



All the standards of measurement for liquids or gas (API, AGA, ISO, NIST, etc.) are available in the Micro MV 100. We also include special equations at the request of our clients. Here are just a few of the ways we've got you covered:

Features

- Ultra low power (0.5 watts)
- 32-bit processor
- Touch screen interface
- Turbine diagnostics
- Battery backup/UPS
- Multiple I/O options
- Wireless radio/Modem ready
- Gas chromatography interface
- Custody transfer accuracy
- Smart field I/O

Communications

- RS232 Modbus
- RS485 Modbus
- Analog and digital I/O
- Zigbee wireless radio
- FreeWave wireless radio
- Bluetooth

Applications

- Liquid and gas measurement
- Wellhead measurement & automation
- Custody measurement and control
- Compressor stations
- Well optimization
- PID control
- Liquid and gas pipelines
- Injection index testing

Reports/Storage

- Daily
- Hourly
- Monthly
- Monthly day by day
- Calibration and audit

Alternative Power

- Extended length battery backup
- Solar powered

The Micro MV 100 is a three meter bi-directional field mounted flow computer which can be used for all liquid and gas applications, including custody or non-custody measurements. The Micro MV 100 flow computer is the most powerful flow computer of its kind and represents one of the latest advancements in operation, performance, and modularity.

The Micro MV 100 has been designed to meet the requirements of a wide variety of specialized industries using a single hardware platform thus reducing spare parts requirements, training and calibration costs, and lowers the overall cost of ownership.

With over 5,000 units in worldwide operation, the Micro MV 100 is indicative of Dynamic Flow Computers' intense commitment to our customer's needs and expectations.

The Micro MV 100 flow computer can be found operating under the most extreme conditions: the hot Saudi Arabian desert, the humid forests of Colombia, the snow-covered valleys of Canada, and the corrosive salt air of offshore platforms. You can be assured that the Micro 100 will be reliable under the rigors of any environmental conditions that you can imagine.

The Micro MV 100 flow computer has the capacity to handle up to THREE bi-directional gas or liquid measurement trains. Multiple equations are included among which are AGA3/API14.3, API5.7, API2540, AGA7, AGA9, with more being added continuously. The Micro MV 100 accepts any type of primary element: Venturi, Annubar, Turbine, PD, Ultrasonic, V-Cone, Wedge, Vortex, etc. Additionally, it can carry out density calculations according to the following standards: 5A,B; 6A,B,C; 23A,B,C; 24A,B,C; 53A,B; 54A,B,C; 23 and 24; API12, AGA8, NBS1048 for hydrogenate and oxygenate, NBS for steam, NBS1045 for ethylene, saturated and supersaturated steam, etc. Contact our offices or visit our website for available equation updates.

Another exceptional characteristic of the Micro MV 100 is its ability to communicate directly with a gas chromatograph via MODBUS® or proprietary protocol for highly precise flow measurements. It can also control pneumatic or electrical valves (on-off or variable by means of analog outputs or process PID control).

The display screen of the Micro MV 100 has four lines of twenty characters each. Process parameter values that are displayed on the screen are user-selectable and are alternately displayed, up to three at a time, at user-defined intervals.

The front of the Micro MV 100 includes four non-intrusive touch keys for configuration and operation of the flow computer. This design avoids violation of the area classification by allowing the user to interact with the flow computer without having to remove the cover.

The input/output assignment, flow equations, historical data storage, and other functions are carried out using Dynamic Flow Computers' DYNACOM® software. This software is Windows based, free of charge, and available for download/update at any time from our website: www.dynamicflowcomputers.com.

DYNACOM® Software Capabilities:

- Flow computer diagnostics
- Configure inputs and outputs
- Configure PID control
- Personalize report time and content
- Configure and select the local LCD screen displayed parameters
- Reassign and customize MODBUS® registers and values
- Create and implement custom math and formulas
- Input and output calibration
- Automatic and periodic downloading of flow computer reports
- Obtain historic data for display, saving, exportation, or printing

Historic data is available in the memory of the flow computer for download or display.

Maximum Report Storage:

- Hourly reports: 1536 hours*
- Daily reports: 64 *
- Daily reports, hour by hour: 64*
- Monthly reports: 6*
- Monthly, day by day: 2 months*
- Calibration reports: 20*
- Audit reports: 100*
- Alarm reports: 100*
- Special reports: HTML, and others

*The number of reports stored can vary according to application.

PHYSICAL SPECIFICATIONS

Electrical/Conduit Connections	Two 3/4" NPT One 1" NPT
Housing (Flow Computer)	Material: copper free aluminum Painting: epoxy or polyurethane. Classification: NEMA 4X class 1 div. 1 - IP66
RTD Connection	To flow computer terminal block
Display	Plasma; 4 lines x 20 characters each line. With back light; four non-intrusive keys for configuration, operation, and calibration
Certifications	CSA for class 1, civ. 1, groups B, C and D UL for class I, zone 1, AEx d IIB+H2
Temperature Limits	Operation: -40 to 185 °F (-40 to 85 °C) Storage: -50 to 190 °F (-46 to 87 °C)
Humidity	100%

ELECTRICAL SPECIFICATIONS

Voltage	7 to 28 VDC
Power Consumption	0.5 watt
Solar Panel (Optional)	10/20 watts, 12 volts
UPS (Optional)	2 day operation
Polarity	Reverse polarity protected
Processor	32 bits @ 16.7Mhz
Memory	2 MB, 35 day storage
Extended Memory (Optional)	128 MB virtual hard disk
Real Time Clock	Years/Months/Days/Hours/Minutes
Internal Battery	Lithium ion

INPUT SPECIFICATIONS

Optic Isolation	Each input is optically isolated with ± 250 VDC chassis isolation
Analog Input	Four 4-20mA (or 0-5Vdc) inputs (expandable to 9 inputs) Resolution 24 bits
Pulse/Frequency Input	Three inputs Square wave frequency range 0 - 6000 HZ Sine wave frequency range 0 - 1200 HZ Signal must be > 40 mV for sine wave Signal must be > 3 volts for square wave <i>Input 3 is for square wave only</i>
Digital/Switch Input	Four inputs (4 mutual contacts software selectable to be input or output - see Digital Output*) 7-28Vdc 0.25 Amp rating
RTD Input	Direct connection to flow computer (RTD connection to flow computer uses two of the analog input channels) 24 bit resolution

OUTPUT SPECIFICATIONS

Optic Isolation	Each output is optically isolated with ± 250 VDC chassis/ground isolation
Digital/Switch/Pulse Output	Four outputs (4 mutual contacts software selectable to be input or output – see Digital Input*) 7-28Vdc 0.25 Amp rating. On/Off or pulses (to 125 pulses/sec.)
Analog Output	One output (expandable to 4) 4-20mA (external power required) For PID control or for data transmission Resolution 16 bits

COMMUNICATION SPECIFICATIONS

RS485	Quantity 2 @ 1200 – 19200 bps
RS232	Quantity 1 @ 1200 – 19200 bps
Printer Port	Quantity 1
Protocol	MODBUS® RTU/ASCII
Optional	Modem, Radio, Ethernet, Bluetooth

DIAGNOSTIC SPECIFICATIONS

Monitor/Alarm	Multivariable: P, DP, T Analog inputs/outputs Digital/switch inputs Digital/switch outputs Pulse/frequency inputs Internal temperature Battery voltage Internal power supply
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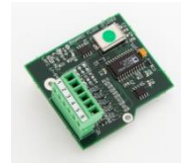
FLOW COMPUTATION SPECIFICATIONS

Number of Trains	Three bi-directional (dependent on application)
Flow Calculation	Simultaneous gas and liquid
Primary Elements	Differential: Orifice, V-Cone, Wedge, Annubar, Venturi, etc. Pulse/Frequency: Turbine, PD, Vortex, Ultrasonic, etc.
Engineering Units	US and Metric
Base Conditions	60°F, 14.7 PSIA (15 °C and 1 Kg./Cm ²) 68°F, 14.7 PSIA (20 °C and 1 Kg/Cm ²)
Equations	AGA3, API14.3, AGA7, AGA9, API5.6, API5.7, AGA8 methods 1, 2, and detailed; API 2540; API11-2-1, 11-2-1M; 11-2,2, 11-2-2M; GPA15, 16; API2565; tables 5A,B; 6A,B,C; 23A,B,C; 24A,B,C; 53A,B; 54A,B,C; 23 and 24. Others added continuously Consult factory for complete list

Optional Accessories



RS-232E



Analog Input Expansion (MVI)



P2DAAA Upgrade



Back-Up Battery (BP11V06AH)



Armored 12-08P-W



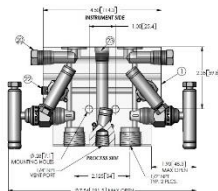
Solar 20 Kit



L-Shaped Bracket



SmartCone®



MAN5NF#



Analog Output Expansion (MVO)