

OCi-1000M Series Energy Flow Computers



General Description

The 1000M has been used as general purpose hardware platform for a variety of stand-alone or networked instruments mostly related to flow measurement. It has either 4 or 8 analog inputs and one or three analog outputs (typical 4-20 mA signals) including a 24vdc Power Supply to energize all input and output loops.

Some of the application software running on this platform are:

Chilled/Hot Water Btu Computer

Most widely used application, a Btu Computer collects data in real time from any type of flowmeter and two RTD sensors. The two

temperature points are at the water supply and return lines. Data is displayed locally on counters as Total Btu's, Ton-Hrs, Gallons, and instantaneous flow rates in Btu/hr, Tons, GPM etc.

Steam Flow Computer

Most common application is saturated steam metering from flow rate and saturation pressure. Totalizes pounds or Kg of steam and displays instantaneous flow rate. Superheated steam requires a steam temperature input as well. In orifice metering of steam, dual DP's across a common orifice may be used to extend turn-down. The computer auto-selects the DP Transmitter.

Gas Flow Computer

Natural gas or any other fuel may be metered from flow meter, pressure, temperature inputs. Computes SCFM and totalizes SCF or mass.

All above may be networked in a serial RS-485 loop and polled by the OCI Energy Management PC program (EMS) running under Win95/NT. Real time monitoring and retrieval of stored data in each field unit are common tasks of the EMS. Information is used by District Energy companies for billing and/or maintenance purposes.

General Specifications

Inputs:

Four (optional eight) analog channels = 4-20 mA
Input Resistance = 250 Ohms
Loop Supply = 24vdc (furnished by internal Power Supply)

Optional Input Card = FX-504D Dual Channel RTD Transmitter Card for Platinum Temp. Sensors

Frequency Input = Pulse or sq. wave from turbine, vortex or mag meters, 0-1000 Hz. Typical range, 10,000 Hz. Maximum. Special software available for low frequency pulse rates from PD meters

Outputs:

One 4-20 mA proportional to Btu (or mass rate) standard. Optional card for two more analog outputs (volts or mA). Load resistance = 800 ohms maximum.

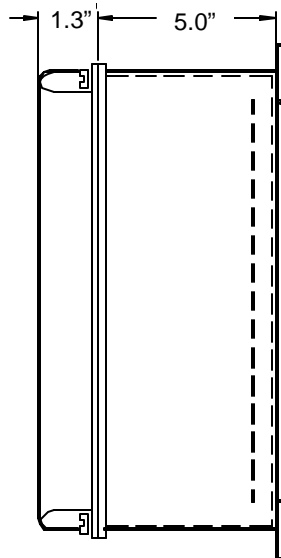
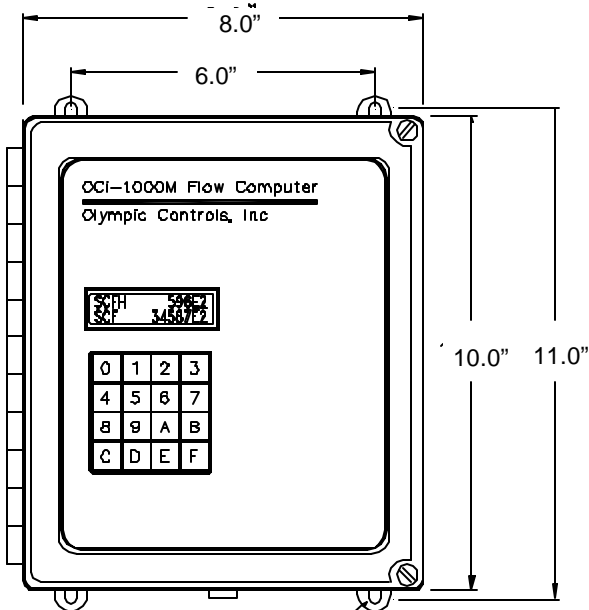
Contact output, SPST N.O. closing for 20 ms to drive external electromechanical counter

Display:

Dual line (16X2) alphanumeric LCD used to display and/or enter variables with 4X4 keypad

Power:

117 VAC (220 optional) +/-10%, 15 watts maximum



0.312" X 0.5" SLOT

MATERIAL: FIBERGLASS
FINISH: FLAT GREY

OCi-1000M-N4X
General Dimensions
NEMA-4X Weatherproof
Enclosure

Other Housings Optional



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