

## 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>	Huegli Tech AG Murgenthalstraße 30 4900 Langenthal Switzerland
<b>PLACE OF PRODUCTION</b>	ComAp spol.s.r.o Kundratka 2359/17 CZ - 180 00 Prague 8 Czech Republic
<b>DESCRIPTION</b>	Generator Control and Monitoring System
<b>TYPES</b>	InteliGen Marine and InteliSys Marine consisting of InteliGen Marine; options in brackets: IG-NT(C)-(GC)-(LT) Marine: Control Panel IG-EE(C)-(GC)-(LT)Marine: Control Panel for electronic controlled engines IG-Display Marine (LT) (GC)  InteliSys: IS-NT-BB Marine: Base box IS-Display Marine, IS Display LT Marine IS NT Marine (complete unit IS-NT-BB + IS Display) C: add. interface USB + RS 232 (RS485); selectable U/I input ranges GC: add. graphical character support LT: low temperature version -25°C

<b>Certificate No.</b>	09/20034
<b>Issue Date</b>	10 December 2009
<b>Expiry Date</b>	09 December 2014
<b>Sheet</b>	1 of 3

Lloyd's Register EMEA  
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## CONTINUE TYPES

Extension Modules:  
I-AOUT8: 8 analogue outputs  
I-RB8, I-RB8-231: 8 analogue outputs

Common modules:  
IG-AVRi Marine: AVR interface  
IG-AVRi TRANS Marine: supply transformer for IG-AVRi  
IGS-NT LSM+PMS: Dongle for load sharing and power management  
IG-MTU, IG-MTU-2-1: main transformer units  
I-LBA: low battery adapter

Communication modules:  
I-LB+: CAN/USB, RS 232, RS 485 bridge for multiple controllers connections  
I-CR: CAN repeater module  
I-CB: Communication bridge with non-J1939 electronic controlled engines

ANSI functions:  
59 overvoltage, 27 undervoltage, 47 phase sequence voltage, 81H overfrequency, 81L underfrequency, 51 overcurrent (range 100- 200%), 46 current unbalance, 32 overload, 51N+64 earth fault, 32R reverse power

## APPLICATION

Marine, offshore and industrial applications for use in environmental categories ENV1, ENV2, ENV3 and ENV4 (power distribution zone) as defined in LR Type Approval System, Test Specification Number 1 - 2002.

## STANDARD

Manufacturers Specification IGS-NT Marine application notes, ComAp-June 2009, revision 2, June 2009

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## OTHER CONDITIONS

Separate synchroniser and short circuit protection devices required.

Separate safety system for the prime mover required.

Virtual periphery function not to be used for systems requiring redundancy of power generation/ propulsion.

The complete installation is subject to a separate plan appraisal according to applicable Rules and Regulations when installed on LR classed vessels.

Various parameters may be adjusted by the utilized software tools. The parameters adjusted to be verified against the applicable LR Rules and Regulations. The valid software used is to be suitably documented in the relevant and applicable documentation.

*"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 Design Appraisal Document No. ETS 22269-09 and its supplementary Type Approval Terms and Conditions form part of this Certificate.*

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Sheet	3 of 3

  
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