

NUFLO™

MC-II™ Plus Weatherproof (WP) Flow Analyzer

The NuFlo™ MC-II™ Plus WP Flow Analyzer is a weatherproof instrument which provides a continuous display of instantaneous flow rate and accumulated total volume of liquid or gas based on a turbine flow meter input signal. It combines ease-of-use and functionality for a truly user-friendly flow analyzer.

The liquid crystal display simultaneously displays seven-digit totals and six-digit flow rates, as well as a selection of commonly used engineering units for rate and volume. The calibration is implemented by entering the calibration factor of the flow meter and selecting the desired units of measurement. It automatically calculates its own divisor. When used with a gas turbine meter, you input gas calculation parameters and the flow analyzer self-calculates the calibration factor for gas in standard cubic feet.

The unique combination of inputs and outputs allows flexibility of use in the field. The MC-II™ Plus WP Flow Analyzer connects to a turbine meter using quick disconnects. It takes the turbine meter signal directly in, without the use of pre-amplifiers. A remote reset input allows the volume to be cleared via a remote computer. The user can select either a 4-20 mA output or an amplified flow meter frequency output to feed to remote equipment.

Features

- Magnetic pickup input
- Simultaneous indication of rate and volume
- 7-digit volume, 6-digit rate
- Analog output – loop powered
- Volumetric pulse output – optically isolated

Display

- 7-digits for total
- 6-digits for rate
- Character height – 0.300-in.
- Update period: 2 seconds
- Units of measurement
 - BBL, GAL, M3, and MCF for volume
 - BPD, GPM, M3/D, and MCF/D for rate
- User defined units implemented by entering a divisor and rate multiplier



Calibration

Liquid flow meter calibration:

- User enters calibration factor of meter and selects units of measurement.

Gas flow meter calibration:

- User enters calibration factor of meter, pressure and temperature parameters, and Fpv.

Input

Turbine Meter Input:

- Front panel keypad configurable sensitivity adjustment
- Sensitivity adjustment range: 20 mV P-P to 120 mV P-P
- Frequency range: 15 to 3500 Hz
- Frequency measurement accuracy: 0.015% of reading

Remote Reset Input

- Optically isolated (bi-directional) input
- Supply range: 3.0 - 30 VDC
- Minimum contact duration: 130 mS

Outputs

Analog Output:

- 4-20 mA, loop powered (two-wire)
- 16-bit resolution
- Accuracy: 0.05% of FS @ 25°C, 50 PPM/°C temperature drift
- Loop drop: 8.0 VDC
- Calibration via Keypad
 - Zero and Full Scale Engineering Values
 - Hardware (DAC) Calibration
- Battery backup
- Update period: 1 second

Volumetric Pulse Output:

- Optically isolated open-collector output
- Output rating: 40 mA maximum @ 30 VDC
- Software configurable pulse width duration and pulse representation
 - Pulse width duration: 65, 130, 195, 260, 520, 1040 milliseconds
 - Pulse representation: 0.001, 0.01, 0.1, 1, 10, 100 volume units

Amp & Square Output:

- Open-drain transistor output of turbine meter input signal
- Output rating: 50 mA @ 30 VDC
(analog output and amp & square outputs are mutually exclusive – choose one or the other.)

Packaging

- Weather proof fiberglass enclosure
- Instruments mounts atop turbine meter
- Optional remote mount bracket permits mounting to a 2-in. pole

Power Supply Options

- Internal lithium battery – 2 year minimum life
- External power supply (8 to 30 VDC reverse polarity protection)
- Internal battery backup
- Loop powered (4-20 reverse polarity protected) internal battery backup

Environmental

Operating Temperature Range:

- -40°F to +167°F (-40°C to +75°C)

Humidity:

- 0 - 90% non-condensing

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