

## NUFLO MC-III WP Flow Analyzer

Cameron's NUFLO™ MC-III™ WP Flow Analyzer offers state-of-the art liquid and gas measurement with data logging and Modbus® communications in an easy-to-use weatherproof totalizer. With the capacity to record up to 384 daily flow logs, 768 hourly logs, and 345 event logs, the MC-III WP is a powerful addition to any flow measurement operation.

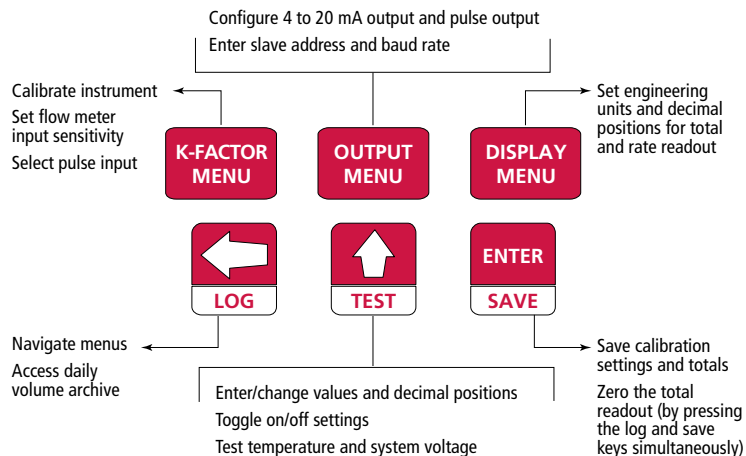
### Features

The MC-III WP offers:

- RS-485 Modbus communications
- Extensive log archival capacity
- High-speed downloads (less than a minute, based on 115 K baud)
- Easy-to-read LCD displays
- 12-point linearization
- Simultaneous indication of rate and total
- Loop-powered analog output
- Nonvolatile memory
- Password-protected security options
- Direct or remote mount

### Keypad Configuration

The MC-III WP is easily configured with the six-button keypad on the front of the instrument. Built-in shortcuts to common functions (see figure below) reduce the user's time spent on-site.



### Inputs/Outputs

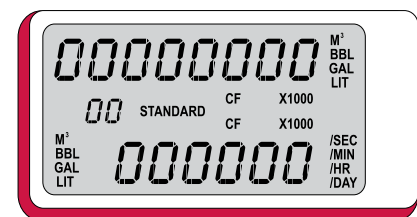
The MC-III WP connects to a turbine meter or a pre-amplifier. Users can select a 4 to 20 mA output, a pulse output, or an amplified flow meter frequency output that allows remote equipment to calculate flow rates and volume.



*Modbus communication, logging and accurate flow measurement – all in one compact weatherproof device. Each unit is supplied with one conduit hub for I/O access; two seals can be replaced with additional hubs (as shown).*

### Calibration

Calibrating the MC-III WP for liquid measurement is as easy as entering the calibration factor of the flow meter and selecting the desired units of measurement. The instrument automatically calculates its own divisor.



When the instrument is paired with a gas flow meter, the user enters the calibration factor of the meter, pressure and temperature parameters and FPV via the MC-III interface software. The wide variety of unit options for total and rate gives users the freedom to customize the display, inputs and outputs for specific needs.

## Display

- Eight-digit display of total
- Six-digit display of rate (11-segment characters for easy-to-read prompts)
- Character height - 0.300"
- Adjustable contrast and update period
- User-selectable units of measurement:
  - Total: bbl, gal, liters, cubic meters, cubic feet, standard cubic feet, user-defined units (and all units x 1000)
  - Rate: Any of the above total engineering units per day, hour, minute, or second

## Power Supply Options

- 3.6 VDC lithium battery pack
  - Two-year typical life (main or backup power supply)
  - Transport is subject to hazardous goods restrictions
- Alkaline battery pack option (main or backup power supply)
- External power supply (6 to 30 VDC) with internal battery backup
- Loop-powered (4 to 20 mA output) with internal battery backup

## Temperature Range

- Lithium battery: -40° F to 158° F (-40° C to 70° C)
- Alkaline battery pack: 0° F to 130° F (-18° C to 55° C)
- LCD contrast is reduced below -20° C

## Inputs

### Turbine Meter Input

- Configurable sensitivity adjustment
- Frequency range: 0 to 3500 Hz

### Remote Reset Input

- Optically isolated
- Supply range: 3.0 to 30 VDC

### Pulse Input

- Optically isolated
- Supply range: 3.0 to 30 VDC

## Outputs

### Analog Output

- 4 to 20 mA, loop-powered (two-wire)
- 16-bit resolution
- Accuracy: 0.1% of FS at 25°C, 50 PPM/°C temperature drift
- Loop power: 8.0 to 30 VDC
- Zero and full-scale engineering values configurable from front panel

### RS-485 Communications

- Baud rates: 300, 600, 1200, 2400, 4800, 9600, 19200, 38400, 57600 and up to 115.2K

### Volumetric Pulse Output

- Solid-state relay
- Output rating: 60 mA max at 30 VDC
- Configurable pulse duration and scale factor

### Amp and Square Output

- Open-drain transistor output of turbine meter input signal
- Output rating: 50 mA at 30 VDC (analog output and amp and square outputs cannot be used simultaneously)

## Certification

- CSA approved for US and Canada
- Class I, Div. 2, Groups A, B, C, D
- Type 4 enclosure
- Type 5 temperature class

## Flow Archive

- 384 daily logs
- 768 hourly logs
- 345 event logs
  - K-factor changes
  - Input setting changes

## Communications/Archive Retrieval

- RTU mode Modbus
- Enron Modbus
- 16-bit slave address supported
- Data printouts in tabular or chart formats
- Data export to spreadsheet (.xls and .csv formats)

## MC-III Interface Software

- Provided at no additional charge
- Complete configuration to include multipoint and gas calibration
- Real-time data
- Downloads
  - Reports
  - Charts
  - Exports to .xls and .csv formats
- Wizard offers step-by-step calibration procedure
- Windows® 2000 or XP required

## LOCATIONS

### North and South America

14450 JFK Blvd.  
Houston, TX 77032  
USA  
Tel 1 281 582.9500  
ms-us@c-a-m.com

### Europe, Africa, Caspian and Russia

3 Steyning Way  
Southern Cross Trading Estate  
Bognor Regis  
West Sussex PO22 9TT  
England, UK  
Tel 44 1243 826741  
ms-uk@c-a-m.com

### Asia Pacific

Suite 16.02 Menara AmFirst  
No. 1 Jalan 19/3  
46300 Petaling Jaya  
Selangor Darul Ehsan  
Malaysia  
Tel 603 7954 0145  
ms-kl@c-a-m.com

### Middle East

Level 9, Al Jazira Club Tower A  
PO Box 47280, Muroor Road  
Abu Dhabi  
United Arab Emirates  
Tel 971 2 596 8400  
ms-uk@c-a-m.com

## OTHER LOCATIONS

### ALGERIA

### CANADA

### CHINA

### INDIA

### MALAYSIA

### RUSSIA

### UAE

### UK

### USA

[www.c-a-m.com/measurement](http://www.c-a-m.com/measurement)