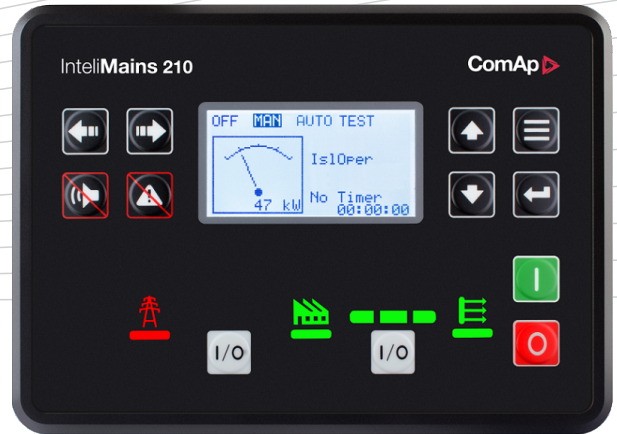


IntelliMains 210



Order code: IM3210XXBAA

Mains supervision controller

Datasheet

Product description

- ▶ Parallel operation for up to 31 gen-sets and mains
- ▶ Remote control and monitoring
- ▶ Flexible, extendable, yet user friendly

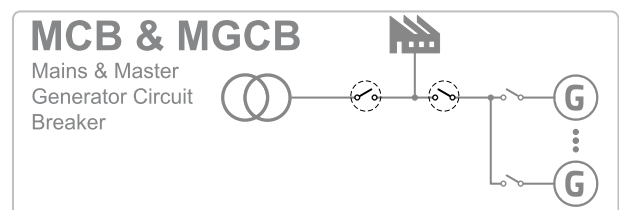
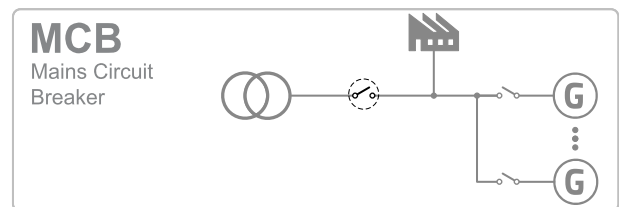
Key features

- ▶ Import/Export power and Power factor control
- ▶ Reverse synchronization of the loaded genset group to mains
- ▶ Peak load shaving functionality
- ▶ Phase Match & Slip Sync types of synchronization
- ▶ Support of applications with MCB + MGCB or MCB only
- ▶ Power management with Running hours equalization and support of the Efficient mode
- ▶ PLC support with PLC editor and monitor
- ▶ Wide communication capabilities including
 - Integrated USB for configuration
 - Isolated RS485 port on board for MODBUS
 - Integrated USB Host for uploading/downloading FW/Configuration with USB key
- ▶ High accuracy of voltage and current measurement
- ▶ Cloud-based monitoring and control
- ▶ Active SMS and emails in different languages*

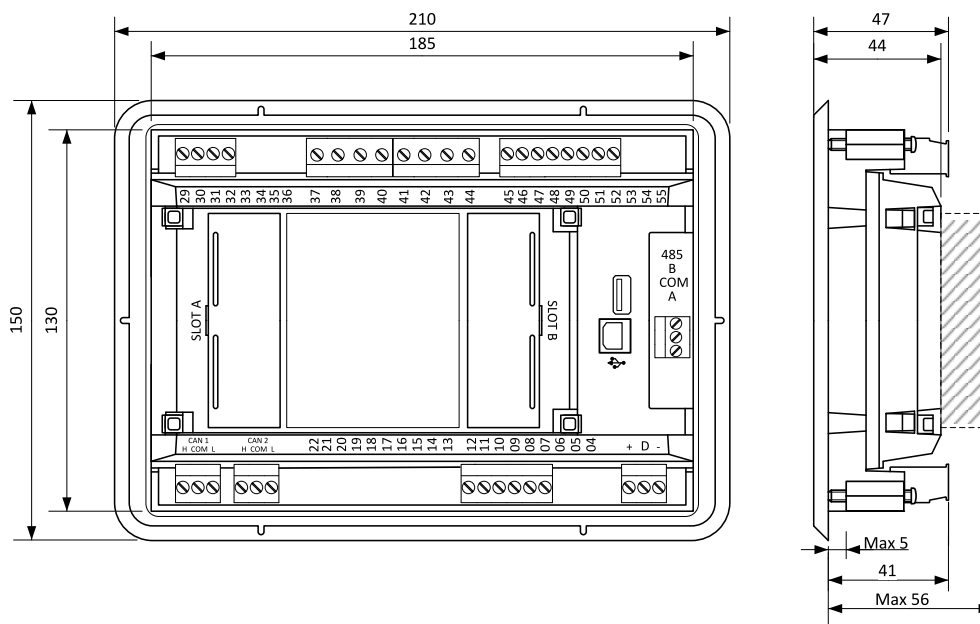
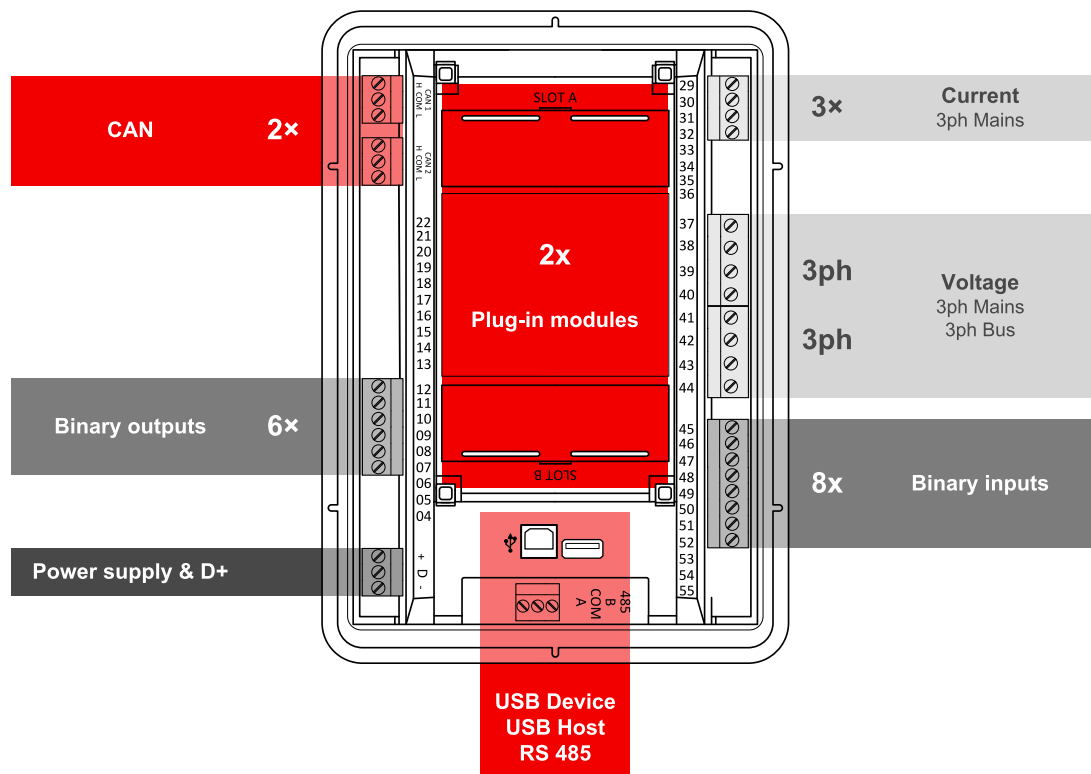
- ▶ Up to 5 languages in the controller
- ▶ Configurable MODBUS
- ▶ Support of MODBUS RTU/TCP* or SNMP* v1/v2c
- ▶ Detailed history with up to 350 events
- ▶ Load shedding, dummy load capability
- ▶ Comprehensive mains/bus protections
- ▶ Multipurpose flexible timers with full calendar
- ▶ True RMS measurement

* Available with extension module.

Application overview



Dimensions, terminals and mounting



Note: The final depth of the controller depends on the selected extension module - it can vary between 41 and 56 mm. Mind also a size of connector and cables (e.g. in case of RS232 connector add about another 60 mm for standard RS232 connector and cable).

Note: The controller is to be mounted into panel doors as a standalone unit using provided metal holders. The requested cut-out size is 187x132 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 (without modules and binary outputs)	320 mA / 8 V DC
	210 mA / 12 V DC
	120 mA / 24 V DC
	90 mA / 36 V DC
RTC battery	Replaceable
Fusing power	4 A BOUTs included
Max. Power Dissipation	9 W

Operating conditions

Operating temperature	-20°C to +70°C
Storage temperature	-30°C to +80°C
Operating humidity	95 % w/o condensation
Protection degree (front p.)	IP 65
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.	

Voltage measurement

Measurement inputs	3ph-n Mains voltage
	3ph-n Bus voltage
Measurement range	277 V
Max. allowed voltage	350 V
Accuracy	1 %
Frequency range	40-70 Hz (accuracy 0.1 Hz)
Input impedance	0.72 MΩ ph-ph
	0.36 MΩ ph-n

Current measurement

Measurement inputs	3ph Mains current
Measurement range	5 A
Max. allowed current	10 A
Accuracy	1 % for 0°C to 50°C
	1.5 % for full temperature range
Input impedance	< 0.1 Ω

Binary inputs

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

Binary outputs

Number	6 non-isolated
Max. current	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

Display

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

Available extension plug-in modules

Product	Description	Order code
CM-4G-GPS	GSM modem / 4G wireless internet and GPS locator	CM14GGPSXBX
CM-Ethernet	Ethernet interface	CM2ETHERXBX
CM-GPRS	GSM modem / GPRS wireless internet	CM2GPRSXXBX
CM-RS232-485	Dual port interface	CM223248XBX
EM-BIO8-EFCP	8 additional binary inputs/outputs; current measurement	EM2BIO8EXBX

Note: Maximally 2 plug-in modules can be connected in the same time.

Available extension CAN modules

Product	Description	Order code
Inteli AIN8	8 Analog Input Channels and 1 RPM/Impulse Input Module	I-AIN8
Inteli IO8/8	16 Configurable Binary Inputs/Outputs and Analog Outputs Module	I-IO8/8
IGL-RA15	Remote Annunciator w/ 15 programmable LEDs	EM2IGLRABAA
IGS-PTM	Up to 12 additional Analog/Binary Input/Output Module	IGS-PTM

Note: Maximally 5 CAN modules can be connected in the same time.

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
Synchronism check	25	Over voltage	59
Under voltage	27	Current unbalance	60
Overload	32	Vector shift	78
Voltage asymmetry and Phase rotation	47	Over frequency	81H
Breaker failure	50BF	Under frequency	81L
Mains overcurrent	50	ROCOF	81R
Overcurrent (IDMT)	51	Regulating device	90

- ▶ EN 61000-6-2
- ▶ EN 61000-6-4
- ▶ EN 61010-1
- ▶ EN 61000-2-1 (-20 °C/16)
- ▶ EN 61000-2-2 (70 °C/16 h)
- ▶ EN 61000-2-6 (2÷25 Hz / ±1,6 mm; 25÷100 Hz / 4,0 g)
- ▶ EN 61000-2-27 (a=500 m/s²; T=6 ms)
- ▶ EN 61000-2-30 (95% RH 25/55 °C, cycle 48 hours)
- ▶ EN 60529 (front panel IP65, back side IP20)

