



TYPE APPROVAL CERTIFICATE
No. ELE485107CS



This is to certify that the product below is found to be in compliance with the applicable requirement of the RINA type approval system.

<i>Description</i>	Diesel engine safety, control and monitoring system
<i>Type</i>	InteliGen and InteliSys Gen-Set controllers.
<i>Applicant</i>	HUEGLI TECH AG Murgenthalstrasse 30, CH-4900 Langenthal SWITZERLAND
<i>Manufacturer</i>	ComAp spol. s.r.o.
<i>Place of manufacture</i>	Kundratka 2359/17, CZ 180 00 Praha 8 CZECH REPUBLIC
<i>Reference standards</i>	- Rules for the Classification of Ships- Part C - Machinery, Systems and fire protection - Ch.3 ; Sect. 6 ; Tab. 1 .

Issued in **Genoa** on **December 14, 2007**. *This Certificate is valid until* **December 14, 2012**

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This certificate consists of this page and 1 enclosure



IGS-NT family overview

IntelSys-NT

Model	Hw /Sw	Description
IS-NT BB Marine	1.x / 2.x	IntelSys Base Box
IS-NT Marine	1.x / 2.x	Complete unit (IS-NT-BB+ IS- Display)
IS-Display Marine (*)	1.x / 1.x	Panel mounting
IS-Display LT Marine (*)	1.x / 1.x	Low temperature version of IS -Display

(*) GC feature included by default in all IS-Display modules

IntelGen-NT, IntelGen-EE

Model	Description
IG-NT Marine	Controller basic type
IG-NTC Marine	Extended functionality
IG-NT GC Marine	Graphical characters
IG-NTC GC Marine	Extended functionality and graphical characters
IG-NT LT Marine	Low temperature version
IG-NTC LT Marine	Low temperature version and graphical characters
IG-NT GC LT Marine	Extended functionality and low temperature
IG-NTC GC LT Marine	Graphical characters and low temperature
IG-EEC LT GC Marine	Full controller version

Hardware ver.: 1.x ; Software ver.: 2.x

A common name for any of the above controllers is IGS-NT. This name is used for description of functions or features common to all IG-NT , IG-EE and IS-NT controllers

Input / Output Overview

I/O Model	Binary Inputs	Binary Outputs	Analogue Inputs	Analogue Output	Speed Governor control	AVR control
IG-NT	12	12	3	-	X	X
IG-EE	6	6	-	-	-	X
IS-NT	16	16	4	1	X	X
IM-NT	6	6	0	0	-	-

Display Marine for IntelGen

Model	Description
IG-Display Marine	Remote display for IntelGen
IG-Display LT Marine	Low temperature version of Remote display for IntelGen
IG-Display GC Marine	Remote display for IntelGen supporting Graphical Characters
IG-Display LT GC Marine	Low temperature version of remote display for IntelGen

Hardware ver: 1.x ; Software ver: 1.x

Inteli Mains-NT

Model	Description
IM-NT Marine	Controller basic type
IM-NT GC Marine	Graphical characters
IM-NT LT Marine	Low temperature version
IM-NT GC LT Marine	Full controller version

Hardware ver: 1.x ; Software ver: 2.x

Common modules

Model	Description
IGS-NT-ISM + PMS Dongle	Module allowing Load sharing and Power management
IG-AVVRi Marine (*)	AVR interface
IG-AVVRi TRANS Marine	Transformer supplying IG-AVVRi input voltage 230-277Vac, 400-480Vac

(*) Hardware ver.: 1.x



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Annex to RINA Certificate n° ELE485107CS

I/O expansion modules

Model	Description
I-AOUT 8 (*)	8 ch. Analog output module
I-RB 8	8 ch. Relay board
I-RB 8-231	8 ch. Relay board (230V/ac)
I-LBA	Low battery adaptor
I-MTU-2-1	Mains transformer unit 2-1

(*) Hardware ver. :1.x ; Software ver. 1.x

Remote communication module

Model	Description
I-LB	CAN / RS232, RS 485 bridge for multiple controllers connection
I-LB+	CAN / USB, RS232, RS 485 bridge for multiple controllers connection

Hardware ver. 1.x ; Software ver. 1.x

Communication bridges

Model	Description
I-CR	CAN repeater module, allows an extension of the standard CAN bus length
I-CB	Interface to electronic engine control units not compatible with protocol J1939
I-CB / CAT Diesel	For CAT diesel engines equipped with Customer Communication Module
I-CB / CAT Gas	For CAT diesel engines equipped with Customer Communication Module
I-CB-MTU	For MTU diesel engines equipped with MDEC unit (2000 / 4000 Series)
I-CB / MTU SIAM 4000	For MTU gas engines equipped with SIAM unit (4000 Series)
I-CB / DEUTZ TEM	For DEUTZ gas engines equipped with TEM Evolution

Hardware ver. 1.x ; Software ver. 1.x

Communication ports Overview

Models	Ports	RS232	CAN 1	CAN 2	External Display Interface	Additional RS232 RS485	USB 2.0 Slave
IG-NT	X	X	X	X	X	-	-
IG-EE	X	X	X	X	X	-	-
IG-NTC	X	X	X	X	X	X	X
IG-EEC	X	X	X	X	X	X	X
IS-NT	X	X	X	X	X	X	X
IM-NT	X	X	X	X	X	-	-

Reference documentation:

- ComAp IGS-NT-2.1 Application guide (February 2007)
- ComAp IGS-NT2.1 Installation guide (February 2007)
- ComAp IGS-NT-2.0 Operator guide (September 2006)

Test Reports:

- 603501-01/01 of 30/11/2006, 603501-01/02 of 30/11/2006, 603501-01/02 of 13/11/2006
- 603501-01/02 of 03/12/2007, 603501-01/03 of 16/11/2006, 603501-01/04 of 30/11/2006

Remarks:

Before of delivery on board, drawings showing the actual hardware configuration are to be sent for approval.
 Before of delivery on board, the functionality provided by the relevant application software is to be tested.
 Application software version is to be available on board any time.

Genoa,
 December 14, 2007