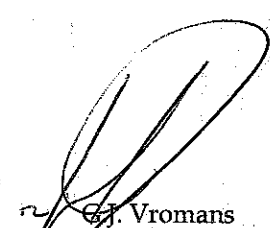


## LR Type Approval Certificate

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

This certificate is issued to:

<b>PRODUCER</b>	DSF Technologies
<b>PLACE OF PRODUCTION</b>	Allée Charles - Victor Naudin Zone des Templiers Sophia Antipolis 06410 Biot FRANCE
<b>DESCRIPTION</b>	Generator Management Module
<b>TYPE</b>	A40Z1 (GENSYS "durci")
<b>APPLICATION</b>	Marine and offshore functional built in applications: - Speed control diesel - Circuit breaker control - Indication of figures I, U, F, Hz, KW, KVAR, PF - Load dependant start/stop - Dead bus start/circuit breakers control - Synchronisation - Droop/Isochronous - Parallel running control - Diesel parameters display
<b>SPECIFIED STANDARDS</b>	ENV 2 according Lloyd's Register Type Approval system Specification 1 1996 EN 50081-2 ed. 1 EN 50082-2 ed. 1 Rules and regulations of ships 2002.
<b>Certificate No.</b>	03/30012
<b>Issue Date</b>	30 May 2003
<b>Expiry Date</b>	29 May 2008
<b>Sheet</b>	1 of 2

  
G.J. Vromans  
Type Approval Department  
Rotterdam

**RATINGS** Max. input voltage 480V

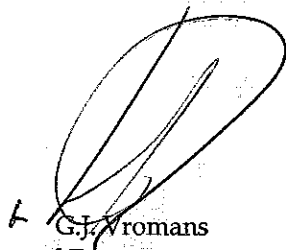
**ACCURACY** Indication: 1,5%

**REMARKS** Diesel shutdown sensors and shutdown control system and alarm system are to be independent of Gen System Module. Functional description of each application (ship) is to be submitted for consideration to Lloyd's Registers plan approval office.

*"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 LR of any modification or changes to the equipment in order to obtain a valid certificate."*

*The Design Appraisal Document No ROT.TA.0290347 and its supplementary Type Approval Terms and Conditions form part of this Certificate.*

**Certificate No.** 03/30012  
**Issue Date** 30 May 2003  
**Expiry Date** 29 May 2008  
**Sheet** 2 of 2

  
G.J. Vromans  
Type Approval Department  
Rotterdam

## DESIGN APPRAISAL DOCUMENT

Date 30 May 2003	Quote this reference on all future communications ROT.TA.0290347/GJV
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### LLOYD'S REGISTER'S TYPE APPROVAL SYSTEM, 1996.

Issued to: DSF Technologies, France  
for: generator management module  
Type: A40Z1 (Gensys durci)  
TYPE APPROVAL CERTIFICATE No. draft

The undernoted documents have been reviewed for compliance with the requirements of Lloyd's Register's Type Approval System, 1996 and this Design Appraisal Document is a supplement to the Certificate.

#### APPROVAL DOCUMENTATION

Emails dated 18-10-2002,  
No. qual/1997/7816C  
Technical documentation ref. A40Z0 dated JUNE 2002  
Request form I40 9000 certificate.

#### TEST REPORTS

LRS Report MSC  
TEST REPORT 0403.001, 0403.002 dated 08-04-2003  
LCIE Test Report 39530020 dated 16-04-2002  
LCIE Test Report 39530010 dated 30-08-2002

#### Supplementary Type Approval Terms and Conditions

*LR 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.*

*LR Type Approval is based on the understanding that the manufacturer's recommendations and instructions and any relevant requirements of the Rules of Lloyd's Register of Shipping are complied with.*

*This LR Type Approval does not eliminate the need for normal inspection and survey procedures required by the Rules and Regulations of Lloyd's Register of Shipping.*

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

  
G.J. Vromans  
Senior Surveyor In Charge  
Type Approval Department

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