Model CM-400

MFC Power Supply/Control Module

Porter Model CM-400 is a high performance microprocessor based 4-channel power supply/ control module designed for use with Porter Mass Flow Meters and Controllers. An 8-line, backlit LCD display provides selectable data on the status of the 4 channels simultaneously; low noise, thermal overload protected +15 Vdc device power is provided on each channel. The CM-400 accepts user selectable current or voltage input signals and supplies a selectable setpoint signal for each channel. In addition to the analog I/O, a digital communication port is included for computer/PLC interface. A programmable multi-channel blend control and totalizer with batch function allows the CM-400 to precisely interact with Porter MFCs in a versatile and functional gas management system.

Contact Information:

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Product Features and Options:

- 4 Independent Channels
- Displays in Selectable Engineering Units
- Multiple I/O Configurations
- Programmable Gas Correction Factors
- Programmable Multi-Channel Blend Control
- Totalizer and Batch Control
- +15 Vdc MFC Power Output
- 110/240 Vac Operation

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Specifications

Programmable Control and Measurement Functions

Channels	Four independent channels
Rate, Batch, Blend, Measure	0.000 to 999999
Blend Ratio Percent	0.000 to 999.999
Totalizer	0.000 to 19,999,999,999
Gas Correction Factor	0.000 to 999.999
Input and Output Signal Selection	Volts or mA, independent, mix or match
Input and Output Full Scale Setting	Independent, 0.000 to 999,999
Setpoint Source	Keypad or RS232

Keypad/Display Window

8-Key Metal Dome Tactile with Selectable Audio Beep	
Construction	Splash proof and chemically resistant
Hot Keys for Instant Access	Setpoint (rate, batch, blend), VOR
System Power	Key selectable power down, power up

Environment

Temperature/ Humidity	Operating: 32 to 122°F (0 to 50°C); 0 to 95% non-condensing Ship/Storage: -40 to 185°F (-40 to 85°C); 0 to 95% non-condensing
Warm-up	15 min typ to rated accuracy
Data Reliability	Data Retention: Non-volatile RAM/ROM, 100 year retention Self-Diagnostics: On power up, memory checksum, communications, system status, display and keypad operation
Enclosure	Material: ABS Cycolac Resin FR23 Weight: 1.4 lbs (635 g) Panel Cut-Out: See dimensions. 0.25" (6.35 mm) maximum panel thickness with optional panel mount kit.

Electrical

Input Electrical Characteristics

Voltage Input	0–5, 0-10, 1–5, 2–10 V
Volts Input Impedance	10 K Ohms
Current Input	0–20, 4–20 mA
Current Input Impedance	100 Ohms

Output Electrical Characteristics

Voltage Output	0–5, 0–10, 1–5, 2–10 V
Voltage Output Load	2 K Ohms minimum
Current Output	0–20, 4–20 mA
Current Output Load	0–375 Ohms
Power Supply Output	+15 Vdc, 1.4A

Channel Connectors (4)

15-pin female D
Provides signal and power to connected devices

Serial Port

EIA-TIA232D full duplex D9S Load 4.7 K max

Power Supply Requirements

Required Input	100–240 Vac, 47–63 Hz
Instrument Power Draw	0.8 W

Graphic Display

8-line x 40-character LCD display with backlight

Programmable Display Configuration

Two lines per channel
Line 1, Process Variable: Rate, Total, or Signal
Line 2, Setpoint: Rate, Batch, Blend, or Signal
Off: Unused individual lines can be turned off

Certifications

CE Mark	EN61326-1 and EN61010-1
FCC	Part 15 Class A, Part 68
RoHS	EPD 2002/95/EC, 01Jul2006
UL	UL 61010 Electrical Safety for General Purpose Indoor Use

Mounting Options

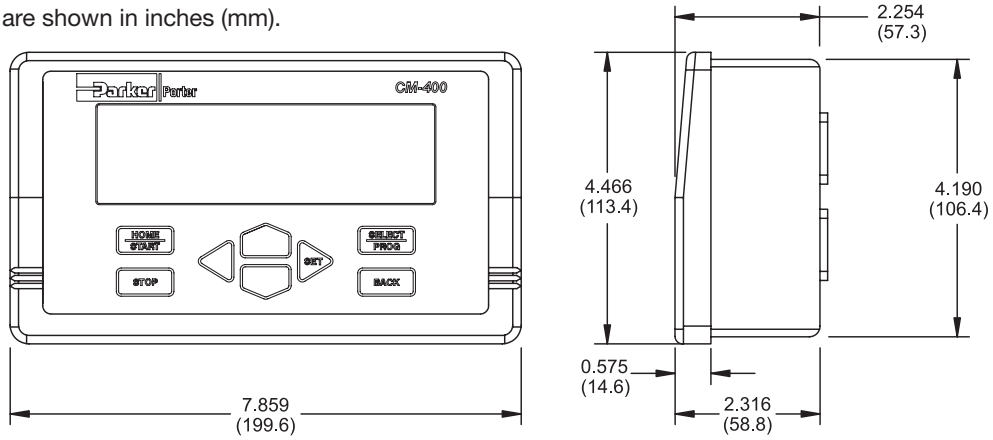
- Table Top Kit (included)
- Panel Mount Kit

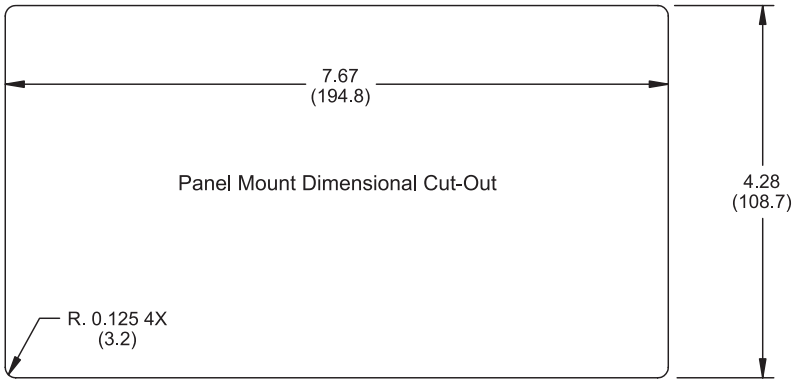
Communications

Full communications capability for remote readout set-point, control, programming, and data acquisition

Dimensions

Dimensions are shown in inches (mm).



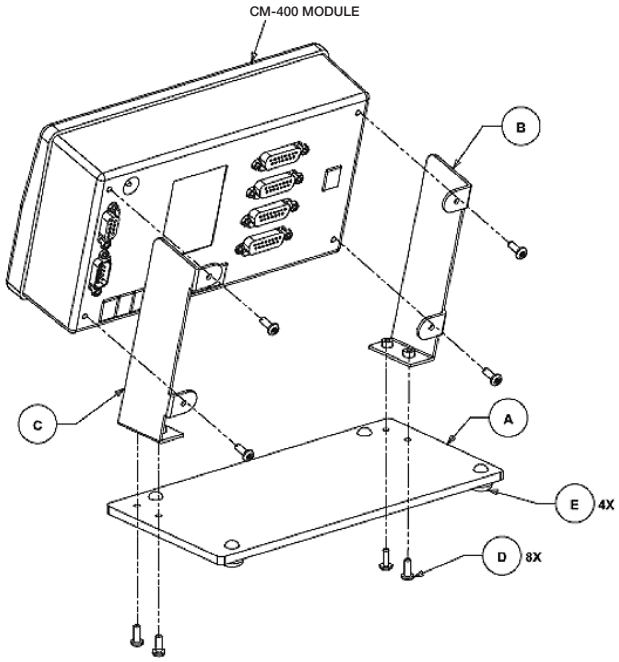


NOTE:
All tolerances
are ±0.20 (±0.5)

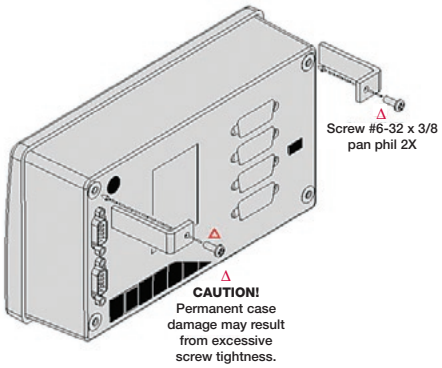
Table Top Stand Mount Installation

Parts List

Item	Description
A	Base
B	Left Hand Bracket
C	Right Hand Bracket
D	6-21 x 3/8" Pan Hd Phillips Screws, Qty 8
E	Mounting Feet, Qty 4



Panel Mount Detail



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