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The heart of smart control

InteliLite AMF20

Datasheet

Order code: IL3AMF20BAA

## Controller for single gen-set applications

Product description

▶ Single gen-set controller for Stand-by and Prime-power applications

▶ Direct communication with EFI engines

▶ All-in-one intuitive & powerful PC tool for configuration/monitoring/control, locally or remotely

Key features

▶ 5 languages in the controller & translator functionality

▶ 3 levels of password

▶ 3 sets of alternative configurations

▶ Magnetic pickup

▶ ECU support & Tier 4 Final ready

▶ Cloud-based monitoring and control via WebSupervisor

▶ Geofencing and tracking via WebSupervisor

▶ Plug-in module concept for more capabilities (RS232, RS485, Ethernet, Modbus, emails, SMS, I/Os)

▶ 1 slots for plug-in modules

▶ CAN modules support

▶ Power over USB for controller's adjustment

▶ In-built PLC, complemented with a monitoring/debugging tool

▶ 7 binary outputs, 7 binary inputs, 3 analog inputs

▶ 2 high-current binary outputs

▶ Run Hours source selector

▶ Activation of outputs based on inputs

▶ Real time clock

▶ Multipurpose flexible timers (also for rental)

▶ Comprehensive history log with up to 350 events

▶ 3 maintenance timers (counting even under zero)

▶ Possibility to disable protections

▶ Modbus register mapping possibility

▶ Adjustable Main Screen

Application overview

AMF
Mains & Generator
Circuit Breaker

MRS
Generator Circuit
Breaker
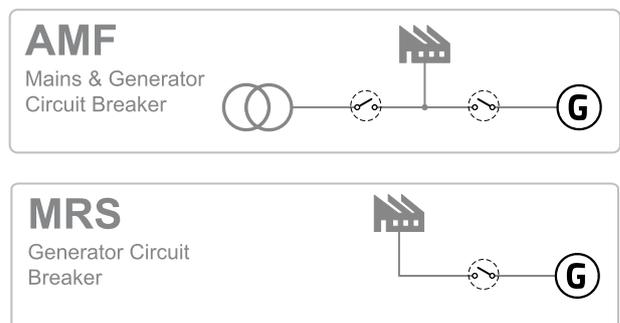
Dimensions, terminals and mounting

Label	Count
CAN	
Analog inputs	3×
Pick-up	
Binary outputs	7×
Power supply & D+	

Label	Count
Current 3ph Generator	3×
Voltage 3ph Generator	3×
Voltage 3ph Mains	3×
Binary inputs	7×

1 × Plug-in modules

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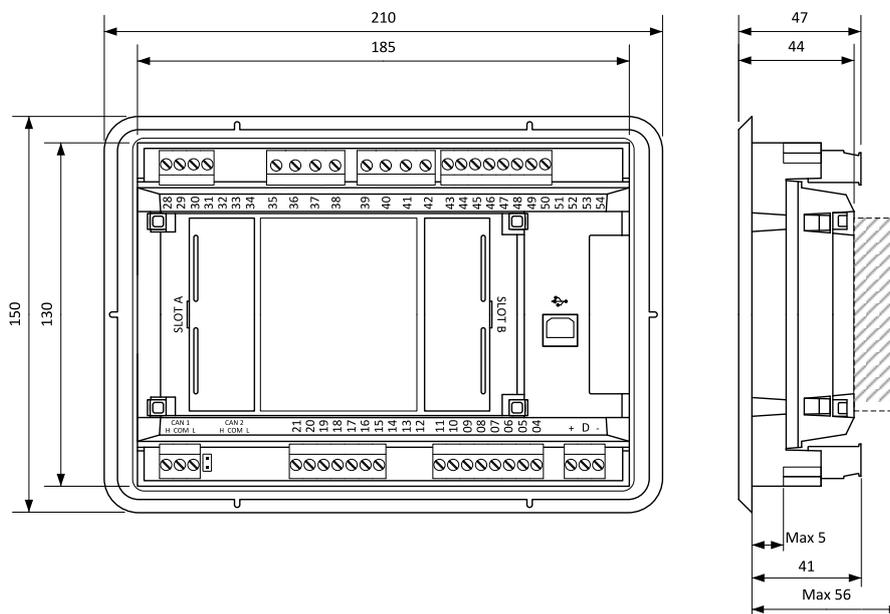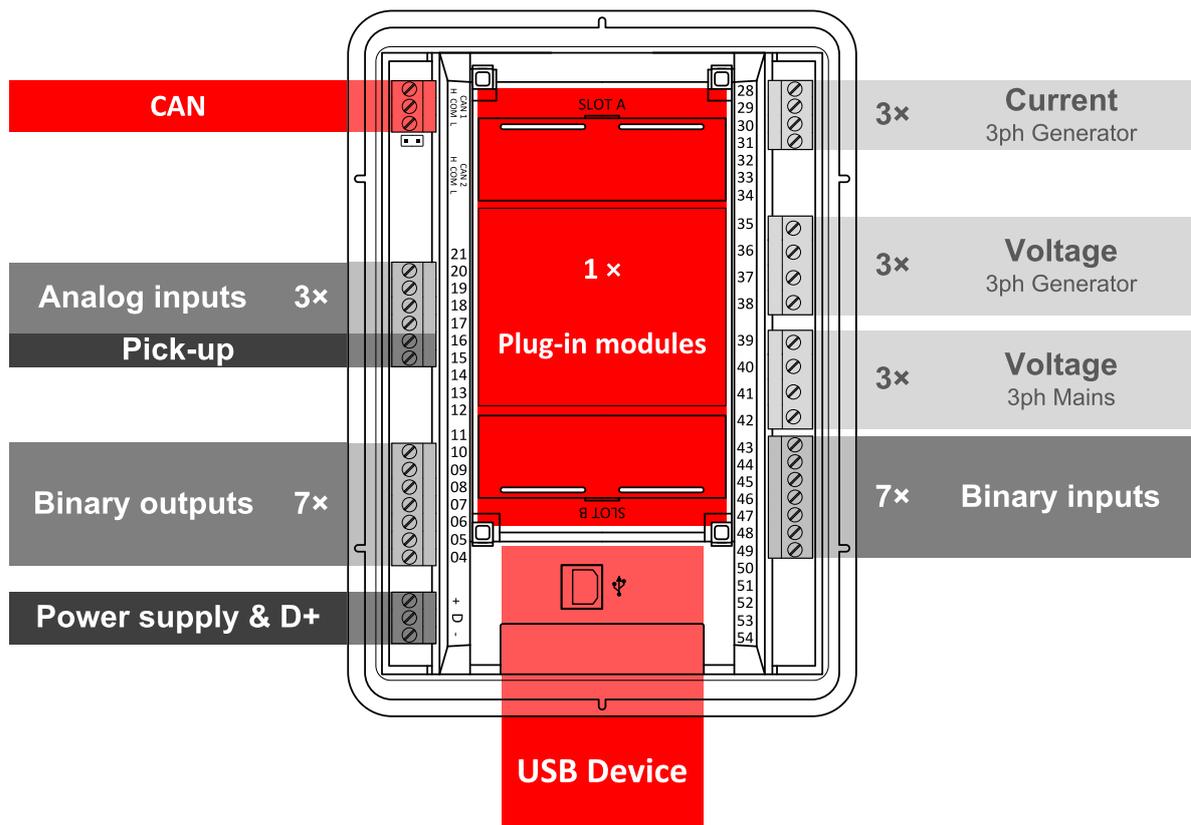
Note: The final depth of the controller depends on the selected plug-in module - it can vary between 41 mm and 56 mm. Mind also the size of connectors and cables (e.g. in case of RS232 connector, add about 60 mm more for standard RS232 connector and cable).

Note: The controller is to be mounted into panel doors as a standalone unit using provided metal holders. The requested cut-out size is 187 x 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 VDC
Power consumption	394 mA / 8 VDC 255 mA / 12 VDC 140 mA / 24 VDC 97 mA / 36 VDC
Fusing	Power terminal max. 3 A E-Stop max.12 A
Fusing E-Stop	12 A
Max. Power Dissipation	3.5 W

D+ terminal

Max. output current	250 mA / 36 V
Charging fail threshold	Adjustable

Operating conditions

Operating temperature	-20 ˚C to +70 ˚C
Storage temperature	-30 ˚C to +80 ˚C
Protection degree (front panel)	IP 65
Operating humidity	95 % w/o condensation
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 3	

Voltage measurement

Measurement inputs	3ph-n Gen voltage , 3ph-n Mains
Measurement range	277 V / 480 V AC (EU) 346 V / 600 V AC (US/Canada)
Linear measurement and protection range	381 V / 660 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 Gen current
Measurement range	5 A
Max. allowed current	10 A
Accuracy	1.5 % for full temperature range (1 % from 0 ˚C to 50 ˚C)
Input impedance	< 0.1 Ω

Binary inputs

Number	7, non-isolated
Close/Open indication	0-2 VDC close contact 6-36 VDC open contact

Binary outputs

Low current	5 low current output, non-isolated 0.5 A switching to positive supply voltage, BATT+
High current	2 high current output, non-isolated 5 A (60 °C), 4 A (70 °C) switching to positive supply voltage, BATT+

Analog inputs

Number	3, non-isolated
Type	Resistive
Resolution	0.1 Ω
Range	0-2500 Ω
Input impedance	170 Ω
Accuracy	±2 % from value in range 0-2500 Ω ±1.5 kΩ in range 2.5-15 kΩ

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 kHz to 5 kHz 10 Vpk-pk to 50 Vpk-pk in range 5 kHz to 10 kHz
Frequency input range	4 Hz to 10 kHz
Frequency measurement tolerance	0.2 % from range 10 kHz

Communications

USB port	non-isolated
CAN 1	CAN bus, 250 kbps, max 200 m, 120 Ω termination option, non- isolated

Available plug-in modules

Product	Description	Order code
CM-4G-GPS	For SMS and GPS info	CM14GGPSXBX
CM-Ethernet	Ethernet interface	CM2ETHERXBX
CM-GPRS	For SMS	CM2GPRSXXBX
CM-RS232-485	Dual port interface	CM223248XBX
EM-BIO8-EFCP	8 additional binary inputs/outputs	EM2BIO8EXBX

Note: Controller has 1 slot for plug-in modules

Available CAN modules

Product	Description	Order code
IGL-RA15	CAN remote annunciator with 15 LEDs	EM2IGLRABAA
Inteli AIN 8	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

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

Description	ANSI code	Description	ANSI code
Over voltage	59	**Load shedding**	32P
Under voltage	27	**Overload**	32
Voltage asymmetry and Phase rotation**	47	**Power factor**	55
Over frequency	81H	**Temperature**	49T
Under frequency	81L	**Gas (fuel) level**	71
Over current*	50 + 51		

* Short current only   ** Fixed setting

- ▶ EN 61000-6-2
- ▶ EN 61000-6-4
- ▶ EN 61010-1
- ▶ EN 60068-2-1 (-20 °C/16 h for std 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)

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