Grid Solutions

RRTD

Remote RTD Module

Remote Monitoring of RTD's for Metering and Protection

Key Benefits

- Additional RTD metering for the Multilin 369 and M60
- Designed for close mounting to motor (reduces wiring)
- Operates as stand-alone temperature monitoring transducer
- Provides overtemperature protection
- Monitors up to 12 RTDs
- Individually field programmable RTD inputs
- AC/DC universal power supply

Applications

- Stand alone RTD protection for all motors
- Connect to the 369 and M60 Motor protection System to provide Remote RTD protection, as well as additional I/O

Features

Protection and Control

- RTD Overtemperature

Automation

- Programmable Inputs and Outputs
- Analog Outputs

Monitoring and Metering

- RTD Temperature

Communications

- Networking via RS485 Serial Ports
- Optional Fiber Optic Port
- Modbus RTU Protocol

EnerVista™ Software

- State of the art software for configuration and commissioning Multilin products
- Document and software archiving toolset to ensure reference material and device utilities are up-to-date
- EnerVista™ Integrator providing easy integration of data in the RRTD into new or existing monitoring and control systems

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Protection and Control

The Remote RTD Module provides additional RTD temperature metering capabilities for the Multilin 369 and M60 Motor Protection System. The module can also operate as a stand-alone temperature monitoring transducer and can provide overtemperature protection (I/O). (Refer to the 369 and M60 Motor Protection System for more detailed information)

Monitoring and Metering

The RRTD module monitors up to 12 RTDs with all metered values accessible through serial communications. When connected to the 369 and M60 Motor Management System, all RTD values, as well as the I/O Status, will be available through the 369 and M60 relay.

Features

The RRTD module has been designed to be mounted close to the motor to reduce the length of the RTD cables. A 369 and M60 Motor Management Protection System can then monitor the RTDs from a remote location and use this temperature information for protection/metering purposes.

- Three isolated RS485 ports
- Fiber optic port (F)
- ModBus® RTU to 19,200 baud
- RTD PC program
- 12 three-wire shielded RTD inputs
- User configurable RTD type
- AC/DC universal power supply

Technical Specifications

INPUTS

RTDS

Inputs:	12 RTDs, stator/bearing programmable
Type:	100 Pt (DIN 43760), 100 Ni, 120 Ni, 10 Cu programmable
Range:	-40°C to 200°C
Trip/alarm range:	0°C to 200°C
Dead band:	2°C
Accuracy:	±2°C
Lead resistance:	Pt or Ni RTD: 25 max Cu RTD: 3 Ω max three-wire lead resistance compensation

DIGITAL/SWITCH INPUTS (OPTION IO)

Inputs:	6 optically isolated
Input type:	Dry contact (<800)
Function:	Programmable

COMMUNICATIONS

Type:	3 RS485 2 wire, half duplex, isolated.
	1 optional fiber optic port
Baud rate:	1,200 – 19,200
Protocol:	ModBus® RTU
Functions:	Read/write setpoints, read actual values commands, execute commands

OUTPUTS

ANALOG OUTPUT (OPTION IO)

	Programmable		
Output	0 – 1 mA	0 – 20 mA	4 – 20 mA
Max load	2400 Ω	600 Ω	600 Ω
max output	1.01 mA	20.2 mA	20.2 mA

Accuracy:	±1% of full scale
Isolation:	50 V isolated active source

OUTPUTS

OUTPUT RELAYS (OPTION IO)

Rated Load	**RESISTIVE LOAD (PF = 1)**	**INDUCTIVE LOAD (PF = 0.4) (L/R – 7ms)**
	8 A @ 250 VAC 3.5 @ 250 VAC	3.5 A @ 30 VDC 3.5 A @ 30 VDC
Carry Current	8 A	
Max Switching Capacity	2000 VA 240 W	875 VA 170 W
Max Switching V	380 VAC/125 VDC	
Max Switching I	8 A	
Operate time	<10 ms (5 ms typical)	
Contact Material	Silver alloy	

POWER SUPPLY

Input:	
LO:	20 – 60 VDC 20 – 48 VAC:50/60 Hz
HI:	50 – 300 VDC 40 – 265 VAC:50/60 Hz
Power:	
Nominal:	20 VA
Maximum:	65 VA
Holdup:	
Non-failsafe trip:	200 ms
Failsafe trip:	100 ms

TYPE TESTS

Dielectric:	2.0 kV for 1 min to relays, power supply
Insulation:	IEC 255-5 500 VDC
Transients:	ANSI C37.90.1 Oscillatory 2.5 kV/1 MHz ANSI C37.90.1 fast rise 5 kV/10 ns Ontario Hydro A-28M-82 IEC 255-4 Impulse/High Frequency disturbance Class III Level
Impulse test:	IEC 255-5 0.5 Joule 5 kV
RFI:	50 MHz/15 W transmitter
EMI:	C37.90.2 electromagnetic interference @ 150 MHz and 450 MHz, 10 V/m
Static:	IEC 801-2 static discharge
Environment:	IEC 68-2-38 temperature/humidity cycle
Dust/moisture:	IP20X

ENVIRONMENT

Humidity:	95% non-condensing
Temperature:	-40°C to + 60°C ambient

PACKAGING

Shipping box:	12"x 12" x 8" (L x H x D) 305 mm x 305 mm x 203 mm (L x H x D)
Ship weight:	10 lbs (4.5 kg)

APPROVALS

ISO:	Manufactured to an ISO9001 registered program
UL:	Recognized file no. E83849
CSA:	Recognized file no. LR41286-59
CE:	IEC 947-1, IEC 1010-1

**Specifications subject to change without notice.*

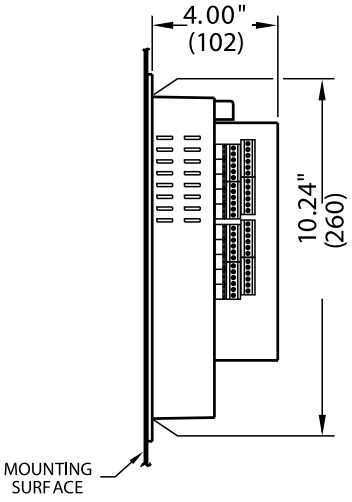
Ordering

RRTD	*	*	*	*	
RRTD					
	HI LO				50 – 300 VDC/40 – 265 VAC 20 – 60 VDC/20 – 48 VAC
		IO 0			Optional input and output No optional input and output
			F 0		Optional fiber optic port No optional fiber optic port

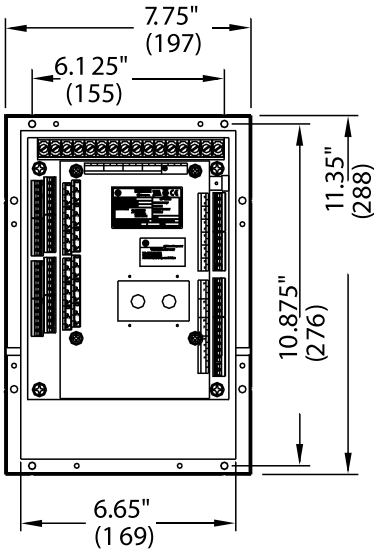
Note: The control power (HI or LO) must be specified with all orders.

Dimensions

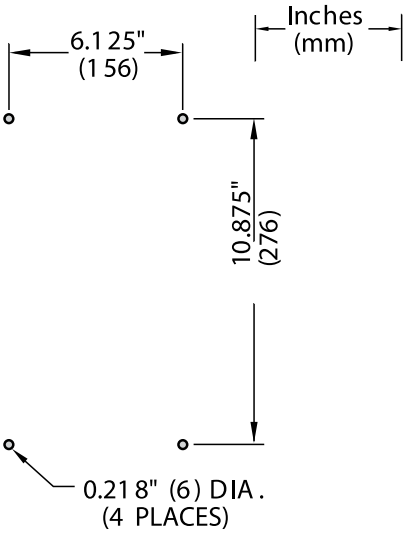
Side View



Rear View



Mounting



For more information, visit
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