

# 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.

<b>Manufacturer</b>	<b>DEIF A/S</b>
<b>Address</b>	Frisenborgvej 33, Skive, 7800, Denmark
<b>Type</b>	Control Units
<b>Description</b>	Protection and Power Management Unit, Generator Protection Unit, Paralleling and Protection Unit Refer to the Appendix for further details.
<b>Trade Name</b>	PPM 300, PPU 300, GPU 300
<b>Application</b>	Marine and offshore applications for use in environmental categories ENV1, ENV2 and ENV3 as defined in Lloyd's Register's Type Approval System, Test Specification Number 1 – July 2018
<b>Specified Standard</b>	Manufacturer's specification
<b>Ratings</b>	Power supply: 12 and 24 VDC Input voltage: 100-690 (2-897*) VAC Input current: 1 or 5 (0.02-17.5*) VAC Input frequency: 40-70 (15-78*) Hz (* = measurement range)
<b>Additional Tests</b>	Low temperature (-25C°/16 hours)



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## Other Conditions

The EIM card may provide diesel safety functions as back up only to provide design diversity.  
Software for Generator Protection, Paralleling and Power Management are covered by a separate LR Software Conformity Certificate. The validity of this Certificate is to be checked on the manufacturer's website and LR Approvals database.

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 Design Appraisal Document No. HTS/ETS 40490-20/TW and its supplementary Type Approval Terms and Conditions form part of this Certificate.

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## Appendix

### Types

#### **PPM 300**

PSM 3.1 Power supply module  
ACM 3.1 AC measurement module  
ACM 3.2 AC measurement module  
IOM 3.1 Input/output module  
IOM 3.4 Input/output module  
EIM 3.1 Engine input module  
GAM 3.1 Governor/AVR module  
GAM 3.2 Governor/AVR module  
PCM 3.1 Processor and communication module  
DU 300 Display unit

Software Versions: 1.0.x.x (BU application)  
3.0.x.x (BU operating system)  
5.0.x.x (ACM 3.1)  
1.0.x.x (ACM 3.2)  
2.0.x.x (EIM 3.1)  
1.0.x.x (DU 300)  
2.0.x.x (GAM 3.1)  
2.0.x.x (GAM 3.2)

#### **GPU 300**

PSM 3.1 Power supply module  
ACM 3.1 AC measurement module  
ACM 3.2 AC measurement module  
IOM 3.1 Input/output module  
IOM 3.4 Input/output module  
PCM 3.1 Processor and communication module  
DU 300 Display unit

Software Versions: 1.0.x.x (BU application)  
3.0.x.x (BU operating system)  
5.0.x.x (ACM 3.1)  
1.0.x.x (ACM 3.2)  
1.0.x.x (DU 300)

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**PPU 300**

Comprising following components:

PSM 3.1 Power supply module  
ACM 3.1 AC measurement module  
ACM 3.2 AC measurement module  
IOM 3.1 Input/output module  
IOM 3.4 Input/output module  
EIM 3.1 Engine input module  
GAM 3.1 Governor/AVR module  
GAM 3.2 Governor/AVR module  
PCM 3.1 Processor and communication module  
DU 300 Display unit

Software Versions: 1.0.x.x (BU application)  
3.0.x.x (BU operating system)  
5.0.x.x (ACM 3.1)  
1.0.x.x (ACM 3.2)  
2.0.x.x (EIM 3.1)  
1.0.x.x (DU 300)  
2.0.x.x (GAM 3.1)  
2.0.x.x (GAM 3.2)

**LLOYD'S REGISTER TYPE APPROVAL – DESIGN APPRAISAL DOCUMENT**  
**ISSUED BY: HAMBURG TECHNICAL SUPPORT OFFICE (HPC1662083)**  
**ISSUED TO: DEIF A/S, SKIVE, DENMARK**  
**FOR: PROTECTION AND POWER MANAGEMENT UNIT, GENERATOR PROTECTION UNIT,**  
**PARALLELING AND PROTECTION UNIT**  
**TYPE PPM 300, GPU 300, PPU 300**

The undernoted documents have been reviewed for compliance with the requirements of the Lloyd's Register Type Approval System Procedure TA14 Version 03 (July 2017) and this Design Appraisal Document forms part of the Certificate.

**APPROVAL DOCUMENTATION**

Unnumbered	Type Approval Application Checklist	18.08.2020
HTS-ETS 39663-20	Design Appraisal Document for Certificate No. LR2002346TA	15.04.2020
HPC1662083/HPC1962114	Production Quality Assessment Form	13.01.2020

  
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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 Lloyd's Register Type Approval System Procedure.*

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