

NUFLO Flo-III

Flow Totalizer, Rate Meter and Batch Controller

Cameron's NUFLO™ Flo-III™ is a multifunctional flow totalizer, rate meter and bath controller with optional power choices and input/output options including a RS-232 communications port.

The Flo-III instrument's menu-driven configuration software offers a variety of outputs including:

- Uncompensated rate
(analog or digital output)
- Corrected rate (analog output)
- Mass rate (analog output)
- Temperature (analog output)
- Density (analog output)
- Uncompensated volume total (analog output)
- Corrected volume total
(analog or digital output)
- Mass total (analog or digital output)

Instrument programming includes a number of different flow equations, making the Flo-III computer the right choice for almost any liquid flow measuring and monitoring application.

With its RS-232 serial port, the computer can provide output for data logging, for transaction printing or for remote meter reading via a modem. Alarm functions are also included.

The Flo-III computer can also provide alarms using its relay outputs. Menu-assignable alarm outputs include: low-rate, high-rate, pre-warn, pre-set, low-temperature, high-temperature or security warnings with an easy-to-read display.

Users have single-key direct access to measurement readouts and display scrolling. The backlit LCD display provides two 20-character lines with a nominal character height of 0.3". Units of measure and descriptors are user programmable.



Specifications

(Environmental)

- Operating Temperature:
32° F to 122° F (0° C to 50° C)
- Storage Temperature:
-40° F to 185° F (-40° C to 85° C)
- Humidity: 0 to 95% non-condensing
- Materials: UL approved

Display

- Type: Two lines of 20 characters
- Backlit LCD
- Character Size: 0.3" nominal
- User-programmable label descriptors and units of measure

Keypad

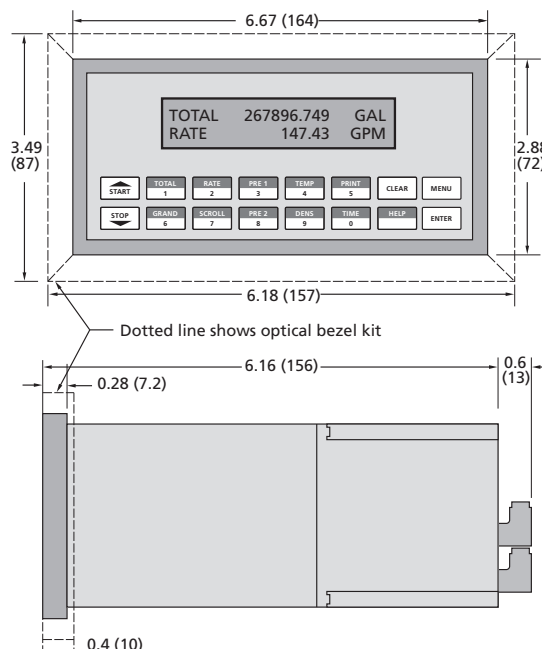
- Membrane keypad
- 16 keys

Approvals

- CE Approved, UL/CSA Pending

Enclosure

- Depth behind panel:
6.5" including mating connector
- Type: DIN
- Materials: Plastic, UL94V-0, flame retardant
- Bezel: Textured matte finish



Real Time Clock

The Flo-III is equipped with a battery-backed real time clock with display of time and date.

- Time: 12 or 24-hour
- Date: day, month, year

Flow Inputs

Analog Input

- Accuracy: 0.01% FS at 68° F (20° C)
- Ranges
Voltage: 0 to 10 VDC, 0 to 5 VDC 1 to 5 VDC
Current: 4 to 20 mA, 0 to 20 mA
- Basic measurement resolution: 16 bit
- Update rate: 4 updates/sec
- Automatic fault detection: signal over/under-range, current loop broken
- Calibration: software calibration (no trimmers) and auto-zero continuously
- Extended Calibration: sets zero and full scale of each range using special test mode
- Fault Protection
Reverse polarity: no ill effects
Over-voltage Limit: 50 VDC over voltage protection
Over-current Protection: internally current limited protected to 24 VDC

Pulse Inputs

- Number of flow inputs: one
- Input impedance: 10K ohm nominal
- Pull Up Resistance: 10K ohm to 5 VDC (menu selectable)
- Pull Down Resistance: 10K ohm to common
- Trigger level: (menu selectable)
High level input
Logic On: 3 to 30 VDC
Logic Off: 0 to 1 VDC
Low level input (mag pickup)
Sensitivity: 10 mV or 100 mV
- Logic on: 3 to 30 VDC logic off: 0 to 1 VDC
- Minimum count speed: user selectable
- Maximum count speed: selectable 40Hz, 3000Hz or 20 kHz
- Overvoltage Protection: 50 VDC

Power Input

The factory equipped power option is internally fused. An internal line to line filter capacitor and MOV are provided for added transient suppression.

- 110 VAC: 50/60 Hz
- 220 VAC: 50/60 Hz
- DC Power: 12/24 VDC
- Power Consumption:
AC: 11.0 VA (11W)
DC: 300 mA max.
- Power: 300 mA max.

Control Inputs:

Switch inputs are menu selectable for: start, stop, reset, lock, inhibit, alarm acknowledge, print or not used.

- Control input specifications
 - Input scan rate: 10 scans/second
 - Logic 1: 4 to 30 VDC
 - Logic 0: 0 to 0.8 VDC input
 - Impedance: 100K ohm
 - Control activation:
Positive Edge or pos. level based on product definition for switch usage

Relay Outputs

Relay outputs are menu assignable to low-rate alarm, hi-rate alarm, pre-warn alarm, pre-set alarm, pulse output or general purpose warning.

- Number of relays: two (four optional)
- Contact style: form C contacts
- Contact ratings: five amp, 240 VAC or 30 VDC

Isolated Analog Output

Analog output is menu assignable to correspond to the uncompensated rate, corrected rate, mass rate, temperature, density, uncompensated volume total, corrected volume total or mass total.

Isolated Pulse Output

Isolated pulse output is menu assignable to uncompensated volume total, corrected volume total or mass total.

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
P.O. 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

RUSSIA

UAE

www.c-a-m.com/measurement