DNV·GL

Certificate No:
TAA00001DT

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Temperature Transmitter

with type designation(s)
Temperature Field Transmitter iTEMP® TMT162, RTD thermometer Omnigrad S TMT162R

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	**D**
Humidity	**B**
Vibration	**B**
EMC	**B**
Enclosure	**Required protection according to DNVGL Rules**

Issued at **Hamburg** on **2017-09-20**
This Certificate is valid until **2018-10-28**.
DNV GL local station: **Augsburg**

for **DNV GL**

Approval Engineer: **Klaus-Peter Schröder**

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.

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Product description

TMT162: Electronic monitoring, conversion and display of input signals for temperature measurement. Configurable via handheld module "HART® Communicator FC375/475" or software FieldCare/DeviceCare (see BA01381T chapter 6.4).

Power supply	rated 24V DC (11 ... 42V DC, Ex 11 ... 30V DC)
Inputs (2x)	RTD (temperature) TC (voltage) Ohm (resistance)
Output	4 ... 20mA / 20 ... 4mA Analogue 2-wire HART® signal (HART® communication via transmitter power supply, e.g. RN221N)
Display	LC-display, illuminated, rotable in 90°
Mounting	remote mounting using mounting bracket
Housing material	Aluminium stainless steel
Cable entries	2 x NPT ½ 2 x M20x1.5

Firmware version: 3.xx.xx

TMT162R: The TMT162R RTD consists of the iTEMP® TMT162 HART field transmitter and a sensor assembly which is mechanical comparable to Omnigrad S TR66/63 (GL Type Approval Certificate no. 58 863-08HH).

Measuring temperature	up to 600°C
Supply voltage	rated 24V DC (11 ... 42V DC) for HART communication
Communication	Pt100 HART
Housing material	Aluminium stainless steel (316L)

A thermowell must be used which fulfills following requirements:

Extension	up to 100mm
Total length	up to 1100mm
Immersion length	up to 1000mm
Diameter tip	> 10mm up to 750mm Immersion length > 18mm up to 1000mm Immersion length
Material	Stainless steel

Application/Limitation

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 RU SHIP Pt.4 Ch.9 Sec. 1.

The installation instructions according to the Technical Instruction are to be observed.

Ex-certification is not covered by this certificate. Application in hazardous area to be approved in each case according to the Rules and Ex-Certification/ Special Condition for Safe Use listed in valid Ex-Certificates issued by a notified/recognized Certification Body.

Type Approval documentation

Tests carried out

Applicable tests according to Class Guideline DNVGL-CG-0339, Edition November 2016.

Marking of product

The products to be marked with:
- manufacturer name
- device name
- serial number

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)
- 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 at least every second year and at renewal of this certificate.
END OF CERTIFICATE