

QUAD TRON, INC.

303 Camars Drive
Warminster, PA 18974

Phone: (215) 441-9303
Fax: (215) 441-9305
www.quadtron.com
Email: quadtron.inc@gmail.com

MICRO PCM ENCODER SERIES

MODEL MI_RT D16_3W

16 CHANNEL 3 WIRE RTD MODULE

The 16 channel RTD module, MI_RT D16_3W, is a very accurate 3 wire RTD conditioner with industry leading channel density, weight and low power.

Each of the 16 channels consists of:

- a 24 bit delta sigma A/D converter with built in low pass filtering for anti aliasing,
- a one pole low pass analog filter for anti aliasing,
- dual tracking constant current source excitation for 3 wire error correction,
- a precision reference resistor for ratiometric RTD measurement
- dynamic offset error removal and
- an FIR filter.

American ($\alpha= 0.00392 \Omega/\Omega/^{\circ}\text{C}$) and European ($\alpha= 0.00385\Omega/\Omega/^{\circ}\text{C}$) ohms conversion for temperature output provided for most common RTD types. Resistance mode provides output resistance in ohms.

Both continuous constant current excitation and pulsed excitation modes selectable. Pulsed excitation mode reduces self heating.

Each channels FIR filter, is programmable for 1, 2, 4, 8, 16, 32, 64, 128, 256, 512, or 1024 taps providing improved noise reduction. Each channels sample rate is 370 Hz.

Two wire measurements supported.

RTD add on modules can be stacked on top to increase the number of channels. Both 16 channel, 3 wire and 12 channel, 4 wire add on modules are available, add on modules MI_RT D_ADD16_3W and MI_RT D_ADD12_4W respectively. Add on modules provide reduced weight and power per channel.

Electrical Specifications:

TRANSDUCER TYPE: RTD's of 100 ohm, 200 ohm, 500 ohm, and 1Kohm

EXCITATION: Constant current, dual tracking, programmable per channel, 0.210 or 1 milli amp.

ACCUARCY: ±0.25% of full scale accuracy

Environmental:

Operating Temperature: -40°C to +85°C
Storage Temperature: -55°C to +125°C
Humidity: Relative humidity of 85% for two hours at 65°C.
Altitude: Unlimited
Vibration: 20g's RMS from 5 to 2000Hz in each major axis.
Acceleration: Constant acceleration of 100g's in each axis.
Shock: 100g's for 10m second in each major axis.

Mechanical:

Size:

	inches	mm
Length	3.50	88.9
Width	1.25	31.75
Height	0.291	7.39

Weight: 25 g

Engraving: MI_RTD16_3W

J1 CONNECTOR : Nanonics # STMO51M6HN; TE Connectivity # 4-1589487-5

MATE: Nanonics # STMO51PC2DC018N; TE Connectivity # 7-158947-7