



IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: IECEx LCIE 17.0026X

Issue No: 0

Certificate history:

Issue No. 0 (2017-07-24)

Status: **Current**

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Date of Issue: **2017-07-24**

Applicant: **WISE Control Inc.**
2022 Deogyong-Daero, Giheung-Gu
Yongin-Si, Gyeonggi-Do (17097)
Korea, Republic of

Equipment: **Thermocouple and resistance temperature detector, Type : R940 series (ETR series)**

Optional accessory:

Type of Protection: **Ex d**

Marking:
Ex d IIC T6 Gb

Approved for issue on behalf of the IECEx
Certification Body:

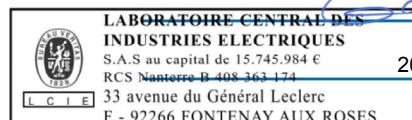
Julien Gauthier

Position:

Certification Officer

Signature:
(for printed version)

Date:



1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the [Official IECEx Website](http://www.iecex.com).

Certificate issued by:

Laboratoire Central des Industries Electriques (LCIE)
33 Avenue du General Leclerc
FR-92260 Fontenay-aux-Roses
France





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Manufacturer: **Wise Control Inc.**
2022 Deogyong-daero, Giheung-gu
Yongin-si, Gyeonggi-do (17097)
Korea, Republic of

Additional Manufacturing location(s):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:

The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2011 Explosive atmospheres - Part 0: General requirements
Edition:6.0

IEC 60079-1 : 2007-04 Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
Edition:6

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

Test Report:

[FR/LCIE/ExTR17.0028/00](#)

Quality Assessment Report:

[DE/EPS/QAR12.0008/05](#)



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

These thermocouple and resistance temperature detectors are composed of:

- A flameproof die-cast aluminum or stainless steel enclosure (connection head) which consists of a threaded cover and a main body with one or two threaded entries.
- Sensitive devices (thermocouple, R.T.D) which are composed of a metallic sheath in which high purity MgO powder is tightly compacted around the thermo element wires, or which are placed into an empty non-metallic tube made of ceramic.

The range of detectors is divided in eight different technologies :

- ETR-1 : Thermocouple and RTD
- ETR-2 : Thermocouple and RTD with spring load type
- ETR-4 : Thermocouple (ceramic)
- ETR-5 : Thermocouple and RTD with transmitter
- ETR-6 : Thermocouple and RTD with spring load type and with transmitter
- ETR-8 : Thermocouple with transmitter (ceramic)

SPECIFIC CONDITIONS OF USE: YES as shown below:

Sensitive element are fragile, they should not be submitted to mechanical impact during mounting. The installation must guarantee the protection of the sensitive element against mechanical impact.

The user must take all precautions to ensure that thermal transfer from sensing element to connection head does not affect the temperature class T6 of the detector.

The sensor part of ceramic types ETR-4 and ETR-8, i.e. process nipple and ceramic tube with sensitive element, must be placed outside of the hazardous area.

The equipment should be equipped with suitably certified cable glands with a compatible mode of protection for the intended use. If any, unused entry shall be closed with a certified plug.

Repairs of flameproof joints shall not be undertaken by the end user. In the event that flameproof joint must be repaired, contact the manufacturer.

Annex:

[Annex 01 IECEx LCIE 17.0026X.pdf](#)



Annex 01 to Certificate IECEx LCIE 17.0026X issue 00



FULL EQUIPMENT DESCRIPTION

R940 series (ETR series) are composed of :

- A flameproof die-cast aluminum or stainless steel enclosure (probe head) which consists of a threaded cover and a main body with one or two threaded entries.
- Sensitive devices (thermocouple, R.T.D) which are composed of a metallic sheath, mounted in a process nipple, in which high purity MgO powder is tightly compacted around the thermo element wires, or which are placed into an empty non-metallic tube made of ceramic.

MARKING

Wise Control Inc.
Address: ...
Type: ...
Serial number: ...
Year of construction: ...
Ex d IIC T6 Gb
 $-40^{\circ}\text{C} \leq T_{\text{amb}} \leq +65^{\circ}\text{C}$
IECEx LCIE 17.0026X

WARNING – DO NOT OPEN WHEN AN EXPLOSIVE ATMOSPHERE MAY BE PRESENT
CABLE ENTRY – SEE INSTALLATION INSTRUCTION DOCUMENT.

RANGE DETAILS

The range is divided in eight different technologies:

- ETR-1 : Thermocouple and RTD (metallic sheath)
- ETR-2 : Thermocouple and RTD with spring load type (metallic sheath)
- ETR-4 : Thermocouple (ceramic protection tube)
- ETR-5 : Thermocouple and RTD with transmitter (metallic sheath)
- ETR-6 : Thermocouple and RTD with spring load type and with transmitter
- ETR-8 : Thermocouple with transmitter (ceramic protection tube)

Type designation :

1 2 3 4 5 6 7 8 9 10 11

Position N°	Code	Description	
1	R941	Single element	ETR-1 & ETR-5
	R942	Double element	
	R943	Single element with spring load type	ETR-2 & ETR-6
	R944	Double element with spring load type	
2	A to H	Head type	
3	One Letter or number	Element type	
4	1 to 7, 9	Sheath material	
5	A9 to H9, J9 or L9	Sheath outer diameter (mm)	
6	1 to 9	Conduit connection	
7	One letter	Mounting type	
8	One letter	Connection type	
9	One letter	Insert length	
10	0 to 7	Integral transmitter	
11	One number	Option	

Position N°	Code	Description	
1	R947	Single element	ETR-4 & ETR-8
	R948	Double element	
2	A, C, E or G	Head type	
3	One Letter or number	Element type	
4	A to H, J to N, P to R, Z	Mounting type and extension length (mm)	
5	Two number	Outer protection tube diameter (mm)	
6	0, 1, 3 to 8	Outer protection tube material	
7	0, 1, 3, 5, 9	Inner tube material	
8	One letter	Connection type	
9	One letter	Insert length	
10	0 to 7	Integral transmitter	
11	One number	Option	

RATINGS

4 VDC (without transmitter), 20 VDC max. with transmitter, 10 mA

FULL CONDITIONS OF CERTIFICATION (ou FULL SCHEDULE OF LIMITATIONS)

Sensitive element are fragile, they should not be submitted to mechanical impact during mounting and once installed. The installation must guarantee the protection of the sensitive element against mechanical impact.

The user must take all precautions to ensure that thermal transfer from sensing element to connection head does not affect the temperature class T6 of the detector.

The sensor part of ceramic types ETR-4 and ETR-8, i.e. process nipple with sensitive element, must be placed outside of the hazardous area.

The product should be equipped with suitably certified cable glands with a compatible mode of protection for the intended use. If any, unused entry shall be closed with a certified plug.

Repairs of flameproof joints shall not be undertaken by the end user. In the event that flameproof joint must be repaired, contact the manufacturer.

ROUTINE TESTS

According to clause 16.1 of standard IEC 60079-1, each apparatus of ETR-4 and ETR-8 models shall be submitted to an overpressure test under 15 bar during minimum 10 seconds.