

# CERTIFICATE

## (1) EU-Type Examination

(2) **Equipment or protective systems intended for use in potentially explosive atmospheres - Directive 2014/34/EU**

(3) EU-Type Examination Certificate Number: **KEMA 09ATEX0006 X** Issue Number: **3**

(4) Product: **Temperature Sensor R950 Series (ETR10) models Type R95\*\*\*\*\***

(5) Manufacturer: **Wise Control Inc.**

(6) Address: **2022 Deogyong-daero, Giheung-gu, Yongin-si, Gyeonggi-do (17097), Korea**

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

(8) DEKRA Certification B.V., Notified Body number 0344 in accordance with Article 17 of 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 confidential test report number NL/DEK/ExTR16.0055/00.

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

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

**EN 60079-11 : 2012**

**EN 60079-26 : 2015**

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 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. 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 1/2 G Ex ia IIC T6 to T1 Ga/Gb**

Date of certification: 19 September 2016

DEKRA Certification B.V.

R. Schuller  
Certification Manager

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(13) **SCHEDULE**

(14) **to EU-Type Examination Certificate KEMA 09ATEX0006 X**

Issue No. **3**

(15) **Description**

The Temperature Sensor R950 Series (ETR10) models Type R95\*\*\*\*\* for temperature measurement, in different versions, consists of an insert, an optional connection head and optionally extension parts.

The inserts have one or two thermocouple or one or two RTD temperature sensing elements.

The sensor assembly is provided with terminals for connection to one or two external intrinsically safe circuits.

**Electrical data**

Insert only with RTD sensing elements

Output circuits (terminals A and B):

in type of protection intrinsic safety Ex ia IIC, only to be connected to a certified intrinsically safe circuit, with the following maximum values for each sensing element:

$U_i = 30 \text{ V}$ ;  $I_i = 100 \text{ mA}$ ;  $P_i = 750 \text{ mW}$ ;  $C_i = 0,1 \text{ nF}$ ;  $L_i = 0,01 \text{ mH}$ .

Insert only with thermocouple sensing elements

Output circuits (terminals + and -):

in type of protection intrinsic safety Ex ia IIC, only to be connected to a certified intrinsically safe circuit, with the following maximum values for each sensing element:

$U_i = 30 \text{ V}$ ;  $I_i = 100 \text{ mA}$ ;  $P_i = 750 \text{ mW}$ ;  $C_i = 0,1 \text{ nF}$ ;  $L_i = 0,01 \text{ mH}$ .

Refer to the thermal data tables for the relation of  $P_i$  with the maximum process temperature, the temperature class and the maximum surface temperature.

**Thermal data**

Ambient temperature range  $-40 \text{ }^\circ\text{C}$  to  $+65 \text{ }^\circ\text{C}$ .

If the sensor assembly is influenced by the temperature of the process medium, it shall be verified that the surface temperature of the connection head and the connection box does not exceed the specified maximum ambient temperature.

The maximum surface temperature due to process conditions ( $T_p$ ) is the maximum surface temperature of any part of the assembly in contact with the explosive atmosphere.

The temperature class T6 ... T1 is depending on the process temperature and the input power  $P_i$ , in accordance with the following table:

Temperature class	$P_i \leq 50 \text{ mW}$	$P_i \leq 100 \text{ mW}$	$P_i \leq 200 \text{ mW}$	$P_i \leq 500 \text{ mW}$	$P_i \leq 650 \text{ mW}$	$P_i \leq 750 \text{ mW}$
	Max. allowed process temperature $T_p$ ( $^\circ\text{C}$ )					
T1	431	424	411	378	363	359
T2	281	274	261	228	213	209
T3	186	179	166	133	118	114
T4	121	114	101	68	53	49
T5	86	79	66	33	18	14
T6	71	64	51	18	3	0



(13) **SCHEDULE**

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**Installation instructions**

The instructions provided with the product shall be followed in detail to assure safe operation.

(16) **Report Number**

No. NL/DEK/ExTR16.0055/00.

(17) **Specific conditions of use**

External connection facilities for the sensor assembly of non connection head types shall be installed in an enclosure which affords it a degree of protection of at least IP20 according to EN 60529, or higher when the environment requires so.

In case the insert does not comply with the dielectric strength requirements of clause 6.3.13 of EN 60079-11, the circuits shall be considered to be connected to ground.

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

Covered by the standards listed at item (9).

(19) **Test documentation**

As listed in Report No. NL/DEK/ExTR16.0055/00.

(20) **Certificate history**

Issue 1 -	212259400	initial certificate
Issue 2 -	214802300	variations to the construction, standards upgrade
Issue 3 -	219516900	Temperature Sensor R950 Series (ETR10) models Type R95***** replace the previous models