

# CURRENT SENSING RELAYS

## CU SERIES UNDERCURRENT AC PLUG-IN



- ◆ Monitors AC single phase currents for undercurrent conditions
- ◆ Three separate current monitoring ranges covering 0.1 - 10 amperes
- ◆ External CT can be used to extend ranges
- ◆ Adjustable Drop-out Setting with Fixed Pick-up Setting
- ◆ Adjustable time delay of 0.1-10 seconds on drop-out
- ◆ LED indicates output relay status
- ◆ Choice of compact 8 Pin SPDT or 11 Pin DPDT plug-in case
- ◆ 10A output contacts



(with appropriate socket)

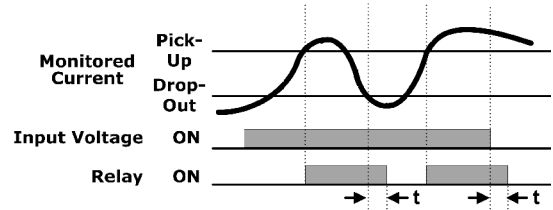


**800-238-7474**

**www.macromatic.com**  
**sales@macromatic.com**

The CU Series is used to detect an undercurrent condition. The drop-out current setting is user-adjustable within one of three ranges as shown in the Product Selection Table below. An external current transformer can be used to extend the range beyond 10 amperes.

The pick-up current setting is fixed at +5% of the selected drop-out setting. The relay will energize when the monitored AC current is above the pick-up setting. It will de-energize when the monitored AC current is below the drop-out setting for a period longer than the adjustable time delay (t) of 0.1-10 seconds. This delay prevents nuisance tripping caused by momentary line dips. The relay will energize when the current rises 5% above the drop-out setting.



### SPDT 8 Pin Plug-in

Pick-up Setting	Drop-Out Setting	Input Voltage	Current Range Monitored	Product Number	Wiring/Socket
Fixed (At +5% of Drop-Out)	Adjustable (Across Monitored Range)	24V AC	0.1 - 1A 0.5 - 5A 1 - 10A	CUP01A68 CUP05A68 CUP10A68	<p>DIAGRAM 21</p>
		120V AC	0.1 - 1A 0.5 - 5A 1 - 10A	CUP01A62 CUP05A62 CUP10A62	

### DPDT 11 Pin Plug-in

Pick-up Setting	Drop-Out Setting	Input Voltage	Current Range Monitored	Product Number	Wiring/Socket
Fixed (At +5% of Drop-Out)	Adjustable (Across Monitored Range)	24V AC	0.1 - 1A 0.5 - 5A 1 - 10A	CUP01A28 CUP05A28 CUP10A28	<p>DIAGRAM 22</p>
		120V AC	0.1 - 1A 0.5 - 5A 1 - 10A	CUP01A22 CUP05A22 CUP10A22	

Application Data & Dimensions—Page 21  
Sockets & Accessories—Pages 80 & 81

# CURRENT SENSING RELAYS

## CM, CO & CU SERIES

### AC PLUG-IN

#### APPLICATION DATA & DIMENSIONS

#### APPLICATION DATA

**Input Voltage Tolerance:**

AC Operation: +10/-15% of nominal at 50/60 Hz.

**Load (Burden):**

Less than 5VA

**Current Settings:**

CM & CO Series

Pick-up: Adjustable throughout current range monitored

Drop-out: Fixed at 95% of pick-up setting (CMP & COP Series); or Adjustable from 50-95% of pick-up setting (CMKP & COKP Series)

CU Series

Pick-up: Fixed at 5% above adjustable drop-out setting

Drop-out: Adjustable throughout current range monitored

**Response Times:**

CM & CO Series

Pick-up: Fixed 100ms

Drop-out: Adjustable 0.1-10 seconds

CU Series

Pick-up: Adjustable 0.1-10 seconds

Drop-out: Fixed 100ms

**Output Contacts:**

10A @ 240V AC/30V DC, 1/2HP @ 120/240V AC (N.O.),

1/3HP @ 120/240V AC (N.C.)

**Life:**

Mechanical: 10,000,000 operations

Full Load: 100,000 operations

**Temperature:**

-28° to 55° C (-18° to 131° F)

**Indicator LED:** Green when Input Voltage is applied;

Red when Relay is energized

**Reset:** Automatic

**Mounting:**

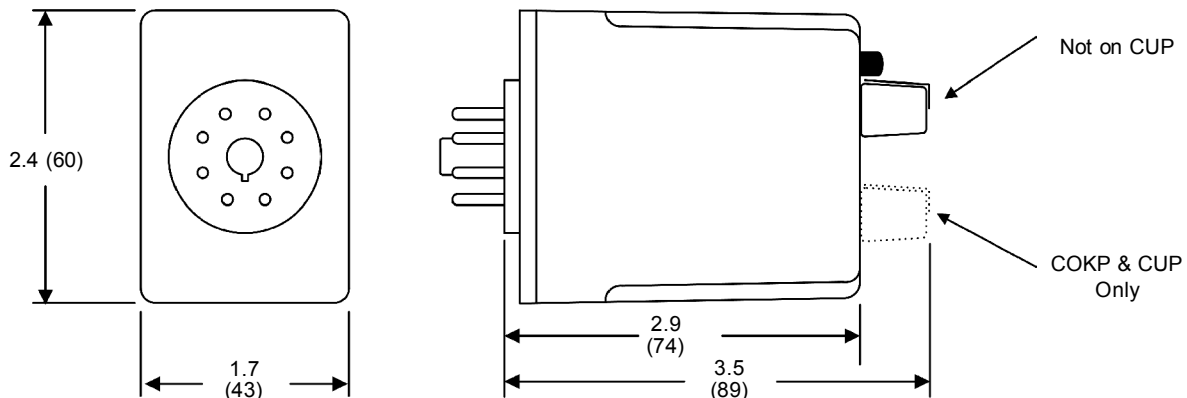
Requires an 8 or 11 pin octal socket--see page 80.

**Approvals:**

Low Voltage & EMC Directives  
EN60947-1, EN60947-5-1

with  
appropriate  
socket  
File #E109466

#### DIMENSIONS



All dimensions are inches  
(millimeters)