

InteliLite MRS16



Order code: IL3MRS16BAA

Controller for single gen-set applications

Datasheet

Product description

- ▶ Single gen-set controller for Prime-power applications
- ▶ Direct communication with EFI engines
- ▶ Total remote monitoring and control

Key features

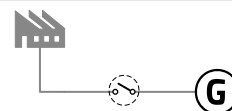
- ▶ Easy to install, configure and use
- ▶ Wide range of communication capabilities including:
 - connection via RS232, RS485, CAN and on board USB
 - internet access using Ethernet, GPRS or 4G
 - support for Modbus and SNMP protocols
- ▶ Internal PLC support with PLC editor and monitor included in LiteEdit
- ▶ Cloud-based monitoring and control via WebSupervisor
- ▶ Active SMS and emails in different languages
- ▶ SNMP traps
- ▶ Geofencing and tracking via WebSupervisor
- ▶ 2x 10 A binary outputs for cranking and fuel solenoid
- ▶ Option for up to 16 additional binary inputs/outputs

- ▶ Flexible event based history with up to 350 events
- ▶ Load shedding, dummy load capability
- ▶ Tier 4 final support
- ▶ Automatic temperature based cooling/heating
- ▶ Comprehensive gen-set protections
- ▶ Multipurpose flexible timers
- ▶ True RMS measurement
- ▶ Available also in low temperature (LT) version

Application overview

MRS

Generator Circuit
Breaker



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
RTC battery	Replaceable
Fusing	2 A (without BOUT consumption nor extension modules)

Operating conditions

Operating temperature	-20 °C to +70 °C
Operating temperature for LT version	-40 °C to +70 °C
Storage temperature	-30 °C to +80 °C
Operating humidity	95 % w/o condensation
Vibration	5-25 Hz, $\pm 1,6$ mm 25-100 Hz, $a = 4$ g
Shocks	$a = 500$ m/s ²

Voltage measurement

Measurement inputs	3ph-n Gen 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 M Ω ph-ph 0,36 M Ω ph-n

Current measurement

Measurement inputs	3ph-n Gen voltage
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 VDC open contact

Binary outputs

Number	2 high current output, non-isolated 5 low current output, non-isolated
Max. current	10 A for 10 s, 5 A long term 0,5 A
Switching to	positive supply terminal

Analog inputs

Number	4 non-isolated
Type	Resistor
Resolution	0,1 Ω
Range	0-2500 Ω
Input impedance	800 Ω
Accuracy	± 2 % from range in range 0-2500 Ω $\pm 1,5$ k Ω in range 2,5-15 k Ω

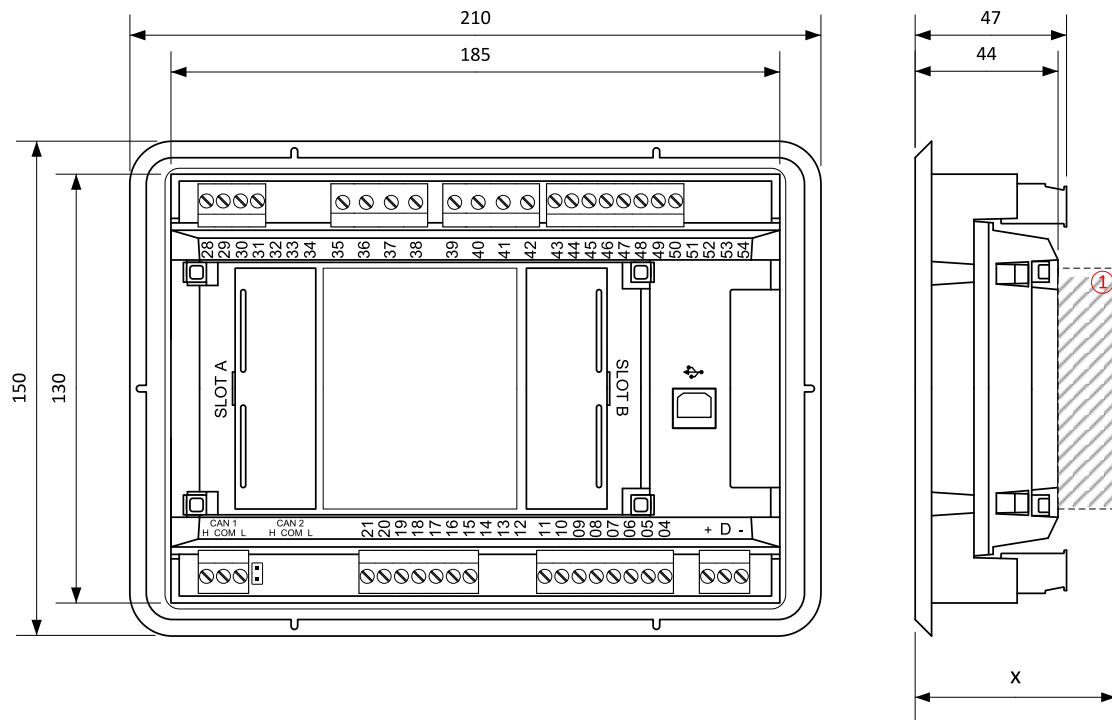
Magnetic pick-up

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

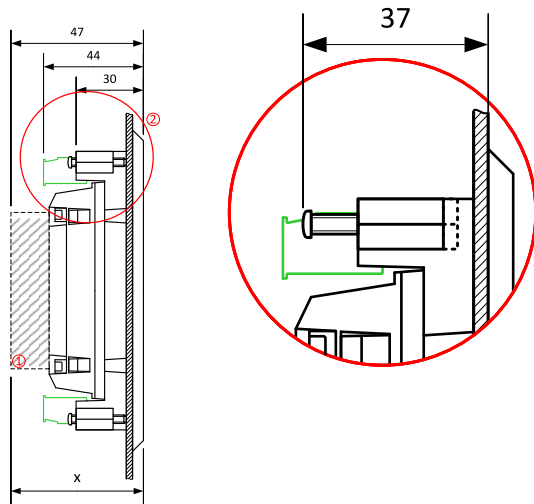
USB port	Non-isolated
CAN 1	CAN bus, 250 kbps, max 200 m, 120 Ω termination option non-isolated

Dimensions, terminals and mounting



Note: Dimension x depends on extension module.

Panel door mounting



Overview of parameter x

Plug-in module	Parameter x [mm]
CM-RS232-485	105 @ RS232 / 62 @ RS485
CM-Ethernet	95
USB	85
CM-GPRS	Depends on connector of antenna
EM-BIO8	62
CM-4G-GPS	Depends on connector of antenna

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.

Available extension 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

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	Earth fault current	50N + 64
Current unbalance	46		

* Short current only

** Fixed setting

Certificates and standards

▶ EN 61000-6-1 ▶ EN 61000-6-2 ▶ EN 61000-6-3 ▶ EN 61000-6-4 ▶ EN 61010-1 ▶ EN 61000-2-1 (-20°C/16h for std, -40°C/16h for LT version) ▶ EN 61000-2-2 (70°C/16h) ▶ EN 61000-2-6 (2÷25Hz / ±1,6mm; 25÷100Hz / 4,0g) ▶ EN 60068-2-2(a=500m/s²) ▶ EN 60068-2-30(25/55/25°C; humidity at 97% ; 2 cycles) ▶ EN 60529 (front panel IP65, back side IP20) ▶ IEC61010-2-030:2010/Measurement category II	
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