

Order code: IA270XXXBAA

## Automatic Transfer Switch Controller

# Datasheet

### Product description

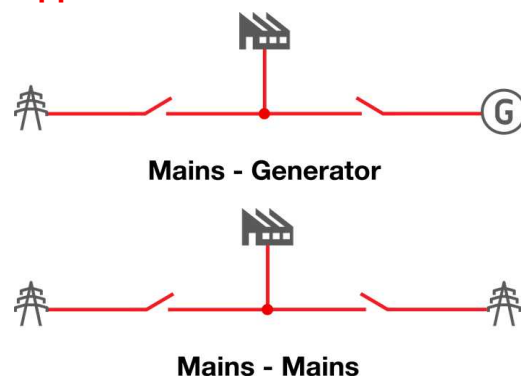
- > Automatic Transfer Switch (ATS) controller for stand-by and prime-power applications
- > All-in-one intuitive & powerful PC tool for configuration, monitoring and control locally or remotely
- > Easy to install, configure and use

### Key features

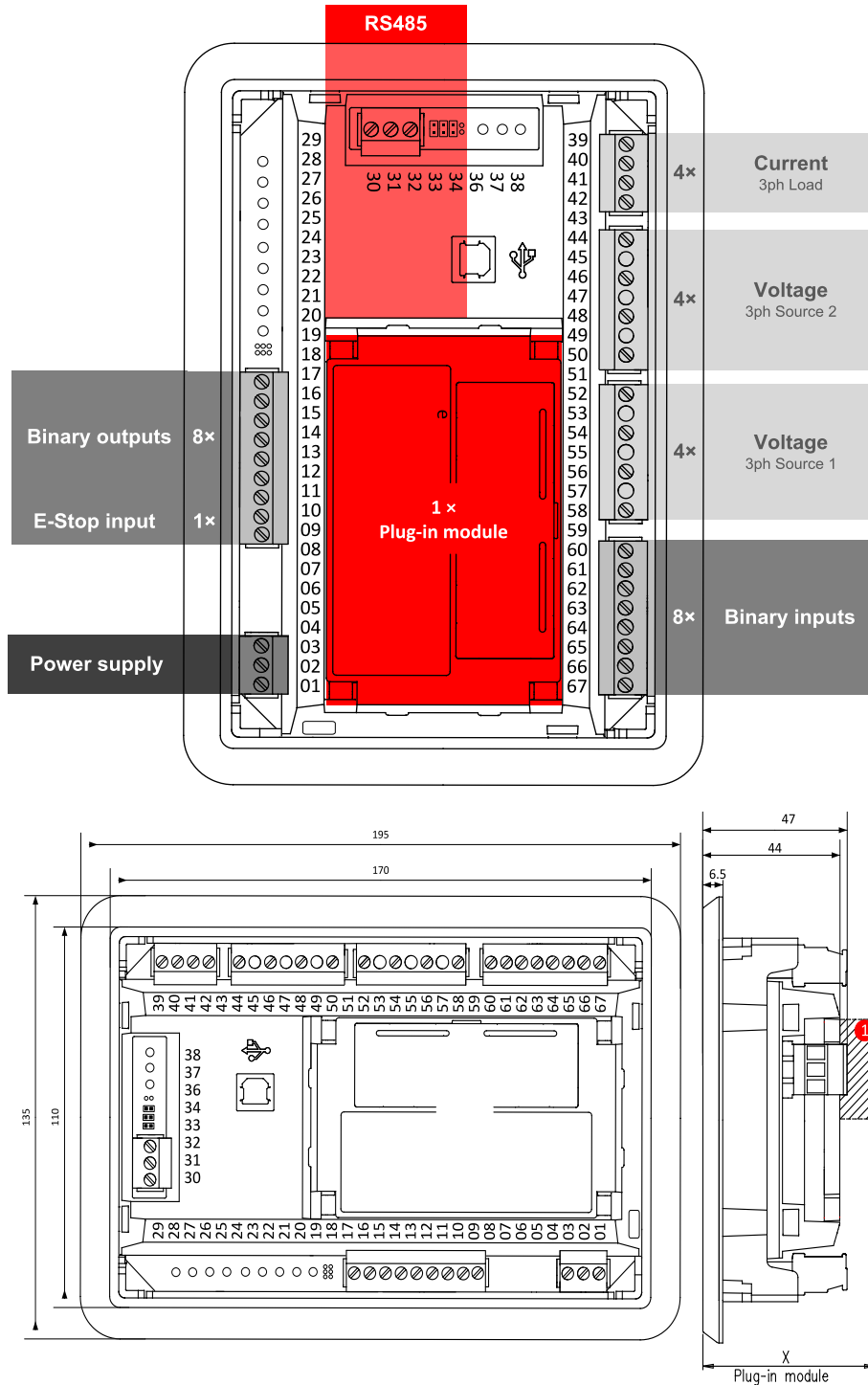
- > Mains-To-Mains or Mains-To-Gen application
- > 8 binary inputs, 6 binary outputs + 2 high-current binary outputs
- > Connection and configuration in PC tool InteliConfig
- > Power over USB for controller configuration
- > RTC with battery back-up (full calendar)
- > RS485 on board
- > Slot for extension plug-in module (support of 4G, BI/BO, Ethernet)
- > Full remote communications support (AirGate 2.0, WSV, InteliSCADA)
- > Internet access using Ethernet/4G Modbus TCP/RTU, SNMP v1/v2c
- > Active SMS and emails
- > Cyber security improvement, Firewall
- > Modbus register mapping possibility

- > In-built PLC, complemented with a PLC monitoring tool in InteliConfig
- > Current measurement in all phases
- > Load Shedding, Elevator switch, Geo-Fencing
- > Remote display support
- > Detailed history log with up to 350 records
- > User setpoints and protections
- > True RMS measurement
- > Multi-purpose schedulers
- > User Access Management
- > 5 languages in the controller & Translator functionality
- > Cut-out: 172 × 112 mm

### Application overview



## Dimensions, terminals and mounting



**1** Plug-in module

**Note:** Dimension "X" depends on 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 to be mounted into panel doors as a standalone unit using provided holders. The requested cutout size is 172 × 112 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 VDC
Power consumption (without modules)	2.0 W
RTC battery	Replaceable (3 V)
Fusing power	4 A w/o BOUT consumption
E-Stop fusing	10 A
Max. Power Dissipation	7 W

## Operating conditions

Protection degree (front panel)	IP 65
Operating temperature	-20 °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 <sup>2</sup>
Surrounding air temperature rating 70 °C Suitable for pollution degree 2	

## Voltage measurement

Measurement inputs	3ph-n S1 voltage, S2 voltage
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 MΩ ph-ph , 0.36 MΩ ph-n

## Display

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

## Communications

USB Device	Non-isolated type B connector
RS485	Isolated

## Current measurement

Measurement inputs	3ph Load 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

## Available plug-in modules

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


**Note:** Controller has 1 slot for plug-in modules.

## 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	Incomplete sequence relay	48
Stopping device	5	Overcurrent	50/50TD
Multi-function device	11	Breaker failure	50BF
Starting-to-running transition contactor	19	Overcurrent IDMT	51
Undervoltage	27	AC circuit breaker	52
Aux Battery Under Voltage	27X	Overvoltage	59
Annunciator	30	Aux Over Voltage	59X
Overload (real power)	32P	Reclosing relay	79
Master sequence device	34	Overfrequency	81O
Current unbalance	46	Underfrequency	81U
Voltage unbalance/Negative sequence voltage	47	Auto selective control/transfer	83

## Certifications and standards

<ul style="list-style-type: none"> <li>&gt; EN 61000-6-2</li> <li>&gt; EN 61000-6-4</li> <li>&gt; EN 61010-1</li> <li>&gt; EN 60068-2-1 (-20 °C/16 h)</li> <li>&gt; EN 60068-2-2 (70 °C/16 h)</li> </ul>	<ul style="list-style-type: none"> <li>&gt; EN 60068-2-6 (2÷25 Hz / ±1,6 mm; 25÷100 Hz / 4.0 g)</li> <li>&gt; EN 60068-2-27 (a=500 m/s<sup>2</sup>; T=6 ms)</li> <li>&gt; EN 60068-2-30:2005 25/55°C, RH 95%, 48hours</li> <li>&gt; EN 60529 (front panel IP65, back side IP20)</li> <li>&gt; UL 1008 (pending)</li> </ul>	
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E-mail: [info@comap-control.com](mailto:info@comap-control.com)  
 Web: [www.comap-control.com](http://www.comap-control.com)

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