

**CERTIFICATE FOR  
SWITCHGEAR ASSEMBLY**

Manufacturer: Phasetronics, Inc. d/b/a Motortronic

Manufacturer's order No.: [REDACTED]

Purchaser: [REDACTED]

Purchaser's order No.: [REDACTED]

The product is intended for  
Yard: [REDACTED]

Yard No.: [REDACTED]

Name of vessel: [REDACTED]

DNV GL Id. No.: [REDACTED]

**THIS IS TO CERTIFY:**

that the product: HV Solid State Reduced Voltage (Thruster) Motor Starter

Type designation: [REDACTED]

Serial No(s): [REDACTED]

Tag Number: [REDACTED]

Power (kW): **3118**

Voltage (V): **6000**

Current (A): **300**

Frequency (Hz): **60**

Has been built and tested in accordance with the relevant requirements of:

DNV Rules for Classification:  Ships  HSLC  Naval  Offshore  
 Other standards:

Remarks (if more than one line, use page 2):  
**Supplied drip hood must be installed to achieve IP42 rating.**

The product was marked: [REDACTED] On: **Brass Nameplate on Front Door**

This field is only to be filled in when the certification is based on a Manufacturing Survey Arrangement (MSA).

The undersigned manufacturer declares that the product/system has been built and tested in accordance with the specification/standard stated above and the conditions referred to in  
 Manufacturing Survey Arrangement No:  
 Quality System Certificate No:

For Manufacturer:  
 Place:  
 Date:

\_\_\_\_\_  
 (name)  
 (title)

This Certificate is only valid when signed by a DNV GL surveyor.

For DNV GL

Place:  
 Date:  Digitally Signed By: Tillison, Ben  
 Location: DNV Houston, TX USA  
 Signing Date: 2014-10-30

\_\_\_\_\_  
**BEN TILLISON**  
 Surveyor

If any person suffers loss or damage which is proved to have been caused by any negligent act or omission of the Society, then the Society shall pay compensation to such person for his proved direct loss or damage. However, the compensation shall not exceed an amount equal to ten times the fee charged for the service in question. The maximum compensation shall never exceed USD 2 million. In this provision the "Society" shall mean DNV GL AS as well as all its direct and indirect owners, affiliates, subsidiaries, directors, officers, employees, agents and any other person or entity acting on behalf of DNV GL AS.

Technical data:

Ingress protection (IP rating): 42  
Short circuit level (rms/peak) (kA): 20  
High voltage test (kV): 20  
Insulation / Megger test (M $\Omega$ ): >500  
Distribution system: Phase: 3 Wire: 3  
Ambient temperature (degC): 50  
System earthing:  
Is rear access for maintenance required:  Yes  No  
Product or TA certificate number  
for PMS system (if applicable):  
Test program / Function tests (specify): Per DNV Rules Pt. 4, Ch. 8, Sec. 4 and Vendor FAT document

Remarks:

Marking and certificate numbers for the different parts:

Drawings with dates of approval and/or type approval certificate number:  
CEN-60200/60300-ESX1 rev. S4 approved 2014-10-nn