The **CR4395** Series, Current Sensing Relay provides an effective and highly stable method for monitoring electrical current. The current-carrying wire is routed through the opening extending from the top of the case. When current reaches the level set by the trip point adjustment, the relay trips and starts the adjustable timer. After the timer cycles the electromechanical relay is energized. A precision voltage reference circuit ensures a highly repeatable trip point.

### Applications
- Monitor Electrical Heater Elements
- Sense Motor Over/Under Loads
- Detect Lamp burn-out
- Indicate Phase Loss

### Features
- Variable Trip Point and Time Delay
- Monitors Currents from 1 AC to 100 AC Amps
- Electrical Isolation Between Circuits
- Output Relay Rated up to 20 Amps
- LED Trip Status Indicator
- Dead Band Prevents Relay Chatter
- Calibrated Dial Option Available
- External Current Transformers Available

### Specifications
- **Mounting:**
  - 3/16" dia. clearance holes on 1 15/16" by 2 15/16" centers
- **Environmental:**
  - Operating Temperature: -30° C to +60° C
  - Storage Temperature: -55° C to +85° C
  - Power-On Delay: 100 MS MAX
  - Hysteresis: 5% Max.
- **Input Supply Power:**
  - Typical 80mA Max 100mA
- **Sensed Current:**
  - Max. Continuous: 200% Full Scale
- **Frequency:** 60-400 Hz *
- **Altitude:** 2000 meters max.
  - (Contact factory for High Altitude applications)
- **Weight:** 0.5 LBS.

### Output Options
The Relay is available with three different output configurations, electromechanical relay, optoisolated NPN transistor or optoisolated triac. Specify desired selection in part number.

### RELAY (-ELR)
- **Arrangement:** 1 Form C (SPDT)
- **Contact Material:** Silver-cadmium oxide
- **Terminals:** 3/16" Male QC
- **Mechanical Life:** 10 million operations, typ. @ rated load
- **Electrical Life:** 100,000 operations, typ. @ rated load
- **Initial Contact Resistance:** 50 milliohms max. @ 500 mA, 12 VDC
- **Contact Rating:** UL508/873 & CSA

### DC SWITCHING (-NPN)
- **Vce (full off):** 30 VDC max.
- **Isink (full on):** 120 mADC max. @ rated full-on
- **Vce (full on):** 1.5 VDC @ 120 mADC Isink
- **Off state leakage current:** 5ua @ 30 VDC (typical)

### AC SWITCHING (-TRC)
- **Off state voltage:** 240 VAC RMS max.
- **Minimum switch voltage:** 24 VAC RMS
- **On state current:** 0.5 AAC RMS max. continuous
- **Switching mode:** Zero crossing
- **Off state leakage:** 60 ua @ 240 VAC max.
- **Terminals:** 2 @ 1/4" Male QC

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**The Professional Energy Monitoring Company**

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**WARNING** Cancer www.P65Warning.ca.gov
OUTLINE DRAWING

**TRIP STATUS**
- **EH** - Energized on High, trips when sense current is above trip point and returns to non-trip status when sense current is below the trip point.
- **EL** - Energized on Low, trips when sense current is below trip point and returns to non-trip status when sense current is above the trip point.
- **LH** - Latch on High, trips when sense current is above trip point and remains tripped until supply power is removed.
- **LL** - Latch on Low, trips when sense current is below trip point and remains tripped until supply power is removed.

**SUPPLY VOLTAGE**
- AC: 120 - 120 VAC, 240 - 240 VAC
- DC: 24D - 24 VDC

All supply voltage tolerances are ± 10 %.

**TRIP RANGE**
- 110 - 1.0 to 10 AAC
- 330 - 3.0 to 30 AAC
- 660 - 6.0 to 60 AAC
- 101 - 10 to 100 AAC

The trip ranges shown are for one wire pass through the window opening. The trip range may be proportionally lowered with additional wire passes through the window.

**TRIP ON DELAY**
- A - .5 to 6 Sec.
- B - 2 to 25 Sec.
- C - .1 to 1 Sec.
- X - none

Time-on delay is the time from when the relay trips to when the output energizes. The ranges are guaranteed minimum, actual range may be slightly greater.

**TRIP POINT DIAL**
- **CD** - Calibrated Dial
- **FP** - Fixed Trip Point

(Specify value of fixed trip point with order)

**OUTPUT OPTIONS**
- **ELR** - Electromechanical Relay
- **NPN** - Optoisolated NPN Transistor
- **TRC** - Optoisolated Triac, Zero Crossing

**PART NUMBER**

| CR4395 | - | - | - | - | - | - | - | - | - |

**Example Part Numbers:**
- **CR4395-EH-120-110-CD-ELR-I** (Relay with CT on board)
- **CR4395-EL-240-330-CD-NPN-R1** (Relay with external CRGFS-100)