

Supplement Nr: 01

EU-Type Examination Certificate

(1)

(2) Equipment or Protective Systems Intended for use in Potentially Explosive Atmospheres

Directive 2014/34/EU

(3) EU – Type Examination Certificate Number: IEP 25 ATEX 1621X

(4) Product: Temperature Sensor, E-TC01-R...EX1, E-TC04...EX1, E-TC30-NUN...EX1
E-RT02...EX1, E-RT04...EX1, E-RT30-NUN...EX1

(5) Firm Name: ELİMKO Elektronik İmalat ve Kontrol Ticaret Ltd. Şti.

(6) Firm Address: ASO 2. Organize Sanayi Bölgesi Alçı OSB Mahallesi 2001. Cad. No: 14 06909 Temelli -
ANKARA / TÜRKİYE

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

(8) The IEP Uluslararası Enerji Petrol Gözetim, Sertifikasyon ve Teknik Hizmetler Organizasyonu Tic. Ltd. Sti., notified body number 2284 in accordance with Article 17 of the Directive 2014/34/EU of 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 Nr: IEP.Rp.Ex.10-3264-1 date 02.10.2025.

(9) Compliance with Essential Health and safety requirements has been assured by compliance with ;

EN IEC 60079-0:2018, EN 60079-1:2014, EN 60079-11:2012, IEC 60079-31:2022

(10) If the sign “ X “ is placed after the certificate number, it indicates that the product is subject to Specified Conditions of Safe 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 with 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 equipment or protective system shall include the following:

II ½G Ex db [ia] IIC T6...T1 Ga/Gb
II ½D Ex tb [ia] IIIC T85°C...T200°C Da/Db

Responsible Person :

Nurettin Terzioğlu
Head of Certification Body

Supplement 01 Date of Issue : 20.10.2025

IEP Uluslararası Enerji Petrol Göz., Sertifikasyon ve Teknik Hiz. Org. Tic. Ltd. Sti.
5746/1 Sok. No:9 K:2 Bornova - İZMİR / TÜRKİYE

Tel: +90 232 431 17 45 (pbx) Fax : +90 232 431 17 30 E-mail: iep@iep.com.trFr:45

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(13) Schedule

(14) Certificate Nr: **IEP 25 ATEX 1621X**

(15) Description of Equipment;

The Temperature Sensor consists of TC-Ex and RT-Ex types. TC-EX type stands for thermocouple, RT-EX type stands for resistance thermometer. It is housed in a stainless-steel housing and consists of a piezoresistive measuring cell and an electronic board on the stainless-steel sensor. RTD and thermocouple probes are used as intrinsically safe equipment for temperature measurement in liquid and gaseous media. The thermometers consist of a protective connection with various process connection options, an ATEX certified db type terminal head (FTZU 03 ATEX 0074U) and a connection cable. All connection parts in contact with the process are made of stainless steel. The thermometers meet the Explosion Group II requirements in categories 1G (indoor) and 2G (outdoor) specified in the EN 60079-10-1 standard. The connection head box is IP66, the measurement sensor is IP 68. The cable connection glands are rated as IP 66/68.

Thermocouples may be connected as follows, single thermocouple and double thermocouple. Resistive thermometers may be connected in 2-wire, 3-wire and 4-wire connection. The measured process temperature affects the temperature rise inside the temperature sensor. Therefore, the required tube length shall be determined using the operating instructions manual and in consideration of the temperature class.

Electrical parameters:

Barrier Power Supply: ia type of protection intrinsic safety Ex, only for connection to a certified intrinsically safe power supply, with following maximum values:

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

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

$$P_i \leq 0,75 \text{ W}$$

$$L_i \leq 25 \text{ mH}$$

$$C_i \leq 0,5 \text{ }\mu\text{F}$$

$$R = 2.025 \text{ }\Omega \sim 3137,1 \text{ }\Omega \text{ (Resistance thermometers)}$$

Resistance values in other types vary depending on the structure, length and thickness of the wire.

The relation between the process temperature and the temperature class and ambient temperature is as follows.

Temperature class	Maximum process temperature (°C)	Ambient temperature
T6	75	-40°C to +40°C
T5	90	-40°C to +45°C
T4	125	-40°C to +45°C
T3	190	-40°C to +50°C
T2	285	-40°C to +55°C
T1	435	-40°C to +60°C

Responsible Person :

Nurettin Terzioğlu
Head of Certification Body



IEP Uluslararası Enerji Petrol Gözetim, Sertifikasyon ve Teknik Hizmetler Organizasyon Ticaret Limited Sirketi
5746/1 Sok. No:9 K:2 Bornova-İZMİR / TÜRKİYE Tel:+90 232 431 17 45 (pbx) Fax:+90 232 431 1730 E-mail: iep@iep.com.tr Fr: 45

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(16) Certificate Nr: **IEP 25 ATEX 1621X**

(17) **Special Conditions for Safe Use;**

17.1 The equipment must be installed so, that during intended use, including maintenance and cleaning, or during malfunctions that can normally be expected, an ignition source due to electrostatic charging of the enclosure is excluded.

17.2 The meaning of (IEP 25 ATEX 1621X) X Means: Temperature transmitter shall be used as an intrinsically safe circuit Zener barrier. The Zener barrier specifications must be suitable according to the IIC gas group and transmitter energy sheets. To must be installed by authorized personnel according to the user manual and EN 60079-14. Periodic inspection should be carried out by authorized personnel according to EN 60079-17.

17.3 Only cable glands for which an ATEX certificate is available shall be used as cable entry elements.

17.4 The temperature sensors shall be included in the local equipotential bonding system.

17.5 When an enclosed conduit is used for zone separation, the system may also be employed for measuring temperatures in zone 0. Only the measuring sensor may in connection with the conduit be employed in zone 0. The connection head and temperature sensor without separate conduit may only be employed in zone 1.

(18) **Essential Health and Safety Requirements:**

18.1 Are included in standards, which are mentioned in clause (9) of this certificate. The products were approved in accordance with above mentioned standards and manufacturer's instruction.

18.2 At the installation and the operation of the Temperature Sensor, TC-Ex and RT-Ex type must be observed manufacturer's manual 20 pages.

(19) **List of Documentation:**

- ♦ Operation Manual : 20 pages
- ♦ Component List : Table 4, dated 05.2025-16 pages
- ♦ Drawings;

Drawings Name;	Date;
RT02 WITH ISOLATOR	May 2025
RT02 MI	May 2025
RT04 WITH ISOLATOR	May 2025
RT30-NUN WITH ISOLATOR	May 2025
RT30-NUN MI	May 2025
TC01-R Element Wired	May 2025
TC01-R MI	May 2025
TC04 & RT04 (MI)	May 2025
TC04 Element Wired	May 2025
TC30-NUN Element Wired	May 2025
TC30-NUN MI	May 2025

For the validity of the analysis-type certificate, the parts used in the Temperature Sensor , TC-Ex and RT-Ex type were confirmed in the component list.

Certificate History:

Supplement Nr	Issue Date	Summary Description of Variation
01	20.10.2025	Addition of IP xy code and resistance
00	11.08.2025	First issue of certificate

Responsible Person :

Nurettin Terzioğlu
Head of Certification Body

Supplement 01 Date of Issue : 20.10.2025



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