DIN RAIL / PANEL MOUNT

Single Element - .26" Window
150 to 300 VAC
1 to 25 AAC Input Range

Two Element - .26" Window
150 to 300 VAC
1 to 25 AAC Input Range

Three Element - .26" Window
150 to 300 VAC
1 to 25 AAC Input Range

The **CRD5100** Series Data Stream Digital Transducers are designed for complete monitoring of electrical power systems. 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

Voltage, True RMS
Current, True RMS
Active Power, bi-directional
Active Energy, bi-directional
Reactive Power, bi-directional
Reactive Energy, bi-directional
Power Factor
Frequency

Applications

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

Features

35mm DIN Rail or Panel Mount
Available with 0 - 5 VDC or 4 - 20 mA DC outputs
24 VDC powered
Use with external current transformers
Highest precision available
Connection diagram printed on case

Regulatory Agencies

CE RoHS 2002/95/EC

PART NUMBERS

CRD5110	- ❑	- ❑	1 Element, AC Multifunction RS485 Digital Transducer
CRD5150	- ❑	- ❑	3 Phase, 3-Wire AC Multifunction RS485 Digital Transducer
CRD5170	- ❑	- ❑	3 Element, 4-Wire AC Multifunction RS485 Digital Transducer

150 - 0-150 VAC
300 - 0-300 VAC
other ranges available

1 - 0-1 AAC
5 - 0-5 AAC
15 - 0-15 AAC
25 - 0-25 AAC
other ranges available

Note: Add an M at the end for MODBUS

CR MAGNETICS
Another **HUNTINGTON ELECTRIC** Company

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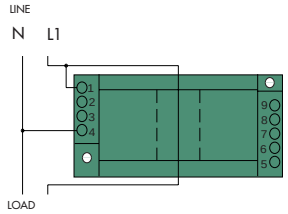
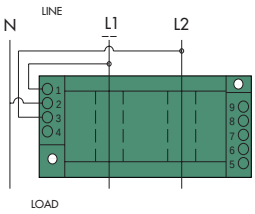
Web: http://www.crmagnetics.com E-mail: sales@crmagnetics.com

SPECIFICATIONS

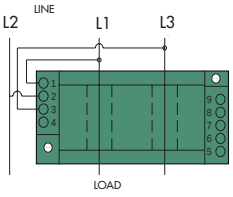
Basic Accuracy: 0.5%	Output Load:.....-20 mA DC - 0 to 300 Ω
Calibration: .....True RMS Sensing	0-5 VDC - 2K Ω or Greater
Thermal Drift: .....500 PPM/°C	Response Time: .....250 ms. max. 0-90% FS
Operating Temperature: .....0°C to +60°C	Relative Humidity: .....80% for temperatures up to
Installation Category: .....CAT II	31°C and decreasing linearly to 50% at 40°C
Pollution Degree: 2	Output Resolution: .....16 bit
Insulation Voltage: .....2500 VDC	Transducer fanout on common bus: .....64 max.
Altitude: .....2000 meter max	Baud Rate 2: .....1200, 2400, 4800, 9600,19.7K .bps
Frequency Range: .....20 Hz - 5 KHz	A/D Conversion Type: .....4th order Delta Sigma
MTBF: .....Greater than 100K hours	Device Address 2: .....00 to FF
Cleaning: .....Water-dampened cloth	Data Format: .....ASCII
Supply Voltage: .....24 VDC ±10%	Supply Current:.....Typical 30mA Max 30mA
Torque Specifications: .....3.0 inch lbs (0.4Nm)	Weight:.....0.5 lbs.



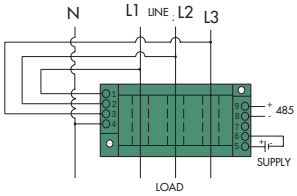
CRD5110 Single Element, 2-Wire



CRD5150 Single Element, 3-Wire

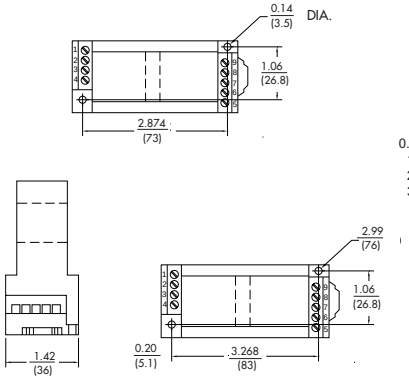


CRD5150 3 Element, 3-Wire



CRD5170 3 Element, 4-Wire

Connection Diagram



OUTLINE DRAWING

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, request a copy of the programming data sheets from CR Magnetics.