



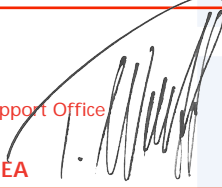

Type Approval Certificate

This is to certify that the undernoted product(s) has/have been tested with satisfactory results in accordance with the relevant requirements of the Lloyd's Register Type Approval System.

This certificate is issued to:

PRODUCER	DEIF A/S Frisenborgvej 33 7800 Skive Denmark
DESCRIPTION	Multi-line 2 generator plant control and protection units
TYPE	PPU - Paralleling and protection unit GPU - Generator protection unit MDR-2 Multi differential relay PPM - PPU Power management system
APPLICATION	Marine, offshore and industrial applications for use in environmental categories ENV1, ENV2 and ENV3 as defined in Lloyd's Register Type Approval System, Test Specification Number 1 – 2002.
ADDITIONAL TESTS	Low temperature (-25°C/16 hours) Enclosure IP5X (display unit front)
STANDARD	Manufacturer's specification
RATINGS	Power supply (Vdc): 12 and 24 Input voltage (Vac): 100-690 Input current (A): 1 or 5 Input frequency (Hz): 30-70
OTHER CONDITIONS	The complete installation is subject to a separate plan appraisal according to applicable Rules and Regulations when installed on LR classed vessels.
Certificate No.	01/20019 (E5)
Issue Date	14 April 2016
Expiry Date	02 April 2021
Sheet	1 of 2

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Lloyd's Register EMEA

LR031.1.2013.12

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The Type Approval does not eliminate the need for normal inspection and survey procedures required by the Rules and Regulations.

If the specified standards are amended during the validity of this certificate, the product is to be re-approved prior to it being supplied to vessels to which the amended standards apply.

The Design Appraisal Document No. HTS/ETS 33481-16 and its supplementary Type Approval Terms and Conditions form part of this Certificate.

Certificate No.	01/20019 (E5)
Issue Date	14 April 2016
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Sheet	2 of 2

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Marine Design Appraisal Document

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Date
14 April 2016

Please quote this reference number on all future communications
HPC1662011/33481-16/TW/FS


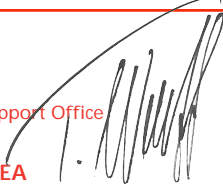
**THE LLOYD'S REGISTER'S TYPE APPROVAL SYSTEM, 2014
ISSUED TO: DEIF A/S, SKIVE (DENMARK)
FOR: GENERATOR PLANT CONTROL AND PROTECTION UNITS MULTI-LINE 2
TYPE APPROVAL CERTIFICATE NO. 01/20019 (E5)**

The undernoted documents have been reviewed for compliance with the requirements of the Lloyd's Register's Type Approval System Procedure TA14 and this Design Appraisal Document forms part of the Certificate.

APPROVAL DOCUMENTATION

Unnumbered	Application Checklist	Undated
ETS 24693-11	Design Appraisal Document for Certificate No. 01/20019(E3)	31.03.2011
HPC1420091	Production Quality Assessment Form	06.05.2015

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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.

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

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Part 2

Power Distribution Systems / Protective Devices

Producer/Licence No.	Type	Standard	Rating	Category/ Additional Tests	Remarks	Cert. No.
Deif A/S Friesenborgvej 33 7800 Skive Denmark	Multi-line 2 generator plant control and protection units Types PPU - Paralleling and protection unit GPU - Generator protection unit MDR-2 - Multi differential relay PPM - PPU Power management system	Manufacturer's specification	Power supply (Vdc): 12 and 24 Input voltage (Vac): 100-690 Input current (A): 1 or 5 Input frequency (Hz): 30-70	ENV1, ENV2, ENV3 (2002) Low temperature (-25C°/16 hours) Enclosure IP5X (display unit front)	Expires: 02 April 2021	01/20019 (E5)