

Certificate No: TAA00002B8

TYPE APPROVAL CERTIFICATE

This is to certify: That the Panel Meter

with type designation(s) **RIA45**

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	В
Humidity	В
Vibration	Α
EMC	В
Enclosure	B (front) / A (rear)

Issued at Hamburg on 2019-05-08

This Certificate is valid until **2024-05-07**. DNV GL local station: **Augsburg**

Approval Engineer: Dariusz Lesniewski

for **DNV GL**

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: 262.1-030760-1 Certificate No: TAA00002B8

Product description

The panel meter powers transmitters and processes analogue signals of transmitters. The signals are monitored, evaluated, calculated, saved, separated, linked, converted and displayed. Main technical data: Power supply: 24V DC and 230V AC

Input: one or two universal inputs (measured variable: current, voltage, resistance, resistance thermometer, thermocouples)

Output: one or two analog outputs, galvanically isolated. Connected sensors can be powered by the integrated transmitter power supply system

Display: LC-display with 5-digit (display range -99999 to +99999) Housing: plastic PC-GF10 Mounting: panel-mount Degree of protection: front IP65, rear IP20 Ex-protection according to EC-type examination certificate no. PTB 08 ATEX 2036 Firmware version: 01.03.xx

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

Ex-version for only one input.

Type Approval documentation

Test reports E+H QUD_F0037: _Description_GL_V0002 (08.11.13), _FunctionTestEUT_EN_V0100 (03.11.11), _Klimaprüfung_GL_DE_V0100 (18.03.13), _Vibrationsprüfung_GL_DE_V0100 (08.02.11), _EMC test report_GL_V0200 (13.11.13), 970001175 (06.02.09) Test reports Intertek no.: 2214940KAU-001 (19.09.11), 2212495KAU-001b (27.04.10), -001a (27.04.10) TI00141R/09/EN/xx.xx; Drawings acc. to the submitted file Softwarebeschreibung RIA45 (15.11.11) 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)
- Review of production and inspection routines, including test records from product sample tests and control routines

Job Id: 262.1-030760-1 Certificate No: TAA00002B8

- 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