



CERTIFICATE NUMBER  
16-LD1581072-PDA

DATE  
13 Dec 2016

ABS TECHNICAL OFFICE  
London Engineering Department

# CERTIFICATE OF DESIGN ASSESSMENT

This is to certify that a representative of this Bureau did, at the request of

## DANFOSS A/S

assess design plans and data for the below listed product. This assessment is a representation by the Bureau as to the degree of compliance the design exhibits with applicable sections of the Rules. This assessment does not waive unit certification or classification procedures required by ABS Rules for products to be installed in ABS classed vessels or facilities. This certificate, by itself, does not reflect that the product is Type Approved. The scope and limitations of this assessment are detailed on the pages attached to this certificate.

Product: **Sensor, Temperature Sensor**

Model: **Block Thermostat MBC 8100**

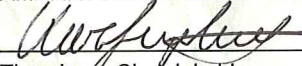
This Product Design Assessment (PDA) Certificate 16-LD1581072-PDA, dated 13/Dec/2016 remains valid until 12/Dec/2021 or until the Rules or specifications used in the assessment are revised (whichever occurs first).

This PDA is intended for a product to be installed on an ABS classed vessel, MODU or facility which is in existence or under contract for construction on the date of the ABS Rules or specifications used to evaluate the Product.

Use of the Product on an ABS classed vessel, MODU or facility which is contracted after the validity date of the ABS Rules and specifications used to evaluate the Product, will require re-evaluation of the PDA.

Use of the Product for non ABS classed vessels, MODUs or facilities is to be to an agreement between the manufacturer and intended client.

AMERICAN BUREAU OF SHIPPING

  
Theodoros Chatzidakas  
Engineer/Consultant

NOTE: This certificate evidences compliance with one or more of the Rules, Guides, standards or other criteria of ABS or a statutory, industrial or manufacturer's standards. It is issued solely for the use of ABS, its committees, its clients or other authorized entities. Any significant changes to the aforementioned product without approval from ABS will result in this certificate becoming null and void. This certificate is governed by the terms and conditions as contained in ABS Rules 1-1-A/3/5.9 Terms and Conditions of the Request for Product Type Approval and Agreement (2010).

**DANFOSS A/S**

NORDBORGVEJ 81 - BUILDING E14 S4A

APPROVALS DEPT.

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**Tier: 3 - Type Approved, unit certification not required** TC

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**Product:** Sensor, Temperature Sensor

**Model:** Block Thermostat MBC 8100

**Intended Service:**

Marine, Offshore and Industrial Application Thermostats for monitoring and alarm systems

**Description:**

The MBC thermostats are supplied in the following versions: Capillary tube, Armoured capillary tube and Rigid sensor types in a range of temperatures

**Rating:**

Temperature setting ranges.: various ranges between -10 degrees C to 200 degrees C

Enclosure.: IP 65

Switch.: Single-pole Changeover switch (SPDT) Inductive contact load: 0.5A, 250V, AC15 or 12W, 125V, DC13

**Service Restriction:**

Unit Certification is not required for this product. If the manufacturer or purchaser request an ABS Certificate for compliance with a specification or standard, the specification or standard, including inspection standards and tolerances, must be clearly defined.

**Comments:**

The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.

**Notes/Drawing/Documentation:**

Drawing No. 060-9650 AA, EC Declaration Danfoss, Revision: -, Pages: 1

Drawing No. IC.PD.P10.D7.02, Block thermostat MBC8100 Datasheet, Revision: -, Pages: 5

Drawing No. 20042053-E, Test of MBC 8100 Vibration, Revision: E, Pages: 1 - 3rd March 2004

Drawing No. 20042053-E2, Test of MBC 8100 heat & cold, Revision: E2, Pages: 1 - 3rd March 2004

Drawing No. 20042053-E3, Test of MBC 8100 IP65, Revision: E3, Pages: 1 - 3rd March 2004

Drawing No. 20042053-E4, Test of MBC 8100 shock, Revision: E4, Pages: 1 - 3rd March 2004

Drawing No. Type Approval Certificate ABS 04-FR50403X, ABS Type Approval cert Nov 2004, Revision: -, Pages: 1 - 18 Nov 2004

**Terms of Validity:**

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**STANDARDS**

**DANFOSS A/S**  
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**ABS Rules:**

- Steel Vessel Rules (2016): 1-1-4/7.7, 1-1-A3&A4; 4-8-3/1.7, 4-8-3/1.11, 4-8-3/1.17
- Steel Vessels Under 90 Meters (295 Feet) in Length (2016): 1-1-4/7.7, 1-1-A3&A4; 4-6-1/11, 4-6-1/15, 4-6-1/17
- Facilities on Offshore Installations (2016): 1-1-4/9.7, 1-1-A2&A3;
- Offshore Support Vessels (2016): 1-1-4/7.7, 1-1-A3&A4, 4-8-3/1.7, 4-8-3/1.11, 4-8-3/1.17,
- Mobile Offshore Drilling Units (2016) 1-1-4/9.7, 1-1-A2&A3, 6-1-1/9, 6-1-1/13; 4.3.1/11, 4-3-1/15, 4-3-1/17
- Steel Vessels for Service on Rivers and Intracoastal Waterways (2016): 1-1-4/7.7, 1-1-A3&A4; 4-5-1/13, 4-5-1/17, 4-5-1/19
- High Speed Crafts (2016): 1-1-4/11.9, 1-1-A2&A3; 4-6-1/11, 4-6-1/15, 4-6-1/17
- Steel Barge Rules (2016): 1-1-4/7.9, 1-1-A3&A4; 4-1-3/5.7

**National:**

NA

**International:**

NA

**Government:**

NA

**EUMED:**

NA

**OTHERS:**

NA

TC