Product Data Sheet
PS-00363, Rev. E
October 2007

Micro Motion® R-Series Coriolis Flow Meters

Micro Motion® R-Series Coriolis meters are simple and reliable, and feature a compact form factor that is easy to install and maintain. Versatile R-Series meters are used in a wide range of industries to obtain the fundamental benefits of Coriolis flow measurement.

Simple to install and easy to use Coriolis flow measurement

- Measure flow in either mass *or* volume units for any application
- Install easily anywhere with compact design that is immune to flow profile effects
- Keep process loops easy to clean and maintain with self-draining design

Broad range of application coverage

- 316L stainless steel construction for compatibility with most fluids

Superior reliability

- No moving parts to wear or replace minimizes maintenance for long-term reliability

ELITE®	Peak performance Coriolis 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®

EMERSON™
Process Management

Micro Motion R-Series Coriolis Flow 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.

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.

R-Series Coriolis flow meters. Micro Motion R-Series Coriolis meters are designed to handle most common mass and volume flow measurement applications. The compact case of the R-Series meter allows it to fit almost anywhere, and integral electronics make installation and setup easy.

R-Series meters support a number of digital communication protocols, such as HART®, Modbus®, FOUNDATION fieldbus™, and PROFIBUS-PA.

Contents

Liquid flow performance

		Mass		Volume[1]	
		lb/min	kg/h	gal/min	l/h
Maximum flow rate	R025S, R025P	100	2720	12	2720
	R050S	300	8160	36	8160
	R100S	1200	32,650	144	32,650
	R200S	3200	87,100	384	87,100
Mass flow accuracy[2]	Transmitter with MVD™ technology	±0.5% of rate[3]			
	IFT9703 transmitter	±0.5% of rate ±[(zero stability / flow rate) × 100]% of rate			
Volume flow accuracy	Transmitter with MVD technology	±0.5% of rate[3]			
	IFT9703 transmitter	±0.5% of rate ±[(zero stability / flow rate) × 100]% of rate			
Mass and volume flow repeatability	Transmitter with MVD technology	±0.25% of rate[3]			
	IFT9703 transmitter	±0.25% of rate ±[½(zero stability / flow rate) × 100]% of rate			
		lb/min	kg/h	gal/min	l/h
Zero stability	R025, R025P	0.01	0.27	0.0012	0.27
	R050S	0.03	0.82	0.0036	0.82
	R100S	0.12	3.27	0.0144	3.27
	R200S	0.32	8.71	0.0384	8.71

(1) Volumetric measurement is based on a process-fluid density of 1 g/cm^3. For fluids with density other than 1 g/cm^3, the volume flow rate equals the maximum mass flow rate divided by the fluid's density.

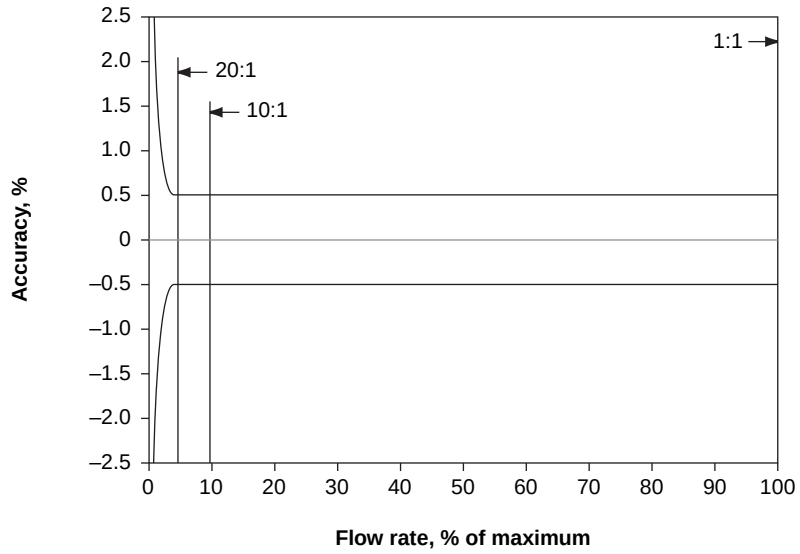
(2) Stated flow accuracy includes the combined effects of repeatability, linearity, and hysteresis. All specifications for liquids are based on reference conditions of water at 68 to 77 °F (20 to 25 °C) and 15 to 30 psig (1 to 2 bar), unless otherwise noted.

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

Liquid flow performance *continued*

Typical accuracy, turndown, and pressure drop with transmitter with MVD technology

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	***20:1***	***10:1***	***1:1***
Accuracy, ± %	0.50	0.50	0.50
Pressure drop			
psi	0.1	0.813	54
bar	0.007	0.05	3.4

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 psid (0.68 bar) pressure drop on *air* at 68 °F (20 °C) and 100 psi (6.8 bar)					
	R025S, R025P	4	120	60	90
	R050S	13	360	175	275
	R100S	50	1400	700	1050
	R200S	140	3800	2000	3000
Typical flow rates that produce approximately 50 psid (3.4 bar) pressure drop on *natural gas* (MW 16.675) at 68 °F (20 °C) and 500 psi (34 bar)					
	R025S, R025P	16	450	380	600
	R050S	50	1350	1150	1820
	R100S	190	5200	4400	6900
	R200S	520	14,500	12,300	19,500
Mass flow accuracy[2]	Transmitter with MVD technology	±0.75% of rate[3]			
	IFT9703 transmitter	±1.0% of rate ±[(zero stability / flow rate) × 100]% of rate			
Mass flow repeatability[2]	Transmitter with MVD technology	±0.5% of rate[3]			
	IFT9703 transmitter	±0.5% of rate ±[(zero stability / flow rate) × 100]% of rate			
		lb/min	kg/h		
Zero stability	R025S, R025P	0.01	0.27		
	R050S	0.03	0.82		
	R100S	0.12	3.27		
	R200S	0.32	8.71		

(1) Standard (SCFM) reference conditions are 14.7 psia and 68 °F. Normal (Nm^3/hr) reference conditions are 1.013 bar and 0 °C.

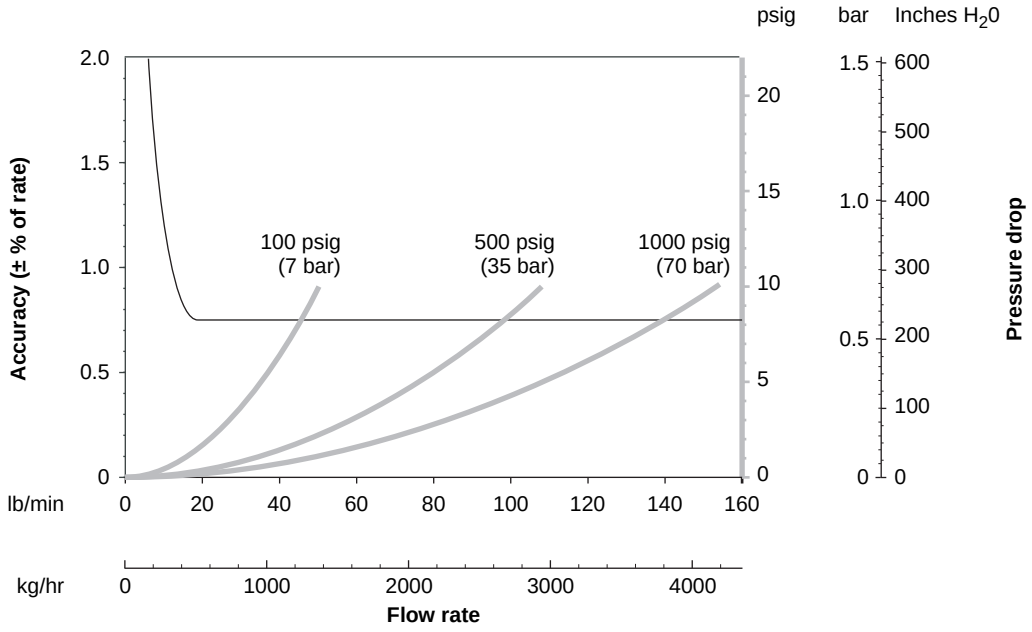
(2) Stated flow accuracy includes the combined effects of repeatability, linearity, and hysteresis.

(3) When flow rate < (zero stability / 0.0075), then accuracy = ±[(zero stability / flow rate) × 100]% of rate and repeatability = ±[(zero stability / flow rate) × 100]% of rate.

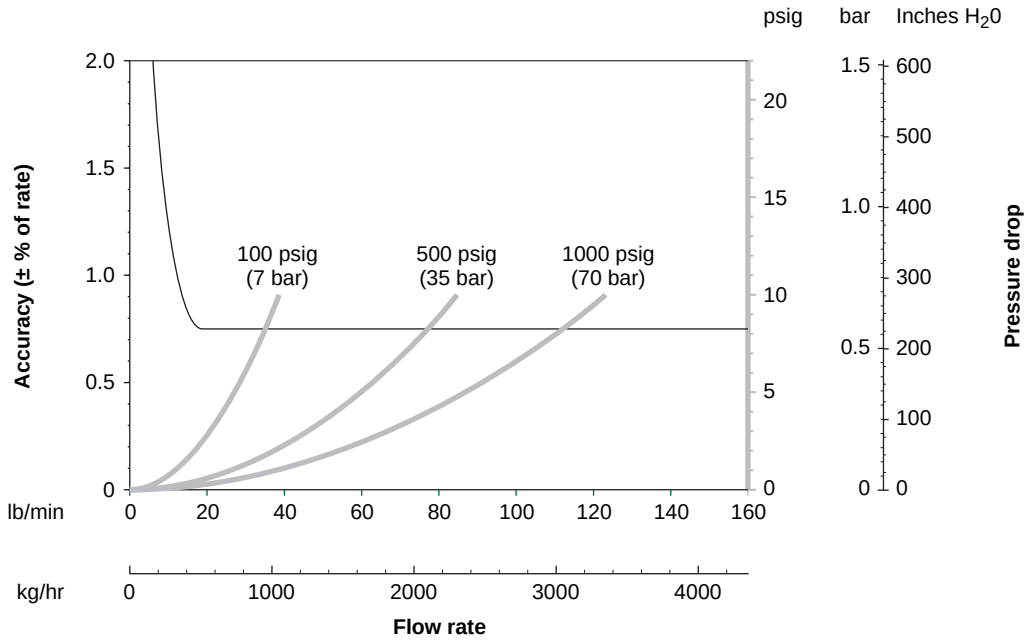
Gas flow performance *continued*

Typical accuracy and pressure drop with R100S 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

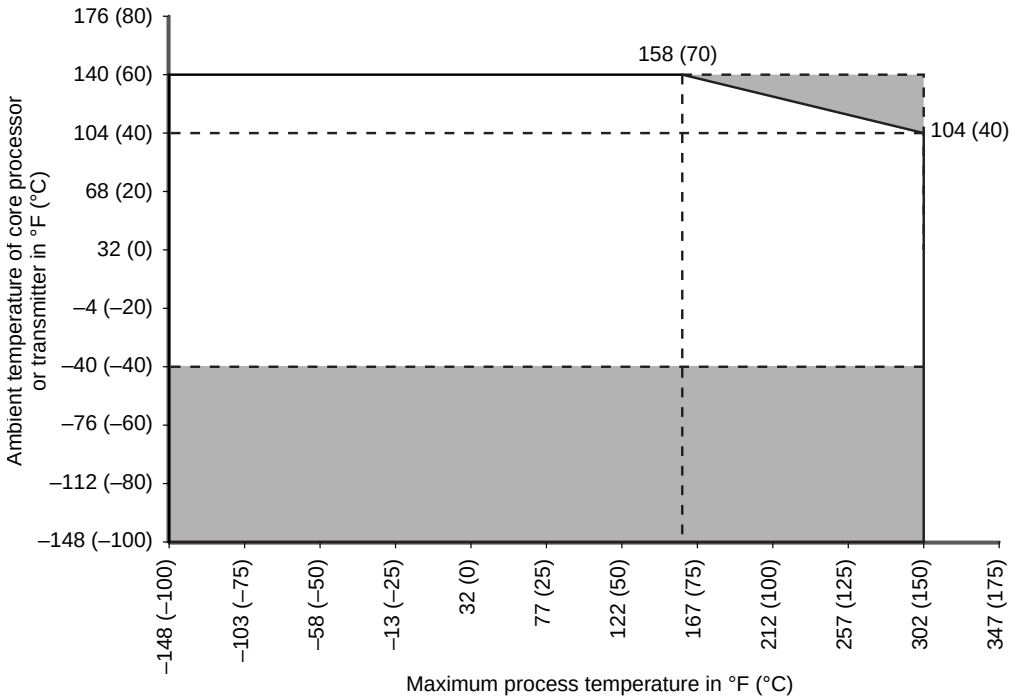


Standard or normal volumetric capability

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	±1 °C ± 0.5% of reading in °C
Repeatability	All models	±0.2 °C
Temperature limits[1]	All models with all electronics options (except the IFT9703 transmitter) [2]	



When ambient temperature is below –40 °F (–40 °C), a core processor must be heated to bring its local ambient temperature to between –40 °F (–40 °C) and +140 °F (+60 °C). Long-term storage of electronics at ambient temperatures below –40 °F (–40 °C) is not recommended.

	Sensors with integral IFT9703 transmitter[3]	Ambient temperature: +131 °F (+55 °C) maximum Process temperature: +257 °F (+125 °C) maximum

(1) Temperature limits may be further restricted by hazardous area approvals. See pages 9–12.

(2) The temperature extender option allows the sensor case to be insulated without covering the transmitter, core processor, or junction box, but does not affect temperature ratings.

(3) Refer to the IFT9703 Product Data Sheet for more information about its temperature limits.

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
R025	±0.00175	±0.0001	±0.1
R050	±0.00175	±0.0001	±0.1
R100	±0.00175	±0.0001	±0.1
R200	±0.00175	±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
R025	None	None
R050	None	None
R100	None	None
R200	–0.001	–0.015

	Pressure effect on density accuracy	
	g/cm^3 per psi	kg/m^3 per bar
R025	None	None
R050	None	None
R100	None	None
R200	–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).

Vibration limits

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

Pressure ratings

		psi	bar
Flow tube rating[1]	R025P	2300	158
	R025S	1450	100
	R050S	1500	103
	R100S	1450	100
	R200S	1600	110
PED compliance	Sensors comply with council directive 97/23/EC of 29 May 1997 on Pressure Equipment.		
Housing rating	All models	Housing is not rated for pressure containment.	

(1) Over the entire temperature range, according to ASME B31.3.

Hazardous area classifications

UL

Sensor with integrally mounted Model IFT9703 transmitter	Ambient temperature: –4 to +104 °F (–20 to +40 °C) Class I, Div. 2, Groups A, B, C, and D Class II, Div. 2, Groups F and G

CSA and CSA-US

Sensor with integrally mounted Model IFT9703 transmitter	Ambient temperature: +140 °F max. (+60 °C max.) Class I, Div. 2, Groups A, B, C, and D Class II, Div. 2, Groups F and G
Sensor with integrally mounted Model 1700/2700 transmitter or with core processor	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

NEPSI and IECEx[1]

Sensor with integrally mounted Model 1700/2700 transmitter or with core processor	Ex ib IIC T1–T5

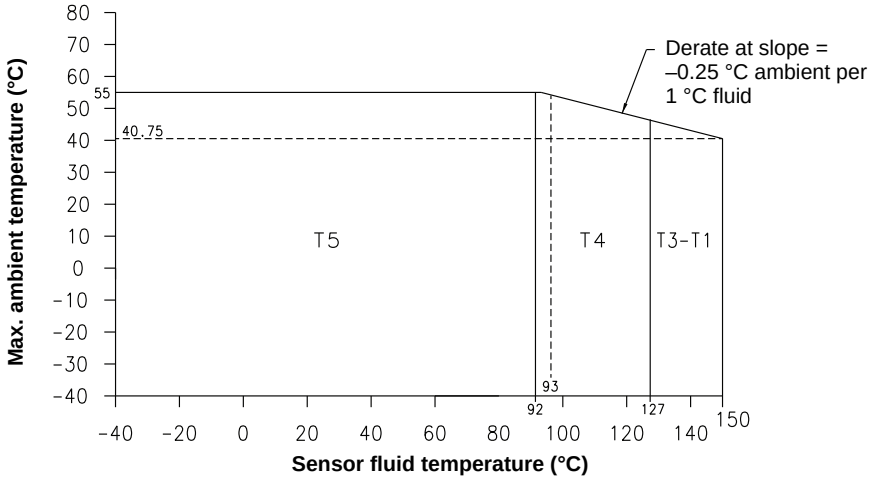
(1) For NEPSI and IECEx approvals, refer to the ATEX temperature graphs on the following pages for ambient and process temperature limits.

Hazardous area classifications *continued*

ATEX[(1)]

Models R025 and R050 (C.I.C. A2) with core processor or Model 1700/2700 transmitter

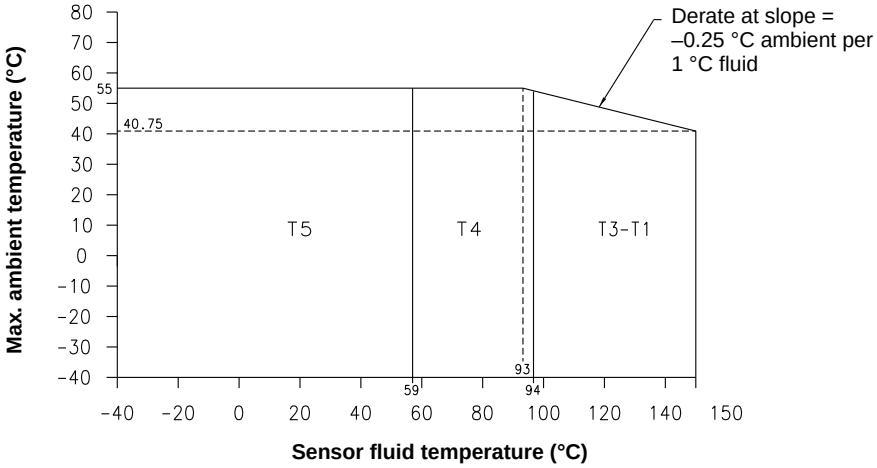
CE 0575 ⟨Ex⟩
II 2 G EEx ib IIC T1...T5
II 2 D IP65 T °C



The maximum surface temperature for dust is as follows: T5:T 95°C, T4:T 130°C, T3 to T1:T 153°C.

Model R100 (C.I.C. A2) with core processor or Model 1700/2700 transmitter

CE 0575 ⟨Ex⟩
II 2 G EEx ib IIC T1...T5
II 2 D IP65 T °C



The maximum surface temperature for dust is as follows: T5:T 95°C, T4:T 130°C, T3 to T1:T 186°C.

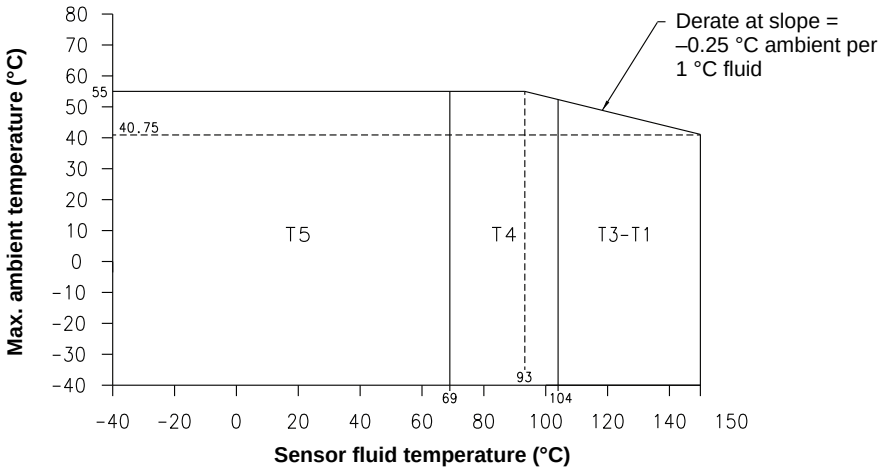
(1) ATEX "T" rating depends on the maximum temperature shown in the graphs above.

Hazardous area classifications *continued*

ATEX[(1)]

Model R200 (C.I.C. A1) with core processor or Model 1700/2700 transmitter

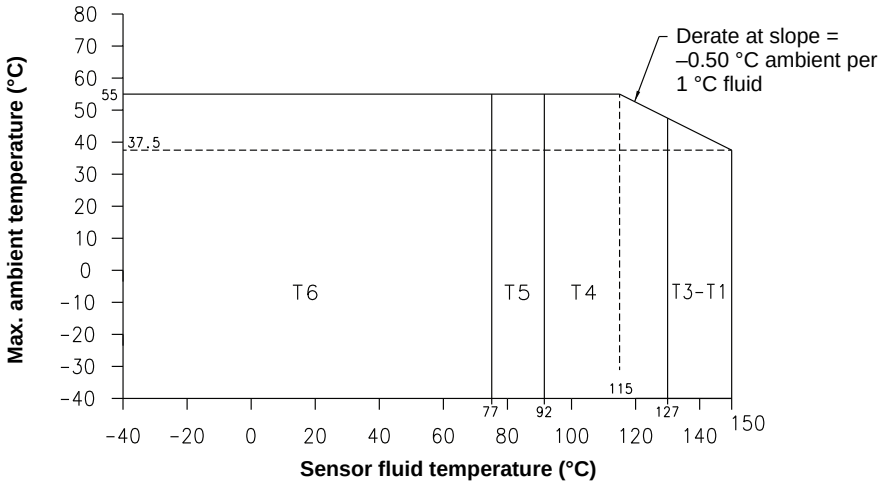
CE 0575 ⟨Ex⟩
II 2 G EEx ib IIC T1...T5
II 2 D IP65 T °C



The maximum surface temperature for dust is as follows: T5:T 95°C, T4:T 130°C, T3 to T1:T 176°C.

Models R025 and R050 (C.I.C. A2) with IFT9703 transmitter

CE 0575 ⟨Ex⟩
II 2 G EEx ib IIC T1...T6



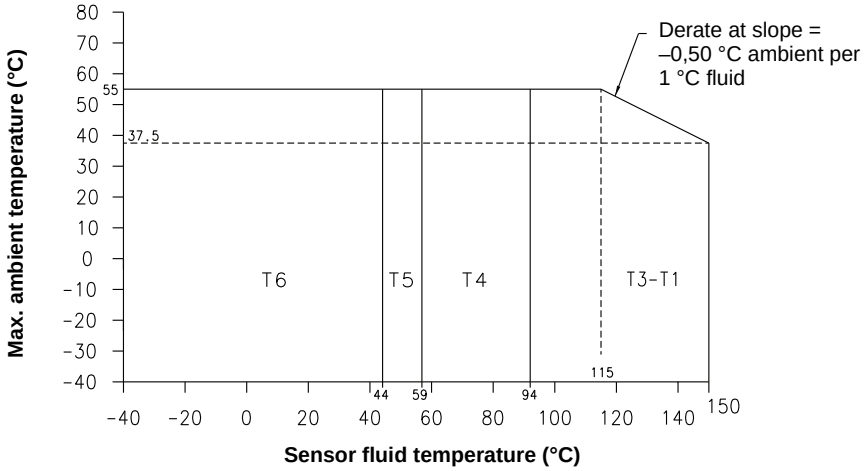
(1) ATEX "T" rating depends on the maximum temperature shown in the graphs above.

Hazardous area classifications *continued*

ATEX[1]

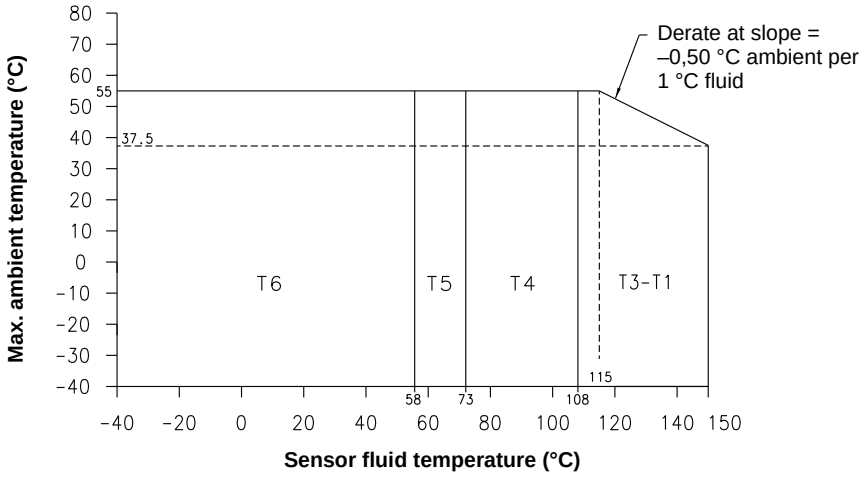
Model R100 (C.I.C. A2) with IFT9703 transmitter

CE 0575 ⟨Ex⟩
II 2 G EEx ib IIC T1...T6



Model R200 (C.I.C. A1) with IFT9703 transmitter

CE 0575 ⟨Ex⟩
II 2 G EEx ib IIC T1...T6



(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
Housing	Sensor	304L stainless steel
	Core processor	CF-3M stainless steel or polyurethane-painted aluminum; NEMA 4X (IP65)
	Integrally mounted transmitter	Polyurethane-painted aluminum; NEMA 4X (IP65)

(1) General corrosion guides 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.

Weight

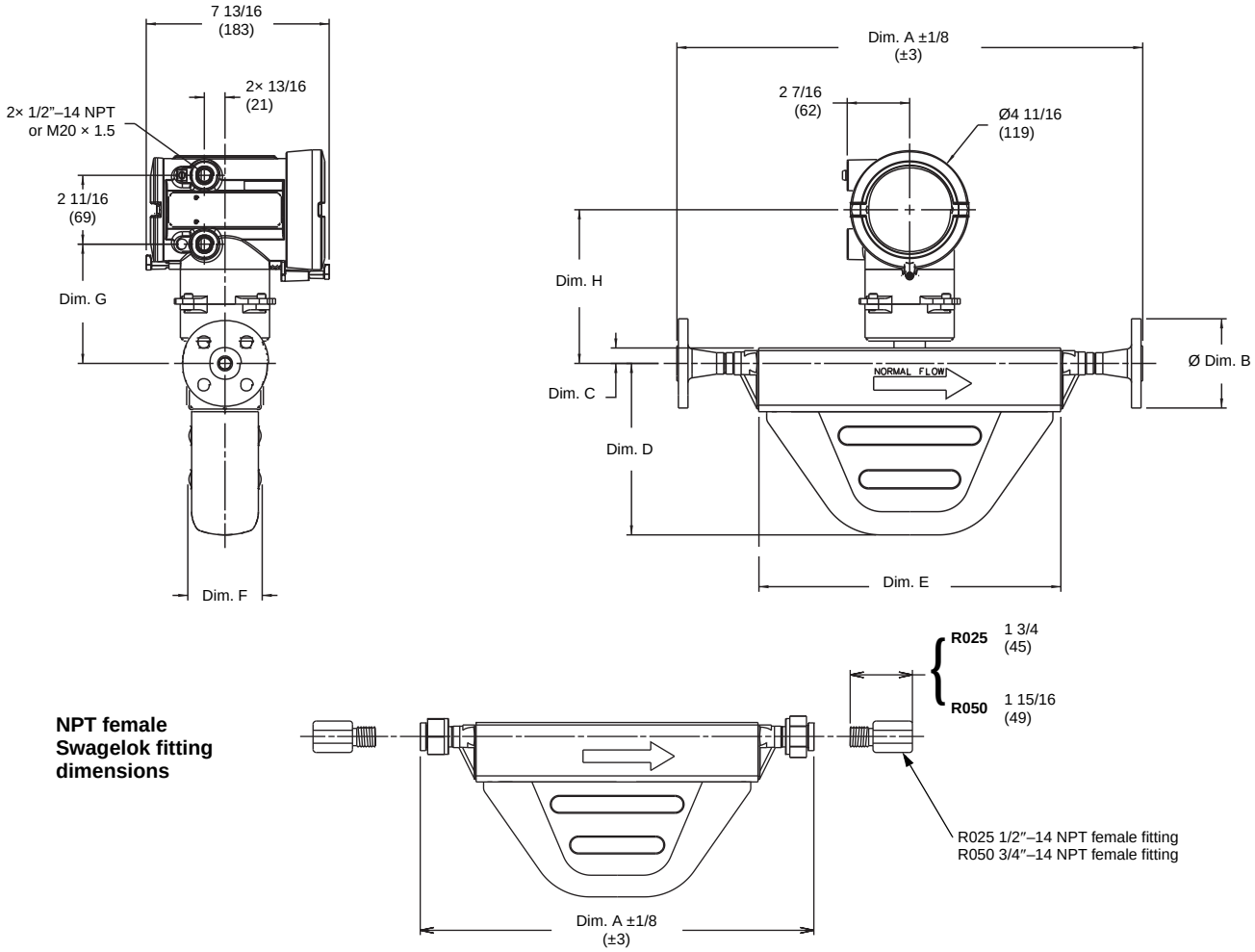
Weights provided are the weight of the meter with ANSI CL150 weld neck raised face flanges.

		lb	**kg**
Sensor with integrally mounted IFT9703 transmitter	R025	16	8
	R050	17	8
	R100	27	12
	R200	49	22
Sensor with integrally mounted Model 1700/2700 transmitter	R025	17	8
	R050	18	9
	R100	27	13
	R200	49	23
Sensor with core processor	R025	11	5
	R050	12	6
	R100	22	10
	R200	43	20
Sensor with extended core processor	R025	12	6
	R050	13	6
	R100	23	11
	R200	44	20

Dimensions

Sensor with integrally mounted Model 1700 transmitter

Dimensions in inches (mm)



NPT female Swagelok fitting dimensions

Model		Dimensions[1] RD[2]	C	D	E	F	G	H
R025	in	0.210	5/8	5 1/8	9 3/4	2 13/16	4 11/16	6
	(mm)	(5)	(15)	(130)	(247)	(72)	(119)	(153)
R050	in	0.345	5/8	6 3/4	11 7/8	2 15/16	4 11/16	6
	(mm)	(9)	(15)	(171)	(301)	(74)	(119)	(153)
R100	in	0.647	7/8	9 1/8	14 7/8	4 1/8	4 15/16	6 1/4
	(mm)	(16)	(22)	(232)	(378)	(104)	(126)	(159)
R200	in	1.058	1 3/4	12 9/16	17 7/8	5 5/8	5 13/16	7 3/16
	(mm)	(29)	(44)	(319)	(454)	(144)	(148)	(182)

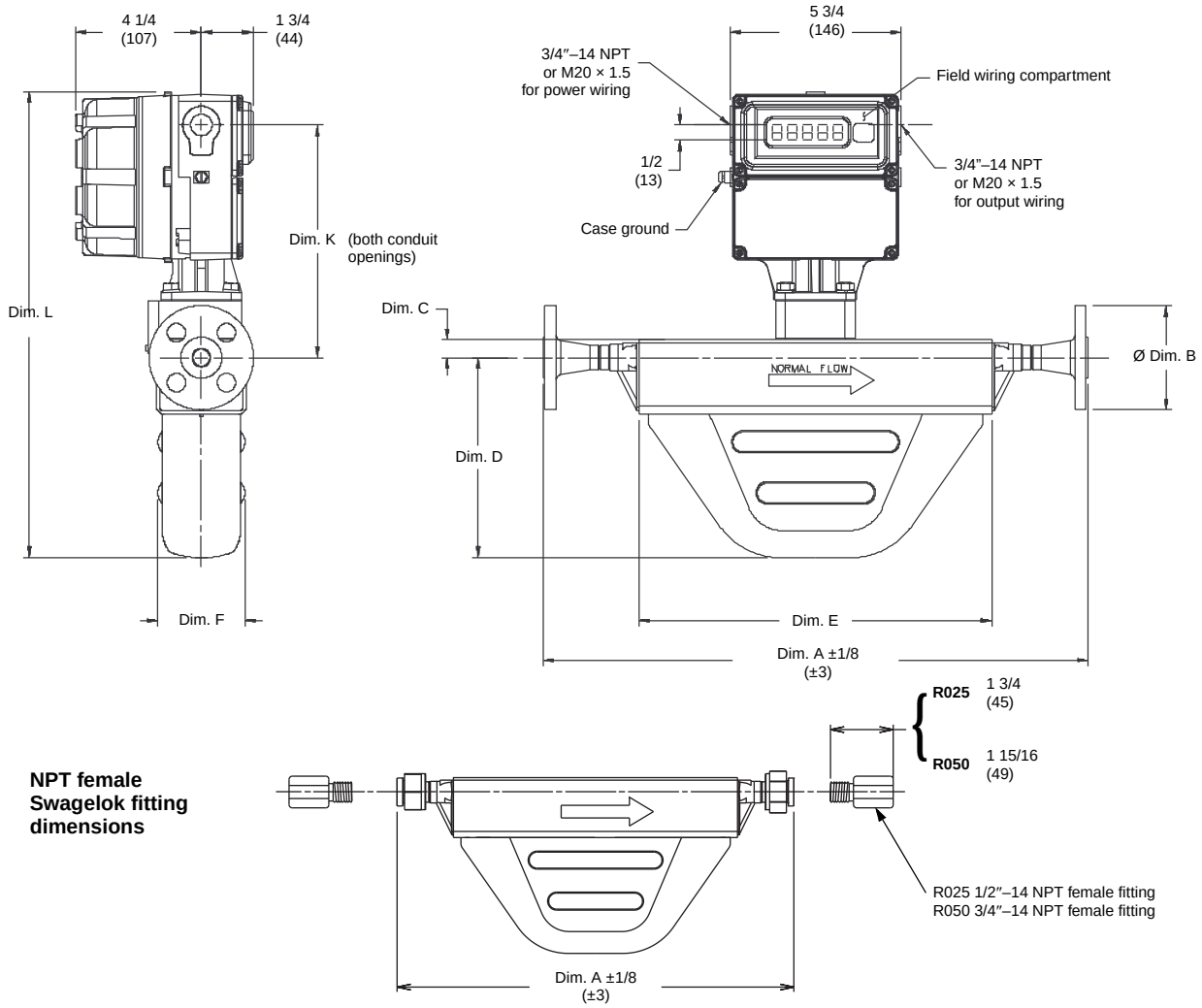
(1) For dimensions A and B, see fittings tables on pages 17–19.

(2) Minimum flow path restriction diameter.

Dimensions *continued*

Sensor with integrally mounted IFT9703 transmitter

Dimensions in inches (mm)



NPT female Swagelok fitting dimensions

Model		Dimensions[1] RD[2]	C	D	E	F	K	L
R025	in	0.210	5/8	5 1/8	9 3/4	2 13/16	7 13/16	14 1/16
	(mm)	(5)	(15)	(130)	(247)	(72)	(199)	(358)
R050	in	0.345	5/8	6 3/4	11 7/8	2 15/16	7 13/16	15 11/16
	(mm)	(9)	(15)	(171)	(301)	(74)	(199)	(398)
R100	in	0.647	7/8	9 1/8	14 7/8	4 1/8	8 1/16	18 5/16
	(mm)	(16)	(22)	(232)	(378)	(104)	(205)	(466)
R200	in	1.058	1 3/4	12 9/16	17 7/8	5 5/8	8 15/16	22 5/8
	(mm)	(29)	(44)	(319)	(454)	(144)	(228)	(575)

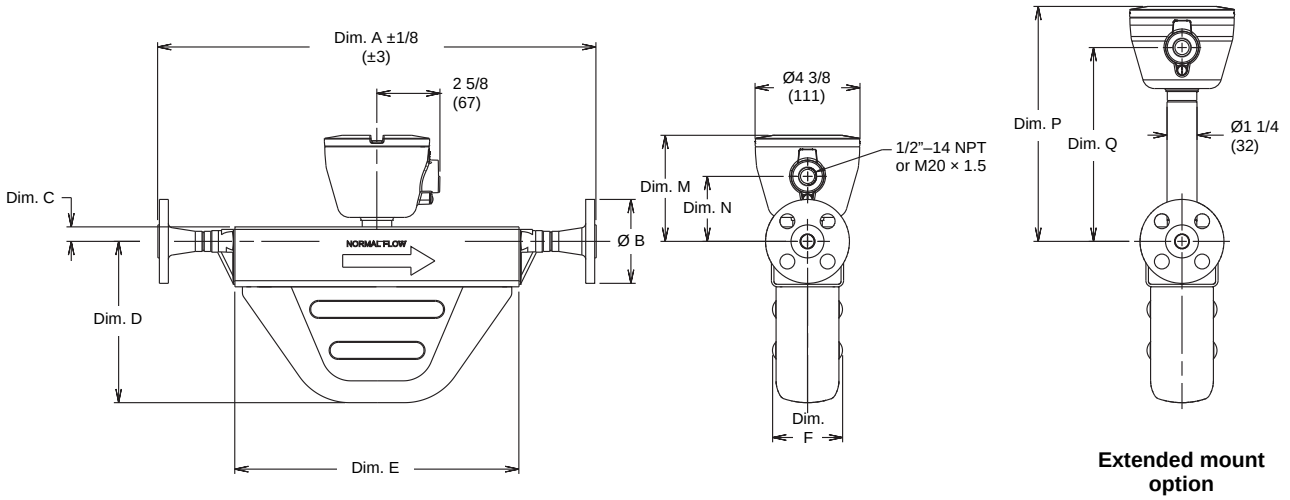
(1) For dimensions A and B, see fittings tables on pages 17–19.

(2) Minimum flow path restriction diameter.

Dimensions *continued*

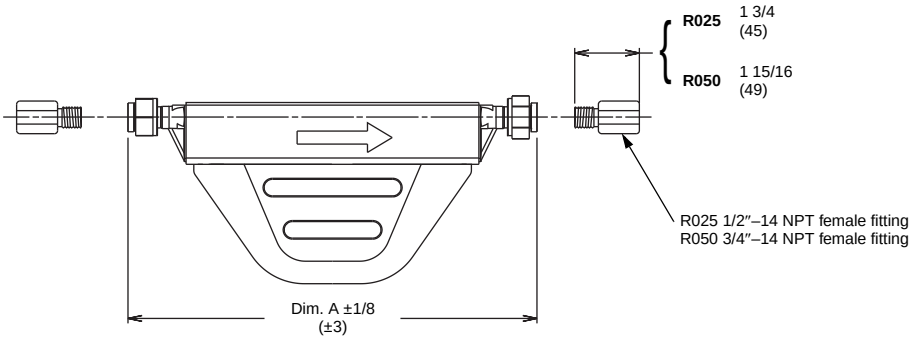
Sensor with core processor

Dimensions in inches (mm)



Extended mount option

NPT female Swagelok fitting dimensions



Model		Dimensions[1]								
		RD[2]	C	D	E	F	M	N	P	Q
R025	in	0.210	5/8	5 1/8	9 3/4	2 13/16	4 7/16	2 11/16	9 13/16	8 1/16
	(mm)	(5)	(15)	(130)	(247)	(72)	(112)	(69)	(249)	(205)
R050	in	0.345	5/8	6 3/4	11 7/8	2 15/16	4 7/16	2 11/16	9 13/16	8 1/16
	(mm)	(9)	(15)	(171)	(301)	(74)	(112)	(69)	(249)	(205)
R100	in	0.647	7/8	9 1/8	14 7/8	4 1/8	4 11/16	2 15/16	10 1/16	8 5/16
	(mm)	(16)	(22)	(232)	(378)	(104)	(119)	(75)	(255)	(212)
R200	in	1.058	1 3/4	12 9/16	17 7/8	5 5/8	5 9/16	3 7/8	10 15/16	9 1/4
	(mm)	(29)	(44)	(319)	(454)	(144)	(141)	(98)	(278)	(234)

(1) For dimensions A and B, see fittings tables on pages 17–19.

(2) Minimum flow path restriction diameter.

Fitting options

	Fitting code	Dim. A face-to-face inches (mm)	Dim. B outside diam. inches (mm)
R025S fitting options[1]			
1/2-inch ANSI CL150 weld neck raised face flange	113	16 (406)	3 1/2 (89)
1/2-inch ANSI CL300 weld neck raised face flange	114	16 3/8 (416)	3 3/4 (95)
1/2-inch ANSI CL600 weld neck raised face flange	115	16 7/8 (429)	3 3/4 (95)
1/2-inch NPT female Swagelok size 8 VCO fitting	319	14 (356)[2]	not applicable
1/2-inch sanitary fitting (Tri-Clamp® compatible)	121	14 (356)	1 (25)
DN15 PN40 weld neck; DIN 2635 type C face	116	15 1/4 (387)	3 3/4 (95)
DN15 PN40 weld neck flange; EN 1092-1 Form B1	176	15 1/4 (387)	3 3/4 (95)
DN15 PN40 weld neck flange; EN 1092-1 Form D	310	15 1/4 (387)	3 3/4 (95)
DN25 PN40 weld neck flange; EN 1092-1 Form B1	172	15 3/8 (400)	4 1/2 (115)
DN25 PN40 weld neck flange; EN 1092-1 Form D	183	15 3/8 (400)	4 1/2 (115)
DN15 PN100/160 weld neck flange; DIN 2638 type E face	120	15 13/16 (401)	4 1/8 (105)
DN15 PN100/160 weld neck flange; EN 1092-1 Form B2	170	15 13/16 (401)	4 1/8 (105)
DN15 PN100 weld neck flange; EN 1092-1 Form D	178	15 13/16 (401)	4 1/8 (105)
15mm DIN 11851 hygienic coupling	222	13 15/16 (353)	Rd 34 × 1/8
JIS 15mm 10K/20K weld neck raised face flange	122	15 7/16 (393)	3 3/4 (95)
JIS 15mm 40K weld neck raised face flange	221	16 1/2 (420)	4 1/2 (115)
R025P fitting options[1]			
15mm DIN PN100/160 weld neck, DIN 2638, type E face	120	15 13/16 (401)	4 1/8 (105)
DN15 PN100/160 weld neck flange; EN 1092-1 Form B2	170	15 13/16 (401)	4 1/8 (105)
DN15 PN100 weld neck flange; EN 1092-1 Form D	178	15 13/16 (401)	4 1/8 (105)
DN25 PN100 weld neck flange; EN 1092-1 Form B2	180	16 13/16 (427)	5 7/8 (150)
1/2-inch NPT female Swagelok size 8 VCO fitting	319	14 (356)[2]	not applicable

(1) Fittings listed here are standard options. Other types of fittings are available. 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 14–16.

Fitting options *continued*

	Fitting code	Dim. A face-to-face inches (mm)	Dim B. outside diam. inches (mm)
R050S fitting options[1]			
1/2-inch ANSI CL150 weld neck raised face flange	113	18 1/8 (460)	3 1/2 (89)
1/2-inch ANSI CL300 weld neck raised face flange	114	18 1/2 (469)	3 3/4 (95)
1/2-inch ANSI CL600 weld neck raised face flange	115	19 (482)	3 3/4 (95)
3/4-inch NPT female Swagelok size 12 VCO fitting	239	16 3/8 (415)[2]	not applicable
3/4-inch sanitary fitting (Tri-Clamp compatible)	322	15 7/8 (403)	1 (25)
DN15 PN40 weld neck flange; DIN 2635 type C face	116	17 3/8 (441)	3 3/4 (95)
DN15 PN40 weld neck flange; EN 1092-1 Form B1	176	17 3/8 (441)	3 3/4 (95)
DN15 PN40 weld neck flange; EN 1092-1 Form D	310	17 3/8 (441)	3 3/4 (95)
DN15 PN100/160 weld neck flange; DIN 2638 type E face	120	17 7/8 (455)	4 1/8 (105)
DN15 PN100/160 weld neck flange; EN 1092-1 Form B2	170	17 7/8 (455)	4 1/8 (105)
DN15 PN100 weld neck flange; EN 1092-1 Form D	178	17 7/8 (455)	4 1/8 (105)
DN25 PN40 weld neck flange; DIN 2635 type C face	131	17 1/2 (444)	4 1/2 (115)
DN25 PN40 weld neck flange; EN 1092-1 Form B1	172	17 1/2 (444)	4 1/2 (115)
DN25 PN40 weld neck flange; EN 1092-1 Form D	183	17 1/2 (444)	4 1/2 (115)
15mm DIN 11851 hygienic coupling	222	16 (407)	Rd 34 × 1/8
JIS 15mm 10K/20K weld neck raised face flange	122	17 9/16 (446)	3 3/4 (95)
JIS 15mm 40K weld neck raised face flange	221	18 5/8 (473)	4 1/2 (115)
R100S fitting options[1]			
1-inch ANSI CL150 weld neck raised face flange	128	22 11/16 (576)	4 1/4 (108)
1-inch ANSI CL300 weld neck raised face flange	129	23 3/16 (588)	4 7/8 (124)
1-inch ANSI CL600 weld neck raised face flange	130	23 11/16 (601)	4 7/8 (124)
1-inch sanitary fitting (Tri-Clamp compatible)	138	21 1/4 (540)	2 (50)
DN25 PN40 weld neck flange; DIN 2635 type C face	131	21 7/16 (544)	4 1/2 (115)
DN25 PN100/160 weld neck flange; DIN 2638 type E face	137	22 13/16 (580)	5 1/2 (140)
25mm DIN 11851 hygienic coupling	230	20 9/16 (522)	Rd 52 × 1/6
DN25 PN40 weld neck flange; EN 1092-1 Form B1	179	21 7/16 (545)	4 1/2 (115)
DN25 PN40 weld neck flange; EN 1092-1 Form D	311	21 7/16 (545)	4 1/2 (115)
DN25 PN100 weld neck flange; EN 1092-1 Form B2	180	22 7/8 (581)	5 1/2 (140)
DN25 PN100 weld neck flange; EN 1092-1 Form D	181	22 7/8 (581)	5 1/2 (140)
JIS 25mm 10K/20K weld neck raised face flange	139	21 11/16 (550)	4 15/16 (125)
JIS 25mm 40K weld neck raised face flange	229	22 15/16 (582)	5 1/8 (130)

(1) Fittings listed here are standard options. Other types of fittings are available. 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 14–16.

Fitting options *continued*

	Fitting code	Dim. A face-to-face inches (mm)	Dim B. outside diam. inches (mm)
R200S fitting options[1]			
1 1/2-inch ANSI CL150 weld neck raised face flange	341	24 3/4 (629)	5 (127)
1 1/2-inch ANSI CL300 weld neck raised face flange	342	25 1/4 (642)	6 1/8 (155)
1 1/2-inch ANSI CL600 weld neck raised face flange	343	25 3/4 (654)	6 1/8 (155)
2-inch ANSI CL150 weld neck raised face flange	418	24 7/8 (632)	6 (152)
2-inch ANSI CL300 weld neck raised face flange	419	25 3/8 (645)	6 1/2 (165)
2-inch ANSI CL600 weld neck raised face flange	420	26 1/8 (664)	6 1/2 (165)
1 1/2-inch sanitary fitting (Tri-Clamp compatible)	351	23 1/4 (591)	2 (50)
2-inch sanitary fitting (Tri-Clamp compatible)	352	22 7/8 (581)	2 1/2 (64)
DN40 PN40 weld neck flange; DIN 2635 type C face	381	23 9/16 (598)	5 15/16 (150)
DN50 PN40 weld neck flange; DIN 2635 type C face	382	23 5/8 (600)	6 1/2 (165)
DN50 PN100 weld neck flange; DIN 2637 type E face	378	25 1/4 (641)	7 11/16 (195)
DN40 PN40 weld neck flange; EN 1092-1 Form B1	368	23 1/4 (594)	5 15/16 (150)
DN40 PN40 weld neck flange; EN 1092-1 Form D	312	23 1/4 (594)	5 15/16 (150)
DN40 PN100 weld neck flange; EN 1092-1 Form B2	363	24 3/4 (628)	6 11/16 (170)
DN40 PN100 weld neck flange; EN 1092-1 Form D	366	24 3/4 (628)	6 11/16 (170)
DN50 PN40 weld neck flange; EN 1092-1 Form B1	369	23 5/8 (600)	6 1/2 (165)
DN50 PN40 weld neck flange; EN 1092-1 Form D	316	23 5/8 (600)	6 1/2 (165)
DN50 PN100 weld neck flange; EN 1092-1 Form B2	365	25 1/4 (641)	7 11/16 (195)
DN50 PN100 weld neck flange; EN 1092-1 Form D	367	25 1/4 (641)	7 11/16 (195)
40mm DIN 11851 hygienic coupling	353	23 3/16 (589)	Rd 65 × 1/6
50mm DIN 11851 hygienic coupling	354	23 1/4 (591)	Rd 78 × 1/6
JIS 40mm 10K weld neck raised face flange	385	23 7/16 (595)	5 1/2 (140)
JIS 40mm 20K weld neck raised face flange	387	23 7/16 (595)	5 1/2 (140)
JIS 50mm 10K weld neck raised face flange	386	23 7/16 (595)	6 1/8 (155)
JIS 50mm 20K weld neck raised face flange	388	23 5/8 (600)	6 1/8 (155)
JIS 50mm 40K weld neck raised face flange	389	25 7/16 (646)	6 1/2 (165)

(1) Fittings listed here are standard options. Other types of fittings are available. Contact your local Micro Motion representative.

Ordering information

Model	Product description
	Standard sensor models
R025S	R-Series sensor; 1/4-inch (6 mm); 316L stainless steel
R050S	R-Series sensor; 1/2-inch (12 mm); 316L stainless steel
R100S	R-Series sensor; 1-inch (25 mm); 316L stainless steel
R200S	R-Series sensor; 2-inch (50 mm); 316L stainless steel
	High-pressure models
R025P	R-Series sensor; 1/4-inch (6 mm); 316L stainless steel; 2300 psi (158 bar) tube rating
Code	**Process connection**
###	See fittings option tables on pages 17–19
Code	**Case options**
N	Standard case
Code	**Electronics interface**
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 (all output options) or Model 2700 (FOUNDATION fieldbus or PROFIBUS-PA) transmitter
W(1)	Polyurethane-painted aluminum integral core processor for MVD™ Direct Connect™ installations
D(1)	Stainless steel integral core processor for MVD Direct Connect installations
Y(1)	Polyurethane-painted aluminum integral core processor with extended mount for MVD Direct Connect installations
E(1)	Stainless steel integral core processor with extended mount for MVD Direct Connect installations
I	Integrally mounted IFT9703 transmitter
Code	**Conduit connections**
	Electronics interface codes Q, A, V, B, W, D, Y, and E
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 C or I (integrally mounted 1700/2700 or IFT9703, no conduit connections)
A	No gland

Continued on next page

(1) When electronics interface W, D, Y, or E is ordered with approval code C, A, or Z, an MVD Direct Connect I.S. barrier is supplied. No barrier is supplied when ordered with approval code M or N.

Ordering information *continued*

Code	Approvals[1]
M	Micro Motion standard (no approval)
N	Micro Motion standard / PED compliant (no approval)
U[2]	UL
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
Code	**Language**
A	Danish installation manual
C	Czech installation manual
D	Dutch installation manual
E	English installation manual
F	French installation manual
G	German installation manual
H	Finnish installation manual
I	Italian installation manual
J	Japanese installation manual
M	Chinese installation manual
N	Norwegian installation manual
O	Polish installation manual
P	Portuguese installation manual
S	Spanish installation manual
W	Swedish installation manual
B	Hungarian CE requirements and English manual
K	Slovak CE requirements and English manual
T	Estonian CE requirements and English manual
U	Greek CE requirements and English manual
L	Latvian CE requirements and English manual
V	Lithuanian CE requirements and English manual
Y	Slovenian CE requirements and English manual
Code	**Future option 1**
Z	Reserved for future use
Code	**Future option 2**
Z	Reserved for future use
Code	**Future option 3**
Z	Reserved for future use
Code	**Factory options**
Z	Standard product
X	ETO product
Typical model number:	**R025S 113 N C A C E Z Z Z Z**

(1) When electronics interface W, D, Y, or E is ordered with approval code C, A, or Z, an MVD Direct Connect I.S. barrier is supplied. No barrier is supplied when ordered with approval code M or N.

(2) Available only with electronics interface code I.

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

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