Micro Motion® EtherNet/IP Module

Simplify integration of your Micro Motion® flowmeter into an EtherNet/IP control system with the Micro Motion EtherNet/IP Module.

The Micro Motion EtherNet/IP Module is a pre-configured interface between the serial output of a Micro Motion device and an EtherNet/IP network. It supports process monitoring and control, and browser-based configuration and administration.
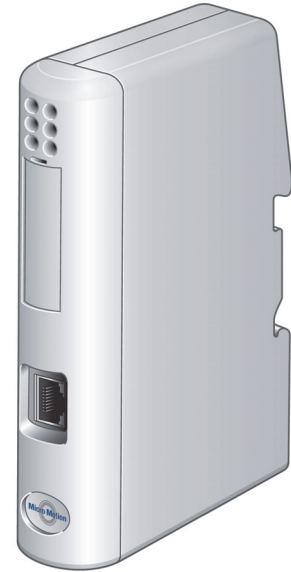
Current process data available for access via EtherNet/IP

- Pre-configured to deliver flow rates, flow totals, density, and more

- Supports both cyclic and acyclic data access strategies

**Browser-based configuration and administration**

- Access to the most frequently used configuration settings

- Access to the most frequently used maintenance procedures

Compatible with broad range of Micro Motion offerings

- Can be used with most Micro Motion transmitters and all Coriolis sensors

- Supports Micro Motion Smart Meter Verification

Micro Motion®

EMERSON™
Process Management

Micro Motion® EtherNet/IP Module
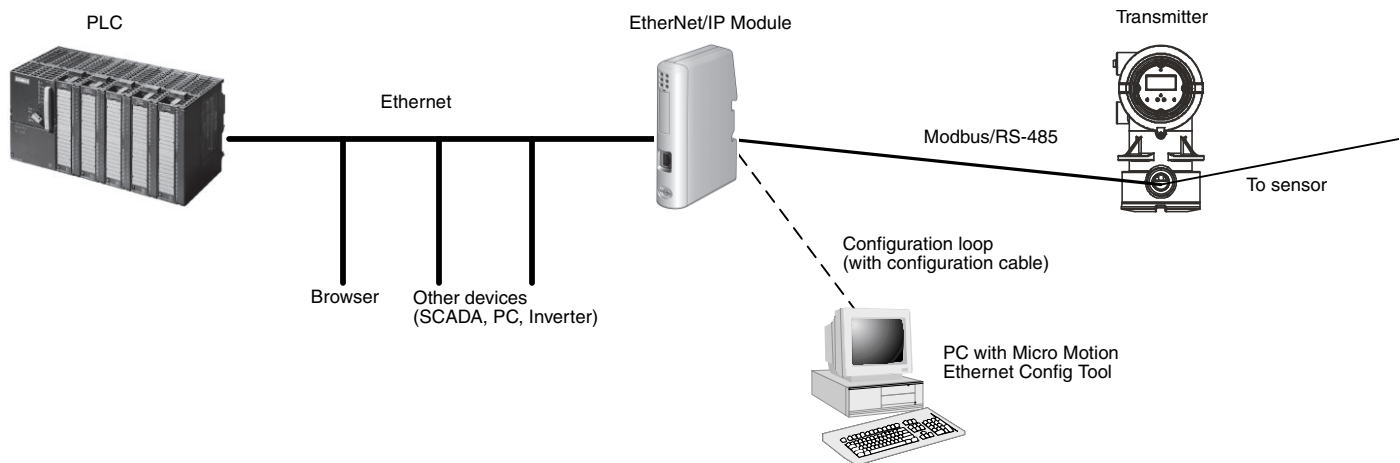
Benefits

- Pre-configured to deliver simple, fast EtherNet/IP system integration

- Supports the full portfolio of Micro Motion Coriolis sensors

- Provides a retrofit EtherNet/IP solution for existing flowmeters

- Delivers installation flexibility

- Provides a convenient web interface for flowmeter configuration, management, and maintenance

Supported transmitters

The EtherNet/IP Module is compatible with the following transmitters and devices:

- Model 1500 with analog outputs

- Model 1700 with analog outputs

- Model 2500 with configurable input/outputs

- Model 2700 with analog outputs

- 9739 MVD

- Micro Motion Direct Connect with Model 500 barrier (standard or enhanced core processor)

- Model 3500 and Model 3700 transmitters (Model 3300 and Model 3350 controllers are not supported)

The Micro Motion EtherNet/IP Module is a customization of the Anybus® Communicator™ from HMS Industrial Networks. This data sheet provides information that is relevant to the Micro Motion implementation. For general platform information, see the HMS web site.

Contents

Supported process variables and applications

Standard	Petroleum measurement application[1]	Concentration measurement application[1]
• Mass flow rate, total, and inventory • Volume flow rate, total, and inventory (liquid) • Gas standard volume flow rate, total, and inventory • Density • Temperature • Pressure and external temperature (when available on the transmitter)	• Temperature-corrected density • Temperature-corrected volume flow rate, total, and inventory • Batch-weighted average density • Batch-weighted average temperature • CTL	• Density at reference • Specific gravity • Temperature-corrected volume flow rate, total, and inventory • Net volume flow rate, total, and inventory • Net mass flow rate, total, and inventory • Concentration • Baume

(1) *Requires application installed on transmitter, and support files installed on Micro Motion EtherNet/IP Module.*

Supported sensors

The EtherNet/IP Module is compatible with all Coriolis flow and density sensors. All installation architectures (4-wire, 9-wire, integral, and direct connect) are supported.

Update rate

The EtherNet/IP Module reads process variables from the transmitter at 5 Hz.

Host interface

The EtherNet/IP Module is accessible over any ethernet network and is ODVA-certified for seamless interoperability with EtherNet/IP host systems. System integration is fast and easy using the Micro Motion EDS, downloaded directly from the device.

The process variables previously listed are supported as implicit parameters. Many additional parameters are available as explicit parameters.

The host can be programmed to perform various control and maintenance actions, such as totalizer reset and Smart Meter Verification.

Configuration and maintenance

Flowmeter. Basic configuration for the Micro Motion flowmeter is supported via a web browser interface, accessible throughout the ethernet network. Standard Micro Motion web pages are pre-loaded in the Micro Motion EtherNet/IP Module.

The standard Micro Motion web pages provide an interface to process data, and to process control and maintenance actions such as totalizer reset and sensor zero. The web pages also support operation of Micro Motion Smart Meter Verification.

EtherNet/IP Module. If custom configuration of the EtherNet/IP Module is required:

- Some configuration tasks can be performed through the standard Micro Motion web pages.

- The system supports access from a PC, using the Ethernet Config Tool software (provided with purchase) and a serial port connection

- FTP connections are supported, for loading the petroleum measurement or concentration measurement support files, and for access to platform features that are not used by the Micro Motion EtherNet/IP Module.

Security

Two users are predefined for the Micro Motion web pages. The passwords can be changed, but adding or deleting users is not supported. The administrator password provides complete access to the Micro Motion web pages. The operator password provides read-only access. To access the web pages, one of these passwords must be supplied.

Specifications

Physical

Housing	Plastic housing with snap-on connection to DIN rail Protection class: IP20
Dimensions	4.72″ × 2.95″ × 1.06″ L×W×H (120 mm × 75 mm × 27 mm)

Electrical

Power supply	24 V ±10%	
Power consumption	Maximum	280 mA on 24 V
	Typical	100 mA

Connections and protocols

PLC to EtherNet/IP Module	EtherNet/IP	Standard cable (not included) Standard connectors (not included)
EtherNet/IP Module to transmitter	Modbus RTU (8-bit) over RS-485	Standard cable (not included) Standard connector (included)
Ethernet Config Tool (PC) to EtherNet/IP Module	Serial	Custom cable (included)

Environmental

Relative humidity	5 to 95% non-condensing	
Temperature	Operating	32 °F to 131 °F (0 °C to 55 °C)
	Ambient	−13 °F to +185 °F (−25 °C to +85 °C)

Regulatory compliance

EMC	Complies with EMC directive 2004/108/EC			
	EN 61001-6-4 (2007)	Emission standard for industrial environment	EN 55016-2-3 (2006)	Class A
	EN 61000-6-2 (2005)	Immunity standard for industrial environment	EN 61000-4-2 (2009)	
			EN 61000-4-3 (2006)	
			EN 61000-4-4 (2004)	
			EN 61000-4-5 (2005)	
			EN 61000-4-6 (2007)	
UL/c-UL	The certification has been documented by UL in file E214107.			

Galvanic isolation on Modbus serial interface

EN 60950-1 (2001)	Pollution Degree 2	
	Material Group IIIb	
	250 V$_{RMS}$ or 250 VDC	Working voltage
	500 V	Secondary circuit transient rating

Ordering information

To order, reference Model Code ETHERNETIPM on the spare accessory list.

Micro Motion—The undisputed leader in flow and density measurement

World-leading Micro Motion measurement solutions from Emerson Process Management deliver what you need most:

Technology leadership

Micro Motion introduced the first reliable Coriolis meter in 1977. Since that time, our ongoing product development has enabled us to provide the highest performing measurement devices available.

Product breadth

From compact, drainable process control to high flow rate fiscal transfer—look no further than Micro Motion for the widest range of measurement solutions.

Unparalleled value

Benefit from expert phone, field, and application service and support made possible by more than 750,000 meters installed worldwide and over 30 years of flow and density measurement experience.

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