



Marine & Offshore

Certificate number: 24604/C0 BV

File number: AP4206

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

RTD Thermometer

Omnigrad S: TR62, TR65

Requirements:

Bureau Veritas Rules for the Classification of Steel Ships

EC Code: 41S or 41

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 is a renewal of certificate N° 24604/B0 BV expiring on 02/02/2023

This certificate will expire on: 02 Feb 2028

For Bureau Veritas Marine & Offshore,

At BV HAMBURG, on 26 Jan 2023,

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 :

Omnigrad S: TR62, TR65 series are PT100 resistance temperatur sensors.

Main characteristics:

Process connection: TR62: Threaded, extension neck between housing and thermowell connection, length max.104mm
TR65: Threaded, fixed

Sensor: Platinum (WW, TF), 1x or 2x PT100

Measuring range: WW: -200 to 600°C
TF: -50 to 400°C

Insert diameter: 6mm

Electrical connection: Terminal block or flying leads

Housing of head: Aluminium for TA21H and TA30H or Stainless Steel for TA21H

Degree of protection: IP66/IP68

Variants: (acc. to order code dated 25.08.2010)

Type: TR62 **a b c d e f g h i**

a = Approval: Ex-approvals
b = Head (housing): A, B, S
c = Cable entry: A to H
d = Neck length: B, D, F, H, K
e = Insert diameter: 3
f = Insertion length: X
g = Head transmitter (electric connection): C, F
h = RTD: 2, 3, 6, 7, A, B, C, F, G
i = Additional options: 0

Variants: (acc. to order code dated 25.08.2010)

Type: TR65 **a b c d e f g h i j**

a = Approval: Ex-approvals
b = Head (housing): A, B, S
c = Cable entry: A to H
d = Process connection: 13, 14, 11, 12
e = Insertion length: X
f = Insert diameter: 3
g = Sensor head: 1, 2
h = Head transmitter (electric connection): C, F
i = RTD: 2, 3, 6, 7, A, B, C, F, G
j = Additional option: 0

2. DOCUMENTS AND DRAWINGS :

- Technical Information TI281T/02/en/07.05 and TI283T/02/en/07.05
- Order code for TR62 and TR65: Z_en_Temperature-Wetzer-1000085-2009_0400_0400 dated 25.08.2010
- Drawing 935AXXXXXX dated 03.07.08, example for protection pipe, model: TA555
- KEMA: 09ATEX0091 X issue 1, Ex d IIC T6/T5/T4; 01ATEX1169 X issue 4, Ex ia IIC T6 ... T1

3. TEST REPORTS :

- Paconsult: 10-3223 Revision 1, dated: 18 Jan, 2011; 07-1567 rev.1, dated: 28 Sept. 2007

4. APPLICATION / LIMITATION :

- 4.1 - Bureau Veritas Rules 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: 41S** with housing TA21H, **41** with housing TA30H
- 4.4 - The installation and fixing of insert shall comply with the Manufacturer's recommendation within tested parameters.

5. PRODUCTION SURVEY REQUIREMENTS :

5.1 - The **Omnigrad S: TR62, TR65** 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 recognised by Bureau Veritas in compliance with the requirements of NR320 for HBV products.

Endress & Hauser Wetzer GmbH & Co. KG
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87484 Nesselwang
GERMANY

6. MARKING OF PRODUCT :

- Maker's name or trademark
- Date of manufacture and/or serial number
- Equipment type or model identification
- 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° 24604/B0 BV issued on 02 Feb 2018 by the Society.

*** END OF CERTIFICATE ***