

Product Data Sheet

PS-00292, Rev. C

March 2008

Micro Motion® Series 3000 Transmitters and Controllers

Micro Motion® Series 3000 electronics combine transmitter functions and PLC capabilities in one instrument. Series 3000 models feature MVD™ technology, enabling high-speed digital signal processing (DSP) capabilities and a broad range of specialty applications.



2400S Compact integral transmitter

1700
2700 Versatile field-mount transmitter

1500
2500 Compact control-room transmitter

3300
3350 Frequency-input controller

3500
3700 Integrated control and measurement platform

Platform architecture designed for flexibility

- Transmitter and/or controller in field-, rack-, or panel-mount design
- Wide range of I/O channels for maximum functionality

Broadest range of application coverage

- Advanced density options enable measurement of concentration, petroleum, net volume, water cut, and associated net oil/water flow
- Provides powerful and easy one-stage or two-stage batch control with ticket printing output
- Delivers effective security capabilities suitable for custody transfer applications

Single operator interface for easy setup, control, and operation

- Full configuration capabilities eliminate the need for external tools
- Large display provides easy-to-read menus and descriptive alarms
- Enables true in-situ meter verification to deliver fast, actionable, simplified performance checks



Series 3000 transmitters and controllers

MVD™ technology. MVD technology makes your Micro Motion meter work smarter. Front-end digital signal processing dramatically reduces signal noise and gives you faster response time compared to analog devices.

Only MVD technology allows you to:

- Measure multiple variables
- Install easily with a standard 4-wire signal cable
- Identify and resolve problems easily with built-in smart diagnostics
- Choose transmitter capabilities based on your application's needs
- Upgrade transmitter functionality as needed

Series 3000 transmitters and controllers with MVD technology. Model 3500 and 3700 transmitters deliver process measurement and control based on direct input from a Micro Motion Coriolis meter. Model 3300 and 3350 controllers provide control based on a frequency input from a remote transmitter. Series 3000 models are available with specialty applications such as batch control, concentration measurement, petroleum measurement, net oil measurement, custody transfer security, and meter verification.

Configuration, operation, and maintenance are all accomplished using the innovative Series 3000 user interface. The interface features a large, easy-to-use backlit display with big, tactile-feedback push buttons. Other user interfaces (such as hand-held communication devices) are not required, but can be used. Modbus® and HART® communication allow configuration devices such as ProLink® II, AMS, and HART Communicators to be used with the Series 3000, and the Series 3000 can be integrated into a PlantWeb® network.

Contents

Applications	3	Environmental specifications	9
Housings	4	Model 3500/3700 liquid flow performance	9
Interface/display	4	Model 3500/3700 density performance (liquid only)	10
Weight	4	Model 3500/3700 gas flow performance	10
Sensor cabling	5	Hazardous area classifications	11
Power supply	5	Model 3100 accessory	11
Electrical connections	6	Dimensions	12
Input signals	6	Ordering information	16
Output signals	7		
Digital communications	8		

Applications

Process monitor/totalizer	Process monitoring and totalizing for multiple variables, including mass flow, volume flow, density, and temperature, reported in the user's choice of unit. Unit options include all common units, plus °API, SCF, beer barrels, etc., and the ability to define a special unit for mass, volume, or gas standard volume.
Discrete batch control	<ul style="list-style-type: none">• Configuration of up to six preset batch recipes• One-stage or two-stage batch control• End-of-batch warning and batch-overflow alarms• Configuration by quantity or by percent of target for primary valve closure, secondary valve opening and closure, end warning, and batch overrun• Configuration for target lockout, or for target adjustment during batch operation• Automatic overshoot compensation
Meter verification	Provides <i>in-situ</i> assessment of a Micro Motion Coriolis meter, determining whether the meter has been affected by erosion, corrosion, or other influences affecting meter calibration. No secondary references are required to perform this operation. ⁽¹⁾
Concentration measurement	<p>Provides concentration measurement based on either industry-specific or liquid-specific units and relationships. Standard measurement options include:</p> <ul style="list-style-type: none">• Industry-specific:<ul style="list-style-type: none">- °Brix- °Plato- °Balling- °Baumé at SG60/60- Specific gravity• Liquid-specific:<ul style="list-style-type: none">- %HFCS- Concentration derived from reference density- Concentration derived from specific gravity <p>Additionally, the application can be customized for site-specific concentration measurement, e.g., %HNO₃, %NaOH, etc.</p>
Petroleum measurement	Provides process variables such as temperature-corrected volume flow and batch weighted average density, calculated using the American Petroleum Institute equations.
Net oil (NOC)	<ul style="list-style-type: none">• Designed for use with two-phase, three-phase, or compact separators, including the GLCC™ (Gas-Liquid Cylindrical Cyclone)• Supports up to 48 wells, three well tests per well (well test mode), or continuous measurement of one well• Measures and reports net oil and net water production• Real-time water cut data based on process density or read from water cut probe• Optionally reports gas production• Manages two-phase flow via patented Transient Bubble Remediation• Enables recalculation of stored NOC data for different reference values
Custody transfer	<ul style="list-style-type: none">• Physical and software security• NTEP compliance<ul style="list-style-type: none">- Requires the discrete batch application• MID 2004/22/EC compliance (based on OIML recommendations 117-1 and 137-1) pending<ul style="list-style-type: none">- Certifications to include the discrete batch application, the petroleum measurement application, the concentration measurement application, and the process monitor• Security-breach alarm posting• Mass or volume totalizer that can be configured by the user• Audit trail of configuration changes• Custom formatting of receipt tickets

(1) If the custody transfer application is installed, meter verification cannot be started in the secure mode. Running meter verification requires any custody transfer seal to be broken and removed.

Housings

Rack-mount	486,2 mm rack-mount housing meets DIN standard 41494 and IEC 297-3 Front panel is rated IP40
Panel-mount	Front panel with bezel is rated NEMA 4X (IP65)
Field-mount	Compartment with threaded cover contains electronics Terminal compartment contains: <ul style="list-style-type: none">• Non-intrinsically safe compartment with input/output and power supply terminals• Intrinsically safe compartment with interface/display, sensor terminals (Model 3700 only), and optional input and output terminals Mounting bracket and interface/display rotate to allow mounting in four different orientations Rated NEMA 4X (IP67)

Interface/display

Display	
Models 3300 and 3500	Backlit LCD, 128 × 128 pixel, bit map Adjustable contrast Non-glare, chemical-resistant acrylic lens
Models 3350 and 3700	Backlit LCD, 128 × 128 pixel, bit map Adjustable contrast Non-glare tempered glass lens Suitable for hazardous area installation
Keypad membrane switch	Large push buttons with tactile feedback Software-defined function keys Chemical-resistant polyester

Weight

Models 3300 and 3500	Maximum 1,6 kg, excluding prepared cables
Models 3350 and 3700	8,6 kg

Sensor cabling

Requirements⁽¹⁾

With Sensor Interface Option 5:

- Requires standard 4-wire twisted-pair shielded signal cable between the sensor and the transmitter. Micro Motion recommends using Micro Motion 4-wire cable.

With Sensor Interface Option 6:

- Requires standard 4-wire twisted-pair shielded signal cable between the transmitter and the remote core processor. Micro Motion recommends using Micro Motion 4-wire cable.
- Requires Micro Motion 9-wire signal cable between the remote core processor and the sensor.

Depending on the order, 3 meters of 4-wire cable or 3 meters of both 4-wire and 9-wire cable are shipped with the order. For longer cable lengths, contact Micro Motion.

Maximum cable lengths

Cable type	Wire gauge	Maximum length
Micro Motion 9-wire	Not applicable	20 meters
Micro Motion 4-wire	Not applicable	300 meters
User-supplied 4-wire		
• Power wires (VDC)	0,35 mm ²	90 meters
	0,5 mm ²	150 meters
	0,8 mm ²	300 meters
• Signal wires (RS-485)	0,35 mm ² or larger	300 meters

(1) Model 3500/3700 only. Sensor cabling not applicable to Model 3300/3350.

Power supply

AC power supply

Model 3300

85 to 265 VAC

50/60 Hz, 15 VA

0,25 A maximum at 85 VAC, 0,12 A maximum at 265 VAC

IEC 127-3/4 fuse, 0,63 A time-delay

Complies with European low-voltage directive 2006/95/EC per IEC 61010-1

Installation (Overvoltage) Category II, Pollution Degree 2

Models 3350, 3500,
and 3700

85 to 265 VAC

50/60 Hz, 30 VA

0,33 A maximum at 85 VAC, 0,15 A maximum at 265 VAC

IEC 127-3/4 fuse, 0,63 A time-delay

Complies with European low-voltage directive 2006/95/EC per IEC 61010-1

Installation (Overvoltage) Category II, Pollution Degree 2

DC power supply

Model 3300

18 to 30 VDC

7 watts typical, 14 watts maximum

IEC 127-3/4 fuse, 1,6 A time-delay

Models 3350, 3500,
and 3700

18 to 30 VDC

18 watts typical, 25 watts maximum

IEC 127-3/4 fuse, 1,6 A time-delay

Electrical connections

Input and output connections

Rack-mount	Type D connectors per DIN standard 41612 (IEC 603-2) Available as solder tails (standard) or screw terminals (optional) Screw terminals accept 0,25 mm ² to 1,5 mm ² wires
Panel-mount	Screw terminals (standard) or I/O cable with remote DIN rail-mount screw terminals (optional) Remote terminals attach to any of four rail types. I/O cable is available in lengths of 0,6, 1,5, and 3 meters Screw terminals accept 0,25 mm ² to 1,5 mm ² wires
Field-mount	Two color-coded wiring compartments: <ul style="list-style-type: none">• Compartment with intrinsically safe terminals has two 3/4-inch NPT or M20 × 1,5 conduit openings• Compartment with non-intrinsically safe terminals has three 3/4-inch NPT or M20 × 1,5 conduit openings Screw terminals accept 0,34 mm ² to 1,5 mm ² wires

Power connection

Rack-mount	Screw terminals are fixed to rack chassis Ground makes first and breaks last Screw terminals accept 0,75 mm ² to 2,5 mm ² wires
Panel-mount	Screw terminals accept 0,75 mm ² to 2,5 mm ² wires
Field-mount	Screw terminals accept 0,75 mm ² to 4,0 mm ² wires

Input signals

Non-intrinsically safe input signals

One 2-wire frequency/pulse input	Frequency range	0–20000 Hz
	Minimum pulse width	25 μ-sec
	Power	Sourcing or sinking
	Voltage	0–0,8 VDC low state
		3–30 VDC high state
	Current	Nominal 5 mA pull-up
Two discrete momentary inputs	Pulse width	0,15 sec minimum
	Voltage	0–0,8 VDC low state
		3–30 VDC high state
		Dry contacts

Intrinsically safe input signals

One 4-wire Coriolis sensor signal input with ground

Output signals

Non-intrinsically safe output signals

Two active 4–20 mA outputs	Isolated to ± 50 VDC from all other outputs and earth ground Maximum load limit of 1000 ohms Output is linear with process from 3,8 to 20,5 mA per NAMUR NE43 (June 1994)
Three discrete outputs	Configurable for the application Polarity Active high or active low, software selectable Power Internal pull-up to 24 V Voltage 24 VDC nominal Current Sourcing at 5,6 mA when $V_{out} = 3$ VDC Sinking up to 500 mA at 30 VDC maximum
One 2-wire frequency/pulse output	Scalable to 10000 Hz Output is linear with flow rate to 12500 Hz Pulse width 50% duty cycle above the crossover frequency ⁽¹⁾ Configurable between 0,543 ms and 277 ms Polarity Active high or active low, software selectable Power Active or passive, software selectable Voltage 24 VDC nominal, active 30 VDC applied maximum, passive Current Sourcing at 10 mA at 3 VDC, active Sinking at 500 mA, active or passive

Fault indication

When a fault is detected, outputs go to configured states. User can select upscale, downscale, internal zero, or none. Milliamp outputs conform to NAMUR NE43 (June 1994).

Upscale	Milliamp Frequency	21 to 24 mA, user configurable 15000 Hz
Downscale	Milliamp Frequency	1 to 3,6 mA, user configurable 0 Hz
Internal zero	Drives the mA and frequency outputs for process variables to zero values	
None	Ignores fault conditions	

(1) The crossover frequency depends on the configured value of the pulse width. At the minimum pulse width value of 0,543 ms, the crossover frequency is 922 Hz. At the maximum pulse width value of 277 ms, the crossover frequency is 1,8 Hz.

Digital communications

RS-485

One pair of terminals supports SP (service port) mode or RS-485 mode. On device power-up, the user has 10 seconds to connect in SP mode. After 10 seconds, the terminals switch to RS-485 mode. The communication parameters in SP mode are:

Protocol	Modbus RTU
Data rate	38400 baud
Parity	No parity
Stop bit	One stop bit
Address	111

In RS-485 mode, the Series 3000 can communicate via Modbus RTU, Modbus ASCII, or HART⁽¹⁾ protocols. The communication parameters are configurable with ProLink II software, Modbus, or the display. The shipped default parameters are:

Data rate	9600 baud
Parity	Odd
Stop bit	One stop bit

The RS-485 port can also be configured as a printer port (see below).

HART Bell 202⁽¹⁾

The HART Bell 202 signal is superimposed on the primary mA output, and is available for host system interface or for polling external measurement devices. The HART Bell 202 communication parameters are:

Frequency	1,2 and 2,2 KHz
Amplitude	0,8 mA peak-to-peak
Data rate	1200 baud
Resistance	Loop requires 250 to 600 ohms resistance

Printer port

The RS-485 port can be configured as a printer port. When the RS-485 port is configured as a printer port, it cannot be used for any other function.

Requires external RS-232 adapter (not included)

Bidirectional with Epson printer; send-only with all other printers and when using a multidrop configuration

(1) HART protocol supports configuration of basic transmitter functionality, configuration of the petroleum measurement application, and reading/writing batch setpoints and totals. HART protocol does not support configuration of the batch, concentration measurement, or NOC applications. Both Modbus and the display provide configuration and control of all transmitter functionality.

Environmental specifications

EMI effects	All Series 3000 devices meet EMC directive 2004/108/EC per EN 61326 Industrial, and all Series 3000 devices conform to NAMUR NE 21 (August 2007).	
Ambient temperature effect	On analog outputs	$\pm 0,005\%$ of span per °C
Ambient temperature limits⁽¹⁾	Operating	-20 to +60 °C
	Storage	-40 to +70 °C
Temperature accuracy	Models 3500 and 3700	$\pm 1,0$ °C $\pm 0,5\%$ of reading in °C
Temperature repeatability	Models 3500 and 3700	$\pm 0,2$ °C
Humidity limits	5 to 95% relative humidity, non-condensing at 60 °C	
Vibration limits	Per IEC 68-2-6, endurance sweep, 5 to 2000 Hz, 50 sweep cycles at 1,0 g	

(1) If exposed to direct sunlight, the ambient temperature can be expected to rise by an additional 10 °C.

Model 3500/3700 liquid flow performance

	Sensor model	
Mass flow accuracy⁽¹⁾⁽²⁾	ELITE®	$\pm 0,05\%$ of rate
	F-Series	$\pm 0,10\%$ of rate
	H-Series	$\pm 0,10\%$ of rate
	T-Series	$\pm 0,15\%$ of rate
	R-Series	$\pm 0,50\%$ of rate
Volume flow accuracy⁽¹⁾⁽²⁾	ELITE	$\pm 0,05\%$ of rate
	F-Series	$\pm 0,15\%$ of rate
	H-Series	$\pm 0,15\%$ of rate
	T-Series	$\pm 0,25\%$ of rate
	R-Series	$\pm 0,50\%$ of rate
Repeatability⁽²⁾	ELITE	$\pm 0,025\%$ of rate
	F-Series	$\pm 0,05\%$ of rate
	H-Series	$\pm 0,05\%$ of rate
	T-Series	$\pm 0,05\%$ of rate
	R-Series	$\pm 0,25\%$ of rate

(1) Stated flow accuracy includes the combined effects of repeatability, linearity, and hysteresis.

(2) For the details of flow accuracy and repeatability specifications, refer to the product data sheet for each sensor family.

Model 3500/3700 density performance (liquid only)

	Sensor model	kg/m ³
Accuracy⁽¹⁾	ELITE	±0,2
	F-Series	±1,0
	H-Series	±1,0
	T-Series	±2,0
	R-Series	Not rated for density
Repeatability⁽¹⁾	ELITE	±0,1
	F-Series	±0,5
	H-Series	±0,5
	T-Series	±0,5
	R-Series	Not rated for density




(1) For the details of the density accuracy and repeatability specifications, refer to the product data sheet for each sensor family.

Model 3500/3700 gas flow performance

	Sensor model	
Mass flow accuracy	ELITE®	±0,35% of rate
	F-Series	±0,50% of rate
	H-Series	±0,50% of rate
	T-Series	±0,65% of rate
	R-Series	±0,75% of rate
Repeatability	ELITE	±0,20% of rate
	F-Series	±0,25% of rate
	H-Series	±0,25% of rate
	T-Series	±0,25% of rate
	R-Series	±0,50% of rate

Hazardous area classifications

UL is a U.S.A. approvals agency. CSA is a Canadian approvals agency that provides approvals accepted in both the U.S.A. (C-US) and Canada. ATEX is a European directive.

UL and CSA	Model 3300	Class I, Div. 2, Groups A, B, C, and D when installed in a suitable enclosure
	Model 3350	Class I, Div. 2, Groups A, B, C, and D
	Model 3500	Class I, Div. 2, Groups A, B, C, and D when installed in a suitable enclosure Provides non-incendive sensor outputs for use in Class I, Div. 2, Groups A, B, C, and D, or intrinsically safe sensor outputs for use in Class I, Div. 1, Groups C and D; Class II, Div. 1, Groups E, F, and G
	Model 3700	Class I, Div. 2, Groups A, B, C, and D Provides non-incendive sensor outputs for use in Class I, Div. 2, Groups A, B, C, and D, or intrinsically safe sensor outputs for use in Class I, Div. 1, Groups C and D; Class II, Div. 1, Groups E, F, and G
ATEX	Model 3350	ATEX Zone 1 CE 0575  II 2G EEx de [ib] IIB/IIC T4
	Model 3500	Safe area only. Can be connected to a sensor in ATEX Zone 1 area. CE 0575  II (2)G [EEx ib] IIB/IIC
	Model 3700	ATEX Zone 1 CE 0575  II 2G EEx de [ib] IIB/IIC T4

Model 3100 accessory

Relays module Three relays
Solid state, SPST
Rated at 24–250 VAC, 40 mA to 5 A; or 0–70 VDC, 5 A
Energized by discrete outputs
NEMA 4X (IP65) enclosure (optional)

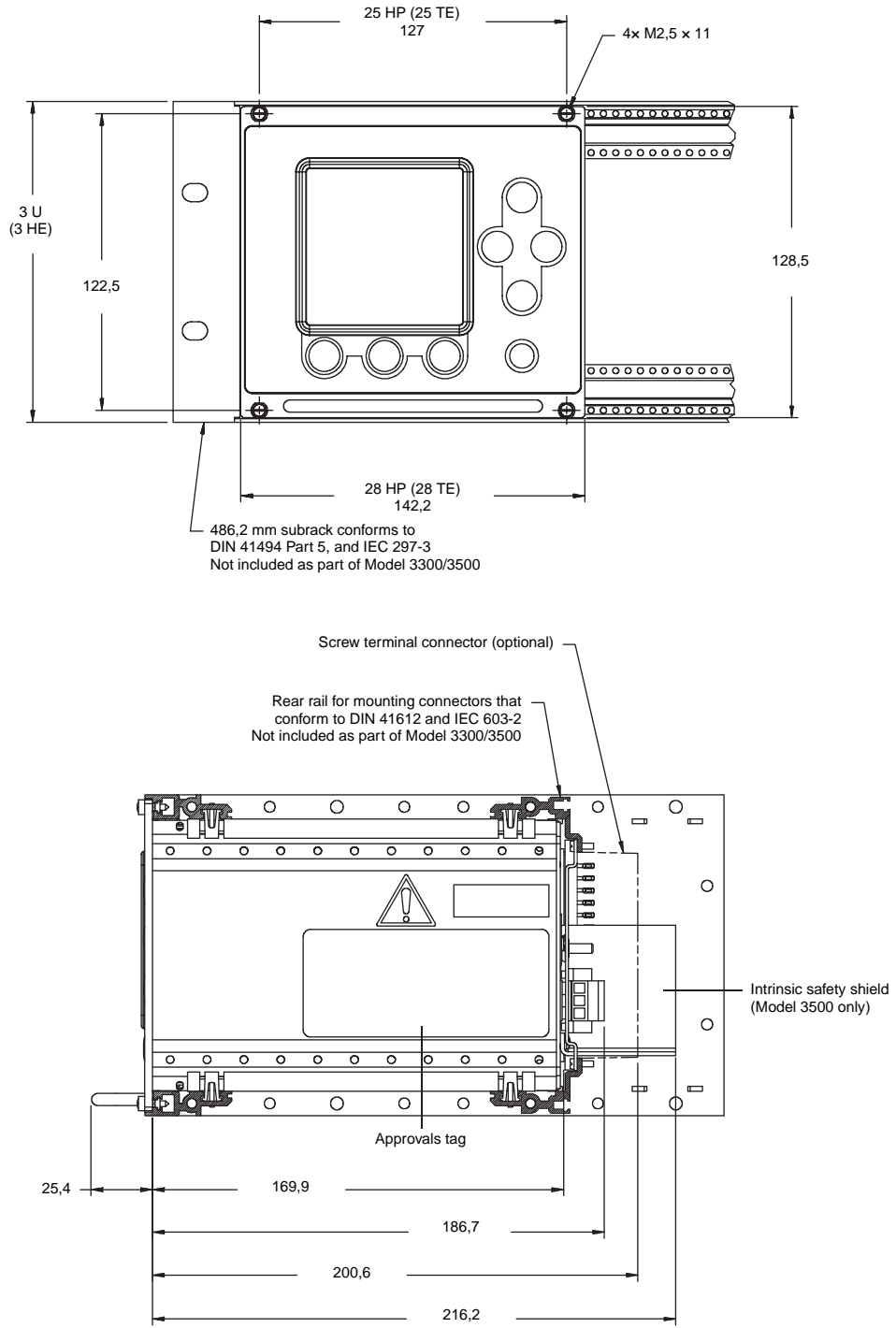
UL and CSA approvals Class I, Div. 2, Groups A, B, C, and D

Dimensions

Rack-mount Model 3300/3500

Dimensions in mm

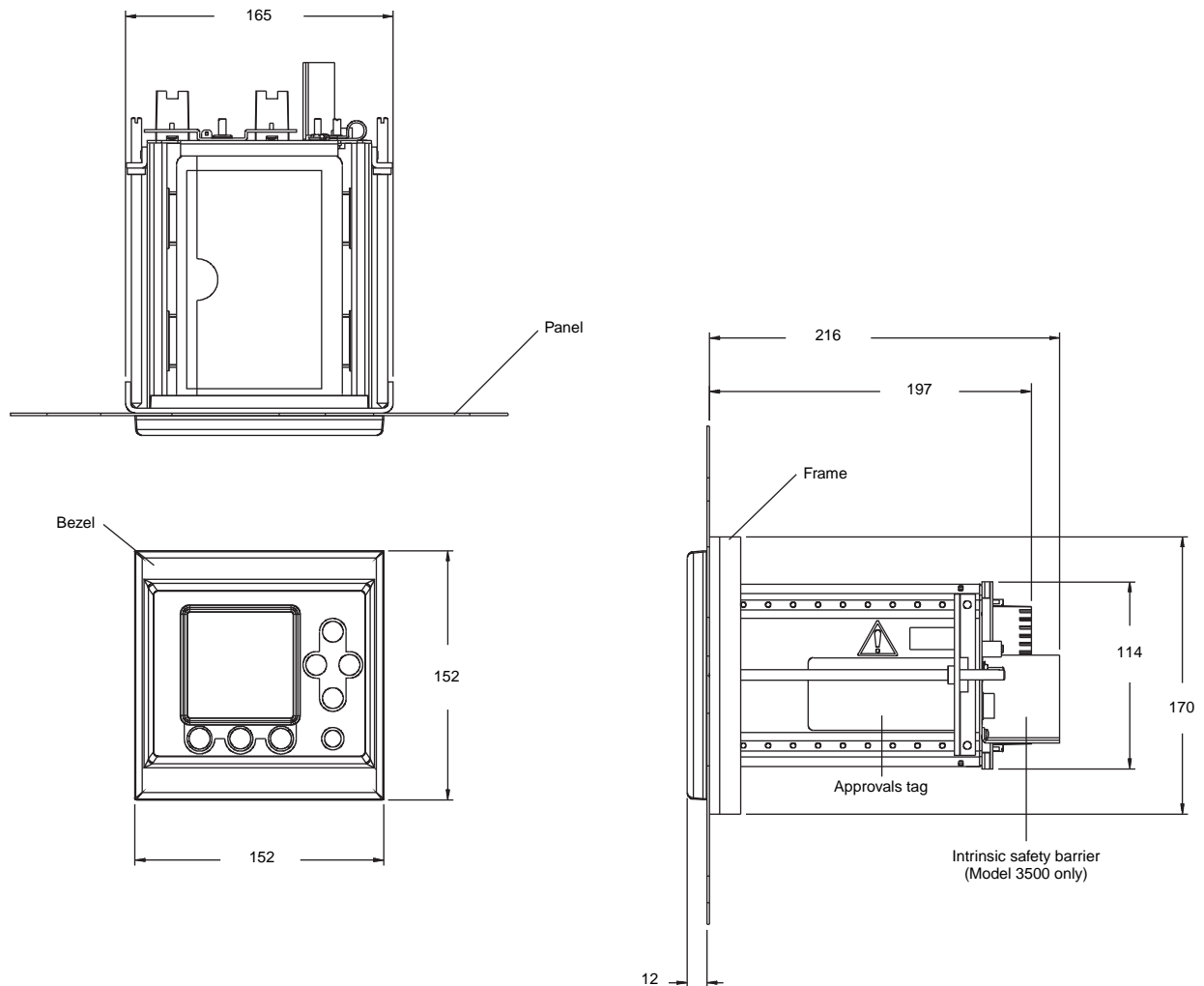
1 U = 1 HE = 44,45 mm
1 HP = 1 TE = 5,08 mm



Dimensions *continued*

Panel-mount Model 3300/3500 with screw-type connectors

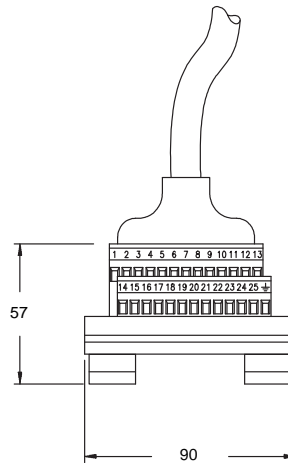
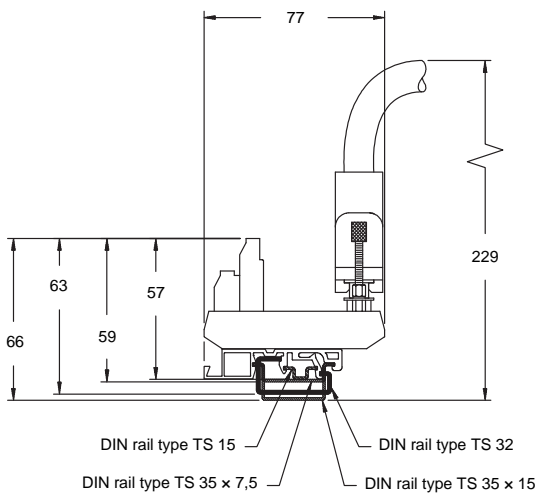
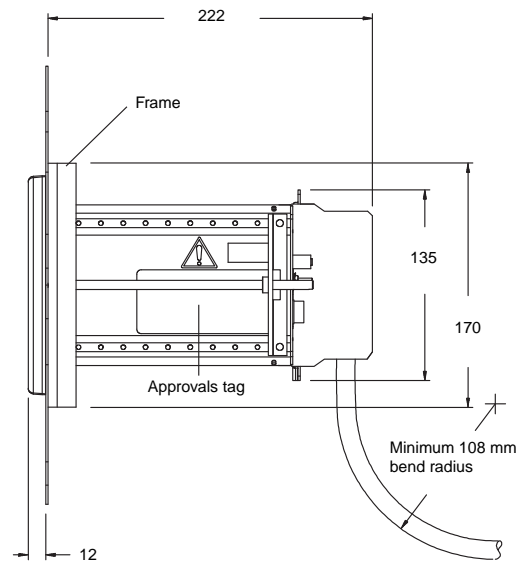
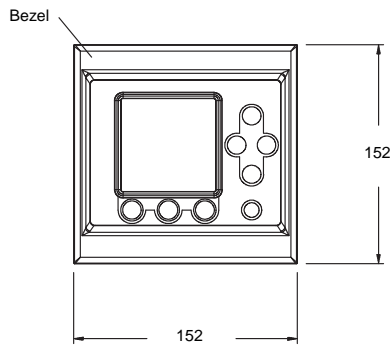
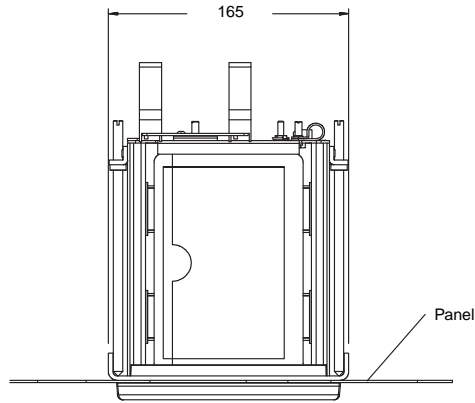
Dimensions in mm



Dimensions *continued*

Panel-mount Model 3300/3500 with optional I/O cable

Dimensions in mm

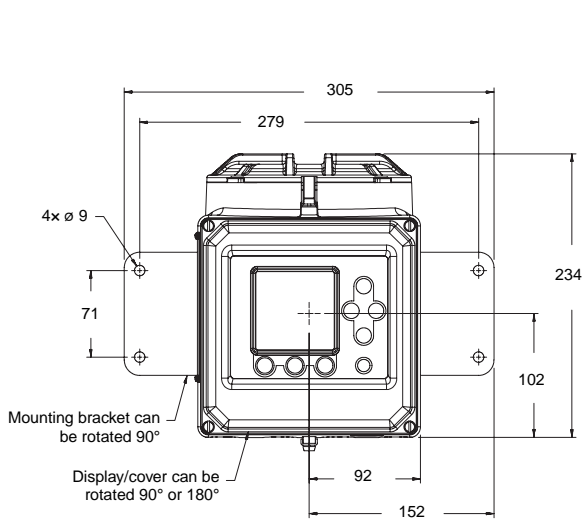


DIN-rail-mount screw terminals detail

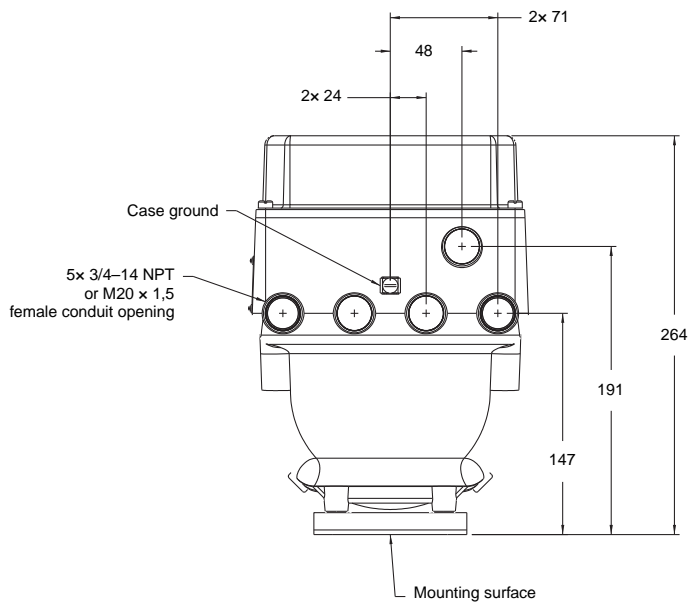
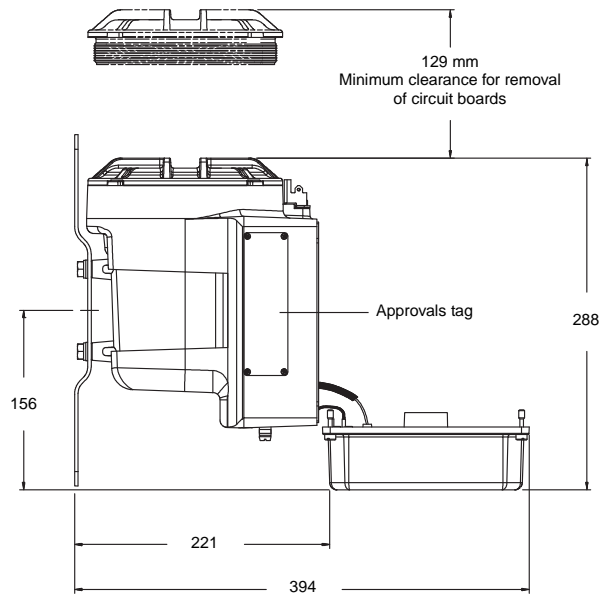
Dimensions *continued*

Field-mount Model 3350/3700

Dimensions in mm



4x M8 x 16 bolts are included for attaching the mounting bracket to the Model 3350 or 3700 transmitter



Conduit openings view

Ordering information — Model 3300

Model	Product description
3300	Micro Motion Coriolis Discrete Controller; remote rack/panel-mount
Code	Mounting options
R	DIN rack
P	Panel-mount
Code	Power supply options
1	85 to 265 VAC
2	18 to 30 VDC (recommended for 24 VDC users)
Code	Communication gateway module
A	No communication gateway module
Code	Additional hardware modules
0	No additional hardware modules
1 ⁽¹⁾	Weights & Measures Custody Transfer (all other than OIML)
Code	Sensor interface
0	No sensor interface
Code	Terminals
A	Solder pins (use with mounting code R only)
B	Screw terminals
C	Prepared cables; 0,6 m length (use with mounting code P only)
D	Prepared cables; 1,5 m length (use with mounting code P only)
E	Prepared cables; 3 m length (use with mounting code P only)
Code	Relays and housings
1	No relays and housing
Code	Approvals
M	Micro Motion standard (no approval)
U	UL
C	CSA (Canada only)
A	CSA C-US (U.S.A. and Canada)
Q ⁽²⁾	General purpose with CMC (China only)
Continued on next page	

(1) Control Application code must be code D (Discrete Batch Controller).

(2) Available with Chinese (M) language option only.

Ordering information — Model 3300 *continued*

Code	Language		
A	English local display	Danish quick reference guide	English manual
D	English local display	Dutch quick reference guide	English manual
E	English local display	English quick reference guide	English manual
F	French local display	French quick reference guide	French manual
G	German local display	German quick reference guide	German manual
H	English local display	Finnish quick reference guide	English manual
I	English local display	Italian quick reference guide	English manual
J	Japanese local display	Japanese quick reference guide	English manual
M	English local display	Chinese quick reference guide	English manual
N	English local display	Norwegian quick reference guide	English manual
O	English local display	Polish quick reference guide	English manual
P	English local display	Portuguese quick reference guide	English manual
S	English local display	Spanish quick reference guide	Spanish manual
W	English local display	Swedish quick reference guide	English manual
B	English local display	Hungarian CE requirements document	English manual and quick reference guide
C	English local display	Czech CE requirements document	English manual and quick reference guide
K	English local display	Slovak CE requirements document	English manual and quick reference guide
L	English local display	Latvian CE requirements document	English manual and quick reference guide
T	English local display	Estonian CE requirements document	English manual and quick reference guide
U	English local display	Greek CE requirements document	English manual and quick reference guide
V	English local display	Lithuanian CE requirements document	English manual and quick reference guide
Y	English local display	Slovenian CE requirements document	English manual and quick reference guide
Code	Control application software		
Z	Process monitor/totalizer (standard)		
D	Discrete batch controller		
Code	Measurement application software		
Z	No measurement application software		
Code	Specialty applications		
Z	No specialty applications		
X	ETO application		
Typical model number: 3300 R 1 A 0 0 A 1 U E D Z Z			

Ordering information — Model 3350

Model	Product description
3350	Micro Motion Coriolis Discrete Controller; remote field-mount
Code	Mounting options
A	Field-mount
Code	Power supply options
1	85 to 265 VAC
2	18 to 30 VDC (recommended for 24 VDC users)
Code	Communication gateway module
A	No communication gateway module
Code	Additional hardware modules
0	No additional hardware modules
1 ⁽¹⁾	Weights & Measures Custody Transfer (all other than OIML)
Code	Sensor interface
0	No sensor interface
Code	Conduit connections
A	M20 without glands
B	M20 with three increased safety glands
C	M20 with five increased safety glands
D	3/4-inch NPT without conduit seals
Code	Approvals
M	Micro Motion standard (no approval)
U	UL
C	CSA (Canada only)
A	CSA C-US (U.S.A. and Canada)
Z	ATEX — Zone 1 Equipment Category 2
P ⁽²⁾	NEPSI — Safe area
Continued on next page	

(1) Control Application code must be code D (Discrete Batch Controller).

(2) Available only with language option M (Chinese).

Ordering information — Model 3350 *continued*

Code	Language		
A	English local display	Danish quick reference guide	English manual
D	English local display	Dutch quick reference guide	English manual
E	English local display	English quick reference guide	English manual
F	French local display	French quick reference guide	French manual
G	German local display	German quick reference guide	German manual
H	English local display	Finnish quick reference guide	English manual
I	English local display	Italian quick reference guide	English manual
J	Japanese local display	Japanese quick reference guide	English manual
M	English local display	Chinese quick reference guide	English manual
N	English local display	Norwegian quick reference guide	English manual
O	English local display	Polish quick reference guide	English manual
P	English local display	Portuguese quick reference guide	English manual
S	English local display	Spanish quick reference guide	Spanish manual
W	English local display	Swedish quick reference guide	English manual
B	English local display	Hungarian CE requirements document	English manual and quick reference guide
C	English local display	Czech CE requirements document	English manual and quick reference guide
K	English local display	Slovak CE requirements document	English manual and quick reference guide
L	English local display	Latvian CE requirements document	English manual and quick reference guide
T	English local display	Estonian CE requirements document	English manual and quick reference guide
U	English local display	Greek CE requirements document	English manual and quick reference guide
V	English local display	Lithuanian CE requirements document	English manual and quick reference guide
Y	English local display	Slovenian CE requirements document	English manual and quick reference guide
Code	Control application software		
Z	Process monitor/totalizer (standard)		
D	Discrete batch controller		
Code	Measurement application software		
Z	No measurement application software		
Code	Specialty applications		
Z	No specialty applications		
X	ETO application		
Typical model number: 3350 A 1 0 0 A U E D Z Z			

Ordering information — Model 3500

Model	Product description
3500	Micro Motion Coriolis multivariable transmitter and discrete controller; remote rack/panel-mount
Code	Mounting options
R	DIN rack
P	Panel-mount
Code	Power supply options
1	85 to 265 VAC
2	18 to 30 VDC (recommended for 24 VDC users)
Code	Remote core processor
A	Sensor interface code 5 None
	Sensor interface code 6 (remote core processor)
B	1/2"—NPT remote core processor — no gland
E	M20 remote core processor — no gland
F	Remote core processor — brass/nickel cable gland
G	Remote core processor — stainless steel cable gland
Code	Additional hardware modules
0	No additional hardware modules
1 ⁽¹⁾	Weights & Measures Custody Transfer (all other than OIML)
2	Weights & Measures Custody Transfer (OIML) ⁽²⁾
Code	Sensor interface
5	4-wire interface to sensors with core processors
6	4-wire remote mount transmitter with 9-wire remote core processor to sensors with junction box
Code	Terminals
B	Screw terminals
C	Prepared cables; 0,6 m length (use with mounting code P only)
D	Prepared cables; 1,5 m length (use with mounting code P only)
E	Prepared cables; 3 m length (use with mounting code P only)
Code	Relays and housings
1	No relays and housing
Code	Approvals
M	Micro Motion standard (no approval)
U	UL
C	CSA (Canada only)
A	CSA C-US (U.S.A. and Canada)
B	ATEX — Safe area with IS sensor outputs
P ⁽³⁾	NEPSI — Safe area
Continued on next page	

(1) Control Application code must be code D (Discrete Batch Controller).

(2) MID 2004/22/EC compliance pending.

(3) Available with Chinese (M) language option only.

Ordering information — Model 3500 *continued*

Code	Language		
A	English local display	Danish quick reference guide	English manual
D	English local display	Dutch quick reference guide	English manual
E	English local display	English quick reference guide	English manual
F	French local display	French quick reference guide	French manual
G	German local display	German quick reference guide	German manual
H	English local display	Finnish quick reference guide	English manual
I	English local display	Italian quick reference guide	English manual
M	English local display	Chinese quick reference guide	English manual
N	English local display	Norwegian quick reference guide	English manual
O	English local display	Polish quick reference guide	English manual
P	English local display	Portuguese quick reference guide	English manual
S	English local display	Spanish quick reference guide	Spanish manual
W	English local display	Swedish quick reference guide	English manual
B	English local display	Hungarian CE requirements document	English manual and quick reference guide
C	English local display	Czech CE requirements document	English manual and quick reference guide
K	English local display	Slovak CE requirements document	English manual and quick reference guide
L	English local display	Latvian CE requirements document	English manual and quick reference guide
T	English local display	Estonian CE requirements document	English manual and quick reference guide
U	English local display	Greek CE requirements document	English manual and quick reference guide
V	English local display	Lithuanian CE requirements document	English manual and quick reference guide
Y	English local display	Slovenian CE requirements document	English manual and quick reference guide
Code	Control application software		
Z	Process monitor/totalizer (standard)		
C ⁽¹⁾	Process monitor/totalizer; with meter verification, structural integrity method		
D	Discrete batch controller		
E ⁽¹⁾	Discrete batch controller; with meter verification, structural integrity method		
Code	Measurement application software		
Z	No measurement application software		
G	Concentration measurement		
B	Concentration measurement with predefined algorithms for food and beverage		
A	Petroleum measurement		
N ⁽²⁾	Net Oil Computer		
Code	Specialty applications		
Z	No specialty applications		
X	ETO application		
Typical model number: 3500 R 1 A 0 5 A 1 U E D B Z			

(1) Requires the Model 3500 to be connected to an enhanced core processor.

(2) Control Application code must be C or Z.

Ordering information — Model 3700

Model	Product description
3700	Micro Motion Coriolis multivariable transmitter and discrete controller; remote field-mount
Code	Mounting options
A	Field-mount
Code	Power supply options
1	85 to 265 VAC
2	18 to 30 VDC (recommended for 24 VDC users)
Code	Remote core processor
A	Sensor interface code 5 None
	Sensor interface code 6 (remote core processor)
B	1/2"–NPT remote core processor — no gland
E	M20 remote core processor — no gland
F	Remote core processor — brass/nickel cable gland
G	Remote core processor — stainless steel cable gland
Code	Additional hardware modules
0	No additional hardware modules
1 ⁽¹⁾	Weights & Measures Custody Transfer (all other than OIML)
2	Weights & Measures Custody Transfer (OIML) ⁽²⁾
Code	Sensor interface
5	4-wire interface to sensors with core processors
6	4-wire remote mount transmitter with 9-wire remote core processor to sensors with junction box
Code	Conduit connections
A	M20 without glands
B	M20 with three increased safety glands
C	M20 with five increased safety glands
D	3/4-inch NPT without conduit seals
Code	Approvals
M	Micro Motion standard (no approval)
U	UL
C	CSA (Canada only)
A	CSA C-US (U.S.A. and Canada)
Z	ATEX — Zone 1 Equipment Category 2
P ⁽³⁾	NEPSI — Safe area
Continued on next page	

(1) Control Application code must be code D (Discrete Batch Controller).

(2) MID 2004/22/EC compliance pending.

(3) Available only with language option M (Chinese).

Ordering information — Model 3700 *continued*

Code	Language		
A	English local display	Danish quick reference guide	English manual
D	English local display	Dutch quick reference guide	English manual
E	English local display	English quick reference guide	English manual
F	French local display	French quick reference guide	French manual
G	German local display	German quick reference guide	German manual
H	English local display	Finnish quick reference guide	English manual
I	English local display	Italian quick reference guide	English manual
M	English local display	Chinese quick reference guide	English manual
N	English local display	Norwegian quick reference guide	English manual
O	English local display	Polish quick reference guide	English manual
P	English local display	Portuguese quick reference guide	English manual
S	English local display	Spanish quick reference guide	Spanish manual
W	English local display	Swedish quick reference guide	English manual
B	English local display	Hungarian CE requirements document	English manual and quick reference guide
C	English local display	Czech CE requirements document	English manual and quick reference guide
K	English local display	Slovak CE requirements document	English manual and quick reference guide
L	English local display	Latvian CE requirements document	English manual and quick reference guide
T	English local display	Estonian CE requirements document	English manual and quick reference guide
U	English local display	Greek CE requirements document	English manual and quick reference guide
V	English local display	Lithuanian CE requirements document	English manual and quick reference guide
Y	English local display	Slovenian CE requirements document	English manual and quick reference guide
Code	Control application software		
Z	Process monitor/totalizer (standard)		
C ⁽¹⁾	Process monitor/totalizer; with meter verification, structural integrity method		
D	Discrete batch controller		
E ⁽¹⁾	Discrete batch controller; with meter verification, structural integrity method		
Code	Measurement application software		
Z	No measurement application software		
G	Concentration measurement		
B	Concentration measurement with predefined algorithms for food and beverage		
A	Petroleum measurement		
N ⁽²⁾	Net Oil Computer		
Code	Specialty applications		
Z	No specialty applications		
X	ETO application		
Typical model number: 3700 A 1 A 0 5 A U E D B Z			

(1) Requires the Model 3700 to be connected to an enhanced core processor.

(2) Control Application code must be C or Z.

Ordering information — Model 3100 high energy relay

Model	Product description
3100	Micro Motion Coriolis High Energy Relay
Code	Device (order separately)
A	3 relays; 24–250 VAC; 5 A
B	3 relays; 0–70 VDC; 5 A
Code	Housing
1	No housing
2	NEMA 4X housing for relays only
Code	Future expansion
A	Reserved for future use
Code	Approvals
M	Micro Motion standard (no approval)
U	UL Class I, Div. 2, Groups A, B, C, and D
C	CSA Class I, Div. 2, Groups A, B, C, and D
Typical model number: 3100 A 2 A U	

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 500,000 meters installed worldwide and 30 years of flow and density measurement experience.

 www.micromotion.com

© 2008 Micro Motion, Inc. All rights reserved. Micro Motion is committed to continuous product improvement. As a result, all specifications are subject to change without notice. ELITE and ProLink are registered trademarks, and MVD and MVD Direct Connect are trademarks of Micro Motion, Inc., Boulder, Colorado. Micro Motion is a registered trade name of Micro Motion, Inc., Boulder, Colorado. The Micro Motion and Emerson logos are trademarks and service marks of Emerson Electric Co. All other trademarks are property of their respective owners.

Emerson Process Management Micro Motion Americas

Worldwide Headquarters
7070 Winchester Circle
Boulder, Colorado USA 80301
T: 800 522 6277
T: +1 (303) 527 5200
F: +1 (303) 530 8459
Mexico T: 52 55 5366 2622
Argentina T: 54 11 4837 7000
Brazil T: 55 15 3238 3677
Venezuela T: 58 26 1731 3394

Emerson Process Management Micro Motion Europe/Middle East

Central & Eastern Europe T: +41 41 7686 111
Dubai T: 971-4 8835235
France T: 0800 917 901
Germany T: 0800 182 5347
Italy T: 8008 77334
The Netherlands T: (31) 318 495 555
U.K. T: 0870 240 1978
Russia/CIS T: +7 495 981 9811

Emerson Process Management Micro Motion Asia Pacific

Australia T: (61) 3 9721 0200
China T: (86) 21 2892 9000
India T: (91) 22 5662 0566
Japan T: (81) 3 5769 6803
Korea T: (82) 2 3438 4600
Singapore T: (65) 6 777 8211

