



## *Confirmation of Product Type Approval 01/JUL/2011*

Please refer to the "Service Restrictions" shown below to determine if Unit Certification is required for this product.

This is to certify that, pursuant to the Rules of the American Bureau of Shipping (ABS), the manufacturer of the below listed product held a valid Manufacturing Assessment (MA) with expiration date of 21/JAN/2012. The continued validity of the Manufacturing Assessment is dependent on completion of satisfactory audits as required by the ABS Rules.

And; a Product Design Assessment (PDA) valid until 28/JUN/2016 subject to continued compliance with the Rules or standards used in the evaluation of the product.

The above entitle the product to be called Product Type Approved.

The Product Design Assessment is valid for products intended for use on ABS classed vessels, MODUs or facilities which are in existence or under contract for construction on the date of the ABS Rules used to evaluate the Product.

ABS makes no representations regarding Type Approval of the Product for use on vessels, MODUs or facilities built after the date of the ABS Rules used for this evaluation.

Due to wide variety of specifications used in the products ABS has evaluated for Type Approval, it is part of our contract that; whether the standard is an ABS Rule or a non-ABS Rule, the Client has full responsibility for continued compliance with the standard.

### SELCO A/S

Model Name(s): SIGMA S6000; SIGMA S6100; SIGMA S6500; SIGMA S6610

**Presented to:**

SELCO A/S  
BETONVEJ 10  
ROSKILDE  
Denmark

**Intended Service:**

The SIGMA generator protection, control and power management system includes following modules: S6000 IO/P Module for protection of the generator and non-essential load trip; S6100 S/LS Module for synchronising and active/reactive load sharing; S6500 UI Module for indication of measurements and change of settings of the modules; S6610 PM Module for power management (starts and stops of generators, blackout clearance, large consumer request functionality which allows 5 separate LC inputs, load feedback from large consumers and preferential trips).

**Description:**

The SIGMA generator protection, control, monitoring and power management system is made up of a range of integrated modules for protection and control of marine generators.

**Ratings:**

See data sheet attached

**Service Restrictions:**

Unit Certification is not required for this product. If the manufacturer or purchaser's request an ABS Certificate for compliance with a specification or standard, the specification or standard, including inspection standards and tolerances, must be clearly defined.

**Comments:**

The use of SIGMA in an integrated protection and control system will require to be reviewed as part of a switchboard or system drawings. Each application and configuration is to be specifically approved.

**Notes / Documentation:**

This Product Design Assessment (PDA) is valid only for products intended for use on ABS classed vessels, MODUs or facilities which are in existence or under contract for construction on the date of the ABS Rules used to evaluate the

**Term of Validity:** Product. Delta Test Report No.s DANAK-197219, Project No. E501273-1; DANAK-198449, Project No. A503163-1

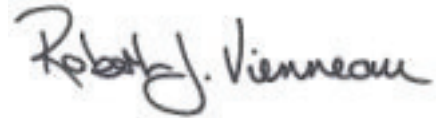
This Product Design Assessment (PDA) Certificate 06-LD173765-2-PDA, dated 29/Jun/2011 remains valid until 28/Jun/2016 or until the Rules or specifications used in the assessment are revised (whichever occurs first). This PDA is intended for a product to be installed on an ABS classed vessel, MODU or facility which is in existence or under contract for construction on the date of the ABS Rules or specifications used to evaluate the Product. Use of the Product on an ABS classed vessel, MODU or facility which is contracted after the validity date of the ABS Rules and specifications used to evaluate the Product, will require re-evaluation of the PDA. Use of the Product for non ABS classed vessels, MODUs or facilities is to be to an agreement between the manufacturer and intended client.

**ABS Rules:** 2011 Steel Vessel Rules 1-1-4/7.7, 4-8-2/9.9, 9.11, 4-8-3/1.7, 1.9, 3.13.3, 4-9-7/13.1, 4-9-7/Table 9 and 2008 MODU Rules 4-3-1/11 (upd. 2011)

**National Standards:**  
**International Standards:** IACS UR E10 Rev5:2006

**Government Authority:**  
**EUMED:**  
**Others:**

Model Certificate	Model Certificate No	Issue Date	Expiry Date
PDA	06-LD173765-2-PDA	29/JUN/2011	28/JUN/2016



ABS Programs

ABS has used due diligence in the preparation of this certificate and it represents the information on the product in the ABS Records as of the date and time the certificate was printed. Type Approval requires Drawing Assessment, Prototype Testing and assessment of the manufacturer's quality assurance and quality control arrangements. Limited circumstances may allow only Prototype Testing to satisfy Type Approval. The approvals of Drawings and Products remain valid as long as the ABS Rule, to which they were assessed, remains valid. ABS cautions manufacturers to review and maintain compliance with all other specifications to which the product may have been assessed. Further, unless it is specifically indicated in the description of the product; Type Approval does not necessarily waive witnessed inspection or survey procedures (where otherwise required) for products to be used in a vessel, MODU or facility intended to be ABS classed or that is presently in class with ABS. Questions regarding the validity of ABS Rules or the need for supplemental testing or inspection of such products should, in all cases, be addressed to ABS.