



Marine & Offshore

Certificate number: 23461/C0 BV

File number: AP4149

Product code: 3812H

This certificate is not valid when presented without the full attached schedule composed of 7 sections

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TYPE APPROVAL CERTIFICATE

This certificate is issued to

Endress & Hauser Wetzer GmbH & Co. KG
Nesselwang - GERMANY

for the type of product

TEMPERATURE SENSORS / PROBES / TRANSDUCERS

Temperature field transmitter
TMT162

Requirements:

Bureau Veritas Rules for the Classification of Steel Ships
EC Code: 31 / 41BS.

This certificate is issued to attest that Bureau Veritas Marine & Offshore did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.

This certificate will expire on: 05 Apr 2027

For Bureau Veritas Marine & Offshore,

At BV HAMBURG, on 05 Apr 2022,

Dirk Hoepfner

This certificate was created electronically and is valid without signature



This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with Bureau Veritas Marine & Offshore. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of Bureau Veritas Marine & Offshore available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against Bureau Veritas Marine & Offshore for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

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BV Mod. Ad.E 530 June 2017

This certificate consists of 3 page(s)

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION:

The iTEMP temperature field transmitter **TMT162** is a two-wire transmitter for resistance temperature sensors or thermocouples.

Main characteristics for transmitter of TMT162:

Power Supply: 24V DC
 Input: 1x or 2x RTD (resistance thermometer) or TC (thermocouples)
 Output: 4 to 20mA with HART protocol
 Operation: With or without LC display
 Human Interface: LC display, illuminated with 5-digits, trend bargraph and further characters
 Housing: Aluminium (Alu) or stainless steel (316L)
 Cable entry: Thread or gland
 Degree of protection: IP67
 Software version: 04.01.xx

Variants of Type: TMT162 **a b c d e f g**: (acc. to document TI086R/09/en/01.09)

a= Approval: Ex-approvals

b= Housing: 1 to 4

c= Cable entry: 1, 2, 4, 5, 6

d= Mounting Bracket: 1, 2

e= Configuration connection: A, 1, 2, 3, 4

f= Configuration Sensor Type: A, 1 to 8, B to H, J to N, P to V

g= Communication: A to D

2. DOCUMENTS AND DRAWINGS:

- KEMA: IECEx KEM 06.0038 issue no: 2

For C0 version:

- Technical Information TI01344T/09/EN/03.21 dated 2021-01-22

- Operating Instructions BA01801T/09/EN/02.21 dated 2021-04-30

3. TEST REPORTS:

- Paconsult: 122-03, dated: Feb. 17, 2003; 07-1567-rev.1, dated: 28 Sept. 2007

- SENTON: 50515-20709e, dated: Nov. 28, 2002; 50515-30213e, dated: April 28, 2003

- Endress + Hauser: 03-9-609-50-E-002, dated: 18.03.2003; W10118, dated: 2010-04-20

For C0 version:

- MTN: 073175.052.22 V1.0 dated 23.03.2022

4. APPLICATION/LIMITATION:

4.1 - Bureau Veritas Rules and Regulations for the Classification of Steel Ships

4.2 - Approval valid for ships intended to be granted with the following additional class notations: **AUT-UMS, AUT-CCS, AUT-PORT** and **AUT-IMS**.

4.3 - Bureau Veritas Environmental Category, **EC Code: 31 / 41BS**

4.4 - The equipment fulfils the EMC requirements for installation in General Power Distribution and Deck Zones.

4.5 - Equipment covered by this Type Approval certificate has been tested according to requirements of IACS UR E10 rev7.

4.6 - Only Hardware and Firmware successfully tested together in compliance with the regulations as referred to in page one, according to the declaration of the manufacturer is covered by this certificate.

4.7 - The installation shall comply with the Manufacturer's recommendation described in the above-referenced documentation.

5. PRODUCTION SURVEY REQUIREMENTS:

5.1 - The above mentioned products are to be supplied by **Endress & Hauser Wetzer GmbH & Co. KG** in compliance with the type described in this certificate.

5.2 - This type of product is within the category HBV of Bureau Veritas Rule Note NR320 and as such does not require a BV product certificate.

5.3 - **Endress & Hauser Wetzer GmbH & Co. KG** has to make the necessary arrangements to have its works recognized by Bureau Veritas in compliance with the requirements of NR320 for HBV products:

Endress & Hauser Wetzer GmbH & Co. KG
Oberer Wang 1
87484 Nesselwang
GERMANY

6. MARKING OF PRODUCT:

- Maker's name or trademark
- Equipment type or model identification
- Date of manufacture and/or serial number
- Ex marking, as relevant

7. OTHERS:

7.1 - It is the responsibility of **Endress & Hauser Wetzer GmbH & Co. KG** to inform shipbuilders or their sub-contractors of the proper methods of fitting, use and general maintenance of the approved equipment and the conditions of this approval.

7.2 - This certificate supersedes the Type Approval Certificate N° 23461/B0 BV issued on 26 Jan 2016 by the Society.

*** END OF CERTIFICATE ***