

Micro MS4

Introduction

The Micro MS4 is a 32-bit, **four (4) meter run**, custody flow computer used for measuring natural gases and crude oil.

It utilizes an analog input or a **Master Comm. Port** to retrieve data from other meter runs for additional I/O's. It may be connected to three (3) external multivariable transmitters or any other Dynamic Flow Computers to produce data for the four (4) meter runs. **Stack DP's** may be used to increase the differential pressure range-ability and performance.

The Micro MS4 communicates with a **Gas Chromatograph** to obtain gas composition. A frequency or analog signal can be received from a **Densitometer**.

An optional **Multivariable Module 205 Sensor** may be integrally mounted to the Micro MS4 to allow accurate determination of **differential pressure, static pressure, and temperature**.



Micro MS4 Details

Specification

32 Bit Processor
7-28 VDC @ 0.5 WATT
NEMA 4X Class 1 Div. 1
Group B, C and D Housing

Display

4 Lines, 20 Characters
Backlit Display
Minutes, Hours or Days
Automatic Scrolling

Standard Interfacing

Serial Modbus
(3) Frequency Channels
(4) Analog Inputs
(1) Analog Output
(4) Digital I/O's
(1) RS-232 Port
(2) RS-485 ports
(1) Printer Output
Rosemount Multivariable-
DP, Press., & Temp.
.075 % Accuracy of
Calibrated Range

Interrogation Upgrade Options

TCP/IP Encapsulated Modbus
GSM/ Radio
Satellite

Applications

Well Head Measurement
Custody Measurement
Allocation Measurement
Gas Process Plants
PID Control
Smart Field I/O

Standardization

API, ISO, AGA

Units of Measurement

Metric & US Customary

****Input OR Output Expansion
Module Available**

Metered Products

Crude Oil (24A/ Chap. 11.2.1)
Natural Gases (AGA8)
Process Gases (AGA8)

Instrumentation

Orifice Meter (API 14.3/AGA3)
Turbine/ Freq. Meter (AGA7)
SmartCone® (Dynamic)
Other Cone Meters
Verabar™
Foxboro™ Mass Flow
Accelabar
ISO5167
ISO6976
Pilot Tube
Ultrasonic MPU-1200
Orifice for Natural Gas Base 20°C

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Technical Data- Micro MS4	
POWER	
VOLTAGE RANGE	7-28 VDC
POWER CONSUMPTION	0.5 WATT
OPERATING CONDITIONS	
UNITS	US or METRIC
TEMPERATURE	- 40 TO 185 °F
HUMIDITY	100%
HOUSING	NEMA 4X CLASS 1 DIV. 1
FEATURES	
DISPLAY	PLASMA 4 LINES 20 CHARACTERS BACKLIT DISPLAY WITH FOUR (4) INFRARED REFLECTIVE SENSORS
PROCESSOR	32-BIT MOTOROLA 68332 @ 16.7 MHz
FLASH ROM	4 MB @ 70 NANO SECONDS
RAM	2 MB @ 70 NANO SECONDS
FREQUENCY INPUT	THREE (3) CHANNELS CHANNELS 1 & 2 ARE SINE/SQUARE WAVE CAPABLE CHANNEL 3 IS SQUARE WAVE ONLY SQUARE WAVE RANGE: 0-6000 HZ SINE WAVE RANGE: 0-1200 HZ SIGNAL > 40 Mv FOR SINE WAVE SIGNAL > 3v FOR SQUARE WAVE
MULTIVARIABLE	BUILT-IN ROSEMOUNT MULTIVARIABLE TRANSMITTER WITH DIRECT SPI DIGITAL CONNECTION. MAXIMUM UPDATE SPEED ONCE EVERY 109 MILLISECONDS. TEMPERATURE RANGE: - 200 thru 1200 F PRESSURE RANGE: 0 thru 3626 PSIG DP RANGE: 0 thru 250 inches OR 0 thru 1000 inches
ANALOG INPUT	FOUR (4) INPUTS STANDARD EXPANDABLE UP TO NINE (9) ANALOG INPUTS OR SEVEN (7) WITH ADDITIONAL 3-WIRE RTD
ANALOG OUTPUT	ONE (1) 16-BITS OPTICALLY ISOLATED OUTPUT EXPANDABLE TO FOUR (4)
DIGITAL I/O	FOUR (4) DIGITAL INPUTS OR OUTPUTS DIGITAL OUTPUTS HAVE 0.25 AMPS RATING
SERIAL COMMUNICATION	TWO (2) RS-485 @ 19200 BAUDS VARIABLE ONE (1) RS-232 @ 9600 BAUDS VARIABLE ONE (1) PRINTER OUTPUT
COMMUNICATION PROTOCOL	MODBUS