

## Type Approval Certificate Extension

This is to certify that Certificate No.04/70002 for the undernoted products is extended and renumbered as shown.

This certificate is issued to:

PRODUCER	SELCO A/S
PLACE OF PRODUCTION	P.O.Box 113 Betonvej 10, Roskilde, DK-4000 Denmark
DESCRIPTION	Integrated Generator Protection, Control and Monitoring System. Inputs Voltages: 63 – 690 V AC Currents: 5 or 1 A External Redundant Power Supply: 24 Vdc.
TYPE	SIGMAS6000 Data Acquisition and Protection Module Trip- I/OP Module functions: O/C, S/C, Over Load, Reverse Power, Excitation Loss, Over/Under Voltage & Over/Under Frequency, Load Shedding in 2 Steps. Three outlets for read-out of analogue signals. SW: firm ware version: SIGMA 6000: 3-v-x. Present 3-2-39 SIGMAS6100 Frequency and Voltage Controls, Automatic/Manual S/LS Module Synchronising and active/reactive Load Sharing. SW firm ware version SIGMA 6100: 3-v-x. Present:3-5-41 SIGMAS6610 Automatic load depending start/stop of gen-sets, P/M Module large consumer request, non essential load trip, black-out clearance SW firm ware version: SIGMA 6610: 1-v-x. Present 1-0-17 SIGMAS6500 User Interface Module allowing read-out of UI Module measurements and configuration of the system. SW firm ware version: SIGMA 6500: 1-v-x. Present 1-4-13.
Certificate No.	04/70002(E1)
Issue Date	26 May 2009
Expiry Date	11 March 2014
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Poul Erik Hansen  
Copenhagen Plan Approval Centre

Lloyd's Register EMEA  
Strandvejen 104A, DK-2900 Hellerup

## APPLICATION

Marine, Offshore and Industrial use in environmental categories ENV1, ENV2, ENV3 and ENV4 as defined in LR Test Specification No1: 2002 where the test specification is satisfactory for the intended operation/location

## ADDITIONAL TESTS

Conducted emission: CISPR 16-2, "General Power Distribution Zones".  
Radiated emission: CISPR 11, "General power Distribution Zones".  
Random Vibration Test to DNV Certification Notes No. 2.4 – May 1995  
Immunity to conducted HF interference: IEC 60945 "For bridge and deck mounted equipment".  
Surge voltage: IEC 61000-4-5, Power Lines: 1 & 2kV line/earth and 0.5 & 1kV line/line  
Signal Lines: 1 kV line/earth  
1 MHz Burst Disturbance Test: IEC 60255-22-1

Test of software has been limited to tests as demonstrated at the function testing at the Type Approval.

## OTHER CONDITIONS

For installation in low voltage switchboard assembly.  
Ingress Protection: IP 54 from front of the SIGMA S6500UI  
Minor software changes to firmware results in change of second and/or third digit(s) of the SW version number require no approval by LR.

*"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 attached Design Appraisal Document No TA04/70002(E1) and its supplementary Type Approval Terms and Conditions form part of this Certificate.*

All other details remain as the previous Certificate No.04/70002 to which this extension should be attached.

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