

InteliNano^{NT} MRS 3



Order code: IN-NT MRS 3

Controller for small single gen-set applications

Datasheet

Product description

- ▶ Single small gen-set controller for Primepower applications
- ▶ Direct communication with EFI engines

Key features

- ▶ 3-phase current and voltage measurement
- ▶ Power measure and energy counter
- ▶ Magnetic pick up input
- ▶ Configurable from the front face
- ▶ Free configuration software (NanoEdit) & USB power-up
- ▶ Emergency stop internally connected to Starter and Fuel Solenoid outputs
- ▶ Up 6 inputs / Up 6 outputs
- ▶ ECE engine support over onboard CAN port
- ▶ Automatic recharge of battery
- ▶ Autodetection of connection type and voltage
- ▶ Zero power consumption mode
- ▶ Symbolic interface
- ▶ Event log of 15 records
- ▶ Light tower support

Application overview



Technical data

Power supply

Power supply range	8–36 VDC
Power consumption	90 mA / 8 VDC 60 mA / 12 VDC 35 mA / 24 VDC 32 mA / 36 VDC
Fusing	2 A (without BOUT consumption)
Max. Power Dissipation	1.2 W

Operating conditions

Operating temperature	–20 to 70 °C
Operating humidity	95% non-condensing (IEC/EN 60068-2-30)
Protection degree (front panel)	IP65
Vibration	5–25 Hz, ± 1.6 mm 25–100 Hz, a = 4 g
Shocks	$a_{\max} = 500 \text{ m/s}^2$
Surrounding air temperature rating 70 °C.	
Suitable for pollution degree 3.	

Voltage measurement

Measurement inputs	3Ph-N Voltage
Nominal voltage	230 V
Measurement range	277 V
Max. allowed voltage	350 V
Accuracy	±1 % of nominal value (70 %–130 % of nominal voltage)
Frequency range	40–70 Hz (accuracy ±0.1 Hz)
Input impedance	> 300 kΩ (Ph-N) > 600 kΩ (Ph-Ph)

Current measurement

Measurement inputs	3Ph Current
Measurement range	5 A
Max. allowed current	10 A
Accuracy	±20 mA (0–2 A) ±1 % of measured value (2–5 A)
Input impedance	< 0.1 Ω

Binary inputs

Number	up to 6, non-isolated
Close/Open indication	< 2 V closed contact > 3.5 V open contact

Binary outputs

Number	2 high current output, non-isolated up to 4 low current output, non-isolated
Max. current (high current output)	10 A short term, 6 A long term
Max. current (low current output)	0.5 A
Switching to	positive supply terminal

Analog inputs

Number	up to 3, non-isolated
Type	Resistive
Resolution	0.1 Ω
Range nominal	0–250 Ω
Range maximal	up to 2.5 kΩ
Accuracy	±2 % of measured value ± 5 Ω (0–250 Ω) ±4 % of measured value (250 Ω–2.5 kΩ)

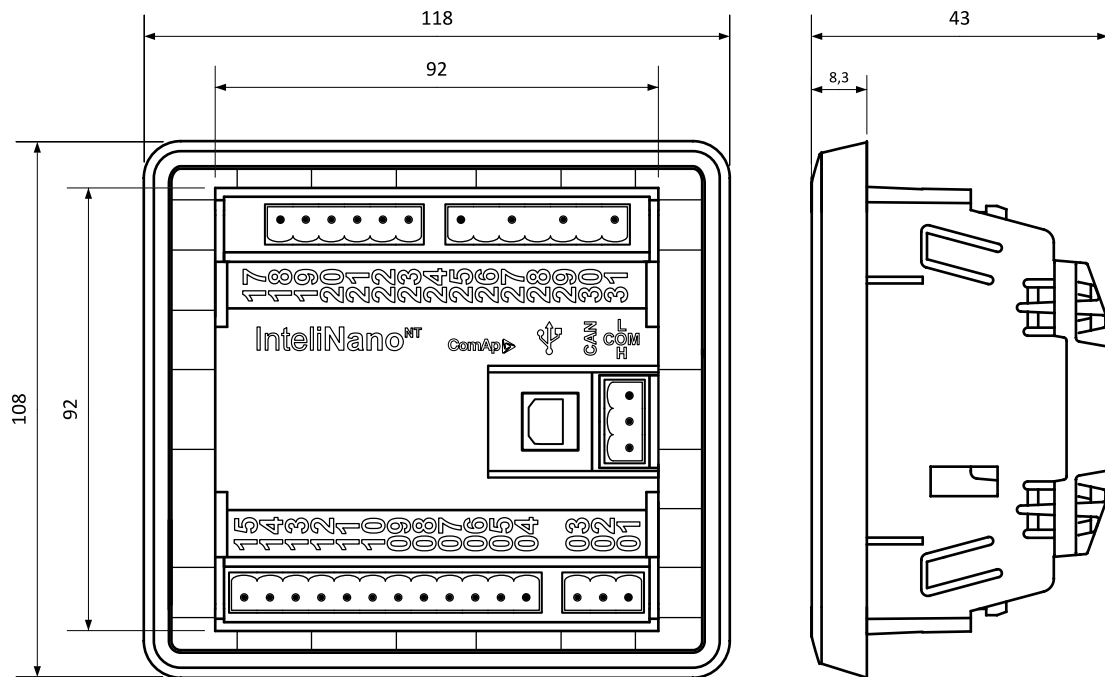
Magnetic pick-up

Voltage input range	4–50 Vpk-pk (4 Hz–1 kHz) 6–50 Vpk-pk (4 Hz–5 kHz) 10–50 Vpk-pk (4 Hz–10 kHz)
Frequency input range	4 Hz–10 kHz
Frequency measurement accuracy	0.2 % of full scale

Communication

CAN	CAN bus, 250 kbps, max 200 m, non-isolated
USB	non-isolated

Dimensions, terminals and mounting



Note: The controller is to be mounted into panel doors as a standalone unit using provided fixing clips. The requested cut-out size is 94 × 94 mm. Use the screw holders delivered with the controller to fix the controller into the door.

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
Overvoltage	59	Over current**	50 + 51
Undervoltage	27	Overload	32
Voltage asymmetry and Phase rotation*	47	Power factor	55
Over frequency	81H	Temperature	49T
Under frequency	81L	Gas (fuel) level	71

*Short current only

**Fixed setting

Certificates and standards

<ul style="list-style-type: none"> ▶ EN 61000-6-2EN ▶ 61000-6-4 ▶ 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/s²; T=6 ms) ▶ EN 60068-2-30 ▶ EN 60529 (front panel IP65, back side IP20) 	
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