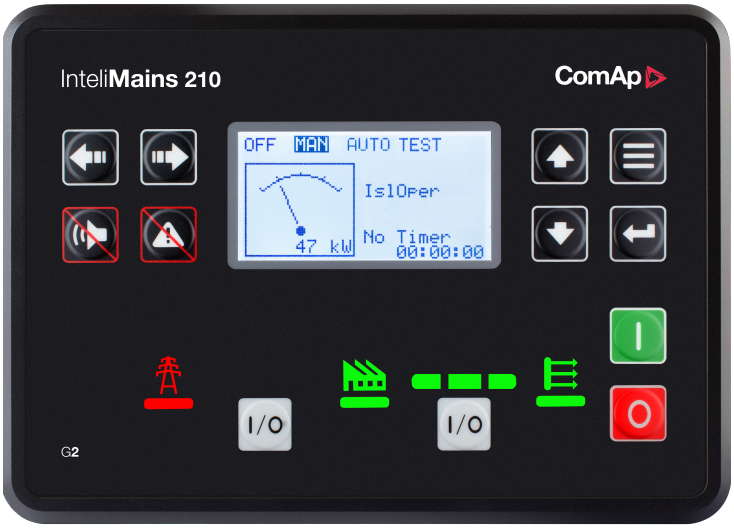
ComAp
The heart of smart control

InteliMains 210 G2



Order code: IM4210XXBAA

Mains supervision controller

Datasheet

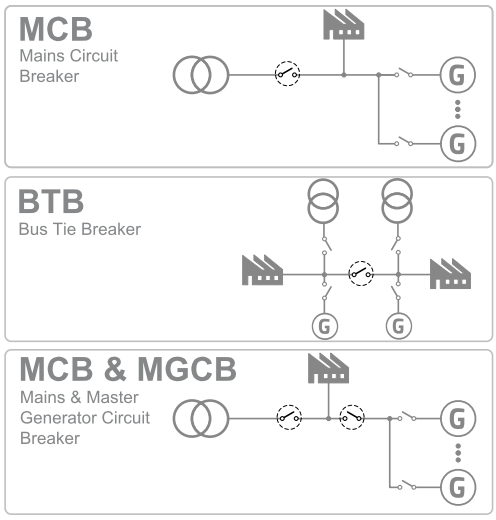
Product description

InteliMains 210 G2 is a secure mains supervision controller for synchronising sets of gen-sets to the mains/utility source. The controller can also be used for tie-breaker operation and is compatible for switchgear and standard applications. It is a direct successor of InteliMains 210.

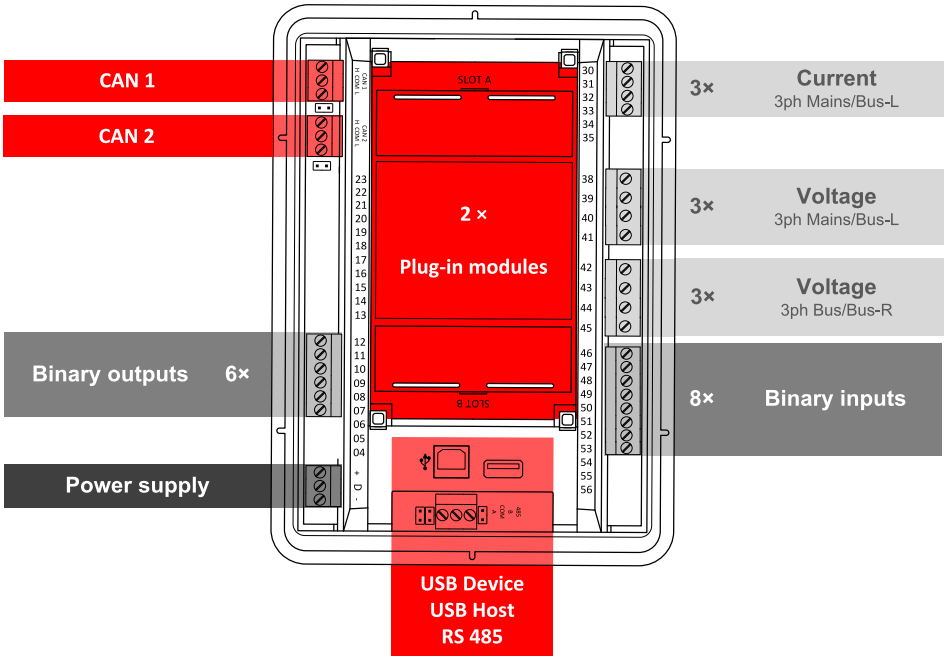
Key features

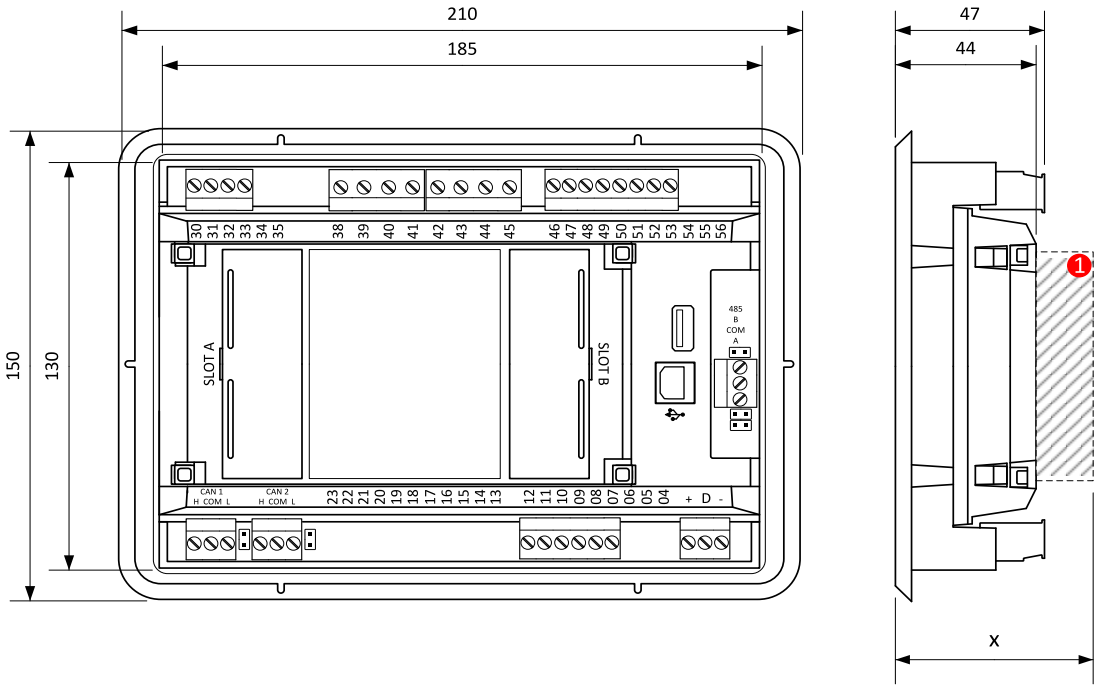
- Support for installations with the option for cooperation with up to 32 gen-sets/mains/tie controllers
- Built-in PLC interpreter with the use of ComAp's free PLC Editor for easy configuration
- AirGate 2.0 to connect to your equipment remotely, without worrying about your asset's IP address
- Remote control and monitoring of your gen-set operations with WebSupervisor, our cloud-based fleet management tool
- Compatible load/Var sharing and power management with other ComAp solutions
- A wide range of plug-in modules allowing you to easily extend the functionality of the controller
- One hardware for more applications, enabling an easy switch between MCB, MGCB and BTB applications
- User-defined protections and setpoints on top of default protection
- Dynamic spinning reserve preventing supply drops in hybrid installations with PVs
- Secure user management
- Possibility to have a mains application in a gen-set controller
- Peak shaving for limiting the import from the mains (e.g. due to higher prices)
- Load shedding ensuring the most important loads are running even when there is a lack of power
- Event-based history for fast and easy troubleshooting

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.*

Technical data

Power supply

Power supply range	8-36 V DC
Power consumption	5 W
RTC battery	Replaceable (3 V)
Fusing power	5 A / 6 × 0.5 A BOUT
Max. Power Dissipation	7 W

Operating conditions

Operating temperature	-20 ˚C to +70 ˚C
Storage temperature	-30 ˚C to +80 ˚C
Operating humidity (norm 60068-2-30)	95 % non-condensing (EN 60068-2-30)
Protection degree	IP65
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.	

Current measurement

Measurement inputs	3ph Mains/Bus-L
Measurement range	5 A
Maximum continuous current	10 A
Accuracy	±20 mA for 0-2 A; 1 % of value for 2-5 A
Input impedance	<0.1 Ω

Voltage measurement

Measurement inputs	3ph-n Mains/Bus-L, 3ph-n Bus/Bus-R
Measurement range (L-N / L-L)	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 MΩ ph-ph , 0.36 MΩ ph-n

Display

Type	Build-in monochromatic 3.2"
Resolution	132 × 64 px

Binary inputs

Number	8, non-isolated
Close/Open indication	0-2 V DC close contact 6-36 V DC open contact

Binary outputs

Number	6, non-isolated
Max. current	BO 1-6 = 0.5 A
Switching to	Positive supply terminal

Communications

USB Device	Non-isolated type B connector
USB Host	Non-isolated type A connector
RS 485	Isolated
CAN 1 **CAN 2**	Isolated, 250 / 50 kbps, Nominal impedance 120 Ω

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
I-CR	CAN Repeater Module.	I-CR
I-CR-R	CAN Redundancy Module.	I-CR-R

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
Speed and frequency matching device	15	Breaker failure	50BF
Starting-to-running transition contactor	19	Overcurrent IDMT	51
Synchronizing-check	25	Overvoltage	59
Thermal relay	26	Aux Over Voltage	59X
Undervoltage	27	Alarm relay *	74
Aux Battery Under Voltage	27X	Vector shift	78
Annunciator	30	Reclosing relay	79
Overload (real power)	32P	Overfrequency	81O
Master sequence device	34	Underfrequency	81U
Unit sequence starting	44	ROCOF	81R
Current unbalance	46	Auto selective control/transfer	83

* extension module IGL-RA15 required

- 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/s^2; T=6 ms)
- EN 60068-2-30:2005 25/55°C, RH 95%, 48hours
- EN 60529 (front panel IP65, back side IP20)
- UL 6200 (pending)
- FCC

E-mail: info@comap-control.com
Web: www.comap-control.com

ComAp
The heart of smart control