

# True RMS AC Current Transducer

## DIN RAIL / PANEL MOUNT, TRUE RMS



Single Element - 0.79" Window  
0.1 to 600 AAC Input Range



Two Element - 0.26" Window 0.1  
to 30 AAC Input Range



Three Element - 0.26" Window  
0.1 to 30 AAC Input Range

The **CR4100** Series True RMS Current Transducers and Transmitters are designed for applications where AC current waveforms are not purely sinusoidal. More precise and accurate than other transducers, these devices are ideal in chopped wave and phase fired control systems.

### Applications

Phase fired controlled heaters  
Quickly varying motor loads  
Chopped wave form drivers  
Harmonic currents

### Features

35mm DIN Rail or Panel Mount  
Available with 0-5 VDC, 0-10 VDC, 4-20 mA DC output  
24 VDC powered  
Use with external current transformers  
Highest precision available  
Connection diagram printed on case

### Regulatory Agencies

Recognized to meet UL 61010B-1  
Constructed to meet CAN/CSA-C22.2, No. 61010-1-2004  
Meets requirement of IEC 61010-1 and BS EN 61010-1



Use a 5 Amp  
Secondary Current  
Transformer to  
extend the ranges of  
all CR Magnetics  
Current Transducers



All single phase current  
transducers are available  
in split core design. Simply  
put an "S" at the end of the  
prefix\*  
I.E. CR4110S-10  
**\* Not UL Recognized**

Add suffix for input range

PART NUMBERS			
CR4110(S)	-		Single element with 0 - 5 VDC output (split core design)
CR4111(S)	-		Single element with 0 - 10 VDC output (split core design)
CR4120(S)	-		Single element with 4 - 20 mA DC output (split core design)
CR4150	-		Two element with 0 - 5 VDC output **
CR4160	-		Two element with 4 to 20 mA DC output **
CR4170	-		Three element with 0 - 5 VDC output **
CR4180	-		Three element with 4 - 20 mA DC output **

\*Two and three element transducers are available only in ranges of 0.1 to 30 AAC

- 5** - 0- 5 AAC \*\*
- 10** - 0-10 AAC \*\*
- 15** - 0-15 AAC \*\*
- 20** - 0-20 AAC \*\*
- 25** - 0-25 AAC \*\*
- 30** - 0-30 AAC \*\*
- 40** - 0-40 AAC
- 50** - 0-50 AAC
- 75** - 0-75 AAC
- 100** - 0-100 AAC
- 150** - 0-150 AAC

Ranges available up to and including  
600 AAC

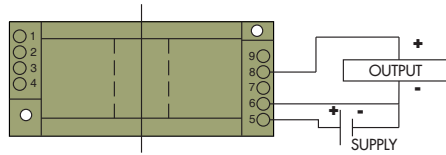
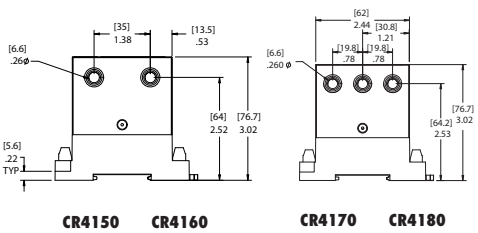
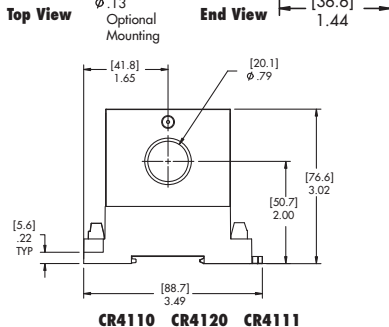
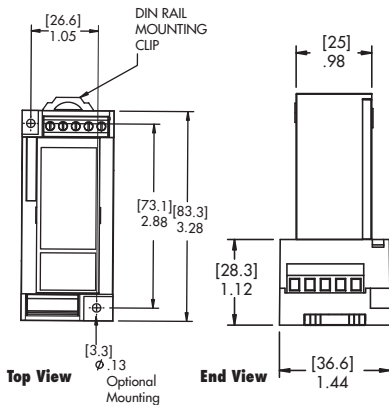
# True RMS AC Current Transducer

DIN RAIL / PANEL MOUNT, TRUE RMS

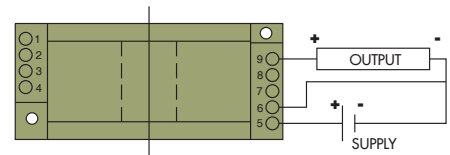
## SPECIFICATIONS

Basic Accuracy:.....	0.5%	Response Time:.....	250 ms max. 0-90%
Linearity:.....	10% to 100% FS	FS Relative Humidity:.....	5% to 95%, Non-Condensing
Calibration:.....	True RMS Sensing	Torque Specs:.....	3.0 inch lbs. (0.4Nm)
Thermal Drift:.....	500 PPM/°C	Weight:.....	0.5 lbs.
Operating Temperature:.....	0°C to +60°C	Supply Current:	
Installation Category:.....	CAT II	CR4110/11.....	Typical 15mA Max 25mA
Pollution Degree:.....	2	CR4120.....	Typical 25mA Max 40mA
Insulation Voltage:.....	2500 VDC	CR4150.....	Typical 25mA Max 75mA
Vibration Tested To:.....	IEC 60068-2-6,1995	CR4160.....	Typical 40mA Max 70mA
Altitude:.....	2000 meter max.	CR4170.....	Typical 20mA Max 60mA
Frequency Range:.....	20 Hz - 5 KHz	CR4180.....	Typical 55mA Max 110mA
MTBF:.....	Greater than 100 K hours	CR4110S.....	Typical 15mA Max 25mA
Cleaning:.....	Water-dampened cloth	CR4120S.....	Typical 25mA Max 40mA
Supply Voltage:.....	24 VDC ± 10%		
Output Load:.....	4-20 mADC - 0 to 500 Ω		
	0-5 VDC - 2K Ω or Greater		

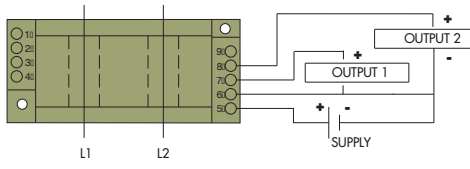
Transducers



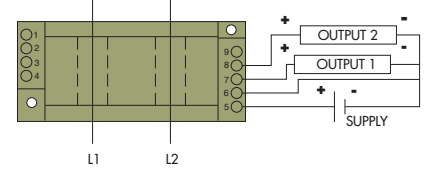
**CR4110** One Element 0 - 5 VDC Output  
**CR4111** One Element 0 - 10 VDC Output



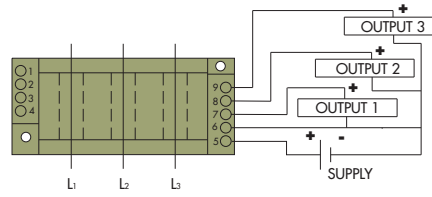
**CR4120** One Element 4 - 20 mADC Output



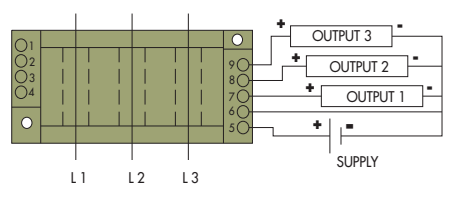
**CR4150** Two Element 0 - 5 VDC Output



**CR4160** Two Element 4 - 20 mADC Output



**CR4170** Three Element 0 - 5 VDC Output



**CR4180** Three Element 4 - 20 mADC Output

## CONNECTION DIAGRAM

## OUTLINE DRAWING

NOTE: The building installation must have a switch or circuit-breaker that is in close proximity and within easy reach of the operator. The switch or circuit breaker shall be marked as the disconnecting device for the equipment.



3500 Scarlet Oak Blvd. St. Louis MO USA 63122 V: 636-343-8518 F: 636-343-5119

Web: <http://www.crmagnetics.com>

33

E-mail: [sales@crmagnetics.com](mailto:sales@crmagnetics.com)