

NUFLO™

# MC-II™ Plus Explosion Proof (EXP) Flow Analyzer

The NuFlo™ MC-II™ Plus EXP Flow provides a more robust option for calculating and displaying instantaneous flow rates and accumulated totals based on a turbine flow meter input signal. It combines ease-of-use and functionality for a truly user-friendly totalizer.

The liquid crystal display simultaneously displays seven-digit totals and six-digit 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. It is that simple. It even lets you input gas calculation parameters and 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 EXP 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 total to be cleared from a remote computer. The user can select either a 4-20 mA output or an amplified flow meter frequency output which may be used by remote equipment to calculate flow rates and volume. This explosion proof instrument is an all-in-one instrument. It is truly the next generation of the MC-II™.

## 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.

## Inputs

### Turbine Meters:

- 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 Max @ 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

- Explosion Proof – CSA (NRTL/C) use in USA/Canada
- Class I, Div I, Groups B, C, D
- Class II, Div I, Groups E, F, G

## 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

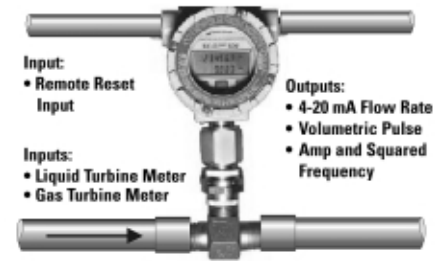
## Environmental

### Operating Temperature Range:

- -40°F to +167°F (-40°C to +75°C)

### Humidity:

- 0 - 90% non-condensing



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