

## MONITORS LOAD CURRENTS

### DESCRIPTION

The Model CMS-400B monitors load currents of devices such as fans, pumps and other critical items in HVAC systems. The solid-state relay output provides a run-status indication for these devices to compatible DDC/PLC control systems. The relay output of this model is completely isolated from the input current.

Units with the VF option are suitable for use in Variable Frequency Drive (VFD) systems with a frequency range of 12 to 60Hz. (order Model CMS-400B-VF)

NOTE: CMS-400B was previously CMS-400B-N.O.



## SPECIFICATIONS

### INPUT

Current Range..... 0.75-20A  
 Frequency  
 Standard ..... 60Hz  
 With VF option ..... 12-60Hz

### OUTPUT

Solid State Relay..... Form A, Normally Open, 120V, 2A, dc or ac noninductive  
 Response Time  
 Standard ..... 25ms  
 With VF option ..... 2s  
 Threshold Setting ..... Fixed at 0.75A,  $\pm 0.2A$   
 Relay Action ..... Load current *under* threshold = Open  
 Load current *over* threshold = Closed

### INSTRUMENT POWER

All models..... Self Powered

### TEMPERATURE

Operating Range..... 10°-135°F

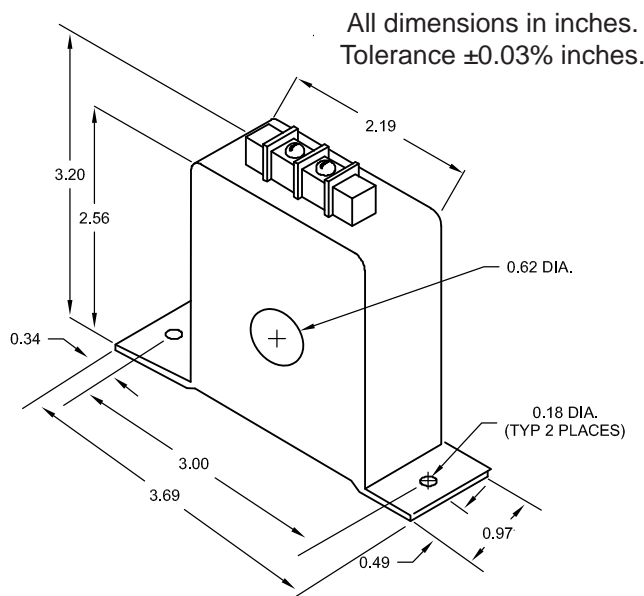
### PHYSICAL

Enclosure ..... Noryl SE1X, UL 94V-1  
 Net Weight..... 0.25lb

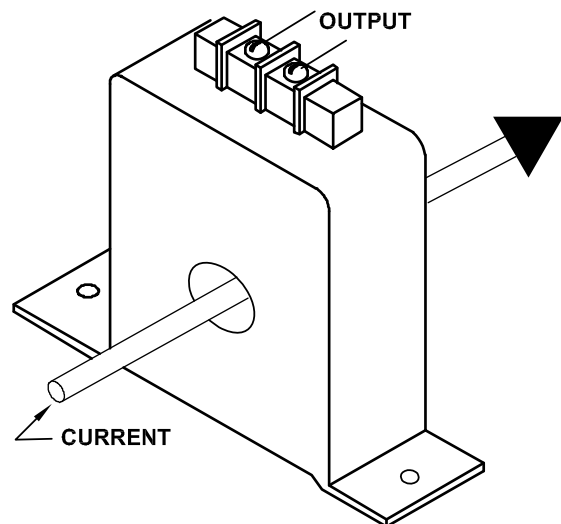
### CONNECTIONS

Input ..... Current-carrying cable is inserted through circular window opening. Maximum cable size #3/0 (dia. <0.62")  
 Output ..... Wire-retaining screw terminals No. 6/32 Maximum wire size #14 AWG

## CASE DIMENSIONS



## CONNECTIONS



Dwg# 0902-01085-B Rev--

**INSTALLATION**

1. The CMS-400B may be mounted in any type of protected enclosure, motor starter, motor control center, control system field panel, or disconnect switch.
2. The current-carrying cable must pass through the circular window opening. Permanently affix the CMS-400B to the cable with a conventional cable tie or similar non-conductive material. The unit may be oriented in any position.
3. Alternatively the CMS-400B may be mounted to any flat surface, such as the back panel of the enclosure - see Case Dimensions for mounting dimensions.
4. Should mounting space be limited, the mounting feet of the CMS-400B may be snapped off.

**SETUP**

1. After the CMS-400B has been installed energize the load and observe the solid state relay output status.
2. When load current is under 0.75A the relay will be open.
3. When load current is over 0.75A the relay will be closed.
4. No other setup is required.

Note 1: The CMS-400B current switch uses a solid state relay output. Contact closure can be verified by a continuity meter.

Note 2: The CMS-400B solid state relay output may be used to switch either dc or ac noninductive loads of up to 120V and 2A.

Note 3: For measured load currents of less than 0.75A two or more turns of the main current-carrying cable may be taken through the window to provide at least 0.75 ampere-turns.