



Lloyd's
Register

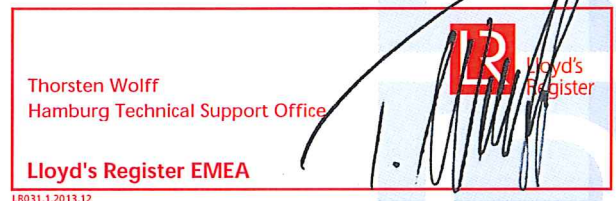
Type Approval Certificate Extension

This is to certify that Certificate No. 05/70002(E1) for the undernoted products is extended and renumbered as shown.

This certificate is issued to:

PRODUCER	Danfoss A/S Nordborgvej 81 DK-6430 Nordborg Denmark
PLACE OF PRODUCTION	Danfoss (Tianjin) Ltd No. 9 Quanhui Road Wuqing Development Area 301700 Tianjin China
DESCRIPTION	Temperature sensor with integrated transmitter
TYPE	MBT 5560
APPLICATION	Marine applications for use in environmental categories ENV1, ENV2 and ENV3 as defined in Lloyd's Register's Type Approval System, Test Specification Number 1 - 2002.
DESIGN CODE	Manufacturer's specification
RATINGS	Measuring range: -50° - +200°C
ADDITIONAL TESTS	Low Temperature Test: -20°C Degree of protection: IP65

Certificate No.	15/20024
Issue Date	16 March 2015
Expiry Date	15 March 2020
Sheet	1 of 2



Thorsten Wolff
Hamburg Technical Support Office
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"This Certificate is not valid for equipment, the design, ratings or operating parameters of which have been varied from the specimen tested. The manufacturer should notify Lloyd's Register EMEA of any modification or changes to the equipment in order to obtain a valid certificate."



The attached Design Appraisal Document No. HTS/ETS 31317-15 and its supplementary Type Approval Terms and Conditions form part of this Certificate.

All other details remain as the previous Certificate No. 05/70002(E1) to which this extension should be attached.

Certificate No.	15/20024
Issue Date	16 March 2015
Expiry Date	15 March 2020
Sheet	2 of 2

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LR031.1.2013.12

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Part 3
Transmitters/Transducers

Producer/Licence No.	Item Description	Technical Details	Category/Additional Tests	Remarks	Cert. No.
Danfoss A/S Nordborgvej 81 DK-6430 Nordborg Denmark	Temperature sensor with integrated transmitter Type: MBT 5560	Temperature range: -50° - +200°C Power supply: 24 V dc Output signal: 4-20 mA Sensor element: Pt-1000 Class B Sensor: Ø8 mm Elec.Connections: Flying leads; AMP Econoseal J series; Plug EN 175301-803, PG9; M12x1,4-pin or 2m. screened cable.	ENV1, ENV2, ENV3 (2002) Low Temperature Test: -20°C Degree of protection: IP65	Expires: 15 March 2020	15/20024





Marine Design Appraisal Document

Lloyd's Register EMEA
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Date
16 March 2015

Please quote this reference number on all future communications
HPC1562012/31317-15/TW/ND/SC

**THE LLOYD'S REGISTER'S TYPE APPROVAL SYSTEM, 2002
ISSUED TO: DANFOSS A/S
FOR: TEMPERATURE SENSOR WITH INTEGRATED TRANSMITTER
TYPE MBT 5560
TYPE APPROVAL CERTIFICATE EXTENSION NO. 15/20024**

The additional undernoted documents have been reviewed for compliance with the requirements of the Lloyd's Register's Type Approval System, 2002 and this Design Appraisal Document forms part of the Certificate.

ADDITIONAL APPROVAL DOCUMENTATION

Form 2571	Application for Type Approval Certification	20.01.2015
W03982413	Inspection and Surveillance of Production Facilities	29.01.2015
520B6279	MBT 5560 Temperature sensor with integrated transmitter Data Sheet	05.2014

FINAL ACCEPTANCE OF ACTUAL ITEM(S) DEPEND(S) ON SATISFACTORY SURVEY AND TESTING

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Supplementary Type Approval Terms and Conditions

Type Approval certifies that a representative sample of the product(s) referred to herein has/have been found to meet the applicable design criteria for the use specified herein. It does not mean or imply approval for any other use, nor approval of any product(s) designed or manufactured otherwise than in strict conformity with the said representative sample.

Type Approval is based on the understanding that the manufacturer's recommendations and instructions and any relevant requirements of the Rules and Regulations are complied with. Type Approval does not eliminate the need for normal inspection and survey procedures required by the Rules and Regulations.

Lloyd's Register EMEA reserves the right to cancel or withdraw this Type Approval Certificate in accordance with the LR Type Approval System Procedure.


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LR031.1.2013.12

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