

CR Magnetics **CR8400** Series of Wire Lead Current Transformers are available in a wide range of sizes and materials to meet any AC current sensing needs. Our **General Purpose** designs are made from the highest quality silicon steel cores available, and meet most of the common AC current measurement needs. Our **Revenue Grade** CTs (-N) are made from a nickel alloy core which provides the most linear response over temperature and current level. A line of **Ground Fault** (-G) CTs for measuring low AC currents including electrical shields. The **High Frequency** (-F) products are designed for high frequency applications such as high frequency power supplies and motor drives.

## GENERAL PURPOSE CURRENT TRANSFORMERS

| Part Number | I <sub>r</sub> | V <sub>max</sub> RMS | T <sub>e</sub> (typ.) | DCR Ω | Frequency  |
|-------------|----------------|----------------------|-----------------------|-------|------------|
| CR8401-1000 | 10             | 2.2                  | 1009                  | 49    | 20 - 1 KHz |
| CR8410-1000 | 20             | 3.1                  | 1012                  | 41    | 20 - 1 KHz |
| CR8420-1000 | 50             | 5.2                  | 1018                  | 22    | 20 - 1 KHz |
| CR8420-2000 | 75             | 9.0                  | 1983                  | 90    | 20 - 1 KHz |
| CR8448-1000 | 30             | 6.3                  | 990                   | 26    | 20 - 1 KHz |
| CR8448-2000 | 50             | 13.7                 | 2046                  | 106   | 20 - 1 KHz |
| CR8449-1000 | 50             | 11.6                 | 1016                  | 35    | 20 - 1 KHz |
| CR8449-2000 | 75             | 23                   | 2046                  | 150   | 20 - 1 KHz |
| CR8450-1000 | 100            | 16.5                 | 1021                  | 21    | 20 - 1 KHz |
| CR8450-2000 | 200            | 32                   | 2037                  | 73    | 20 - 1 KHz |

## REVENUE GRADE CURRENT TRANSFORMERS

| Part Number   | I <sub>r</sub> | V <sub>max</sub> RMS | T <sub>e</sub> (typ.) | DCR Ω | Frequency  |
|---------------|----------------|----------------------|-----------------------|-------|------------|
| CR8448-2500-N | 40             | 6.6                  | 2510                  | 134   | 20 - 1 KHz |
| CR8449-2500-N | 50             | 10.0                 | 2490                  | 187   | 20 - 1 KHz |
| CR8450-2500-N | 75             | 12.0                 | 2512                  | 160   | 20 - 1 KHz |
| CR8459-2000-N | 200            | 11.5                 | 2011                  | 74    | 20 - 1 KHz |

## GROUND FAULT CURRENT TRANSFORMERS

| Part Number   | I <sub>r</sub> | V <sub>max</sub> RMS | T <sub>e</sub> (typ.) | DCR Ω | Frequency  |
|---------------|----------------|----------------------|-----------------------|-------|------------|
| CR8401-1000-G | 4              | 0.6                  | 1005                  | 49    | 20 - 1 KHz |
| CR8410-1000-G | 7              | 0.8                  | 1007                  | 38    | 20 - 1 KHz |
| CR8420-1000-G | 20             | 1.4                  | 1011                  | 44    | 20 - 1 KHz |

## HIGH FREQUENCY CURRENT TRANSFORMERS

| Part Number   | I <sub>r</sub> | V <sub>max</sub> RMS | T <sub>e</sub> (typ.) | DCR Ω | Frequency    |
|---------------|----------------|----------------------|-----------------------|-------|--------------|
| CR8448-2000-F | 50             | 3.9                  | 2015                  | 90    | 20 - 200 KHz |
| CR8449-2000-F | 75             | 7.4                  | 2017                  | 109   | 20 - 200 KHz |
| CR8450-2000-F | 100            | 8.5                  | 2020                  | 63    | 20 - 200 KHz |

I<sub>r</sub> = Maximum Input Current to be linearly sensed V<sub>max</sub> = Maximum Voltage (Saturation) CT will develop

T<sub>e</sub> = Effective turns ratio including losses (All Specifications tested at 60 Hz)

## PACKAGE DIMENSIONS AND OUTLINE (mm/in)

| Part Number Prefix | A min        | B max         | C max         | D max         | E Typ          | Part Number Prefix | A min         | B max         | C max         | D max        | E Typ        |
|--------------------|--------------|---------------|---------------|---------------|----------------|--------------------|---------------|---------------|---------------|--------------|--------------|
| CR8401             | 6.99<br>.275 | 17.53<br>.690 | 22.35<br>.880 | 8.26<br>.325  | 75.08<br>2.275 | CR8449             | 9.14<br>.354  | 26.0<br>1.02  | 31.8<br>1.25  | 17.0<br>.67  | 100<br>3.94  |
| CR8410             | 9.0<br>.35   | 22<br>.87     | 27.8<br>1.09  | 8.20<br>.323  | 73<br>2.87     | CR8450             | 13.08<br>.515 | 36.83<br>1.45 | 43.18<br>1.70 | 13.97<br>.55 | 88.9<br>3.50 |
| CR8420             | 15.0<br>.59  | 30.0<br>1.18  | 36.0<br>1.41  | 9.2<br>.36    | 100<br>3.94    | CR8459             | 19<br>.75     | 48<br>1.89    | 60<br>2.36    | 17.5<br>.67  | 200<br>7.88  |
| CR8448             | 7.11<br>.280 | 23.42<br>.922 | 29.46<br>1.16 | 11.05<br>.435 | 100<br>3.94    |                    |               |               |               |              |              |



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## CR8400 SERIES



### Applications

Motor Load Measurement  
Power Meters  
High Frequency Current Sensing  
Ground Fault Sensing

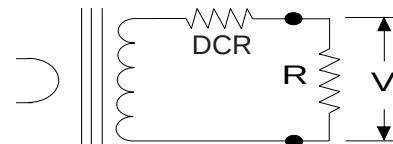
### Features

High Ratio  
Standard Footprints

### Specifications

Maximum Continuous Primary Current 4 X I<sub>r</sub>  
Insulation Voltage 3500 Vac/1min  
Storage Temp. -45°C thru +85 °C  
Operating Temp. General Purpose & Nickel -40°C thru +85 °C  
Operating Temp. High Frequency -40°C thru +65 °C

### Regulatory Agencies



$$V = \frac{I \times R}{T_e} \quad V_L = V_{max} - \left[ \frac{I \times DCR}{T_e} \right]$$

For best linearity, choose R such that V < 0.8 V<sub>L</sub>

