

InteliGen4 200



Order code: IG4200XXBAA, IG4200XXBLA

Controller for multiple gen-set applications

Datasheet

Product description

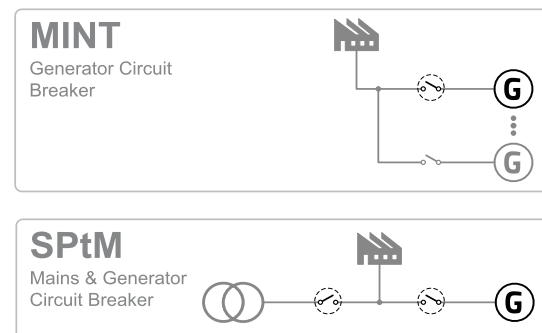
- > New generation of a paralleling Gen-set controller for synchronizing up to 32 units
- > All-in-one intuitive and powerful PC tool for configuration, monitoring and control – locally or remotely
- > Simple to configure and operate, yet very flexible solution

Key features

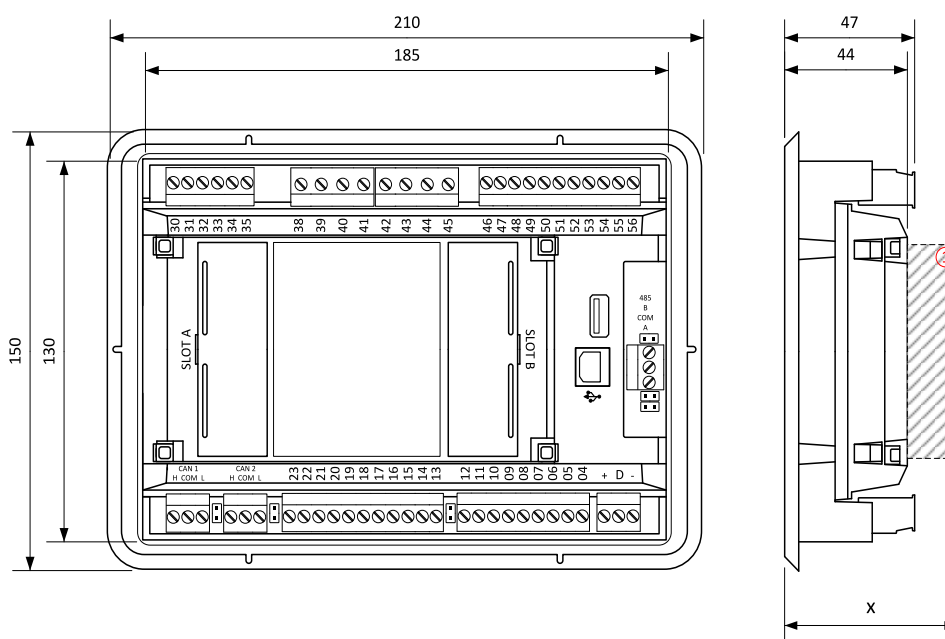
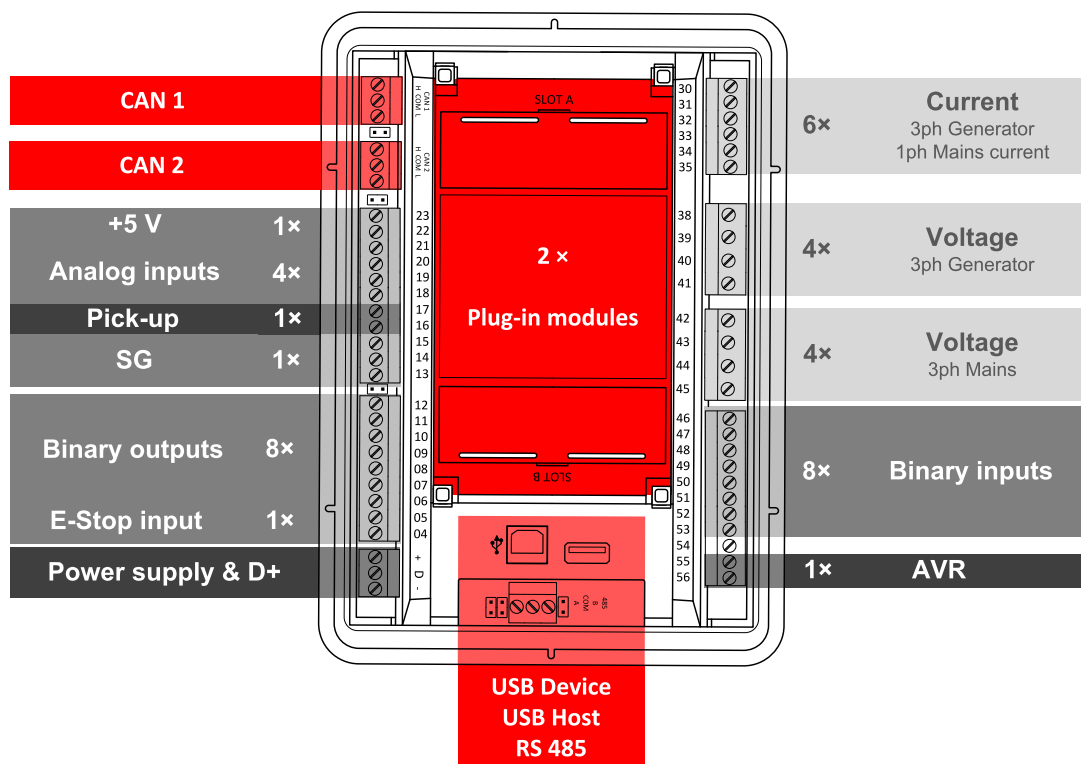
- > Easy switching between MINT and SPtM applications
- > Integrated communication and control ports (USB host/device, CAN, RS485, AVRi)
- > 8 binary outputs, 8 + 1 binary inputs, 4 analog inputs (U/I/R)
- > 2 × 5 A binary outputs for cranking and fuel solenoid, powered by separated E-Stop input
- > +5 V output for analog sensors
- > Power over USB for a controller configuration
- > 2 slots for extension plug-in modules (RS232, RS485, I/Os, Ethernet and 4G/GPS)
- > CAN modules for additional inputs/outputs
- > New cyber-security improvements including user access management
- > Remote communication and monitoring via WebSupervisor, AirGate 2.0 or InteliSCADA
- > ECU support (Tier 4 Final and StageV ready by default) and Multi-ECU
- > Configurable Modbus RTU/TCP
- > Support of SNMP protocols v1 or v2c
- > True RMS measurement
- > Phase Match and Slip synchronisation

- > Load/VAr sharing: Isochronous (CAN), Droop or Emergency Droop
- > In-built PLC editor with a PLC monitoring tool in InteliConfig
- > Active SMS and emails in different languages
- > 5 languages in the controller & Translator functionality
- > Geofencing and tracking via WebSupervisor
- > Flexible event-based history with up to 350 events
- > Compatible Load/VAr sharing & Power management with IC-NT, InteliGen and IGS-NT families
- > Multi-purpose schedulers and Maintenance timers
- > User setpoints, protections and buttons
- > 3 alternative configurations
- > Low temperature version available (IG4200XXBLA)

Application overview



Dimensions, terminals and mounting



1 Plug-in module

Note: Dimension "x" depends on a plug-in module

Note: Dimensions are in millimeters.

Note: The final depth of the controller depends on the selected plug-in module – it can vary between 47 mm and "x" mm. Mind also the size of connectors and cables (e.g. in case of RS232 connector, add about 60 mm more for standard RS232 connector and cable).

Note: The controller is mounted into panel doors as a standalone unit using provided holders. The requested cutout size is 187 × 132 mm. Use the screw holders delivered with the controller to fix the controller into the door.

Power supply

Power supply range	8-36 VDC
Power consumption (without modules)	3.5 W
RTC battery	Replaceable (3 V)
Fusing power	4 A w/o BOUT consumption
E-Stop fusing	10 A
Max. Power Dissipation	9 W

Operating conditions

Protection degree (front panel)	IP 65
Operating temperature	-20 °C to +70 °C
Operating temperature for Low Temp. version	-40 °C to +70 °C
Storage temperature	-30 °C to +80 °C
Operating humidity	95 % non-condensing (EN 60068-2-30)
Vibration	5-25 Hz, ± 1.6 mm 25-100 Hz, $a = 4$ g
Shocks	$a = 500$ m/s ²
Surrounding air temperature rating 70 °C Suitable for pollution degree 2	

D+

Max. output current	250 mA
Charging fail threshold	Adjustable

Voltage measurement

Measurement inputs	3ph-n Gen voltage , 3ph-n Mains
Measurement range	10-277 V AC / 10-480 V AC (EU) 10-346 V AC / 10-600 V AC (US/Canada)
Linear measurement and protection range	350 V AC Ph-N 660 V AC Ph-Ph
Accuracy	1 %
Frequency range	30-70 Hz (accuracy 0.1 Hz)
Input impedance	0.72 M Ω ph-ph , 0.36 M Ω ph-n

Voltage regulator output

Protection	Isolated
Type	max ± 10 V DC

Speed governor output

Output Type	± 10 V DC or 5 V @ 500 Hz, PWM selectable by jumper
Protection	Non-isolated

Display

Type	Build-in monochromatic 3.2"
Resolution	132 $\times$ 64 px

Communications

USB Device	Non-isolated type B connector
USB Host	Non-isolated type A connector
RS485	Isolated
CAN 1 + CAN 2	Isolated, 250 / 50 kbps, Terminator impedance 120 Ω

Current measurement

Measurement inputs	3ph Gen current, 1ph Mains current
Measurement range	5 A
Max. allowed current	10 A
Accuracy	± 20 mA for 0-2 A; 1 % of value for 2-5 A
Input impedance	<0.1 Ω

E-Stop

Dedicated terminal for safe E-Stop input.
Physical supply for binary outputs 1 & 2.

Binary inputs

Number	8
Close/Open indication	0-2 VDC close contact 6-36 VDC open contact

Binary outputs

Number	8
Max. current	BO1,2 = 5 A; BO3-8 = 0.5 A
Switching to	positive supply terminal

Analog inputs

Number	4, switchable (R/U/I)
Range	R = 0-2500 Ω ; U = 0-10 V; I = 0-20 mA
Accuracy	R: ± 2 % from value ± 5 Ω in range 0-250 Ω R: ± 4 % from value in range 250 Ω -2500 Ω U: 1 % from value ± 100 mV I: 1 % from value ± 0.2 mA

+5 V Power supply output

Max. current	45 mA
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Magnetic pickup

Voltage input range	4 Vpk-pk to 50 Vpk-pk in range 4 Hz to 1 kHz 6 Vpk-pk to 50 Vpk-pk in range 1 to 5 kHz 10 Vpk-pk to 50 Vpk-pk in range 5 to 10 kHz
Frequency input range	4 Hz to 10 kHz
Frequency measurement tolerance	0.2 % from measured value

Available plug-in modules

Product	Description	Order code
CM-RS232-485	Dual port interface	CM223248XBX
CM2-4G-GPS	4G & GPS plug-in communication module	CM24GGPSXBX
CM3-Ethernet	Internet / Ethernet plug-in communication module	CM3ETHERXBX
EM-BIO8-EFCP	8 additional binary inputs/outputs	EM2BIO8EXBX

Note: Controller has 2 slots for plug-in modules.

Available CAN modules

Product	Description	Order code
IGL-RA15	CAN remote annunciator with 15 LEDs	EM2IGLRABAA
Inteli AIN8	CAN module with 8 analog inputs	I-AIN8
Inteli IO8/8	CAN module with 8 binary inputs and 8 binary outputs	I-IO8/8
IGS-PTM	CAN module with 8 binary inputs, 8 binary outputs, 4 analog inputs and 1 analog output	IGS-PTM
Inteli AIN8TC	CAN module with 8 analog inputs dedicated for thermocouple sensors only.	I-AIN8TC
Inteli AIO9/1	CAN module with analog inputs and outputs – designed for DC measurement.	I-AIO9/1

Functions and protections

Support of functions and protections as defined by ANSI (American National Standards Institute):

Description	ANSI code	Description	ANSI code
Master unit	1	Voltage unbalance	47
Stopping device	5	Incomplete sequence relay	48
Multi-function device	11	Overcurrent	50/50TD
Overspeed	12	Earth fault	50G
Underspeed	14	Breaker failure	50BF
Speed & frequency matching Device	15	Overcurrent IDMT	51
Starting-to-running transition contactor	19	Overvoltage	59
Synchronizing-check	25	Aux Over Voltage	59X
Thermal relay	26	Pressure switch	63
Undervoltage	27	Liquid level switch	71
Aux Battery Under Voltage	27X	Alarm relay**	74
Annunciator	30	Vector shift	78
Overload (real power)	32P	Reclosing relay	79
Reverse power	32R	Overfrequency	81O
Master sequence device	34	Underfrequency	81U
Excitation loss	40	ROCOF	81R
Unit sequence starting *	44	Auto selective control/transfer	83
Current unbalance	46		

*MINT

** extension module IGL-RA15 required

Certifications and standards

➤ EN 61000-6-2 ➤ EN 61000-6-4 ➤ EN 61010-1 ➤ EN 60068-2-1 (-20 °C/16 h for std, -40 °C/16 h for LT version) ➤ EN 60068-2-2 (70 °C/16 h)	➤ EN 60068-2-6 (2÷25 Hz / ±1,6 mm; 25÷100 Hz / 4.0 g) ➤ EN 60068-2-27 (a=500 m/s²; T=6 ms) ➤ EN 60068-2-30:2005 25/55°C, RH 95%, 48hours ➤ EN 60529 (front panel IP65, back side IP20)	
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