DNV·GL

TYPE APPROVAL CERTIFICATE

Certificate No:
TAE000002J
Revision No:
1

This is to certify:

That the UPS

with type designation(s)
Galaxy VM

Issued to
Schneider Electric IT Denmark ApS
Kolding, Denmark

is found to comply with
DNV GL rules for classification – Ships, offshore units, and high speed and light craft

Application :

Products approved by this certificate are accepted for installation on all vessels classed by DNV GL.

Issued at **Høvik** on **2019-08-28**

This Certificate is valid until **2024-06-30**.
DNV GL local station: **Fredericia FiS**

Approval Engineer: **Nicolay Horn**

for **DNV GL**
Digitally Signed By: Trond Sjåvåg
Location: DNV GL Høvik, Norway

Trond Sjåvåg
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.
The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

Name and pace of manufacturer

American Power Conversion
Jingani, Anekal Taluk, Bengaluru
Bangladore -India

Product description

Galaxy VM: UPS for general emergency equipment, equipped with battery charger and automatic by-pass.

Galaxy VM with disabled bypass: With automatic by-pass disabled and without batteries the UPS is approved to convert input frequency (40-70Hz) into any output setting defined in the table below). Note: Maximum 100% load is supported in this configuration.

Rating kVA PF = 0.9	160	200
Input		
Nominal input Voltage	3 Ph 380/400/415/440V	
Voltage range	320V - 600 V (Max. 1 minute above 480 V)	
Input and Bypass	Separate or common	
Frequency	40-70Hz	
EMC (immunity)	IEC62040-2 class C2/C3	
Bypass		
Nominal input voltage	3 Ph+PE or 3 Ph+N+PE 380/400/415/440V	
Voltage range	342V to 457V	
Frequency	50 / 60 Hz ± 8 %	
EMC (immunity)	IEC62040-2 class C2/C3	
Output		
Output voltage	3 Ph+PE or 3 Ph +N+PE 380/400/415/440V ± 3 %	
Voltage regulation	± 1 %	
Frequency	50 / 60 Hz	
Overload	150 % in 1 min., 125 % in 10 min (normal operation)	
Output total TDHU	< 2 %@linear, < 3%@non-linear	
Max load crest factor	Unlimited	
EMC (emission)	IEC62040-2 class C2	
Batteries		
Charge capacity	40% charge at 80% load, 20% charge at 100% load	
Nominal voltage	480Vdc	
Type	Lead Acid	
Overall efficiency		
Double conversion mode	96.2% at 75% load	
Economy mode	99.2% at 75% load	
Environmental conditions		
Storage temperature	- 25°C to + 45 °C	
Operating temperature	Up to 40°C *	
Dimensions		
Overall dimensions	1970 x 1052 x 865 mm (without batteries)	

* Output to be de-rated for environmental temperatures up to 45 °C. See Application / limitation

Classification according to DNV SfC 2.4	
Temperature class	A
Vibration class	A
Humidity class	A
Enclosure class	A*
EMC class	A*

* See "Application / limitation" for restrictions / limitations

Application/Limitation

Operation for longer periods in 40-45°C ambient requires de-rating of the products nominal load with 2.5%/°C > 40°C.

End user is responsible for correct enclosure protection (IP) with respect to location.

This type approval does not replace the requirement for a product certificates in accordance with the DNV GL Rule paragraph Pt.4, Ch.8, Sec.1, item 2.3 table 3.

Converters with EMC classed C2 or C3 according to IEC 62040-2 can be installed in "special distribution zone" and "general power distribution zone" in accordance with IEC 60533 provided precautions are taken to attenuate these effects on the distribution system, so the safe operation is assured.

To be installed in climatically controlled areas.

Type Approval documentation

Technical info :
Galaxy VM 160-200 kVA 400V Technical Specification

Drawings:
GVMPB160KHS, rev. 0, GVMPB200KHS, rev. 0 GVMSB160KHS, rev. 0, GVMSB200KHS, rev. 0 issued 2014-05-22.

Test Reports:
TÛV report no. 478617089 issued 2014-10-20. DELTA EMC Test reports nos. DANAK-10/13652 rev A dated 2014-07-14, CEM_MG_03 dated 2005-12-19/23.
Environnetech report no. RENV-ENN-14-400489/A (00) dated 2014-06-25. TÛV report no. 21122204_001 dated 2006-09-08.UL test report no. 4786612469 issued 2014-10-23.

Tests carried out

Type tests in accordance with IEC 62040-1, EMC immunity in accordance with DNV Standard for Certification No. 2.4, EMC emission in Accordance with IEC 62040-2 class C2, Vibration, Damp heat in accordance with DNV Class A (no condensation), Dry heat in accordance with DNV Class A.

Marking of product

Schneider Electric – Galaxy VM – technical data

Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the Type approval is complied with and that no alterations are made to the product design or choice of materials.

The main elements of the periodical assessment are:

- Inspection on factory samples, selected at random from the production line (where practicable)
- Results from Production Sample Tests (PST) and Routines (RT) checked (if not available tests according to PST and RT to be carried out)
- Review of type approval documentation
- Review of possible change in design, materials and performance
- Ensuring traceability between manufacturer's product type marking and Type Approval Certificate.

Periodical assessment shall be performed at 2 and 3.5 year and at renewal.

END OF CERTIFICATE