

# POWERLOGIC® Circuit Monitor Series 4000T

## Reference Manual Addendum

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## INTRODUCTION

This instruction bulletin is an addendum to the PowerLogic Circuit Monitor Series 4000T Reference Manual (63230-300-216/A1).

## CIRCUIT MONITOR INSTALLATION

This section describes the circuit monitor hardware, provides dimensional drawings, and explains how to mount the circuit monitor.

### Description

Figure 1 shows the parts of the circuit monitor. A brief description of each part follows in Table 1 on page 3.

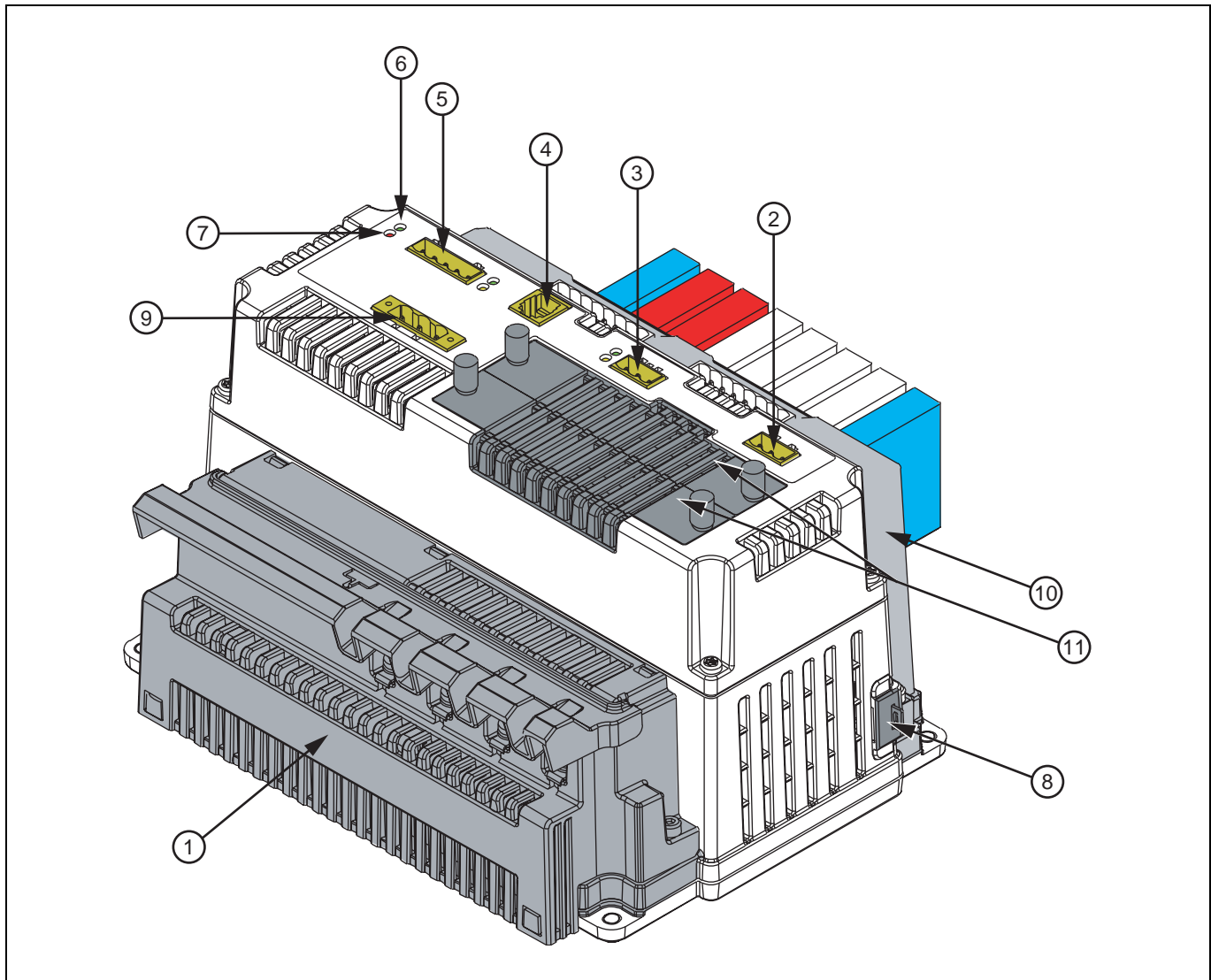


Figure 1: Parts of the Series 4000T Circuit Monitor

**Table 1: Parts of the Circuit Monitor with Transient Detection**

Part	Description
① Current/voltage module for transient detection	The current and voltage connections are housed in this removable current/voltage module for transient detection (CVMT), which plugs directly into the main housing of the circuit monitor. All metering data is acquired through the CVMT. Because the CVMT is removable, it can be easily interchanged with enhanced current/voltage modules for transient detection as they become available without removing the entire circuit monitor.
② KYZ	KYZ pulse output.
③ RS-232 port (COM2) with transmit and receive LED indicators	The RS-232 port can be used for direct communications to the PC. The port has two corresponding LEDs. The yellow LED illuminates when the circuit monitor is receiving data (RX) across the communications; the green illuminates when data is being transmitted (TX).
④ RJ-12 display comms port	The RJ-12 port is used for communications and control power connections to the remote display.
⑤ RS-485 port (COM1) with transmit and receive LED indicators	The RS-485 port is used for communications with daisy-chained devices. The port has two corresponding LEDs. The yellow LED illuminates when the circuit monitor is receiving data (RX) across the RS-485 communications; the green illuminates when data is being transmitted (TX).
⑥ Power LED indicator	A steady-state green LED is continuously illuminated when the circuit monitor is powered up.
⑦ Maintenance LED indicator	This LED illuminates red if the circuit monitor is experiencing an internal problem and requires service.
⑧ Access door	The access door provides access to a security switch that, when activated, locks setup information and metering data in the circuit monitor. This door also lets you access the memory chip for upgrading the circuit monitor's memory.
⑨ Control power supply connector	Connection for control power to the circuit monitor.
⑩ I/O Extender	Optional, external field-installable I/O accessory that lets you expand the input and output capabilities of the circuit monitor. The I/O extender plugs directly into the main housing of the circuit monitor and holds up to 8 individual plug-on digital or analog I/O points. Many combinations of inputs and outputs can be configured. Standard modules are available, or you can select other combinations of inputs and outputs and field-install the pluggable I/Os.
⑪ Option card slots	Optional cards fit in the two slots provided on the top of the circuit monitor, such as a digital I/O card (outputs rated up to 10 A) or an Ethernet communications card.

Dimensions

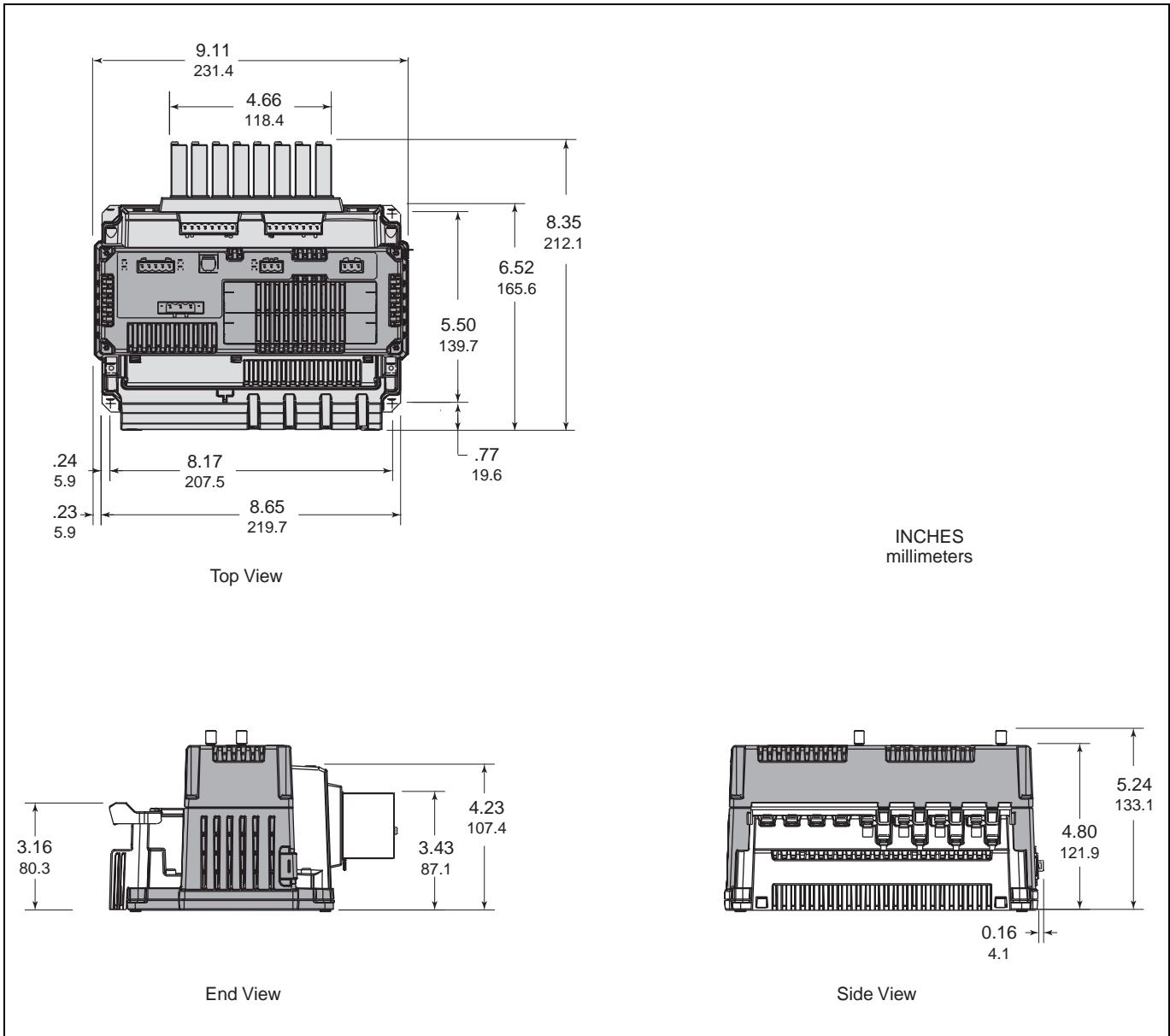


Figure 2: Circuit monitor dimensions

## Mounting

Before mounting the circuit monitor, understand all mounting considerations described in the following section.

### Mounting Considerations

When choosing a mounting location, consider the following points:

- Allow for easy access to all parts of the circuit monitor. Allow extra space for all wires, fuse disconnects, shorting blocks, accessories, or other components. Make sure to route the wires so that they do not cover the option card slots, I/O extender, current/voltage modules, or cooling vents on the circuit monitor. Refer to Figures 4 and 5 on page 6 for required clearances.
- For European Community (CE) compliance, see "Required Protection for CE Compliance" on page 37 of the CM4000 installation manual (63230-300-209).
- The circuit monitor can be mounted horizontally or vertically. The recommended orientation is to mount it vertically in an equipment metering compartment, making sure the control power connector is towards the top. See Figure 3 for the two correct mounting positions.

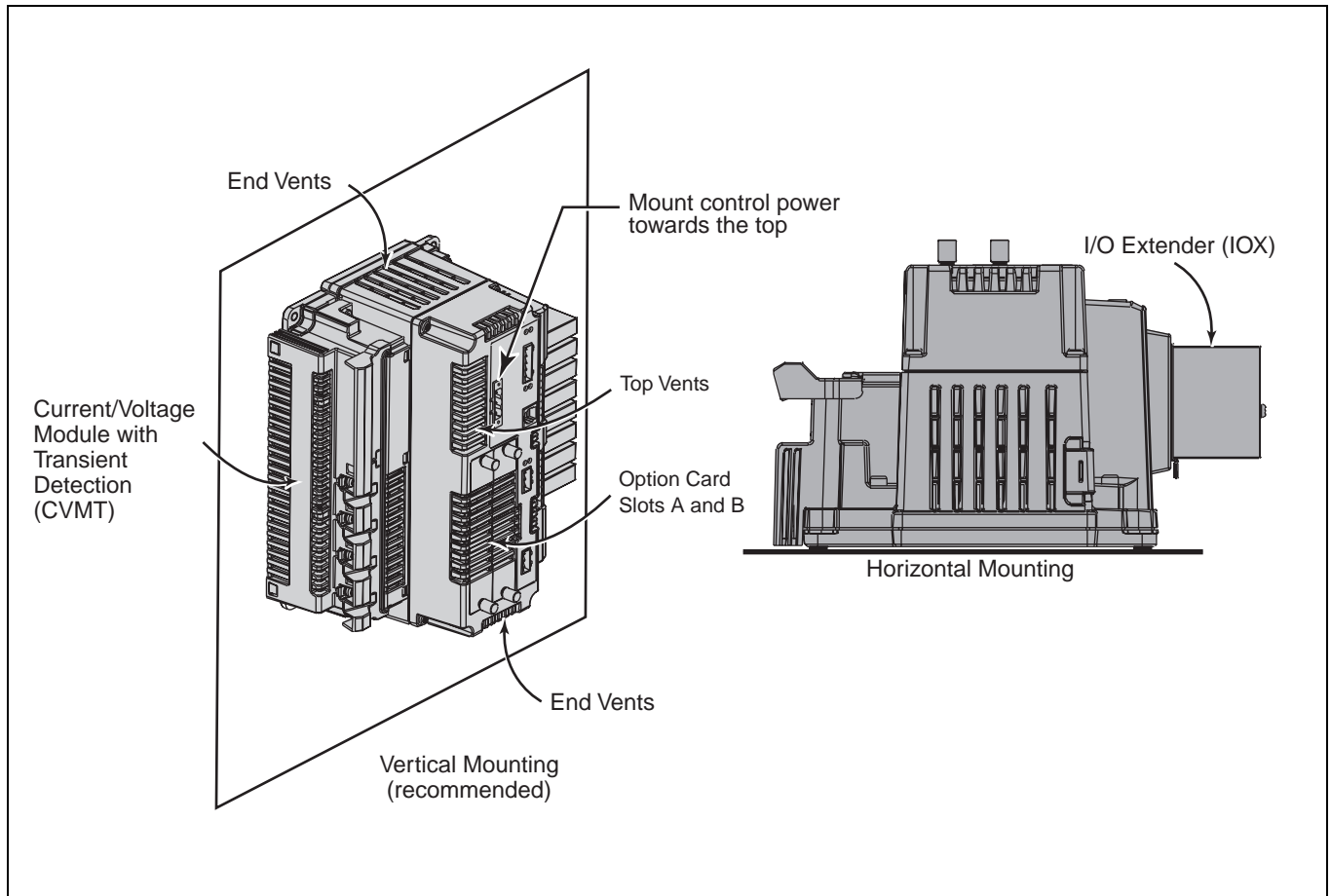


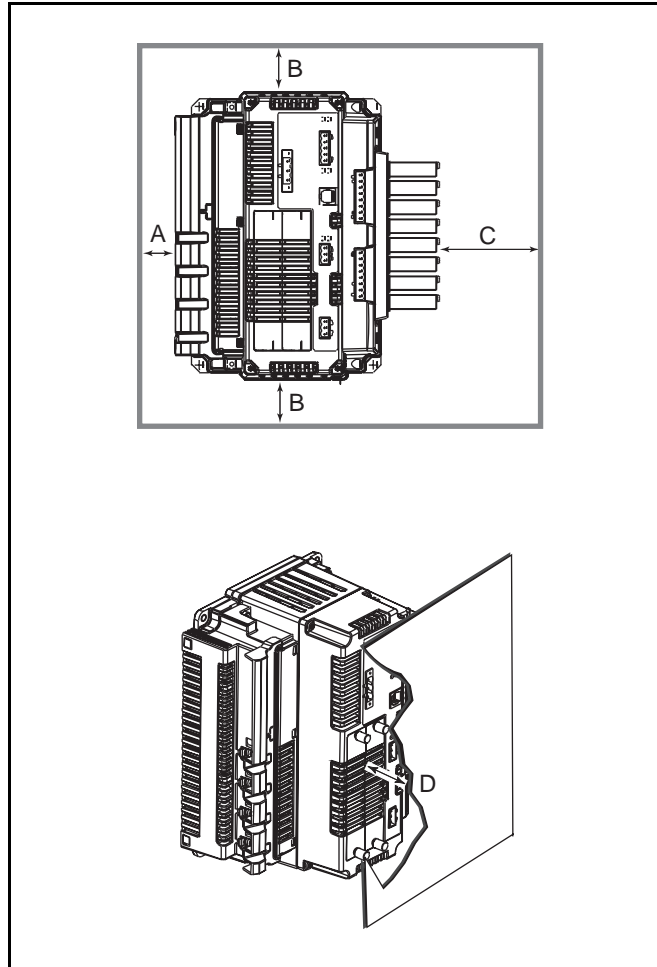
Figure 3: Possible ways to orient the circuit monitor

## CAUTION

### IMPROPER VENTILATION

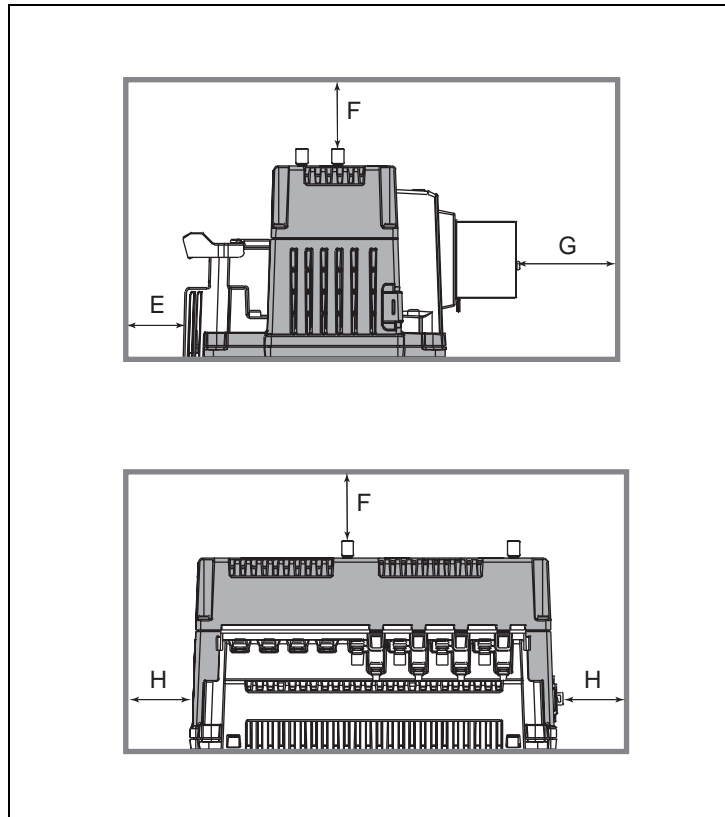
- Do not mount the circuit monitor to a ceiling or in vertical orientations other than the one indicated in this instruction bulletin.
- Provide the following clearances around the circuit monitor as illustrated in Figures 4 and 5 and Table 2:

**Failure to follow these instructions can result in equipment damage.**



**Figure 4: Clearance for vertically mounted circuit monitors**

*NOTE: Use Table 1 on page 3 to determine clearance values.*



**Figure 5: Clearance for horizontally mounted circuit monitors**

*NOTE: Use Table 2 to determine clearance values.*

**Table 2: Clearance values based on ambient temperature**

Ambient Temperature	Inches (millimeters)							
	A	B	C	D	E	F	G	H
less than or equal to 50°C (122°F)	1.0 (25)	1.0 (25)	2.5 (64)	1.0 (25)	1.0 (25)	2.0 (51)	2.5 (64)	1.0 (25)
greater than 50°C (122°F)	1.5 (38)	3.0 (76)	3.0 (76)	2.0 (51)	1.5 (38)	3.0 (76)	3.0 (76)	2.0 (51)

- Locate the circuit monitor in an area where ambient conditions fall within the acceptable range. The circuit monitor's ambient temperature range is -20°C to +70°C when mounted vertically with one or no option cards installed and an I/O extender (IOX) with digital I/O modules installed. See Table 3 on page 8 for operating temperatures.

**Table 3: Operating temperatures**

Mounting Orientation	Number of Options Cards	Ambient Temperature Rating ②
Vertical	0 or 1	-20°C to +70°C
Vertical	2	-20°C to +65°C
Horizontal	0 to 1	
Horizontal	2	-20°C to +60°C
<b>With I/O Extender (IOX) Option equipped with analog I/O modules①</b>		
IOX-2411 (or custom IOX with up to 2 analog modules)		0 to +60°C
IOX-0404 (or custom IOX with 4 analog modules)		0 to +50°C

① No more than four analog I/Os can be installed in the I/O Extender (IOX). Do not mount two analog modules side by side. If using two analog modules, place them at opposite ends of the extender. See the documentation that ships with the I/Os for instructions on installing I/Os.

② Ambient temperature refers to the immediate environment of the circuit monitor, including the temperature within the enclosure in which it is mounted.

Electrical equipment should be serviced only by qualified maintenance personnel. No responsibility is assumed by Square D for any consequences arising out of the use of this material.