

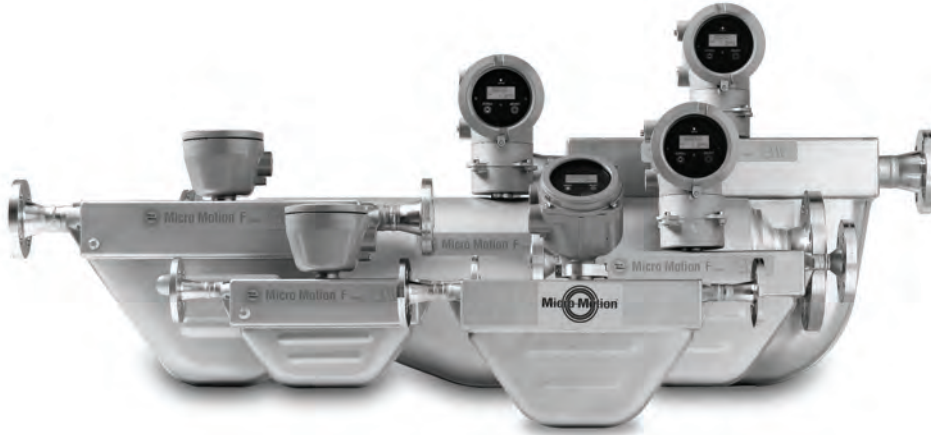
Product Data Sheet

PS-00603, Rev. K

February 2011

Micro Motion® F-Series Coriolis Flow and Density Meters

Micro Motion® F-Series Coriolis meters offer highly accurate mass flow, volume flow, and density measurement in a compact design. F-Series meters come with a smooth exterior finish that can easily be kept clean, and all F-Series meters can be installed to be self-draining.



Best flow and density measurement in a compact, drainable flow meter

- Superior sensitivity in a compact design to reduce variability in process control
- Cleanable self-draining design enables fast product change-over

Broadest range of application coverage

- Available with FMT transmitter for fast-fill dosing and batch applications
- 2-wire loop-powered option for installation simplification
- Supports Wireless THUM™, PROFIBUS-DP, and DeviceNet™ protocols for maximum operational versatility
- Stainless steel or nickel alloy construction and high temperature and pressure options for a variety of process fluids and conditions

Superior reliability and safety

- Enables Smart Meter Verification for quick, complete meter diagnosis without process interruption

ELITE® Peak performance Coriolis meter

ELITE HC Peak performance high capacity meter

F-Series High performance compact drainable Coriolis meter

H-Series Hygienic compact drainable Coriolis meter

T-Series Straight tube full-bore Coriolis meter

R-Series General purpose flow-only Coriolis meter

LF-Series Extreme low-flow Coriolis meter



Micro Motion F-Series flow and density meters

Micro Motion Coriolis meters meet a vast range of application needs, ranging from extreme low-flow up to high-flow, high-capacity lines. Cryogenic, hygienic, high-temperature, and high-pressure—Micro Motion meters can handle them all. Micro Motion meters are available with a variety of wetted parts to ensure the best material compatibility. Now with the industry's only 2-wire Coriolis option, Micro Motion provides unsurpassed simplicity of installation and application flexibility.

Coriolis meters. Coriolis meters offer dramatic benefits over traditional volumetric measurement technologies. Coriolis meters:

- Deliver accurate and repeatable process data over a wide range of flow rates and process conditions.
- Provide direct inline measurement of mass flow and density, and also measure volume flow and temperature—all from a single device.
- Have no moving parts, so maintenance costs are minimal.
- Have no requirements for flow conditioning or straight pipe runs, so installation is simplified and less expensive.
- Provide advanced diagnostic tools for both the meter and the process.

F-Series Coriolis meters. Micro Motion F-Series Coriolis meters have a compact design that fits into tight spaces while offering highly accurate flow and density measurement for virtually any process fluid. With F-Series meters, expensive recalibrations become a thing of the past—a single F-Series calibration is valid for liquids, gases, and slurries.

The accumulated knowledge of Micro Motion is built into every F-Series meter. Now with Smart Meter Verification, F-Series meters deliver outstanding reliability and ease of use for critical applications. F-Series meters are available with either stainless steel or nickel-alloy wetted parts, allowing you to choose the material that is most compatible with your process fluid. And certain F-Series models are available for high-temperature and high-pressure applications.

Contents

Liquid flow performance	3	Materials of construction	16
Density performance (liquid only)	4	Weight	16
Gas flow performance	5	Vibration limits	17
Temperature specifications	7	Dimensions	18
Pressure ratings	8	Fitting options	24
Environmental effects	9	Ordering information	30
Hazardous area classifications	10		

Liquid flow performance

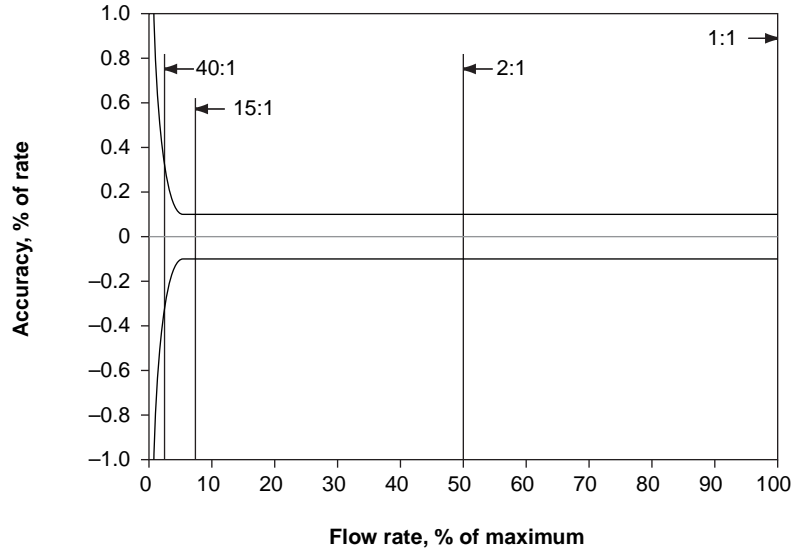
		Mass		Volume ⁽¹⁾	
		lb/min	kg/h	gal/min	l/h
Maximum flow rate	F025	100	2720	12	2720
	F050	300	8160	36	8160
	F100	1200	32,650	144	32,650
	F200	3200	87,100	384	87,100
	F300	10,000	272,000	1200	272,000
Mass flow accuracy⁽²⁾⁽³⁾		±0.10% of rate ⁽⁴⁾⁽⁵⁾			
Volume flow accuracy⁽²⁾⁽³⁾		±0.15% of rate ⁽⁶⁾⁽⁷⁾			
Repeatability		±0.05% of rate ⁽⁴⁾			
		lb/min	kg/h	gal/min	l/h
Zero stability	F025	0.0065	0.1765	0.0008	0.1765
	F050	0.020	0.544	0.002	0.544
	F100	0.080	2.177	0.010	2.177
	F200	0.256	6.965	0.031	6.965
	F300	0.80	21.76	0.096	21.76

- (1) Volumetric measurement is based on a process-fluid density of 1 g/cm³. For fluids with density other than 1 g/cm³, the volume flow rate equals the mass flow rate divided by the fluid's density.
- (2) Stated flow accuracy includes the combined effects of repeatability, linearity, and hysteresis.
- (3) Accuracy options vary by model. Sensors with Model 2200S transmitter have fewer accuracy options. See Ordering information on page 32.
- (4) When flow rate < (zero stability / 0.001), then mass flow accuracy = ±[(zero stability / flow rate) × 100]% of rate and repeatability = ±½[(zero stability / flow rate) × 100]% of rate.
- (5) When ordered with the 0.15% calibration option, mass flow accuracy on liquid = ±0.15% when flow rate ≥ (zero stability / 0.0015). When flow rate < (zero stability / 0.0015), then accuracy = ±[(zero stability / flow rate) × 100]% of rate. When ordered with the 0.20% calibration option, mass flow accuracy on liquid = ±0.20% when flow rate ≥ (zero stability / 0.0020). When flow rate < (zero stability / 0.0020), then mass flow accuracy on liquid = ±[(zero stability / flow rate) × 100]% of rate.
- (6) When flow rate < (zero stability / 0.001), then volume flow accuracy on liquid = ±[1.5 × (zero stability / flow rate) × 100]% of rate and repeatability = ±½[(zero stability / flow rate) × 100]% of rate.
- (7) When ordered with the ±0.15% calibration option, volume flow accuracy on liquid = ±0.25% when flow rate ≥ (zero stability / 0.0017). When flow rate < (zero stability / 0.0017), then volume accuracy on liquid = ±[1.5 × (zero stability / flow rate) × 100]% of rate. When ordered with the ±0.20% calibration option, volume flow accuracy on liquid = ±0.30% when flow rate ≥ (zero stability / 0.002). When flow rate < (zero stability / 0.002), then volume accuracy on liquid = ±[1.5 × (zero stability / flow rate) × 100]% of rate.

Liquid flow performance *continued*

Typical accuracy, turndown, and pressure drop for Model F050 with Model 1700/2700 transmitter

Pressure drop is dependent on process conditions. To determine accuracy, turndown, and pressure drop with your process variables, use Micro Motion's product selector, available at www.micromotion.com.



Turndown from maximum flow rate	40:1	15:1	2:1
Accuracy (\pm %)	0.26	0.10	0.10
Pressure drop			
psi	0.1	0.45	14.2
bar	0.01	0.03	0.98

Density performance (liquid only)

Accuracy ⁽¹⁾	± 0.001 g/cm ³	± 1.0 kg/m ³
Repeatability	± 0.0005 g/cm ³	± 0.5 kg/m ³
Range	Up to 5 g/cm ³	Up to 5000 kg/m ³

(1) Stated accuracy and repeatability with calibration option 1 (see page 33). With other calibration options, accuracy is ± 0.002 g/cm³ (2.0 kg/m³) and repeatability is ± 0.001 g/cm³ (± 1.0 kg/m³).

Gas flow performance

When selecting sensors for gas applications, measurement accuracy is a function of fluid mass flow rate independent of operating temperature, pressure, or composition. However, pressure drop through the sensor is dependent upon operating temperature, pressure, and fluid composition. Therefore, when selecting a sensor for any particular gas application, it is highly recommended that each sensor be sized using Micro Motion's product selector, available at www.micromotion.com.

		Mass		Volume ⁽¹⁾	
		lb/min	kg/h	SCFM	Nm ³ /h
Typical flow rates that produce approximately 10 psi (0.68 bar) pressure drop on air⁽²⁾					
	F025	4	116	57	90
	F050	13	357	174	276
	F100	50	1366	667	1055
	F200	140	3810	1860	2940
	F300	488	14,865	7270	11,512
Typical flow rates that produce approximately 50 psi (3.4 bar) pressure drop on natural gas⁽³⁾					
	F025	16	445	378	598
	F050	49	1358	1154	1825
	F100	189	5162	4387	6936
	F200	523	14,490	12,310	19,470
	F300	1856	50,989	43,331	72,247
Accuracy⁽⁴⁾	All transmitters	±0.50% of rate ⁽⁵⁾			
Repeatability	All transmitters	±0.25% of rate ⁽⁵⁾			
		lb/min	kg/h		
Zero stability	F025	0.0065	0.1765		
	F050	0.020	0.544		
	F100	0.080	2.177		
	F200	0.256	6.965		
	F300	0.80	21.76		

(1) Standard (SCFM) reference conditions are 14.7 psia and 68 °F. Normal (Nm³/h) reference conditions are 1.013 bar-a and 0 °C.

(2) Air at 68 °F (20 °C) and 100 psia (6.8 bar).

(3) Natural gas at MW 16.675 at 68 °F (20 °C) and 500 psia (34 bar).

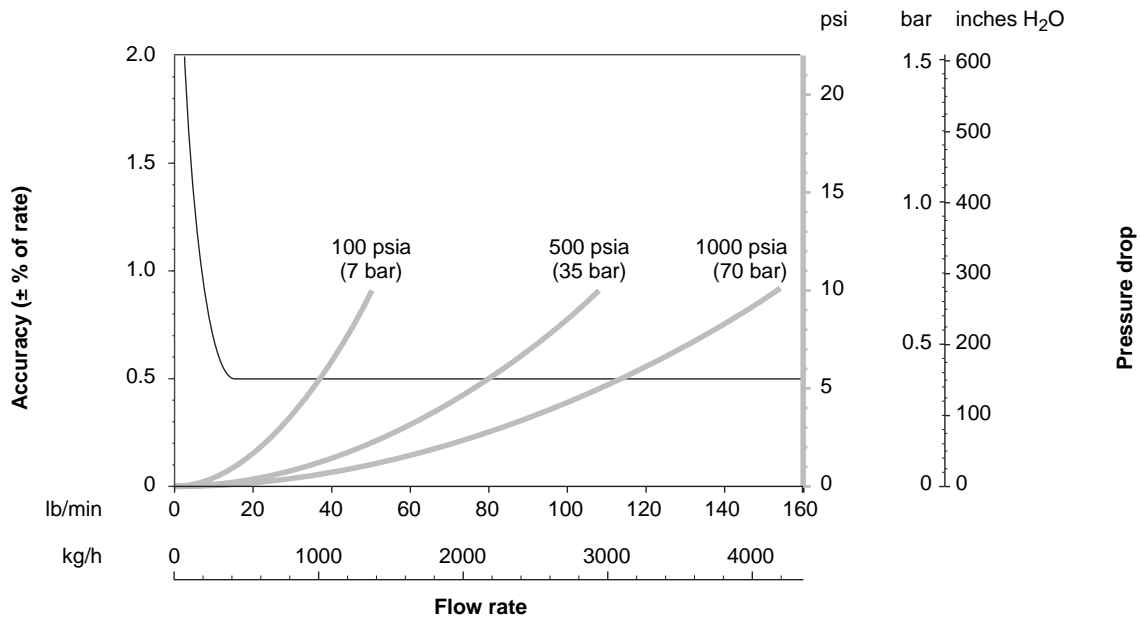
(4) Stated flow accuracy includes the combined effects of repeatability, linearity, and hysteresis.

(5) When flow rate < (zero stability / 0.005), then accuracy = ±[(zero stability / flow rate) × 100]% of rate and repeatability = ±[½(zero stability / flow rate) × 100]% of rate.

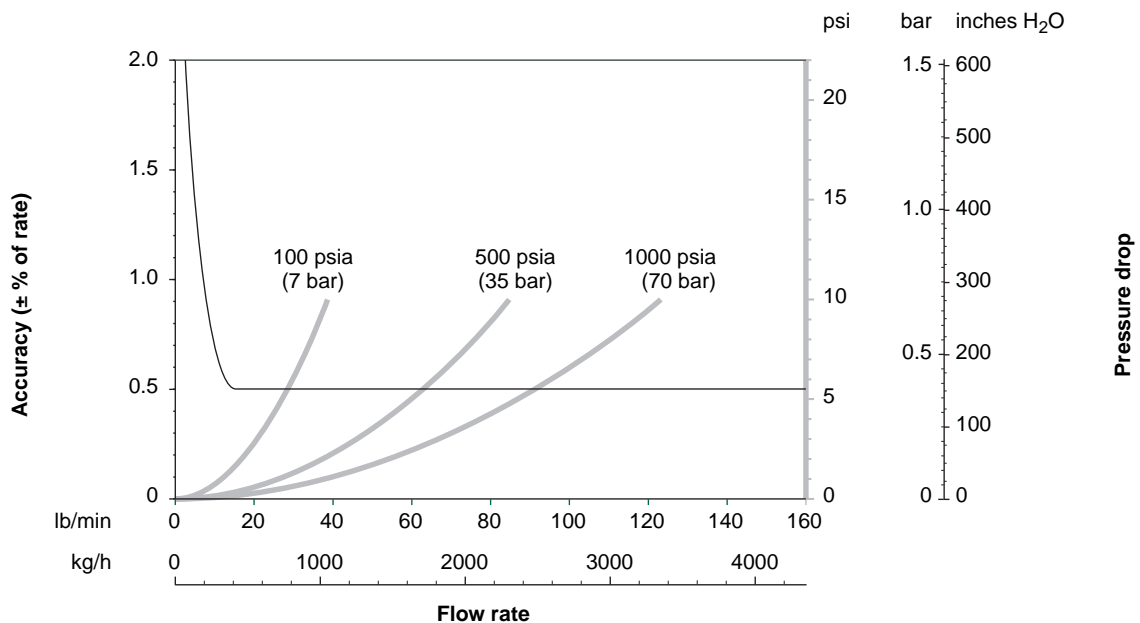
Gas flow performance *continued*

Typical accuracy and pressure drop with F100 with MVD technology

Air at 68 °F (20 °C), static pressures as indicated on graph



Natural gas (MW 16.675) at 68 °F (20 °C), static pressures as indicated on graph

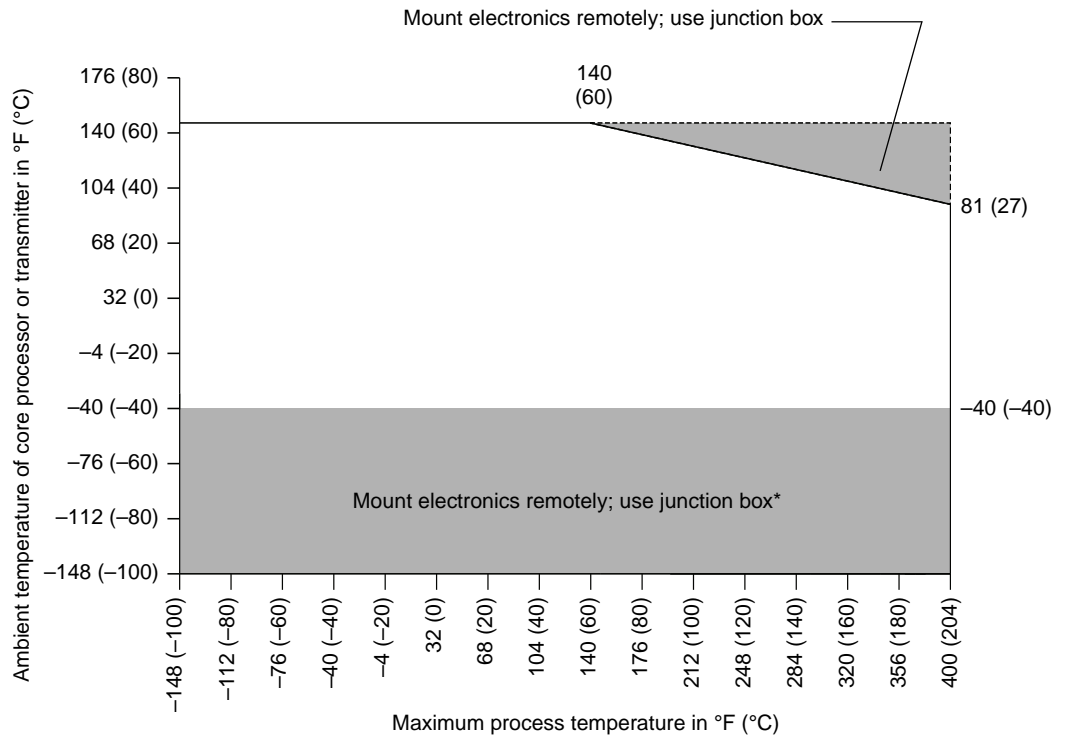


Standard or normal volumetric capability

Standard and normal volumes are “quasi mass” flow units for any fixed composition fluid. Standard and normal volumes do not vary with operating pressure, temperature, or density. With knowledge of density at standard or normal conditions (available from reference sources), a Micro Motion meter can be configured to output in standard or normal volume units without the need for pressure, temperature, or density compensation. Contact your local sales representative for more information.

Temperature specifications

Accuracy	All models	$\pm 1\text{ }^{\circ}\text{C} \pm 0.5\%$ of reading in $^{\circ}\text{C}$
Repeatability	All models	$\pm 0.2\text{ }^{\circ}\text{C}$
Temperature limits⁽¹⁾⁽²⁾⁽³⁾	All models <i>except</i> high-temperature models	



* When ambient temperature is below $-40\text{ }^{\circ}\text{F}$ ($-40\text{ }^{\circ}\text{C}$), a core processor must be heated to bring its local ambient temperature to between $-40\text{ }^{\circ}\text{F}$ ($-40\text{ }^{\circ}\text{C}$) and $+140\text{ }^{\circ}\text{F}$ ($+60\text{ }^{\circ}\text{C}$). Long-term storage of electronics at ambient temperatures below $-40\text{ }^{\circ}\text{F}$ ($-40\text{ }^{\circ}\text{C}$) is not recommended.

High-temperature models

Ambient temperature:
 -40 to $+140\text{ }^{\circ}\text{F}$ (-40 to $+60\text{ }^{\circ}\text{C}$)

Process temperature:
 -50 to $+662\text{ }^{\circ}\text{F}$ (-40 to $+350\text{ }^{\circ}\text{C}$)

- (1) Temperature limits may be further restricted by hazardous area approvals. See pages 10–15.
- (2) For F300 sensors, the difference between the process fluid temperature and the average temperature of the case must be less than $120\text{ }^{\circ}\text{F}$ ($66\text{ }^{\circ}\text{C}$).
- (3) The extended mount option allows the sensor case to be insulated without covering the transmitter, core processor, or junction box, but does not affect temperature ratings.

Pressure ratings

		Material	psig	bar
Flow tube rating⁽¹⁾⁽²⁾	F025P	Stainless steel	2300	158
	F050P	Stainless steel	5000	345
	F300H	Alloy C-22	2220	153
	All other models	Stainless steel	1450	100
		Alloy C-22	2160	148

PED compliance Sensors comply with council directive 97/23/EC of 29 May 1997 on Pressure Equipment

		ASME B31.3 secondary containment rating⁽²⁾		Burst pressure used to determine ASME B31.3 secondary containment rating	
		psig	bar	psig	bar
		Housing rating⁽³⁾	F025	166	11.4
	F050	135	9.3	1530	105
	F100	109	7.5	1281	88.3
	F200	64	4.4	760	52.4
	F300	256	17.7	2630	180

(1) Process connection rating may differ from sensor rating. Please choose process connections accordingly.

(2) Pressure rating at 77 °F (25 °C), according to ASME B31.3. For operating temperatures above 300 °F (148 °C), pressure needs to be derated as follows. Linear interpolation may be used between specified temperatures.

	Flow tubes		Housing
	316L sensors	Alloy C-22 sensors	All sensors
up to 300 °F (up to 148 °C)	None	None	None
at 400 °F (at 204 °C)	7.2% derating	None	5.4% derating
at 500 °F (at 260 °C)	13.8% derating	4.7% derating	11.4% derating
at 600 °F (at 316 °C)	19.2% derating	9.7% derating	16.2% derating
at 650 °F (at 343 °C)	21.0% derating	11.7% derating	18.0% derating
at 700 °F (at 371 °C)	22.8% derating	13.7% derating	19.2% derating

(3) Sensor housing is rated only when the secondary containment case option is purchased. The secondary containment case option is not available on high-temperature sensors.

Environmental effects

Process temperature effect

Process temperature effect is defined as:

- For mass flow measurement, the worst-case zero offset due to process fluid temperature change away from the zeroing temperature.
- For density measurement, the maximum measurement offset due to process fluid temperature change away from the density calibration temperature.

Process temperature effect

	% of maximum flow rate per °C	density accuracy per °C ⁽¹⁾	
		g/cm ³	kg/m ³
F025	±0.00175	±0.0001	±0.1
F050	±0.00175	±0.0001	±0.1
F100	±0.00175	±0.0001	±0.1
F200	±0.00175	±0.0001	±0.1
F300	±0.0040	±0.0001	±0.1

Pressure effect

Pressure effect is defined as the change in sensor flow and density sensitivity due to process pressure change away from the calibration pressure⁽²⁾. Pressure effect can be corrected.

Pressure effect on mass flow accuracy

	% of rate per psi	% of rate per bar
F025	None	None
F050	None	None
F100	None	None
F200	-0.001	-0.015
F300	-0.001	-0.015

Pressure effect on density accuracy

	g/cm ³ per psi	kg/m ³ per bar
F025	None	None
F050	None	None
F100	None	None
F200	-0.00003	-0.43
F300	-0.00003	-0.43

(1) For -100 °C and above.

(2) To determine factory calibration pressure, refer to the calibration document shipped with your sensor. If the data is unavailable, use 20 psi (1.4 bar).

Hazardous area classifications

CSA and CSA C-US

Models F025, F050, F100, and F200 with junction box	Ambient temperature: +140 °F max. (+60 °C max.) Class I, Div. 1, Groups C and D Class I, Div. 2, Groups A, B, C, and D Class II, Div. 1, Groups E, F, and G
Models F025, F050, and F100 with FMT transmitter	Ambient temperature: –13 to +140 °F (–25 to +60 °C) Class I, Div. 2, Groups A, B, C, and D Class II, Div. 2, Groups F and G
All models with Model 2400S transmitter	Ambient temperature: –40 to +140 °F (–40 to +60 °C) Class I, Div. 2, Groups A, B, C, and D Class II, Div. 2, Groups F and G
Models F025, F050, F100, and F200 with core processor, Model 2200S, or Model 1700/2700 transmitter	Ambient temperature: –40 to +140 °F (–40 to +60 °C) Class I, Div. 1, Groups C and D Class I, Div. 2, Groups A, B, C, and D Class II, Div. 1, Groups E, F, and G
Models F300S and F300H with junction box	Ambient temperature: +140 °F max. (+60 °C max.) Class I, Div. 1, Groups C and D Class I, Div. 2, Groups A, B, C, and D Class II, Div. 1, Groups E, F, and G
Models F300S and F300H with core processor, Model 2200S, or Model 1700/2700 transmitter	Ambient temperature: –40 to +140 °F (–40 to +60 °C) Class I, Div. 1, Groups C and D Class I, Div. 2, Groups A, B, C, and D Class II, Div. 1, Groups E, F, and G
All high-temperature models with junction box	Ambient temperature: +140 °F max. (+60 °C max.) Class I, Div. 1, Groups C and D Class I, Div. 2, Groups A, B, C, and D Class II, Div. 1, Groups E, F, and G

UL

Models F025, F050, F100, and F200 with junction box	Ambient temperature: –4 to +104 °F (–20 to +40 °C) Class I, Div. 1, Groups C and D Class I, Div. 2, Groups A, B, C, and D Class II, Div. 1, Groups E, F, and G
---	---

Hazardous area classifications *continued*



IECEX⁽¹⁾

All models with Model 2400S transmitter; Models F025, F050, and F100 with FMT transmitter	Ex nA IIC T1–T5 Gc
Models F025, F050, F100, F200 with core processor or Model 1700/2700 transmitter	Ex ib IIC T1–T5
Models F025, F050, F100, F200 with Model 1700/2700 transmitter with THUM adapter	Ex ib IIC T1–T4
Models F025, F050, F100 and F200 with junction box	Ex ib IIC T1–T6
Model F300S and F300H with core processor or Model 1700/2700 transmitter	Ex ib IIB T1–T5
Model F300S and F300H with Model 1700/2700 transmitter with THUM adapter	Ex ib IIB T1–T4
Models F300S and F300H with junction box	Ex ib IIB T1–T6
Models F025, F050, F100, F200 with Model 2200S transmitter	Ex ib IIC T1–T4
Model F300S and F300H with Model 2200S transmitter	Ex ib IIB T1–T4

NEPSI⁽¹⁾

All models with Model 2400S transmitter	Ex nA II T1–T5
Models F025, F050, F100, F200 with core processor or Model 1700/2700 transmitter	Ex ib IIC T1–T5
Models F025, F050, F100 and F200 with junction box	Ex ib IIC T1–T6
Model F300S and F300H with core processor or Model 1700/2700 transmitter	Ex ib IIB T1–T5
Models F300S and F300H with junction box	Ex ib IIB T1–T6

ATEX

All models with Model 2400S transmitter; Models F025, F050, and F100 with FMT transmitter	  II 3G Ex nA IIC T1–T5 Gc II 3D Ex tc IIIC T ⁽¹⁾ °C Dc IP65
--	--

(1) Refer to the ATEX temperature graphs on the following pages for ambient and process temperature limits.

Hazardous area classifications *continued*

ATEX⁽¹⁾

(Certified per BVS 03 ATEX E 176 X)

Models F025, F050, F100, and F200 with integral core processor or Model 1700/2700 transmitter (max. ambient for core processor is +60 °C)

Transmitter with THUM adapter and display

CE 0575 Ex II 2G Ex ib IIB+H₂ T1–T4

Transmitter with THUM adapter, without display

CE 0575 Ex II 2G Ex ib IIC T1–T4

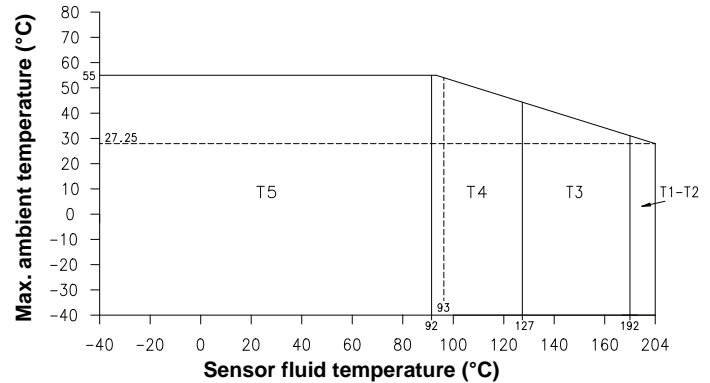
Transmitter with display:

CE 0575 Ex II 2G Ex ib IIB+H₂ T1–T5
II 2D Ex tD A21 IP65 T⁽¹⁾ °C

Core processor or transmitter without display:

CE 0575 Ex II 2G Ex ib IIC T1–T5
II 2D Ex tD A21 IP65 T⁽¹⁾ °C

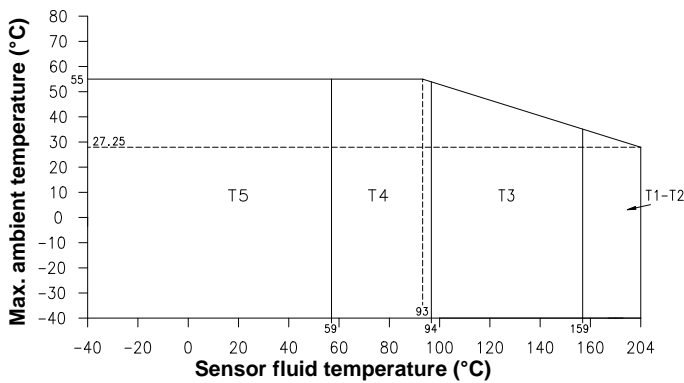
F025 and F050 with C.I.C. A2



Note 1: The maximum surface temperature for dust is as follows: T5:T 95°C, T4:T 130°C, T3:T 195°C, T2 to T1:T 207°C.

Note 2: When installed with the THUM adapter, the T4 rating spans –40 to +127°C.

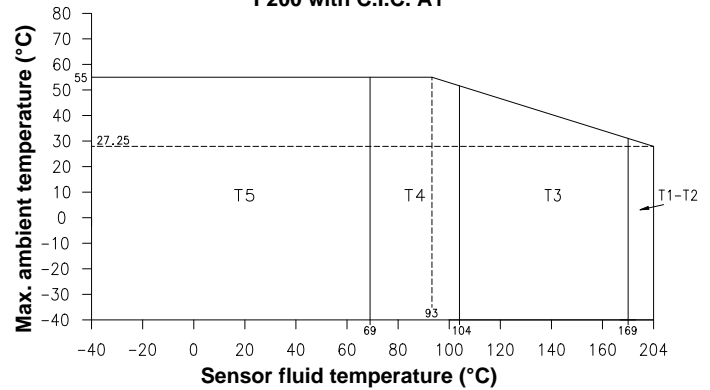
F100 with C.I.C. A2



Note 1: The maximum surface temperature for dust is as follows: T5:T 95°C, T4:T 130°C, T3:T 195°C, T2 to T1:T 240°C.

Note 2: When installed with the THUM adapter, the T4 rating spans –40 to +94°C.

F200 with C.I.C. A1



Note 1: The maximum surface temperature for dust is as follows: T5:T 95°C, T4:T 130°C, T3:T 195°C, T2 to T1:T 230°C.

Note 2: When installed with the THUM adapter, the T4 rating spans –40 to +104°C.


(1) ATEX “T” rating depends on the maximum temperature shown in the graphs above.

Hazardous area classifications *continued*

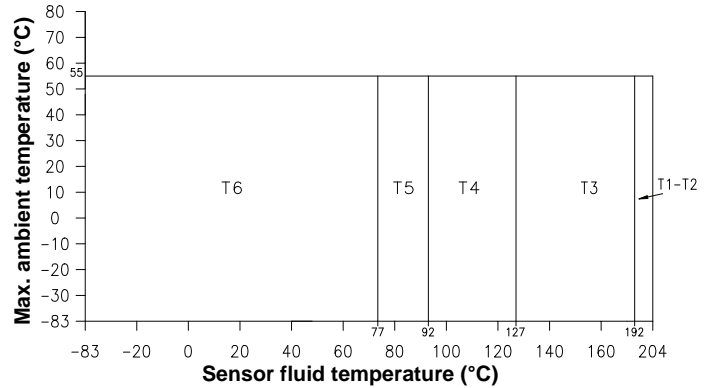
ATEX⁽¹⁾

(Certified per BVS 03 ATEX E 176 X)

Models F025, F050, F100, and F200 with junction box when connected to MVD transmitter

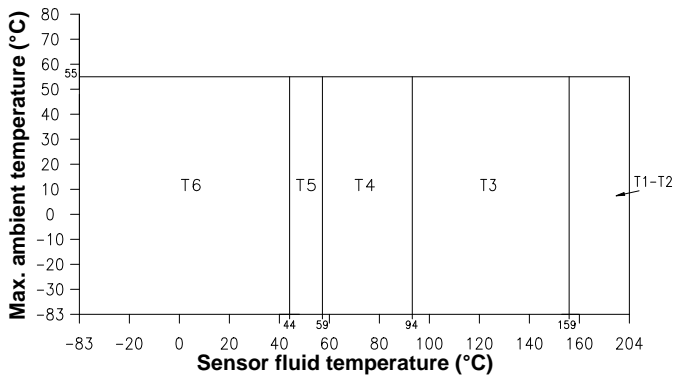
CE 0575  II 2G Ex ib IIC T1–T6
II 2D Ex tD A21 IP65 T⁽¹⁾ °C

F025 and F050 with C.I.C. A2



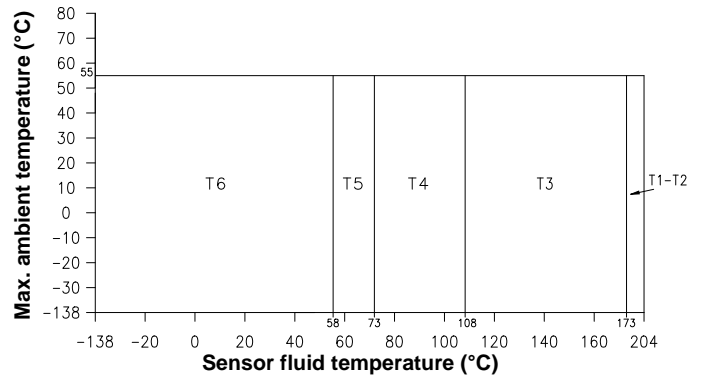
The maximum surface temperature for dust is as follows: T6:T 80°C, T5:T 95°C, T4:T 130°C, T3:T 195°C, T2 to T1:T 207°C
The minimum ambient and process fluid temperature allowed for dust is -40°C.

F100 with C.I.C. A2



The maximum surface temperature for dust is as follows: T6:T 80°C, T5:T 95°C, T4:T 130°C, T3:T 195°C, T2 to T1:T 240°C
The minimum ambient and process fluid temperature allowed for dust is -40°C.

F200 with C.I.C. A1



The maximum surface temperature for dust is as follows: T6:T 80°C, T5:T 95°C, T4:T 130°C, T3:T 195°C, T2 to T1:T 226°C
The minimum ambient and process fluid temperature allowed for dust is -40°C.

(1) ATEX "T" rating depends on the maximum temperature shown in the graphs above.

Hazardous area classifications *continued*

ATEX⁽¹⁾

(Certified per BVS 03 ATEX E 176 X)

Models F025, F050, F100, and F200 with Model 2200S transmitter

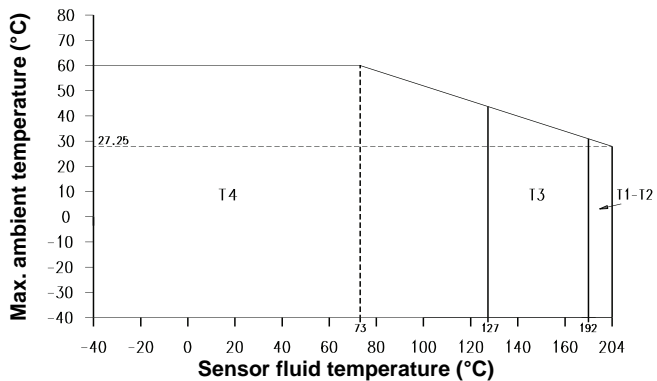
Transmitter:

CE 0575 Ex II 2G Ex ib IIC T1–T4
II 2D Ex ibD 21 T⁽¹⁾ °C

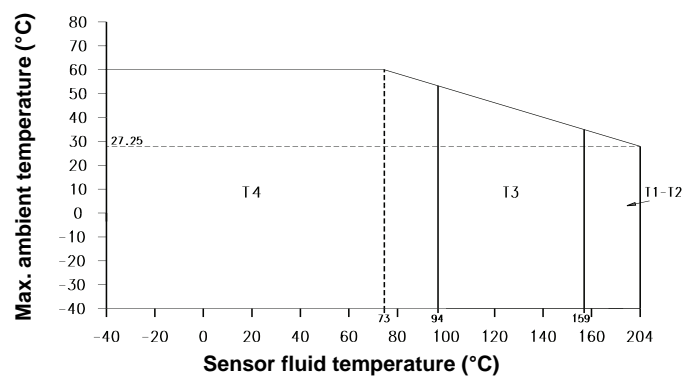
Transmitter with THUM adapter:

CE 0575 Ex II 2G Ex ib IIC T1–T4

F025 and F050



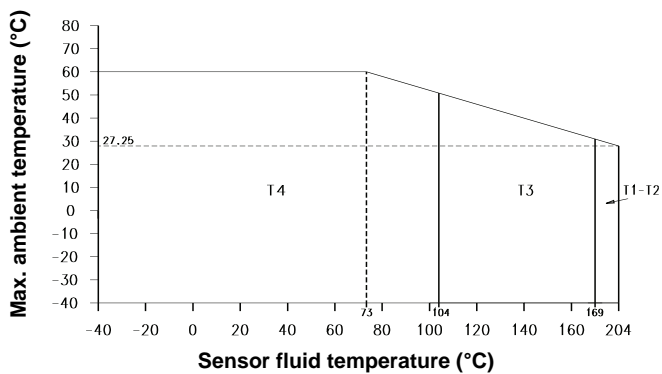
F100



The maximum surface temperature for dust is as follows: T4:T 130°C, T3:T 195°C, T2 to T1:T 207°C

The maximum surface temperature for dust is as follows: T4:T 130°C, T3:T 195°C, T2 to T1:T 240°C

F200



The maximum surface temperature for dust is as follows: T4:T 130°C, T3:T 195°C, T2 to T1:T 230°C

(1) ATEX "T" rating depends on the maximum temperature shown in the graphs above.

Hazardous area classifications *continued*

ATEX⁽¹⁾

(Certified per BVS 03 ATEX E 176 X)

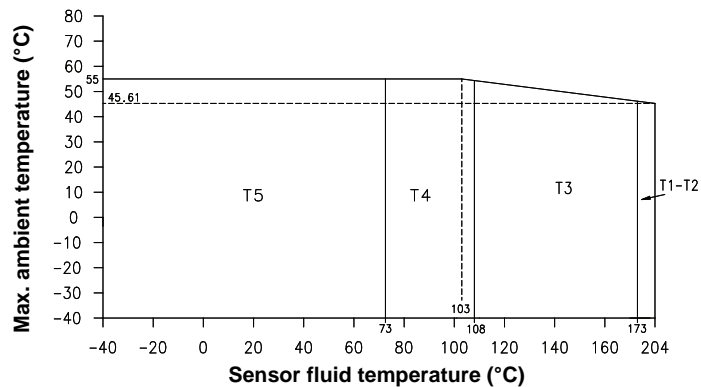
Model F300 with integral core processor or Model 1700/2700 transmitter (max. ambient for core processor is +60 °C)

Transmitter:

CE 0575 Ex II 2G Ex ib IIB T1–T5
II 2D Ex tD A21 IP65 T⁽¹⁾ °C

Transmitter with THUM adapter:

CE 0575 Ex II 2G Ex ib IIB T1–T4

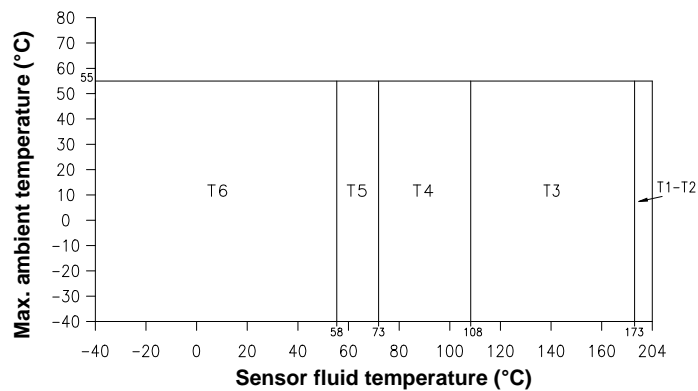


Note 1: The maximum surface temperature for dust is as follows: T5:T 95°C, T4:T 130°C, T3:T 195°C, T2 to T1:T 226°C.

Note 2: When installed with the THUM adapter, the T4 rating spans –40 to +108°C.

Model F300 with junction box connected to MVD transmitter

CE 0575 Ex II 2G Ex ib IIB T1–T6
II 2D Ex tD A21 IP65 T⁽¹⁾ °C



Note 1: The maximum surface temperature for dust is as follows: T6:T 80°C, T5:T 95°C, T4:T 130°C, T3:T 195°C, T2–T1:T 226°C.

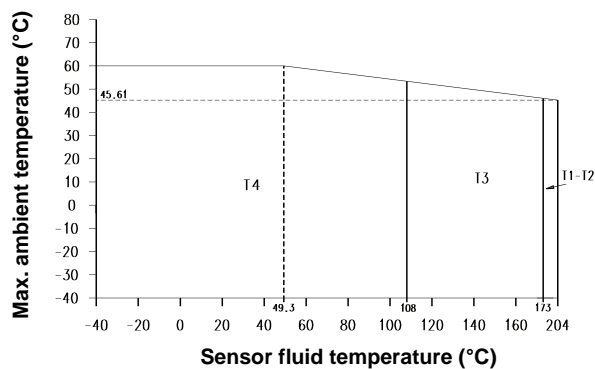
Model F300 with Model 2200S transmitter

Transmitter:

CE 0575 Ex II 2G Ex ib IIB T1–T4
II 2D Ex ibD 21 T⁽¹⁾ °C

Transmitter with THUM adapter:

CE 0575 Ex II 2G Ex ib IIB T1–T4



The maximum surface temperature for dust is as follows: T4:T 130°C, T3:T 195°C, T2 to T1:T 226°C

(1) ATEX “T” rating depends on the maximum temperature shown in the graphs above.

Materials of construction

Wetted parts⁽¹⁾	All models	316L stainless steel or alloy C-22 ⁽²⁾
Housing	Sensor	304L stainless steel
	Core processor	300-series stainless steel or polyurethane-painted aluminum; NEMA 4X (IP66)
	Model 2400S transmitter	316L stainless steel or polyurethane-painted aluminum; NEMA 4X (IP66/67)
	Model 2200S transmitter	316L stainless steel or polyurethane-painted aluminum; NEMA 4X (IP66/67)
	Junction box	Stainless steel or polyurethane-painted aluminum; NEMA 4X (IP66)

(1) General corrosion guidelines do not account for cyclical stress, and therefore should not be relied upon when choosing a wetted material for your Micro Motion meter. Please refer to the Micro Motion Corrosion Guide for material compatibility information.

(2) The outer flange ring on lap joint type flanges is non-wetted and is 304L stainless steel. Consult factory for other materials.

Weight

Standard sensor models in lb (kg)

Sensor model ⁽¹⁾	Model 2400S transmitter, Model 2200S transmitter, or core processor				FMT	Model 1700/2700 transmitter	Junction box	Extended junction box
	Aluminum	Stainless steel	Extended aluminum	Extended stainless steel				
F025S	11 (5)	14 (7)	12 (6)	16 (8)	14 (6)	17 (8)	10 (5)	11 (5)
F025P	11 (5)	14 (7)	12 (6)	16 (8)	—	17 (8)	10 (5)	11 (5)
F025H	13 (6)	17 (8)	14 (6)	18 (8)	—	18 (8)	13 (6)	14 (6)
F050S	12 (6)	16 (8)	13 (6)	17 (8)	15 (7)	18 (9)	11 (5)	12 (6)
F050P	12 (6)	16 (8)	13 (6)	17 (8)	—	18 (9)	11 (5)	12 (6)
F050H	14 (6)	18 (8)	15 (7)	19 (9)	—	19 (9)	14 (6)	15 (7)
F100S	22 (10)	26 (12)	23 (11)	27 (13)	22 (10)	27 (13)	21 (10)	22 (10)
F100H	22 (10)	26 (12)	23 (11)	27 (13)	—	27 (12)	22 (10)	23 (11)
F200S	43 (20)	47 (22)	44 (20)	48 (22)	—	49 (23)	42 (20)	43 (20)
F200H	57 (25)	61 (27)	58 (26)	62 (28)	—	61 (27)	57 (25)	58 (26)
F300S	157 (71)	161 (73)	158 (72)	162 (74)	—	162 (74)	156 (71)	157 (71)
F300H	161 (73)	165 (75)	162 (73)	166 (75)	—	168 (76)	160 (73)	161 (73)

(1) Weight includes sensor, ANSI CL150 weld neck raised face flanges, and indicated electronics option.

Weight *continued*

High-temperature sensor models in lb (kg)

Sensor model ⁽¹⁾	Aluminum junction box	Stainless steel junction box
F025A	20 (9)	21 (10)
F025B	21 (10)	22 (11)
F050A	21 (10)	22 (10)
F050B	22 (10)	23 (11)
F100A	30 (14)	31 (14)
F100B	30 (14)	31 (14)

(1) Weight includes sensor, ANSI CL150 weld neck raised face flanges, and indicated electronics option.

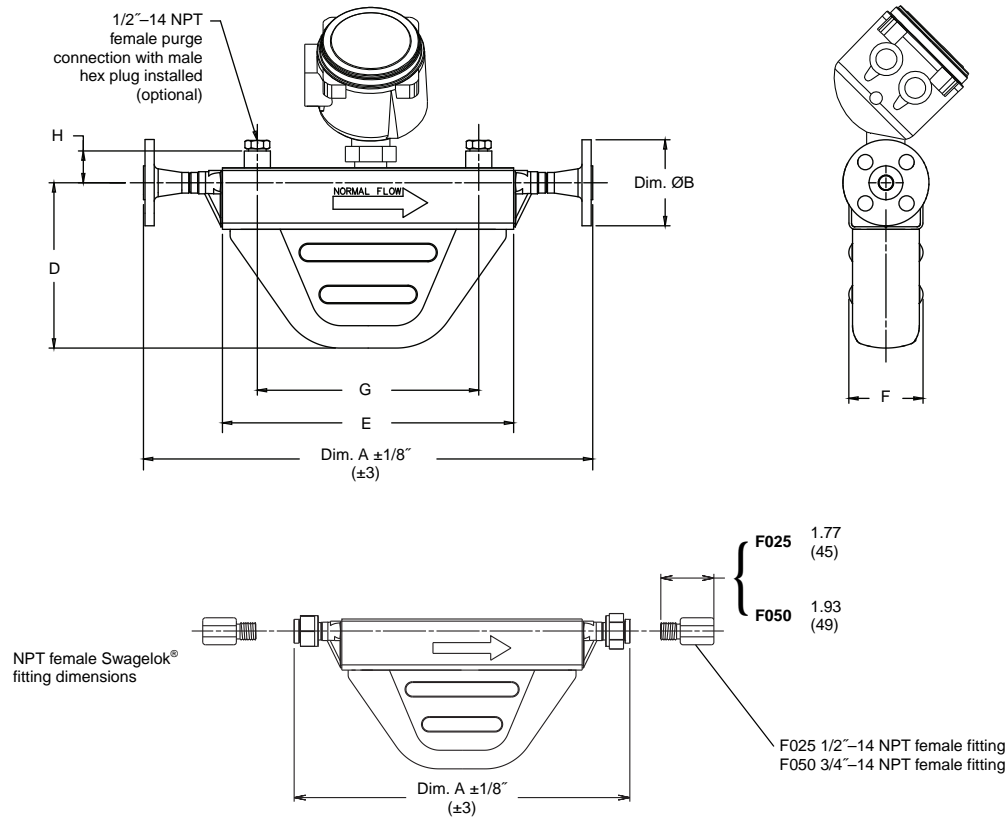
Vibration limits

Meets IEC 68.2.6, endurance sweep, 5 to 2000 Hz, 50 sweep cycles at 1.0 g

Dimensions

Sensor

Dimensions in inches
(mm)



Model	No. of flow tubes	Units	Dimensions ⁽¹⁾					
			Flow tube ID	D	E	F	G	H
F025	2	in	0.21	5.12	9.75	2.81	7.5	1.26
		mm	5.3	130	248	71	190	32
F050	2	in	0.35	6.75	11.88	2.94	9	1.26
		mm	8.8	171	302	75	229	32
F100	2	in	0.65	9.12	14.88	4.13	12	1.51
		mm	16	232	378	105	305	38
F200	2	in	1.1	12.56	17.88	5.62	14	2.38
		mm	27	319	454	143	356	61
F300	2	in	1.6	7.25	27.72	5.88	21	4.07
		mm	40	184	704	149	533	103

(1) For dimensions A and B, see process fitting tables on pages 24–29. For electronics dimensions, see pages 19–20.

Dimensions *continued*

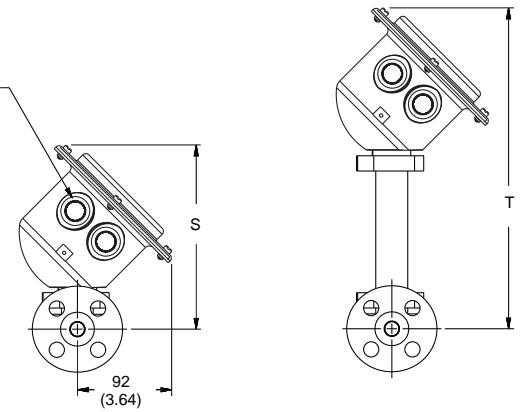
Electronics detail

Model 2400S, Model 2200S, or enhanced core processor with stainless steel housing

Model	Dimensions in mm (inches)	
	S	T
F025	186 (7.31)	322 (12.68)
F050	186 (7.31)	322 (12.68)
F100	192 (7.56)	328 (12.93)
F200	216 (8.50)	352 (13.86)
F300	260 (10.25)	395 (15.57)

2400S or enhanced core processor:
2 x 1/2"-14 NPT female or M20 x 1.5 female

2200S:
1 x 1/2"-14 NPT female or M20 x 1.5 female

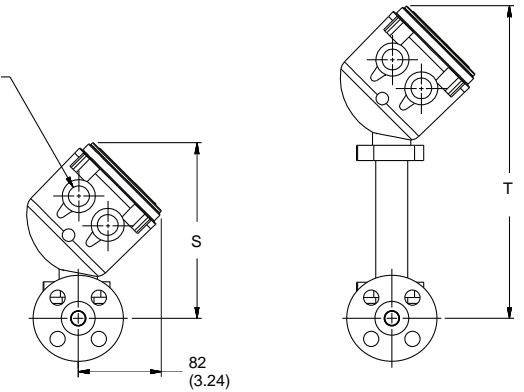


Model 2400S, Model 2200S, or enhanced core processor, with aluminum housing

Model	Dimensions in mm (inches)	
	S	T
F025	176 (6.91)	312 (12.28)
F050	176 (6.91)	312 (12.28)
F100	182 (7.16)	318 (12.53)
F200	206 (8.10)	342 (13.46)
F300	250 (9.85)	385 (15.17)

2400S or enhanced core processor:
2 x 1/2"-14 NPT female or M20 x 1.5 female

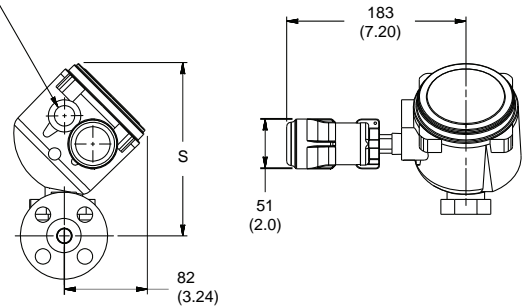
2200S:
1 x 1/2"-14 NPT female or M20 x 1.5 female



Model 2200S with THUM adapter

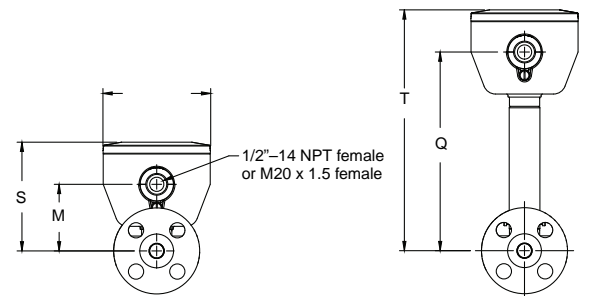
Model	Dimensions in mm (inches)	
	S	T
F025	176 (6.91)	
F050	176 (6.91)	
F100	182 (7.16)	
F200	206 (8.10)	
F300	250 (9.85)	

1/2"-14 NPT female



Standard core processor

Model	Dimensions in mm (inches)			
	M	Q	S	T
F025	68 (2.69)	205 (8.06)	113 (4.45)	250 (9.83)
F050	68 (2.69)	205 (8.06)	113 (4.45)	250 (9.83)
F100	75 (2.94)	211 (8.31)	119 (4.7)	256 (10.08)
F200	98 (3.87)	235 (9.25)	143 (5.64)	280 (11.01)
F300	143 (5.62)	279 (11)	188 (7.39)	324 (12.76)

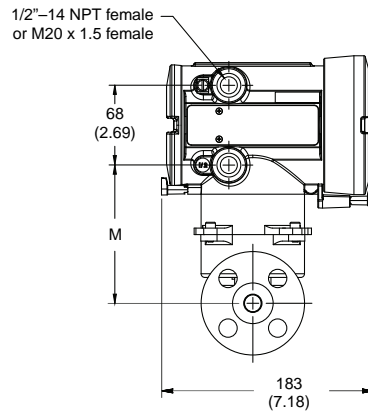


Dimensions *continued*

Electronics detail

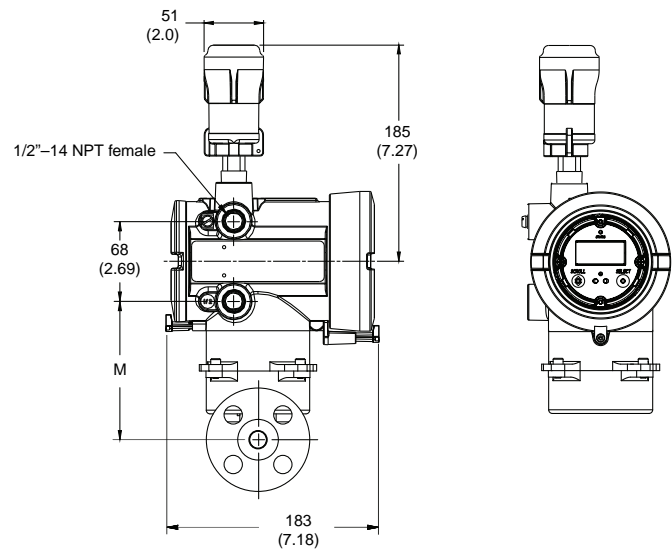
Model 2700

Model	Dimensions in mm (inches)	
	M	
F025	118 (4.66)	
F050	118 (4.66)	
F100	125 (4.91)	
F200	148 (5.85)	
F300	193 (7.6)	



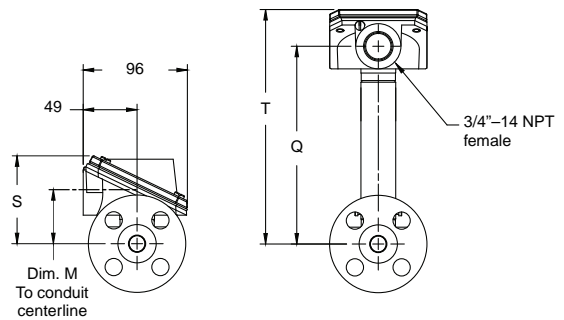
Model 2700 with THUM adapter

Model	Dimensions in mm (inches)	
	M	
F025	118 (4.66)	
F050	118 (4.66)	
F100	125 (4.91)	
F200	148 (5.85)	
F300	193 (7.6)	



Junction box

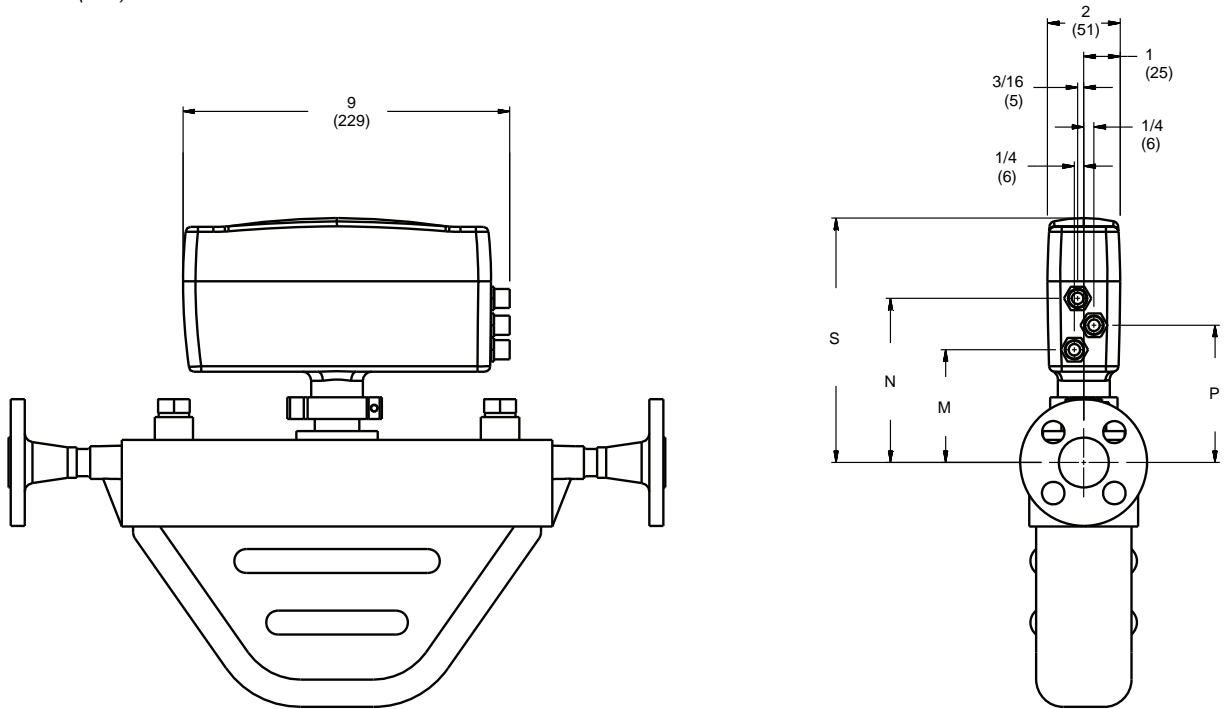
Model	Dimensions in mm			
	M	Q	S	T
F025	46	183	79	216
F050	46	183	79	216
F100	52	189	85	222
F200	76	213	109	246
F300	121	257	154	290



Dimensions *continued*

Sensor with integral FMT transmitter

Dimensions in inches
(mm)



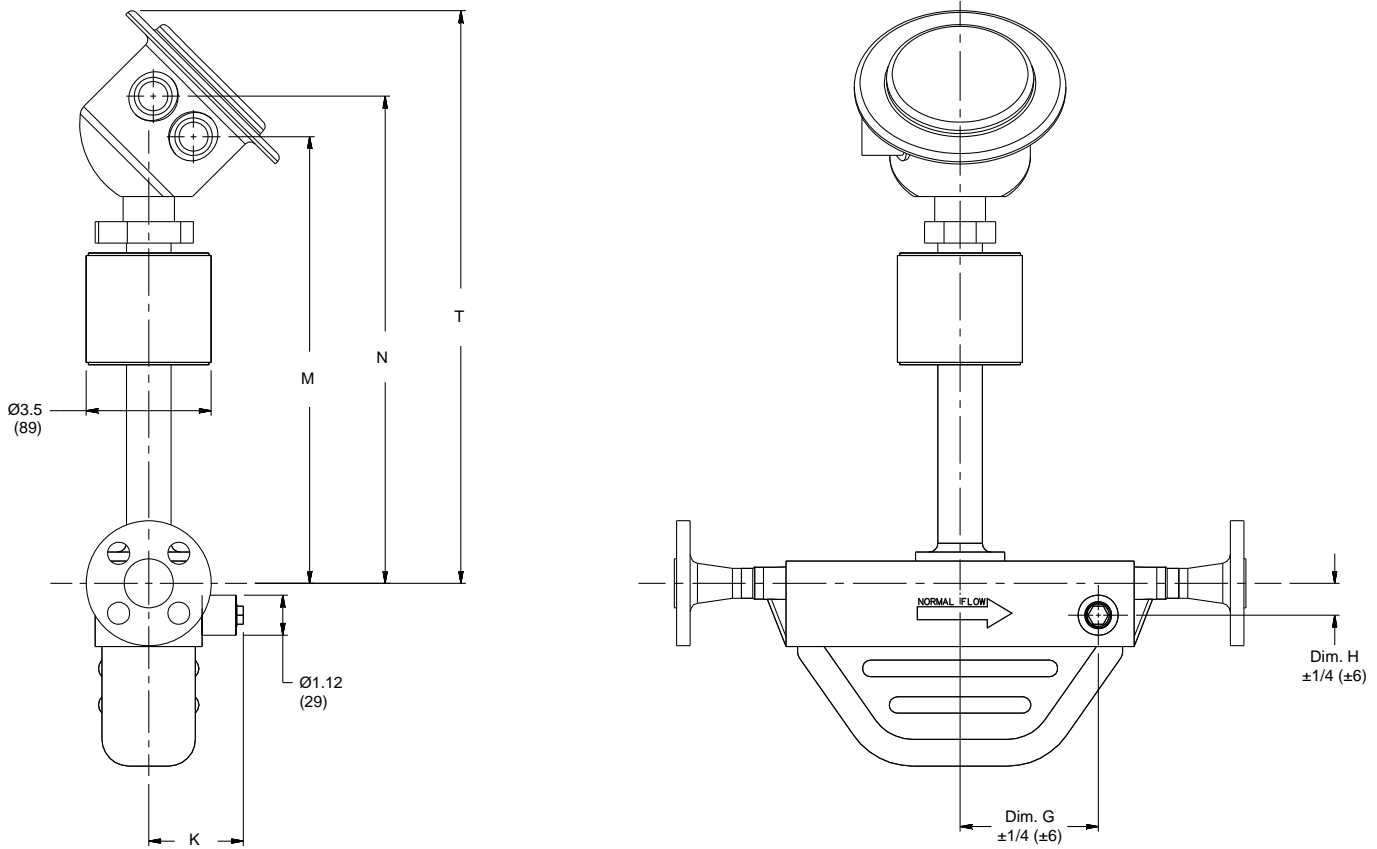
For remaining sensor dimensions, refer to page 18.

Model	No. of flow tubes	Units	Dimensions				
			Flow tube ID	M	N	P	S
F025	2	in	0.21	3 1/8	4 9/16	3 13/16	6 3/4
		mm	5.3	79	116	97	171
F050	2	in	0.35	3 1/8	4 9/16	3 13/16	6 3/4
		mm	8.8	79	116	97	171
F100	2	in	0.65	3 3/8	4 13/16	4 1/16	7
		mm	16	86	122	103	178

Dimensions *continued*

High-temperature Models F025(A or B), F050(A or B), and F100(A or B) with stainless steel junction box

Dimensions in *inches*
(*mm*)



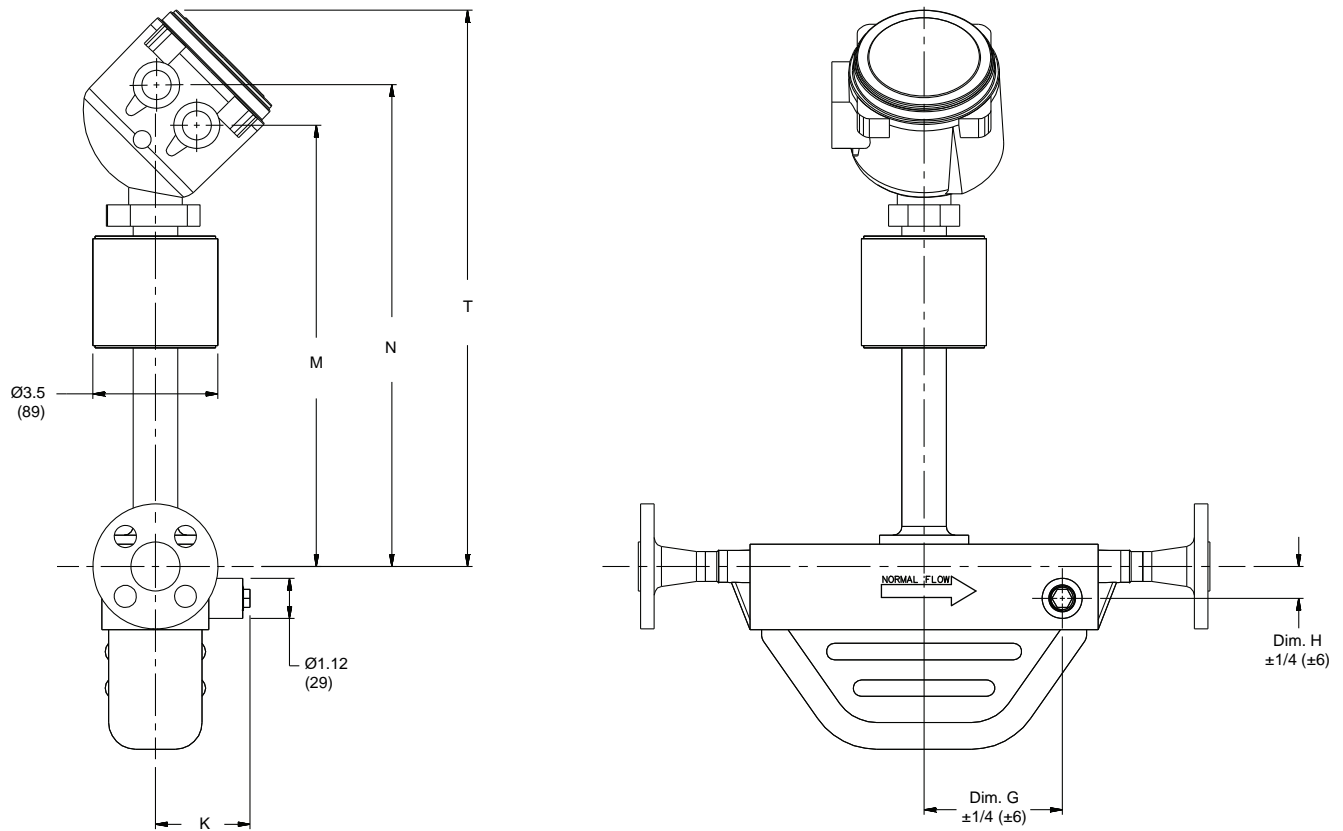
For remaining sensor dimensions, refer to page 18.

Model	No. of flow tubes	Units	Dimensions						
			Flow tube ID	G	H	K	M	N	T
F025	2	in	0.21	3.86	0.90	2.65	12.52	13.66	16.05
		mm	5.3	98	23	67	318	347	408
F050	2	in	0.35	5.06	0.90	2.65	12.52	13.66	16.05
		mm	8.8	129	23	67	318	347	408
F100	2	in	0.65	6.44	1.14	3.25	12.77	13.91	16.30
		mm	16	164	29	83	324	353	414

Dimensions *continued*

High-temperature Models F025(A and B), F050(A and B), and F100(A and B) with polyurethane-painted aluminum junction box

Dimensions in inches
(mm)



For remaining sensor dimensions, refer to page 18.

Model	No. of flow tubes	Units	Dimensions						
			Flow tube ID	G	H	K	M	N	T
F025	2	in	0.21	3.86	0.90	2.65	12.37	13.51	15.60
		mm	5.3	98	23	67	314	343	396
F050	2	in	0.35	5.06	0.90	2.65	12.37	13.51	15.60
		mm	8.8	129	23	67	314	343	396
F100	2	in	0.65	6.44	1.14	3.25	12.62	13.76	15.85
		mm	16	164	29	83	321	350	402

Fitting options

	Fitting code ⁽¹⁾	Dim. A face-to-face inches (mm)	Dim. B outside diam. inches (mm)
Model F025S			
1/2-inch ANSI CL150 weld neck raised face flange	113	15.98 (406)	3.50 (89)
1/2-inch ANSI CL300 weld neck raised face flange	114	16.38 (416)	3.75 (95)
1/2-inch ANSI CL600 weld neck raised face flange	115	16.88 (429)	3.75 (95)
1/2-inch NPT female Swagelok size 8 VCO fitting	319	17.53 (445) ⁽²⁾	not applicable
1/2-inch sanitary fitting (Tri-Clamp® compatible)	121	13.99 (355)	0.98 (25)
DN15 PN40 weld neck; DIN 2635 type C face	116	15.23 (387)	3.74 (95)
DN15 PN40 weld neck flange; EN 1092-1 Form B1	176	15.23 (387)	3.74 (95)
DN15 PN40 weld neck flange; EN 1092-1 Form D	310	15.23 (387)	3.74 (95)
DN25 PN40 weld neck flange; EN 1092-1 Form B1	172	15.39 (391)	4.53 (115)
DN25 PN40 weld neck flange; EN 1092-1 Form D	183	15.39 (391)	4.53 (115)
DN15 PN100/160 weld neck flange; DIN 2638 type E face	120	15.80 (401)	4.13 (105)
DN15 PN100/160 weld neck flange; EN 1092-1 Form B2	170	15.80 (401)	4.13 (105)
DN15 PN100 weld neck flange; EN 1092-1 Form D	178	15.80 (401)	4.13 (105)
15mm DIN 11851 hygienic coupling	222	13.91 (353)	Rd 34 x 1/8
Models F025H and F025B			
1/2-inch ANSI CL150 lap joint flange	520	16.06 (408)	3.50 (89)
1/2-inch ANSI CL300 lap joint flange	521	16.42 (417)	3.75 (95)
1/2-inch ANSI CL600 lap joint flange	517	16.42 (417)	3.75 (95)
DN15 PN40 lap joint flange; EN 1092-1 Form B1	524	15.29 (388)	3.74 (95)
Model F025P			
15mm DIN PN100/160 weld neck, DIN 2638, type E face	120	15.80 (401)	4.13 (105)
1/2-inch ANSI CL900 weld neck raised face flange	150	17.48 (444)	4.75 (121)
DN15 PN100/160 weld neck flange; EN 1092-1 Form B2	170	15.80 (401)	4.13 (105)
DN15 PN100 weld neck flange; EN 1092-1 Form D	178	15.80 (401)	4.13 (105)
DN25 PN100 weld neck flange; EN 1092-1 Form B2	180	16.82 (427)	5.51 (140)
1/2-inch NPT female Swagelok size 8 VCO fitting	319	17.53 (445) ⁽²⁾	not applicable

(1) Fittings listed here are standard options. Other types of fittings are available. The face to face dimensions for any custom fittings ordered using a 998 or 999 fitting code are not represented in this table. It is necessary to confirm face to face dimensions of these fittings at time of ordering. Contact your local Micro Motion representative.

(2) Dimension specified in table does NOT include fitting length. For installation, modify Dim. A value to include fitting. See pages 18–23.

Fitting options *continued*

	Fitting code ⁽¹⁾	Dim. A face-to-face inches (mm)	Dim B. outside diam. inches (mm)
Model F025A			
1/2-inch ANSI CL150 weld neck raised face flange	113	15.98 (406)	3.50 (89)
1/2-inch ANSI CL300 weld neck raised face flange	114	16.38 (416)	3.75 (95)
1/2-inch ANSI CL600 weld neck raised face flange	115	16.88 (429)	3.75 (95)
1/2-inch ANSI CL900 weld neck raised face flange	150	17.48 (444)	4.75 (121)
DN15 PN40 weld neck flange; EN 1092-1 Form B1	176	15.23 (387)	3.74 (95)
DN15 PN40 weld neck flange; EN 1092-1 Form D	310	15.23 (387)	3.74 (95)
DN15 PN100/160 weld neck flange; EN 1092-1 Form B2	170	15.80 (401)	4.13 (105)
DN15 PN100 weld neck flange; EN 1092-1 Form D	178	15.80 (401)	4.13 (105)
DN25 PN40 weld neck flange; EN 1092-1 Form B1	172	15.39 (391)	4.53 (115)
DN25 PN40 weld neck flange; EN 1092-1 Form D	183	15.39 (391)	4.53 (115)
Model F050S			
1/2-inch ANSI CL150 weld neck raised face flange	113	18.12 (460)	3.50 (89)
1/2-inch ANSI CL300 weld neck raised face flange	114	18.48 (469)	3.75 (95)
1/2-inch ANSI CL600 weld neck raised face flange	115	18.98 (482)	3.75 (95)
3/4-inch NPT female Swagelok size 12 VCO fitting	239	16.37 (416) ⁽²⁾	not applicable
3/4-inch sanitary fitting (Tri-Clamp compatible)	322	15.86 (403)	0.98 (25)
DN15 PN40 weld neck flange; DIN 2635 type C face	116	17.36 (441)	3.74 (95)
DN15 PN40 weld neck flange; EN 1092-1 Form B1	176	17.36 (441)	3.74 (95)
DN15 PN40 weld neck flange; EN 1092-1 Form D	310	17.36 (441)	3.74 (95)
DN15 PN100/160 weld neck flange; DIN 2638 type E face	120	17.90 (455)	4.13 (105)
DN15 PN100/160 weld neck flange; EN 1092-1 Form B2	170	17.90 (455)	4.13 (105)
DN15 PN100 weld neck flange; EN 1092-1 Form D	178	17.90 (455)	4.13 (105)
DN25 PN40 weld neck flange; DIN 2635 type C face	131	17.50 (445)	4.53 (115)
DN25 PN40 weld neck flange; EN 1092-1 Form B1	172	17.50 (445)	4.53 (115)
DN25 PN40 weld neck flange; EN 1092-1 Form D	183	17.50 (445)	4.53 (115)
15mm DIN 11851 hygienic coupling	222	16.01 (407)	Rd 34 x 1/8

(1) Fittings listed here are standard options. Other types of fittings are available. The face to face dimensions for any custom fittings ordered using a 998 or 999 fitting code are not represented in this table. It is necessary to confirm face to face dimensions of these fittings at time of ordering. Contact your local Micro Motion representative.

(2) Dimension specified in table does NOT include fitting length. For installation, modify Dim. A value to include fitting. See pages 18–23.

Fitting options *continued*

	Fitting code ⁽¹⁾	Dim. A face-to-face inches (mm)	Dim B. outside diam. inches (mm)
Model F050P			
1/2-inch ANSI CL150 weld neck raised face flange	113	18.12 (460)	3.50 (89)
1/2-inch ANSI CL300 weld neck raised face flange	114	18.48 (469)	3.75 (95)
1/2-inch ANSI CL600 weld neck raised face flange	115	18.98 (482)	3.75 (95)
1/2-inch ANSI CL900 weld neck raised face flange	150	19.62 (498)	4.75 (121)
DN15 PN40 weld neck flange; DIN 2635 type C face	116	17.36 (441)	3.74 (95)
DN15 PN100/160 weld neck flange; DIN 2638 type E face	120	17.90 (455)	4.13 (105)
DN25 PN40 weld neck flange; DIN 2635 type C face	131	17.50 (445)	4.53 (115)
DN15 PN100/160 weld neck flange; EN 1092-1 Form B2	170	17.90 (455)	4.13 (105)
DN15 PN100 weld neck flange; EN 1092-1 Form D	178	17.90 (455)	4.13 (105)
DN25 PN100 weld neck flange; EN 1092-1 Form B2	180	18.93 (481)	5.51 (140)
3/4-inch NPT female Swagelok size 12 VCO fitting	239	16.37 (416) ⁽²⁾	not applicable
3/4-inch sanitary fitting (Tri-Clamp compatible)	322	15.86 (403)	0.98 (25)
Models F050H and F050B			
1/2-inch ANSI CL150 lap joint flange	520	18.19 (462)	3.50 (89)
1/2-inch ANSI CL300 lap joint flange	521	18.55 (471)	3.75 (95)
1/2-inch ANSI CL600 lap joint flange	517	18.55 (471)	3.75 (95)
DN15 PN40 lap joint flange; EN 1092-1 Form B1	524	17.42 (442)	3.74 (95)
Model F050A			
1/2-inch ANSI CL150 weld neck raised face flange	113	18.12 (460)	3.50 (89)
1/2-inch ANSI CL300 weld neck raised face flange	114	18.48 (469)	3.75 (95)
1/2-inch ANSI CL600 weld neck raised face flange	115	18.98 (482)	3.75 (95)
1/2-inch ANSI CL900 weld neck raised face flange	150	19.62 (498)	4.75 (121)
DN15 PN40 weld neck flange; EN 1092-1 Form B1	176	17.36 (441)	3.74 (95)
DN15 PN40 weld neck flange; EN 1092-1 Form D	310	17.36 (441)	3.74 (95)
DN15 PN100/160 weld neck flange; EN 1092-1 Form B2	170	17.90 (455)	4.13 (105)
DN15 PN100 weld neck flange; EN 1092-1 Form D	178	17.90 (455)	4.13 (105)
DN25 PN40 weld neck flange; EN 1092-1 Form B1	172	17.50 (445)	4.53 (115)
DN25 PN40 weld neck flange; EN 1092-1 Form D	183	17.50 (445)	4.53 (115)

(1) *Fittings listed here are standard options. Other types of fittings are available. The face to face dimensions for any custom fittings ordered using a 998 or 999 fitting code are not represented in this table. It is necessary to confirm face to face dimensions of these fittings at time of ordering. Contact your local Micro Motion representative.*

(2) *Dimension specified in table does NOT include fitting length. For installation, modify Dim. A value to include fitting. See pages 18–23.*

Fitting options *continued*

	Fitting code ⁽¹⁾	Dim. A face-to-face inches (mm)	Dim B. outside diam. inches (mm)
Model F100S			
1-inch ANSI CL150 weld neck raised face flange	128	22.66 (576)	4.25 (108)
1-inch ANSI CL300 weld neck raised face flange	129	23.16 (588)	4.86 (123)
1-inch ANSI CL600 weld neck raised face flange	130	23.66 (601)	4.88 (124)
1-inch sanitary fitting (Tri-Clamp compatible)	138	21.28 (541)	1.98 (50)
2-inch ANSI CL150 weld neck raised face flange	209	23.04 (585)	6 (152)
DN25 PN40 weld neck flange; DIN 2635 type C face	131	21.42 (544)	4.53 (115)
DN25 PN100/160 weld neck flange; DIN 2638 type E face	137	22.84 (580)	5.51 (140)
25mm DIN 11851 hygienic coupling	230	20.56 (522)	Rd 52 x 1/6
DN25 PN40 weld neck flange; EN 1092-1 Form B1	179	21.42 (544)	4.53 (115)
DN25 PN40 weld neck flange; EN 1092-1 Form D	311	21.42 (544)	4.53 (115)
DN25 PN100 weld neck flange; EN 1092-1 Form B2	180	22.84 (580)	5.51 (140)
DN25 PN100 weld neck flange; EN 1092-1 Form D	181	22.84 (580)	5.51 (140)
Models F100H and F100B			
1-inch ANSI CL150 lap joint flange	530	22.74 (578)	4.25 (108)
1-inch ANSI CL300 lap joint flange	531	23.24 (590)	4.87 (124)
1-inch ANSI CL600 lap joint flange	535	23.24 (590)	4.88 (124)
DN25 PN40 lap joint flange; EN 1092-1 Form B1	534	21.52 (547)	3.74 (95)
Model F100A			
1-inch ANSI CL150 weld neck raised face flange	128	22.66 (576)	4.25 (108)
1-inch ANSI CL300 weld neck raised face flange	129	23.16 (588)	4.86 (123)
1-inch ANSI CL600 weld neck raised face flange	130	23.66 (601)	4.88 (124)
2-inch ANSI CL150 weld neck raised face flange	209	23.04 (585)	6 (152)
1-inch ANSI CL900 weld neck raised face flange	928	24.57 (624)	5.88 (149)
DN25 PN40 weld neck flange; EN 1092-1 Form B1	179	21.42 (544)	4.53 (115)
DN25 PN40 weld neck flange; EN 1092-1 Form D	311	21.42 (544)	4.53 (115)
DN25 PN100 weld neck flange; EN 1092-1 Form B2	180	22.84 (580)	5.51 (140)
DN25 PN100 weld neck flange; EN 1092-1 Form D	181	22.84 (580)	5.51 (140)

(1) *Fittings listed here are standard options. Other types of fittings are available. The face to face dimensions for any custom fittings ordered using a 998 or 999 fitting code are not represented in this table. It is necessary to confirm face to face dimensions of these fittings at time of ordering. Contact your local Micro Motion representative.*

Fitting options *continued*

	Fitting code ⁽¹⁾	Dim. A face-to-face inches (mm)	Dim B. outside diam. inches (mm)
Model F200S			
1 1/2-inch ANSI CL150 weld neck raised face flange	341	24.76 (629)	5 (127)
1 1/2-inch ANSI CL300 weld neck raised face flange	342	25.26 (642)	6.12 (155)
1 1/2-inch ANSI CL600 weld neck raised face flange	343	25.76 (654)	6.12 (155)
2-inch ANSI CL150 weld neck raised face flange	418	24.88 (632)	6 (152)
2-inch ANSI CL300 weld neck raised face flange	419	25.38 (645)	6.50 (165)
2-inch ANSI CL600 weld neck raised face flange	420	26.13 (664)	6.50 (165)
1 1/2-inch sanitary fitting (Tri-Clamp compatible)	351	23.26 (591)	1.98 (50)
2-inch sanitary fitting (Tri-Clamp compatible)	352	22.88 (581)	2.52 (64)
DN40 PN40 weld neck flange; DIN 2635 type C face	381	23.55 (598)	5.91 (150)
DN50 PN40 weld neck flange; DIN 2635 type C face	382	23.63 (600)	6.50 (165)
DN50 PN100 weld neck flange; DIN 2637 type E face	378	25.23 (641)	7.68 (195)
DN40 PN40 weld neck flange; EN 1092-1 Form B1	368	23.42 (595)	5.91 (150)
DN40 PN40 weld neck flange; EN 1092-1 Form D	312	23.42 (595)	5.91 (150)
DN40 PN100 weld neck flange; EN 1092-1 Form B2	363	24.73 (628)	6.69 (170)
DN40 PN100 weld neck flange; EN 1092-1 Form D	366	24.73 (628)	6.69 (170)
DN50 PN40 weld neck flange; EN 1092-1 Form B1	369	23.63 (600)	6.50 (165)
DN50 PN40 weld neck flange; EN 1092-1 Form D	316	23.63 (600)	6.50 (165)
DN50 PN100 weld neck flange; EN 1092-1 Form B2	365	25.23 (641)	7.68 (195)
DN50 PN100 weld neck flange; EN 1092-1 Form D	367	25.23 (641)	7.68 (195)
40mm DIN 11851 hygienic coupling	353	23.18 (589)	Rd 65 x 1/6
50mm DIN 11851 hygienic coupling	354	23.26 (591)	Rd 78 x 1/6
Model F200H			
1 1/2-inch ANSI CL150 lap joint flange	540	24.76 (629)	5 (127)
1 1/2-inch ANSI CL300 lap joint flange	541	25.24 (641)	6.12 (155)
1 1/2-inch ANSI CL600 lap joint flange	537	25.24 (641)	6.12 (155)
DN40 PN40 lap joint flange; EN 1092-1 Form B1	548	23.55 (598)	5.91 (150)
DN50 PN40 lap joint flange; EN 1092-1 Form B1	549	23.82 (605)	6.50 (165)
2-inch ANSI CL150 lap joint flange	544	24.74 (628)	6 (152)
2-inch ANSI CL300 lap joint flange	545	25.24 (641)	6.50 (165)

(1) Fittings listed here are standard options. Other types of fittings are available. The face to face dimensions for any custom fittings ordered using a 998 or 999 fitting code are not represented in this table. It is necessary to confirm face to face dimensions of these fittings at time of ordering. Contact your local Micro Motion representative.

Fitting options *continued*

	Fitting code ⁽¹⁾	Dim. A face-to-face inches (mm)	Dim B. outside diam. inches (mm)
Model F300S			
3-inch ANSI CL150 weld neck raised face flange	355	36.83 (935)	7.50 (191)
3-inch ANSI CL300 weld neck raised face flange	356	37.57 (954)	8.25 (210)
3-inch ANSI CL600 weld neck raised face flange	357	38.33 (974)	8.25 (210)
4-inch ANSI CL150 weld neck raised face flange	425	37.21 (945)	9 (229)
4-inch ANSI CL300 weld neck raised face flange	426	38.15 (969)	10 (254)
4-inch ANSI CL600 weld neck raised face flange	427	39.83 (1012)	10.75 (273)
DN80 PN40 weld neck flange; DIN 2635 type C face	391	36.01 (915)	7.87 (200)
DN100 PN40 weld neck flange; DIN 2635 type C face	392	36.45 (926)	9.25 (235)
DN80 PN40 weld neck flange; DIN 2635 type N grooved face	393	36.01 (915)	7.87 (200)
DN100 PN40 weld neck flange; DIN 2635 type N grooved face	394	36.45 (926)	9.25 (235)
DN80 PN100 weld neck flange; DIN 2637 type E face	395	37.71 (958)	9.05 (230)
DN100 PN100 weld neck flange; DIN 2637 type E face	396	38.71 (983)	10.43 (265)
DN80 PN100 weld neck flange; DIN 2637 type N grooved face	397	37.71 (958)	9.05 (230)
DN100 PN100 weld neck flange; DIN 2637 type N grooved face	398	38.71 (983)	10.43 (265)
DN80 PN40 weld neck flange; EN 1092-1 Form B1	371	35.90 (912)	7.87 (200)
DN80 PN40 weld neck flange; EN 1092-1 Form D	326	35.90 (912)	7.87 (200)
DN80 PN100 weld neck flange; EN 1092-1 Form B2	373	37.47 (952)	9.06 (230)
DN80 PN100 weld neck flange; EN 1092-1 Form D	375	37.47 (952)	9.06 (230)
DN100 PN40 weld neck flange; EN 1092-1 Form B1	372	36.45 (926)	9.25 (235)
DN100 PN40 weld neck flange; EN 1092-1 Form D	333	36.45 (926)	9.25 (235)
DN100 PN100 weld neck flange; EN 1092-1 Form B2	374	38.42 (976)	10.43 (265)
DN100 PN100 weld neck flange; EN 1092-1 Form D	359	38.42 (976)	10.43 (265)
3-inch sanitary fitting (Tri-Clamp compatible)	361	35.15 (893)	3.58 (91)
3-inch Victaulic® compatible fitting	410	36.83 (935)	3.50 (89)
Model F300H			
3-inch ANSI CL150 lap joint flange	550	36.77 (934)	7.50 (191)
3-inch ANSI CL300 lap joint flange	551	37.53 (953)	8.25 (210)
3-inch ANSI CL600 lap joint flange	539	37.53 (953)	8.25 (210)
DN80 PN40 lap joint flange; EN 1092-1 Form B1	554	35.97 (914)	7.87 (200)

(1) Fittings listed here are standard options. Other types of fittings are available. The face to face dimensions for any custom fittings ordered using a 998 or 999 fitting code are not represented in this table. It is necessary to confirm face to face dimensions of these fittings at time of ordering. Contact your local Micro Motion representative.

Ordering information

Model	Product description
Standard sensor models	
F025S	F-Series sensor; 1/4-inch (6 mm); 316L stainless steel
F025H	F-Series sensor; 1/4-inch (6 mm); alloy C-22
F050S	F-Series sensor; 1/2-inch (12 mm); 316L stainless steel
F050H	F-Series sensor; 1/2-inch (12 mm); alloy C-22
F100S	F-Series sensor; 1-inch (25 mm); 316L stainless steel
F100H	F-Series sensor; 1-inch (25 mm); alloy C-22
F200S	F-Series sensor; 2-inch (50 mm); 316L stainless steel
F200H	F-Series sensor; 2-inch (50 mm); alloy C-22
F300S	F-Series sensor; 3-inch (75 mm); 316L stainless steel
F300H	F-Series sensor; 3-inch (75 mm); alloy C-22
High-pressure sensor models	
F025P	F-Series sensor; 1/4-inch (6 mm); 316L stainless steel; 2300 psi (158 bar) tube rating
F050P	F-Series sensor; 1/2-inch (12 mm); 316L stainless steel; 5000 psi (345 bar) tube rating
High-temperature sensor models	
F025A	F-Series sensor; 1/4-inch (6 mm); high temperature; 316L stainless steel
F025B	F-Series sensor; 1/4-inch (6 mm); high temperature; alloy C-22
F050A	F-Series sensor; 1/2-inch (12 mm); high temperature; 316L stainless steel
F050B	F-Series sensor; 1/2-inch (12 mm); high temperature; alloy C-22
F100A	F-Series sensor; 1-inch (25 mm); high temperature; 316L stainless steel
F100B	F-Series sensor; 1-inch (25 mm); high temperature; alloy C-22
Code	Process connection
###	See fitting options on pages 24–29
Code	Case options
C	Compact case
B ⁽¹⁾⁽²⁾	Secondary containment with test report
P ⁽¹⁾⁽²⁾	Secondary containment with test report and purge fittings (1/2-inch NPT female)
H ⁽¹⁾⁽³⁾	Hygienic compact case
Continued on next page	

(1) Not available with Model F050P or with high-temperature sensors.

(2) Not available with electronics interface codes L or K.

(3) Not available with alloy C-22 sensors.

Ordering information *continued*

Code	Electronics interface
	Standard and high-pressure models
0	Model 2400S transmitter
1	Extended mount Model 2400S transmitter
2	4-wire polyurethane-painted aluminum integral enhanced core processor for remote mount transmitters
3	4-wire stainless steel integral enhanced core processor for remote mount transmitters
4	4-wire polyurethane-painted aluminum integral extended mount enhanced core processor for remote mount transmitters
5	4-wire extended mount stainless steel integral enhanced core processor for remote mount transmitters
Q	4-wire polyurethane-painted aluminum integral core processor for remotely mounted transmitter with MVD technology
A	4-wire stainless steel integral core processor for remotely mounted transmitter with MVD technology
V	4-wire polyurethane-painted aluminum integral core processor with extended mount for remotely mounted transmitter with MVD technology
B	4-wire stainless steel integral core processor with extended mount for remotely mounted transmitter with MVD technology
C	Integrally mounted Model 1700 or 2700 transmitter
L	Integrally mounted FMT transmitter
K	Integrally mounted FMT transmitter with improved surface finish (64 Ra)
J ⁽¹⁾	Integrally mounted Model 2200S transmitter
U ⁽¹⁾	Extended Model 2200S transmitter
R	9-wire polyurethane-painted aluminum junction box
H	9-wire polyurethane-painted aluminum junction box with extended mount
S	9-wire stainless steel junction box
T	9-wire stainless steel junction box with extended mount
	High-temperature models
R ⁽²⁾	9-wire polyurethane-painted aluminum junction box
S ⁽²⁾	9-wire stainless steel junction box
Code	Conduit connections
	Electronics interface codes 2, 3, 4, 5, Q, A, V, and B
B	1/2-inch NPT — no gland
E	M20 — no gland
F	Brass/nickel cable gland (cable diameter 0.335 to 0.394 inches [8.5 to 10 mm])
G	Stainless steel cable gland (cable diameter 0.335 to 0.394 inches [8.5 to 10 mm])
	Electronics interface codes 0, 1, C, J, U, K, and L
A	No gland
	Electronics interface codes R, H, S, and T — Standard and high-pressure models
A	3/4-inch NPT — no gland
H	Brass/nickel cable gland
J	Stainless steel cable gland
	Electronics interface codes R and S — High-temperature models
B	1/2-inch NPT — no gland
E	M20 — no gland
F	Brass/nickel cable gland (cable diameter 0.335 to 0.394 inches [8.5 to 10 mm])
G	Stainless steel cable gland (cable diameter 0.335 to 0.394 inches [8.5 to 10 mm])
Continued on next page	

(1) Only available with calibration option Z. Not available with high-temperature sensors.

(2) Only for connection to a transmitter with MVD technology.

Ordering information *continued*

Code	Approvals
For electronics interface codes 0, 1, L, and K	
M	Micro Motion Standard (no approval)
N	Micro Motion Standard / PED compliant
2	CSA C-US (U.S.A. and Canada) Class I, Div. 2
V	ATEX — Equipment Category 3 (Zone 2) / PED compliant
3	IECEX Zone 2
Electronics interface codes 2, 3, 4, 5, Q, A, V, B, R, H, S, and T	
M	Micro Motion standard (no approval)
N	Micro Motion standard / PED compliant (no approval)
U ⁽¹⁾	UL
C ⁽²⁾	CSA (Canada only)
A	CSA C-US (U.S.A. and Canada)
Z	ATEX — Equipment Category 2 (Zone 1) / PED compliant
I	IECEX Zone 1
P ⁽³⁾	NEPSI
Electronics interface code C	
M	Micro Motion standard (no approval)
N	Micro Motion standard / PED compliant (no approval)
C	CSA (Canada only)
A	CSA C-US (U.S.A. and Canada)
Z	ATEX — Equipment Category 2 (Zone 1) / PED compliant
I	IECEX Zone 1
P ⁽³⁾	NEPSI
2	CSA Class I, Div. 2 (U.S.A. and Canada)
V	ATEX — Equipment Category 3 (Zone 2) / PED compliant
3	IECEX Zone 2
Electronics interface codes J and U	
M	Micro Motion standard (no approval)
N	Micro Motion standard / PED compliant (no approval)
V	ATEX — Equipment Category 3 (Zone 2) / PED compliant
3	IECEX Zone 2
A	CSA C-US (U.S.A. and Canada)
Z	ATEX — Equipment Category 2 (Zone 1) / PED compliant
I	IECEX Zone 1
Continued on next page	

(1) Not available with electronics interface code S.

(2) Not available with electronics interface options 2, 3, 4, 5, or with high-temperature sensors.

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

Ordering information *continued*

Code	Language
A	Danish CE requirements and English installation manual
C	Czech installation manual
D	Dutch CE requirements and English installation manual
E	English installation manual
F	French installation manual
G	German installation manual
H	Finnish CE requirements and English installation manual
I	Italian installation manual
J	Japanese installation manual
M	Chinese installation manual
N	Norwegian CE requirements and English installation manual
O	Polish installation manual
P	Portuguese installation manual
S	Spanish installation manual
W	Swedish CE requirements and English installation manual
B	Hungarian CE requirements and English installation manual
K	Slovak CE requirements and English installation manual
T	Estonian CE requirements and English installation manual
U	Greek CE requirements and English installation manual
L	Latvian CE requirements and English installation manual
V	Lithuanian CE requirements and English installation manual
Y	Slovenian CE requirements and English installation manual
Code	Future option 1
Z	Reserved for future use
Code	Calibration options
Z	0.20% mass flow and 0.002 g/cm ³ (2.0 kg/m ³) density calibration
A ⁽¹⁾	0.15% mass flow and 0.002 g/cm ³ (2.0 kg/m ³) density calibration
1 ⁽¹⁾	0.10% mass flow and 0.001 g/cm ³ (1.0 kg/m ³) density calibration
Code	Measurement application software
Z	No measurement application software
Code	Factory options
Z	Standard product
X	ETO product
Typical model number: F050S 113 C Q E Z E Z A Z Z	

(1) Not available with electronics interface option code J or U (Model 2200S transmitter).

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 600,000 meters installed worldwide and over 30 years of flow and density measurement experience.

 www.micromotion.com

© 2011 Micro Motion, Inc. All rights reserved.

The Emerson logo is a trademark and service mark of Emerson Electric Co. Micro Motion, ELITE, ProLink, MVD and MVD Direct Connect are marks of one of the Emerson Process Management family of companies. All other trademarks are property of their respective owners.

Micro Motion supplies this publication for informational purposes only. While every effort has been made to ensure accuracy, this publication is not intended to make performance claims or process recommendations. Micro Motion does not warrant, guarantee, or assume any legal liability for the accuracy, completeness, timeliness, reliability, or usefulness of any information, product, or process described herein. We reserve the right to modify or improve the designs or specifications of our products at any time without notice. For actual product information and recommendations, please contact your local Micro Motion representative.

Emerson Process Management Micro Motion Americas

Worldwide Headquarters
7070 Winchester Circle
Boulder, Colorado USA 80301
T: +1 800 522 6277
T: +1 (303) 527 5200
F: +1 (303) 530 8459
Mexico T: 52 55 5809 5300
Argentina T: 54 11 4837 7000
Brazil T: 55 15 3238 3527
Venezuela T: 58 26 1792 1858

Emerson Process Management Micro Motion Europe/Middle East

Central & Eastern Europe T: +41 41 7686 111
Dubai T: +971 4 811 8100
France T: 0800 917 901
Germany T: 0800 182 5347
Italy T: 8008 77334
The Netherlands T: +31 318 495 555
Belgium T: +32 2 716 77 11
Spain T: +34 913 586 000
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 6662 0566
Japan T: (81) 3 5769 6803
Korea T: (82) 2 3438 4600
Singapore T: (65) 6 777 8211

For a complete list of contact information and web sites, please visit: www.emersonprocess.com/home/contacts/global

