



EXPLOSION PROTECTION CERTIFICATE OF CONFORMITY

Cert NO.GYJ19.1040X

This is to certify that the product

Thermal Resistance

manufactured by **WIKA Alexander Wiegand SE & Co. KG**

(Address: Alexander-Wiegand-Strasse 30, D-63911 Klingenberg, Germany)

which model is **TR series**

Ex marking **Ex nA IIC T1~T6 Gc**

product standard **/**

drawing number **14098962.02, 14252368.01, 14244564.01, 14244638.01,
14238185.01**

has been inspected and certified by NEPSI, and that it conforms
to **GB 3836.1-2010, GB 3836.8-2014**

This Approval shall remain in force until **2024.01.01**

Remarks

1. Conditions for safe use are specified in the attachment to this certificate.
2. Symbol "X" placed after the certification number denotes specific conditions of use, which are specified in the attachment to this certificate.
3. Model designation is specified in the attachment to this certificate.
4. This certificate is also applicable for the product with the same type manufactured by WIKA Instrumentation (Suzhou) Co., Ltd. (address: No.81 Tayuan Road, Suzhou New District, Suzhou, China)
5. [Variation I] Approved drawings revised. issued on 2019.04.18.

Director

**National Supervision and Inspection Centre for
Explosion Protection and Safety of Instrumentation**

Issued Date **2019.01.02**

This Certificate is valid for products compatible with the documents and samples approved by NEPSI.

国家级仪器仪表防爆安全监督检验站

National Supervision and Inspection Centre for
Explosion Protection and Safety of Instrumentation

(GYJ19.1039X/GYJ19.1040X)

(Attachment I)

Attachment I to GYJ19.1039X/GYJ19.1040X

TR series thermal resistance and TC series thermal couple, manufactured by WIKA Alexander Wiegand SE & Co.KG, has been certified by National Supervision and Inspection Center for Explosion Protection and Safety of Instrumentation (NEPSI). The thermal resistance/ thermal couple accords with following standards:

GB3836.1-2010 Explosive atmospheres-Part 1: Equipment – General requirements

GB3836.8-2014 Explosive atmospheres-Part 8: Equipment protection by type of protection “n”

The thermal resistance/ thermal couple has the Ex marking Ex nA II C T1~T6 Gc.

The certificate number is GYJ19.1039X (TC series)/GYJ19.1040X (TR series).

The certified type codes are:

a-DND*-***, in which a indicates:

General Description	Name of Product
Measuring inserts without connection head or enclosure	TR10-A, TR10-K, TR10-1, TR12-A, TR12-M, TR17-A, TR18-A, TR19-A, TR11-A, TC10-A, TC 10-K, TC10-1, TC12-A, TC12-M, TC17-A, TC18-A, TC19-A
Assembly including measuring inserts with connection head or enclosure	TR10-0, TR10-2, TR10-B, TR10-C, TR10-D, TR10-F, TR10-H, TR10-J, TR11-C, TR12-B, TR15, TR17-B, TR18-B, TR19-B, TR55, TR81, TR95 TC10-0, TC10-B, TC10-C, TC10-D, TC10-F, TC10-H, TC12-B, TC15, TC17-B, TC18-B, TC19-B, TC55, TC81, TC82, TC83, TC90, TC95
Cable probe with or without connection head or enclosure	TR15, TR40, TR41, TR45, TR50, TR53 TC15, TC40, TC41, TC45, TC50, TC53, TC59
Indoor/ Outdoor with connection head or enclosure	TR60
Sanitary application assembly with connection head or enclosure	TR20, TR22-A, TR22-B, TR25

* indicates all additional characters which are not relevant for explosion protection.

1. Special conditions for safe use

The suffix “X” placed after the certificate number indicates that this product is subject to special conditions for safe use:

- The temperature resistance of the connection cables, the connection heads, the cable entries and if

necessary the blanking connectors shall be at least as high as the maximum permissible ambient temperature and shall be at least as low as the minimum permissible ambient temperature.

- A reverse heat flow from the process exceeding the permissible ambient temperature of the transmitter, the digital display or the enclosure is not allowed and shall be avoided by a suitable thermal insulation or a suitable neck length of the tubing.
- The cable sensor shall be fitted with kink protection and strain relief. They must be connected to ground through their installation. For tube type cable probes (without MI-Cable), the temperature range of the wire insulation shall be considered for operating.
- The connector provided by the end user in the end use application shall be in accordance with all applicable clauses of GB3836.1-2010 and GB3836.8-2014. A minimum degree of protection IP54 according to GB4208-2017 shall be ensured.
- The external earthing has to be established by the end user in the end use application.



2. Conditions for safe use

2.1 Electrical data:

- Electrical data without built-in transmitter or digital display: $U_{max}=10Vdc$ $I_{max}=9mA$ $P_{max}=15mW$

For the use of multiple sensors and simultaneous operation the summation of all single power dissipation may not exceed the maximum permissible power dissipation. The maximum permissible power shall be limited to 15mW.

- Electrical data with built-in transmitter or digital display:

For the sensor circuit the above specified values corresponding to the Group II apply.

The used transmitter/ digital display shall be provided with their own certificate in accordance to GB 3836 series standards. The installation conditions and the electrical connection values shall be taken from the corresponding certificate and shall be considered.

2.2 The relationship between ambient temperature range, maximum surface temperature and temperature class is as following:

Temperature class	Ambient temperature range	Maximum surface temperature (T_{max}) at the tip of the probe or thermowell
T6	-40°C ~ +80°C (Note 1) -60°C ~ +80°C (Note 2)	T_M (Medium temperature) + self-heating (4K)
T1~T5	-40°C ~ +80°C (Note 1) -60°C ~ +85°C (Note 2)	

Note 1: Wika enclosure versions 1/4000, 5/6000 and 7/8000 standard-lid gasket (-40°C), Potting: KAGER 4439 (-40°C) (-tubing version)

Note 2: Wika enclosure versions 1/4000, 5/6000 and 7/8000 special-lid gasket (-60°C), Potting: WEVOPUR PD4 (-60°C) (MI-cable and tubing version)

2.3 Forbid end user to change the configuration to ensure the equipment's explosion protection performance.

2.4 When installation, use and maintenance of thermal resistance/ thermal couple, observe following standards GB3836.13-2013 "Explosive atmospheres - Part 13: Equipment repair, overhaul and reclamation"

GB/T3836.15-2017 "Explosive atmospheres - Part 15: Electrical installations design, selection and erection"

GB/T3836.16-2017 "Explosive atmospheres - Part 16: Electrical installations inspection and maintenance"

GB50257-2014 "Code for construction and acceptance of electric equipment on fire and explosion hazard electrical equipment installation engineering"

3. Manufacturer's Responsibility

3.1 Special condition for safe use specified above should be included in the instruction manual.

3.2 Manufacturing should be done according to the documentation approved by NEPSI.

National Supervision and Inspection Center
for Explosion Protection and Safety of Instrumentation

2019.01.02