

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Temperature Transmitter**with type designation(s)
Omnigrad M TR11

Issued to

Endress+Hauser Wetzer GmbH & Co. KG
Nesselwang, Germany

is found to comply with

DNV GL rules for classification – Ships, offshore units, and high speed and light craft**Application :****Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.****Location classes:****Temperature B, D***
Humidity B
Vibration A, B*
EMC B**Enclosure Required protection according to the Rules shall be provided upon installation on board*****see Application/Limitation**Issued at **Hamburg** on **2019-07-09**for **DNV GL**This Certificate is valid until **2024-07-08**.DNV GL local station: **Augsburg**Approval Engineer: **Dariusz Lesniewski**

Joannis Papanuskas
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.



Job Id: **262.1-030758-1**
Certificate No: **TAA00002C0**

Product description

Modular RTD assembly with protection tube and thread
RTD thermometer with 1x or 2x Pt100 (3- or 4-wire)
Measuring Range: -200 ... 600° C (-328 ... 1112° F)
Electrical connection: head transmitter iTEMP TMT180, TMT181 or TMT182
Max. tube length: 345 mm

Approved variants (ordering code): TR11 – **a b c dd e f g h i j k**

- a** = Approval: A, B, E, G, H, J, P, U, V, 3
- b** = Head, Cable Entry: B, C, I, N, O, P, R, 3, 7
- c** = Pipe Diameter, Material: A, B, D, E, F
- dd** = Process Connection: BG, BH, CA, CB, CD, CE, CL, JA, JB
- e** = Tip Shape: M, R, S, T, W
- f** = Immersion Length: B, C, D, E, U, 1, 2, 3, 4
- g** = Head Transmitter, Range: C, F, G, K, M, O, 2, 3, 4, 5
- h** = RTD, wire, measuring range, class, validity: A, B, C, F, G, Y, 2, 3, 6, 7
- i** = Material Certificate: any digit
- j** = Test Report: any letter or digit
- k** = Test/Calibration: any letter digit

Approval conditions

The Type Approval covers hardware listed under Product description. When the hardware is used in applications to be classed by DNV GL, documentation for the actual application is to be submitted for approval by the manufacturer of the application system in each case. Reference is made to DNV GL rules for classification of ships Pt.4 Ch.9 Control and monitoring systems.

Application/Limitation

Type approval certificate no. TAA000026V to be observed
Location class - Temperature = 'D' not for ordering options **g** = G, K, M, O, 2, 3, 4, 5
Location class - Vibration = 'B' not for for ordering options **g** = G, K, M, O, 2, 3, 4, 5

Type Approval documentation

Test report: paconsult No. 08-2204
Technical Information: TI257T/02/en 71073147
Type approval certificates no. 58866-08 HH and no. TAA000026V
EC Type Examination Certificate no. DEKRA 12ATEX0161 X
Type approval assessment report issued at Augsburg on 2019-02-11

Tests carried out

Applicable tests according to class guideline DNVGL-CG-0339, November 2016.

Marking of product

The products to be marked with:

- manufacturer name
- model name
- serial number
- power supply ratings

Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the type are complied with, and that no alterations are made to the product design or choice of systems, software versions, components and/or materials.

The main elements of the assessment are:

- Ensure that type approved documentation is available
- Inspection of factory samples, selected at random from the production line (where practicable)



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- Review of production and inspection routines, including test records from product sample tests and control routines
- Ensuring that systems, software versions, components and/or materials used comply with type approved documents and/or referenced system, software, component and material specifications
- Review of possible changes in design of systems, software versions, components, materials and/or performance, and make sure that such changes do not affect the type approval given
- Ensuring traceability between manufacturer's product type marking and the type approval certificate

Periodical assessment is to be performed after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.

END OF CERTIFICATE