



Marine & Offshore

Certificate number: 07535/E0 BV

File number: AP3057

Product code: 3812H

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

www.veristar.com

TYPE APPROVAL CERTIFICATE

This certificate is issued to

TEMATEC GmbH

Hennef - GERMANY

for the type of product

TEMPERATURE SENSORS / PROBES / TRANSDUCERS

Type: E11.99011-0207 and E11.99011-0216

Temperature Sensor for Exhaust Gas

Requirements:

Bureau Veritas Rules for the Classification of Steel Ships

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: 28 Sep 2025

For Bureau Veritas Marine & Offshore,

At BV HAMBURG, on 28 Sep 2020,

Dirk Hoepfner



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 2 page(s)

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION:

The types: **E11.99011-0207** and **E11.99011-0216** are thermocouple temperature sensors with protective tube.

2. DOCUMENTS AND DRAWINGS:

- E11.99011-0207 and E11.99011-0216.

3. TEST REPORTS:

MFPA:

- B21/1107-97.

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 - The fitting aboard to be the same as used for the test.

5. PRODUCTION SURVEY REQUIREMENTS:

5.1 - The above mentioned products are to be supplied by **TEMATEC GmbH** 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 - **TEMATEC GmbH** has to make the necessary arrangements to have its works recognised by Bureau Veritas in compliance with the requirements of NR320 for HBV products:

TEMATEC GmbH
Löhestrasse 37
53773 Hennef
GERMANY

6. MARKING OF PRODUCT:

- Maker's name or trademark
- Equipment type or model identification
- Date of manufacture and/or serial number

7. OTHERS:

7.1 - It is the responsibility of **TEMATEC GmbH** 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° 07535/D0 BV issued on 19 Nov 2014 by the Society.

***** END OF CERTIFICATE *****



Marine & Offshore

Certificate number: 07538/E0 BV

File number: AP3057

Product code: 3812H

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TYPE APPROVAL CERTIFICATE

This certificate is issued to

TEMATEC GmbH

Hennef - GERMANY

for the type of product

TEMPERATURE SENSORS / PROBES / TRANSDUCERS

Type: E11.99411-0231

Resistance Temperature Sensor Pt100

Requirements:

Bureau Veritas Rules for the Classification of Steel Ships

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.

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For Bureau Veritas Marine & Offshore,

At BV HAMBURG, on 28 Sep 2020,

Dirk Hoepfner



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BV Mod. Ad.E 530 June 2017

This certificate consists of 2 page(s)

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION:

The type: **E11.99411-0231** is a Pt100 resistance temperature sensor.

2. DOCUMENTS AND DRAWINGS:

- E11.99411-0231

3. TEST REPORTS:

MFPA:

- B21/1107-97.

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 - The fitting aboard to be the same as used for the test.

5. PRODUCTION SURVEY REQUIREMENTS:

5.1 - The above mentioned products are to be supplied by **TEMATEC GmbH** 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.

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TEMATEC GmbH
Löhestrasse 37
53773 Hennef
GERMANY

6. MARKING OF PRODUCT:

- Maker's name or trademark
- Equipment type or model identification
- Date of manufacture and/or serial number

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7.2 - This certificate supersedes the Type Approval Certificate N° 07538/D0 BV issued on 19 Nov 2014 by the Society.

***** END OF CERTIFICATE *****



Marine & Offshore

Certificate number: 07536/E0 BV

File number: AP3057

Product code: 3812H

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TYPE APPROVAL CERTIFICATE

This certificate is issued to

TEMATEC GmbH

Hennef - GERMANY

for the type of product

TEMPERATURE SENSORS / PROBES / TRANSDUCERS

Type: D11.99011-0731, D11.99011-0725, D11.99011-0649, D11.99011-0803, D11.99011-0797, D11.99011-0495.
Temperature Sensor for Crankcase Bearing

Requirements:

Bureau Veritas Rules for the Classification of Steel Ships

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At BV HAMBURG, on 28 Sep 2020,

Dirk Hoepfner



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BV Mod. Ad.E 530 June 2017

This certificate consists of 2 page(s)

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION:

The types: **D11.99011-0731, D11.99011-0725, D11.99011-0649, D11.99011-0803, D11.99011-0797, D11.99011-0495** are thermocouple temperature sensors for crankcase bearing monitoring.

2. DOCUMENTS AND DRAWINGS:

- D11.99011-0731, D11.99011-0725, D11.99011-0649, D11.99011-0803, D11.99011-0797, D11.99011-0495.

3. TEST REPORTS:

MFPA:

- B21/1107-97.

4. APPLICATION/LIMITATION:

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*** END OF CERTIFICATE ***