

48-channel RTD (resistance temperature detector) Conditioner and Encoder



Features

- 48-channel RTD conditioner and encoder
- Uses three (3) internal card assembly types:
 - RCI-2048 overhead card: controls internal channel sampling and interfaces with the CAIS master unit
 - RTD-2048 16-channel RTD conditioning card (3 each are included): Provides 2-wire and 3-wire RTD measurements, linearized temperature output for common RTD types, continuous 2-point gain and offset correction, programmable digital moving average filters
 - PSU-2048 power supply: accepts 28VDC aircraft power and provides multiple internal regulated outputs; provides ground isolation between 28V input, chassis and signal grounds.
- Operates as a CAIS remote DAU
- True real-time RTD linearization
- Compatible with common RTD types, including American ($\alpha = 0.00392 \Omega/\Omega/^\circ\text{C}$) and European ($\alpha = 0.00385\Omega/\Omega/^\circ\text{C}$) curves
- $\pm 0.25\%$ System Accuracy
- No external reference resistors are required
- Output proportional to resistance
- Up to 312.5 updates/second
- $\pm 35\text{VDC}$ Overvoltage Protection
- $+28\text{VDC} \pm 4\text{VDC}$ Operation
- 5.800" W x 4.000" D x 3.000" H
- Weighs 2.7 pounds
- Microsoft Windows application software included

Description

The MRTD-3048D is a 48-channel RTD Conditioner and Encoder. The MRTD-3048D unit accepts direct connection to 2-wire or 3-wire resistance temperature devices. Temperature data is digitized to 16-bit resolution. The MRTD-3048D operates as a "remote unit" along with a CAIS compatible master unit such as TTC's CDAU-20XX or MCDAU-2000. Channel sample sequence and conditioning parameters are controlled by the CAIS master, which is user programmable via a serial RS-232/422 hookup to a PC-based computer running TTC's Microsoft Windows™ software application called "TTCWare". Data acquired and encoded by the MRTD-3048D is formatted as serial PCM per IRIG-106-96, Chapter 4 requirements (standard fixed-position PCM format). The MRTD-3048D is a ruggedized, fixed-volume enclosure suitable for use in harsh environments and over a wide temperature range. RTD wiring and Unit ID use high reliability D-Sub style connectors. All CAIS interface signals use standard 9-pin D-sub style connectors. Input power uses a circular military style connector.

Applications

- Distributed data acquisition systems
- Remote temperature measurement

Revision 05/12/2015

MRTD-3048D Datasheet

©2015 Teletronics - A Curtiss-Wright Company
 Specifications subject to change without notice.

Approved for Public Release 16-S-0924

Teletronics - A Curtiss-Wright Company
 15 Terry Drive, Newtown, PA 18940
 phone: 267.352.2020 fax: 267.352.2021 Sales@ttcdas.com

www.ttcdas.com



CAIS
Compatible



Management
System
AS9100C
ISO 9001:2008