 30 V	DC 30 V
Maximum input current, Ii	130 mA	130 mA
Maximum input power, Pi	800 mW	750/650/550 mW
Maximum internal capacitance, Ci	7.8 nF	7.8 nF
Maximum internal inductance, Li	100 µH	100 µH

(16) **Technical documentation for the equipment**

- 06/2017 RU based on 12/2016 EN. Operation manual
- and other technical documents listed in assessment report No. 513/OB-19 dated 08.11.2019.

(17) **Special conditions for use** (“X” symbol in the certificate number)

1. Transmitters T32.**.0IS, T32.**.0IS-*:

In case of installation in safe area:

- the transmitter shall be mounted inside a case providing, as a minimum, a degree of protection of IP20 according to DSTU EN 60529:2018;
- wiring inside the case shall comply with cl. 6.3.12 and cl. 7.6.e of DSTU EN 60079-11:2016;
- terminals or connectors for the intrinsically safe circuits shall be arranged according to cl. 6.2.1 or 6.2.2 of DSTU EN 60079-11:2016, respectively.

2. Transmitters T32.1*.0IS/T32.1*.0IS-*:

In case of installation in Zone 0 (EPL Ga) or Zone 1 (EPL Gb) area:

- the transmitter shall be mounted inside a case suitable for installation in Zone 0 (EPL Ga) or Zone 1 (EPL Gb) areas wherein electrostatic charge effects are excluded.

In case of installation in Zone 20 (EPL Da) or Zone 21 (EPL Db) area:

- the transmitter shall be mounted inside a case suitable for installation in Zone 20 (EPL Da) or Zone 21 (EPL Db) area providing a degree of protection of IP6X according to DSTU EN 60529:2018.

3. Transmitters T32.3*.0IS/T32.3*.0IS-*

In case of installation in Zone 1 (EPL Gb)

- the transmitter shall be mounted inside a case providing, as a minimum, a degree of protection of IP20 according to DSTU EN 60529:2018 wherein electrostatic charge effects are excluded.

In case of installation in Zone 21 (EPL Db)

- the transmitter shall be mounted inside a case suitable for installation in Zone 21 (EPL Db) area providing a degree of protection of IP6X according to DSTU EN 60529:2018.

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4. T32.**.0IC / T32.**.0IC-*, with marking Ex ic IIC

In case of installation in Zone 2 (EPL Gc)

- transmitter T32.1*0IC/T32.1*0IC-* shall be mounted inside a case providing, as a minimum, a degree of protection of IP20 according to DSTU EN 60529:2018
- transmitter T32.3*0IC/T32.3*0IC-* shall be mounted inside a case providing, as a minimum, a degree of protection of IP20 according to DSTU EN 60529:2018 wherein electrostatic charge effects are excluded.
- wiring inside the case shall comply with cl. 6.3.12 and cl. 7.6.e of DSTU EN 60079-11:2016;
- terminals or connectors for the intrinsically safe circuits shall be arranged according to cl. 6.2.1 or 6.2.2 of DSTU EN 60079-11:2016, respectively.

(18) **Assessment reports and revision history of the certificate**

Revision number and date	Assessment report	Description of revisions, changes or additions
Initial issue dated 09.11.2019.	No. 513/OB-19 dated 08.11.2019.	Initial issue of the certificate.

