

Order code: IG-NT MARINE
Gen-set / GeCon controller

Datasheet

Product description

- ▶ Marine certified Gen-set / GeCon controller
 - Single or multiple Gen-set / GeCon operations
- ▶ Parallel operation up to 32 gen-sets
- ▶ High level control for complex systems

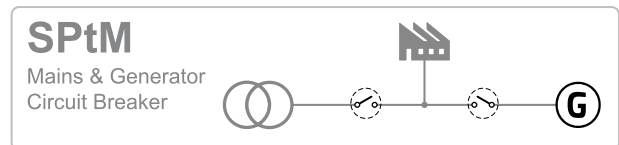
Key features

- ▶ Load sharing and VAr sharing via CAN
- ▶ Virtual shared inputs and outputs via CAN
- ▶ Support of wide range of applications
- ▶ Single or multiple gen-sets in parallel to mains operation with automatic back up function, multiple island operation
- ▶ Advanced power management function
- ▶ Built-in synchronizer
- ▶ Wide range of ECU support
- ▶ Highly configurable
 - Timers, Internal PLC , Force values and more
- ▶ Compatible with ComAp's InteliVision displays
- ▶ Active e-mail messaging and SMS with optional communication module
- ▶ Extensive built-in protection functions
 - Standard protections
 - User configurable protection

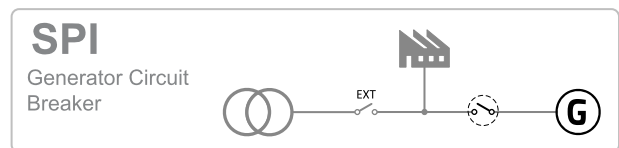
- ▶ Extendable with ComAp's extension modules
- ▶ Inter controller communication redundancy

Application overview

- ▶ Offshore application



- ▶ Offshore application



- ▶ Multi gen-set application



Technical data

Power supply

Power supply range	8-36 VDC
Power consumption	0.4 A / 8 VDC
	0.15 A / 24 VDC
	0.1 A / 36 VDC
RTC battery	10 years (replaceable by official service)
Fusing	2 A (without BOUT consumption)

Operating conditions

Operating temperature	-40°C to +70°C
Storage temperature	-40°C to +80°C
Operating humidity	95 % w/o condensation
Vibration	5 - 25 Hz, ± 1.6 mm
	25-100 Hz, $a = 4$ g
Shocks	$a=200$ m/s ²

Voltage measurement

Measurement inputs	3 ph-n Gen voltage 3 ph-n Mains/Bus voltage
Measurement range	277V
Max allowed voltage	125 %
Accuracy	1 % of 277V
Frequency range	40-70 Hz (at accy 0.1 Hz)
Input impedance	0.6 M Ω ph-ph
	0.3 M Ω ph-n

Current measurement

Measurement inputs	3 ph Gen current 1 ph Neutral/Mains current
Measurement range	5A
Max allowed continuous current	200%
Accuracy	2 % of 5A
Input impedance	< 0.1 Ω

Binary inputs

Number	12 non-isolated
Input resistance	4.7 k Ω
Close/Open indication	0 - 2 VDC close contact > 4 VDC open contact

Binary outputs

Number	12 non-isolated
Max current	0.5 A (2 A per group)
Switching to	negative/positive supply terminal

Analog inputs

Number	3 non-isolated
Type	Switchable (Voltage, Resistance, Current)
Resolution	10 bits, max 4 decimals
Range	0-5 VDC/0-2500 Ω /0-20 mA
Input impedance	>100 k Ω / >100 k Ω /180 Ω
Accuracy	± 1 % of meas. value ± 1 mV
	± 2 % of meas value ± 2 Ω
	± 1 % of meas value ± 0.5 mA

Magnetic pick-up

Voltage input range	2 Vpk-pk to 50 V _{eff}
Frequency input range	4 Hz to 4kHz
Frequency measurement tolerance	0.2 %

Voltage regulator output

Type	5 V TTL PWM / ± 10 VDC with IG-AVRi interface
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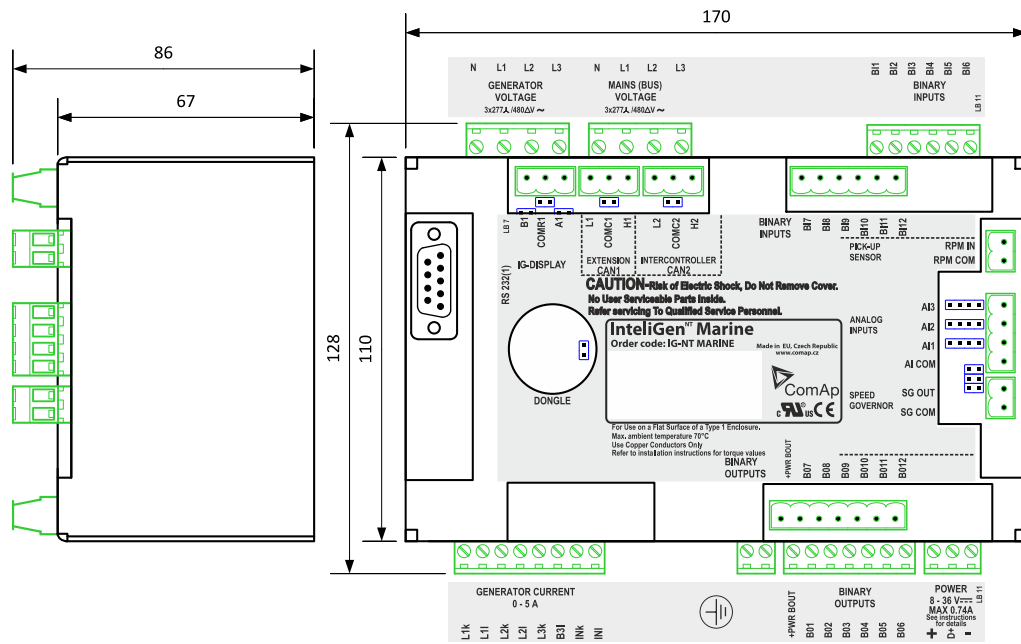
Speed governor output

Voltage output	± 10 VDC / max. 15 mA
Voltage output via resistor	± 10 VDC via 10 k Ω resistor / max. 1 mA
PWM	500-3000 Hz / 5V / max. 10mA

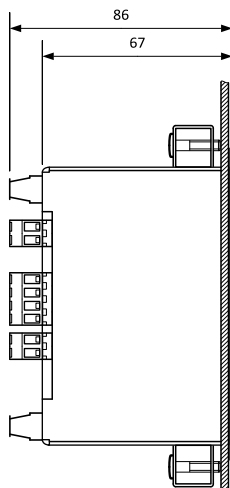
Communications

RS232	Direct/Modbus, non-isolated
Display port	non-isolated RS485, terminal connection, multipurpose RS485
CAN1	External modules 250 kbps, max 200 m, Isolated
CAN2	Intercontroller and comm extensions 250 / 50 kbps, max 200 / 1000 m, Isolated

Dimensions and terminals



Controller panel door mounting



Note: IntelliGen NT Marine can be mounted into panel doors as a standalone unit using provided metal holders. The cut-out for the unit should be 1mm wider than the unit on each side (i.e. cut-out dimensions 172x112mm).

Functions and protections

The described product fully supports the following functions and protections as defined by ANSI (American National Standards Institute):

Description	ANSI code	Description	ANSI code	Description	ANSI code	Description	ANSI code
Synchronism check	25	Excitation loss	40	Overcurrent (IDMT)	51	AC reclosing	79
Undervoltage	27	Current unbalance	46	Earth fault current IDMT	51N+64	Overfrequency	81H
Overload	32	Voltage asymmetry and phase sequence	47	Power factor	55	Underfrequency	81L
Load shedding	32P	Temperature monitoring	49T	Overvoltage	59	ROCOF	81R
Reverse power	32R	Generator overcurrent	50	Gas (fuel) level	71		
Undercurrent	37	Earth fault current	50N+64	Vector shift	78		









Available extension modules

Product	Description	Order code
Inteli IO8/8	8 Binary inputs, 8 Binary outputs and 2 Analog outputs packed in a small unit (HW switchable to IO16/0)	I-IO8/8
Inteli AIN8	8 Analog inputs (R, I, V) and 1 pulse/frequency input in a small unit	I-AIN8
Inteli AIN8TC	8 Thermocouple Analog inputs in a small unit	I-AIN8TC
IS-AIN8	8 Analog inputs packed in a rugged metal unit	IS-AIN8
IGS-PTM	8 Binary inputs, 8 Binary outputs, 4 Analog inputs and 1 Analog output in a unit	IGS-PTM
IGL-RA15	15 Binary LED output (3 colors) packed in a rugged metal unit	IGL-RA15
I-AOUT8	8 Analog outputs packed in a rugged metal unit	I-AOUT8
InternetBridge-NT	Multiple Internet connections (PC and Modbus) to all controllers on CAN2 or RS485	IB-NT
I-LB+	Direct connection (PC) to all controllers on CAN2 or RS485	I-LB+

Related products

Product	Description	Order code
InteliVision 5	Color 5.6" display for monitoring and control	INTELVISION 5
InteliVision 8	Color 8" display for advanced monitoring, control & trending, USB capable	INTELVISION 8
InteliVision 12Touch	Color 12" touch display for advanced monitoring, control & trending, USB capable	RD1IV12TBZH

Certificates and standards

This product is CE compliant.			
▶ EN 60068-2-6 ed.2:2008	▶ EN 60068-2-64		
▶ EN 60068-2-27 ed.2:2010	▶ EN 61010-1:2003		
▶ EN 60068-2-30, May 2000			
This product is tested according to:			
▶ American Bureau of Shipping		▶ Bureau Veritas	
▶ Lloyds Register		▶ Germanischer Lloyd	
▶ Det Norske Veritas		▶ Russian Maritime Register of Shipping	
List of all Marine certificates is available on: http://cdn.comap.cz/files_temporary/certificates/MARINE%20PRODUCTS%20CERTIFICATES%202016-04-22.pdf			
All certificates and standards are available on: https://webstore.iec.ch/			

