DIN RAIL / PANEL MOUNT

Single Element - .26" Window
1 to 25 AAC Input Range

Two Element - .26" Window
1 to 25 AAC Input Range

Three Element - .26" Window
1 to 25 AAC Input Range

The **CRD4100** Series Data Stream Digital Current Transducers are designed for applications where AC current waveforms are not purely sinusoidal. The digital technology is used to measure voltage, current, power frequency and energy in single and three phase designs. The data is streamed over an RS485 IEEE bus which enables multiple transducers to communicate thru a single master connection. These advanced sensors are ideal for entire plant or zone monitoring. Also, the communication alagorithm can be pre-ordered with ASCII based control or modified MODBUS based control.

Sensing
True RMS Current, Each Phase

Applications
Sub-Metering
Motor Loads
Uninterruptible Power Systems
Remote Monitoring
Load Shedding
Energy Management

Features
35mm DIN Rail or Panel Mount
24 VDC powered
Use with external current transformers
Highest precision available
Connection diagram printed on case

Regulatory Agencies

CR Magnetics has a wide selection of Current and Potential Transformers to extend the range of any part.
See Sections G & H for details.

PART NUMBERS

CRD4110	-		Single Element, AC Current RS485 Digital Transducer
CRD4150	-		Two Element, AC Current RS485 Digital Transducer
CRD4170	-		Three Element, AC Current RS485 Digital Transducer

1 - 0-1 AAC
5 - 0-5 AAC
15 - 0-15 AAC
25 - 0-25 AAC
Above 30 AAC must use 5 amp CT

Note: Add an M at the end for MODBUS CRD4110-5-M

CR Magnetics, Inc. 3500 Scarlet Oak Blvd. St. Louis MO USA 63122 V: 636-343-8518 F: 636-343-5119
Web: http://www.crmagnetics.com E-mail: sales@crmagnetics.com

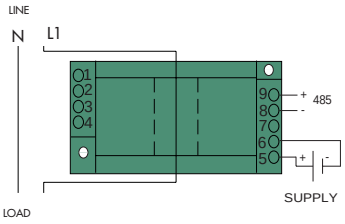
SPECIFICATIONS

Basic Accuracy: 0.5%	Torque Specifications: .....3.0 inch lbs (0.4Nm)
Calibration: .....True RMS Sensing	Response Time: .....250 ms. max. 0-90% FS
Thermal Drift: .....500 PPM/°C	Relative Humidity: .....80% for temperatures up to 31°C and decreasing linearly to 50% at 40°C
Operating Temperature$_1$: .....0°C to +60°C	Output Resolution: .....16 bit
Installation Category: .....CAT II	Transducer fanout on common bus: .....64 max.
Pollution Degree: 2	Baud Rate$_3$: .....1200, 2400, 4800, 9600,19.7K .bps
Insulation Voltage: .....2500 VDC	A/D Conversion Type: .....4th order Delta Sigma
Altitude: .....2000 meter max	Device Address$_3$: .....00 to FF
Frequency Range: .....20 Hz - 5 KHz	Data Format: ....ASCII
MTBF: .....Greater than 100K hours	Supply Current:.....Typical 30mA Max 30mA
Cleaning: .....Water-dampened cloth	Weight:.. .....0.5 lbs.
Supply Voltage$_2$: .....24 VDC ±10%	

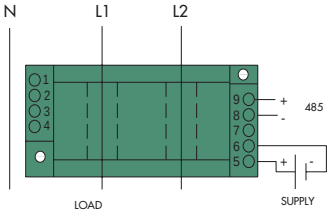
1) RH 5% to 95%, non-condensing

2) 0.4% max. ripple Vpp

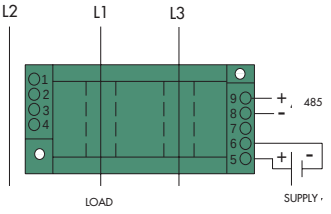
3) Factory default settings: address 01, baud rate 9600, no parity, no flow control, 1 stop bit



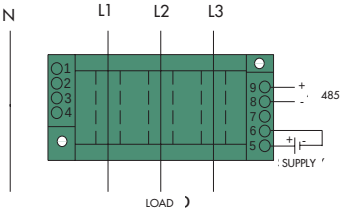
CRD4110 Single Element, 2-Wire



CRD4150 Single Element, 3-Wire

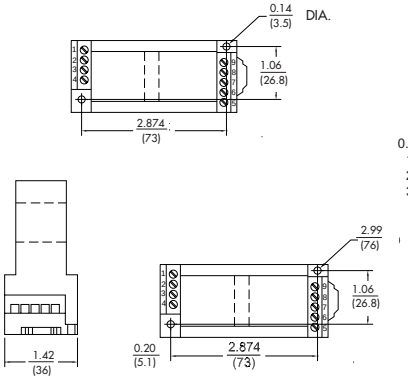


CRD4150 3 Element, 3-Wire



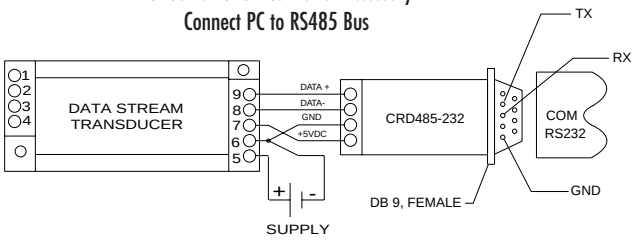
CRD4170 3 Element, 4-Wire

Connection Diagram



OUTLINE DRAWING

CRD485-232
RS485 to RS232 Converter Accessory
Connect PC to RS485 Bus



ASCII Simplified Programming Commands

A simplified data structure is used with only 6 commands required for full control of the transducer. Commands are : Read Transducer Name, Read Configuration, Set Configuration, Read Measurements, Read Energy Totalizer and Clear Energy Totalizer. For illustration, the following commands are used to read data from a CRD5170 3 Phase, 4 Wire Transducer with a device address of 00.

Command Transducer to Read Data: #00A<cr>

Transducers Response: >+[% FS Voltage$_{L1-N}$]+[% FS Current$_{L1}$]+[% FS Voltage$_{L2-N}$]+[% FS Current$_{L2}$]+[% FS Voltage$_{L3-N}$]+[% FS Current$_{L3}$,][+/- % FS Power][+/-% FS VARS][+/-Power Factor][Frequency]<cr>

Command Transducer to Read Energy Totalizer: #00W<cr>

Transducer Responds: 01[+/-KWHr]{\[+/-KVHr][check sum]<cr>

Note: This is for illustration purposes only, See Applications Guides (Section I for complete instructions.