

Product Data Sheet

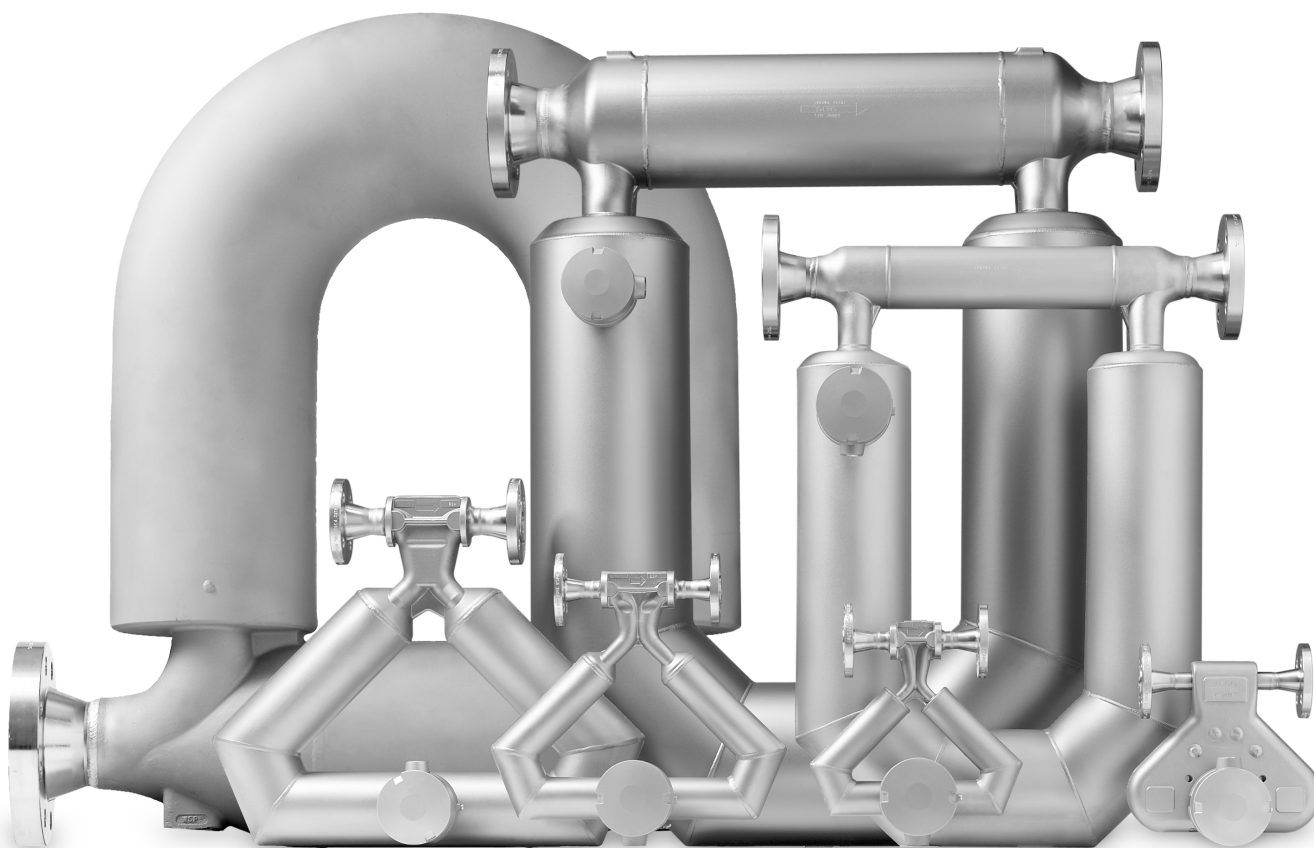
PS-00374, Rev. A

July 2003

Micro Motion® ELITE®

Mass Flow and Density Meters

Available with MVD™ Technology!



Micro Motion ELITE mass flow and density meters

Experience the most accurate Coriolis meters available today

Micro Motion ELITE meters are the leading meters for precision flow and density measurement. And with good reason. ELITE meters offer the most accurate measurement available for virtually any process fluid, while exhibiting exceptionally low pressure drop.

Seven sizes of ELITE meters offer direct mass flow, volume flow, density, and temperature measurement of liquids, gases, and slurries — without the need for additional equipment, manual calculations, or estimations.

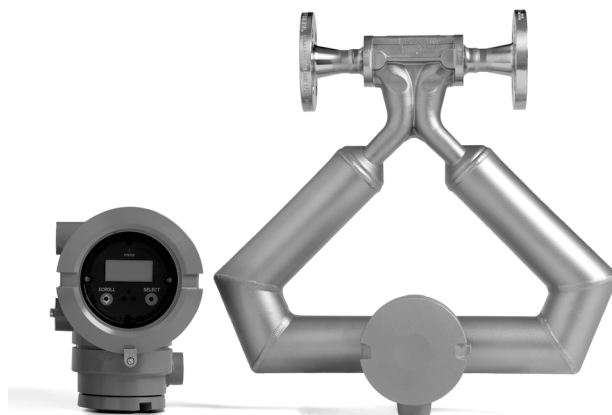
Micro Motion ELITE meters are designed for unsurpassed performance in even the most harsh operating environments. They have no moving parts, and no special mounting or flow conditioning requirements. Every ELITE meter features standard secondary containment, and is available with stainless steel or nickel alloy wetted parts and a wide variety of process connections to meet your every need. And they require no maintenance — saving you money over the course of their lifetime by helping you make the most of your time, people, and materials.

ELITE meters carry hazardous area approvals for the U.S.A., Canada, Europe, Australia, Japan and other areas in the Asia-Pacific region.

Special applications

Several ELITE meters have been designed for special applications. The CMF010, our smallest meter, provides remarkably high performance in low-flow applications. It features a single, continuous flow tube, and is also available in a high-pressure model, for applications up to 6000 psi (413 bar).

The much larger CMF400 4-inch meter offers the most accurate measurement available in a high-capacity meter.



The 3-inch CMF300A high-temperature meter provides the same accuracy and measurement capabilities as our other ELITE meters, at temperatures up to 650 °F (343 °C).

Our CMF025, CMF050, and CMF100 meters are available with optional flangeless, wafer-style process connections.

MVD Technology

Micro Motion ELITE meters are available with MVD Technology — an innovative, multivariable, digital signal processing capability. A core processor, integrally mounted on the ELITE sensor, works with 4-wire transmitters to improve ease of use, reduce downtime, and lower your flow metering costs. Meters with MVD Technology provide cleaner, noise-free digital signals. Digital signal processing means faster response times, enhanced diagnostic capabilities, higher accuracy, and better repeatability.

Micro Motion makes your process more profitable!

Micro Motion offers a variety of microprocessor-based transmitters, any of which can be connected to our ELITE sensors. Depending on the transmitter model, features include milliampere and frequency/pulse outputs, transmitter and process control functions in a single device, and petroleum measurement outputs for crude oil and other hydrocarbon fluids.

Other options include transmitters that can be installed in instrument racks or panels, or housed in NEMA or explosion-proof enclosures. Sensors and explosion-proof transmitters can be installed in the same hazardous area.

Micro Motion ELITE meters can be installed as part of a Bell 202 multidrop network, an RS-485 digital communications network, or a Profibus-PA or FOUNDATION™ Fieldbus system.

Transmitters feature HART®, Modbus®, FOUNDATION™ fieldbus, Profibus-PA, and other communication protocols. And all our transmitters support Emerson Process Management's PlantWeb® field-based architecture, which uses the power of intelligent, interoperable field devices to improve plant performance.

Micro Motion is known worldwide for increasing plant efficiency, production, and profitability. More than 400,000 Micro Motion meters are installed and working in processes just like yours. Contact us and discover the best precision flow and density meters available today — Micro Motion ELITE meters.

Liquid flow performance

		Mass		Volume	
Nominal flow range ⁽¹⁾		lb/min	kg/hr	gal/min	l/hr
	CMF010	0 to 3	0 to 82	0 to 0.4	0 to 82
	CMF025	0 to 40	0 to 1090	0 to 5	0 to 1090
	CMF050	0 to 125	0 to 3400	0 to 15	0 to 3400
	CMF100	0 to 500	0 to 13,600	0 to 60	0 to 13,600
	CMF200	0 to 1600	0 to 43,550	0 to 192	0 to 43,550
	CMF300	0 to 5000	0 to 136,080	0 to 600	0 to 136,080
	CMF400	0 to 15,000	0 to 409,000	0 to 1800	0 to 409,000
Maximum flow rate		lb/min	kg/hr	gal/min	l/hr
	CMF010	4	108	0.4	108
	CMF025	80	2180	10	2180
	CMF050	250	6800	30	6800
	CMF100	1000	27,200	120	27,200
	CMF200	3200	87,100	385	87,100
	CMF300	10,000	272,160	1200	272,160
	CMF400	20,000	545,500	2400	545,500
Mass flow accuracy ⁽²⁾					
	Transmitters with MVD Technology	±0.10% of rate ⁽³⁾			
	All other transmitters	±0.10% ± $\left[\left(\frac{\text{zero stability}}{\text{flow rate}} \right) \times 100 \right] \% \text{ of rate}$			
Mass flow repeatability ⁽²⁾					
	Transmitters with MVD Technology	±0.05% of rate ⁽³⁾			
	All other transmitters	±0.05% ± $\left[\frac{1}{2} \left(\frac{\text{zero stability}}{\text{flow rate}} \right) \times 100 \right] \% \text{ of rate}$			
Zero stability		lb/min	kg/hr		
	CMF010	0.000075	0.002		
	High-pressure CMF010P	0.00015	0.004		
	CMF025	0.001	0.027		
	CMF050	0.006	0.163		
	CMF100	0.025	0.680		
	CMF200	0.08	2.18		
	CMF300	0.25	6.80		
	CMF400	1.50	40.91		

(1) Micro Motion has adopted the terminology "nominal flow range." The upper limit of this range is the flow rate at which water at reference conditions causes approximately 15 psid (1 bar) of pressure drop for ELITE sensors.

(2) 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 is less than $\frac{\text{zero stability}}{0.001}$, accuracy equals $\pm \left[\left(\frac{\text{zero stability}}{\text{flow rate}} \right) \times 100 \right] \% \text{ of rate and}$

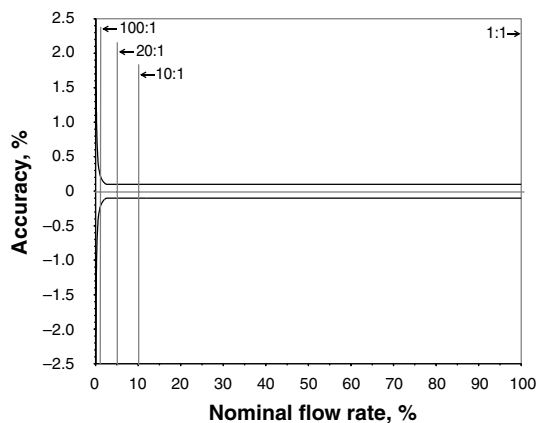
repeatability equals $\pm \left[\frac{1}{2} \left(\frac{\text{zero stability}}{\text{flow rate}} \right) \times 100 \right] \% \text{ of rate.}$

Liquid flow performance *continued*

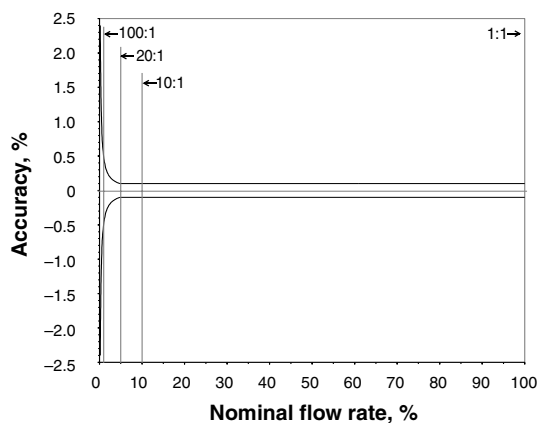
Typical mass accuracy, turndown, and pressure drop with transmitter with MVD Technology

To determine accuracy, turndown, and pressure drop using your process variables, use Micro Motion's product selector at www.micromotion.com.

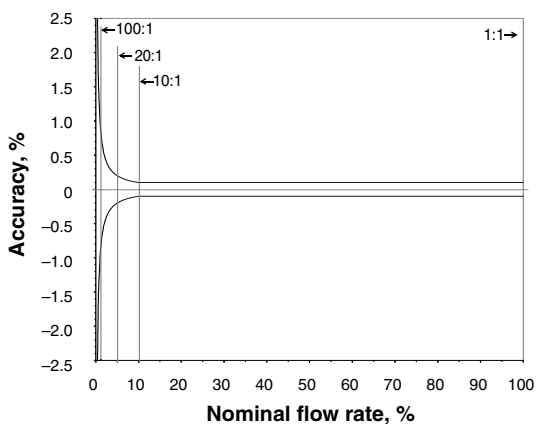
Turndown	500:1	100:1	20:1	10:1	1:1
CMF010N, CMF010M, CMF025					
Accuracy ($\pm\%$)	1.25	0.25	0.10	0.10	0.10
Pressure drop					
psi	~0	~0	0.1	0.2	14.5
bar	~0	~0	0.01	0.01	1.0



Turndown	500:1	100:1	20:1	10:1	1:1
CMF010P, CMF050, CMF100, CMF200, CMF300					
Accuracy ($\pm\%$)	2.40	0.50	0.10	0.10	0.10
Pressure drop					
psi	~0	~0	0.1	0.2	13.5
bar	~0	~0	0.01	0.01	0.93



Turndown	500:1	100:1	20:1	10:1	1:1
CMF400					
Accuracy ($\pm\%$)	5	1.0	0.20	0.10	0.10
Pressure drop					
psi	~0	~0	~0	0.2	14.1
bar	~0	~0	0.01	0.01	1.0



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/hr	SCFM	Nm ³ /hr
Flow rates that produce approximately 10 psid (0.68 bar) pressure drop on <i>air</i> at 68 °F (20 °C) and 100 psi (6.8 bar)				
CMF010	0.3	8	4	6
CMF025	4	116	57	90
CMF050	11	297	145	229
CMF100	48	1313	642	1015
CMF200	147	4005	1957	3094
CMF300	488	13,289	6493	10,268
CMF400	1248	33,976	16,601	26,252
Flow rates that produce approximately 50 psid (3.4 bar) pressure drop on <i>natural gas</i> (MW 16.675) at 68 °F (20 °C) and 500 psi (34.0 bar)				
CMF010	1	32	28	44
CMF025	16	445	378	598
CMF050	42	1135	965	1526
CMF100	184	5016	4263	6741
CMF200	560	15,239	12,950	20,478
CMF300	1856	50,500	42,913	67,861
CMF400	4698	127,864	108,654	171,822

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

Gas flow performance *continued*

Accuracy⁽¹⁾	Transmitter with MVD Technology	±0.35% of rate ⁽²⁾	
	All other transmitters	±0.50% of rate $\pm \left[\left(\frac{\text{zero stability}}{\text{flow rate}} \right) \times 100 \right] \% \text{ of rate}$	
Repeatability⁽¹⁾	Transmitter with MVD Technology	±0.20% of rate ⁽²⁾	
	All other transmitters	±0.25% of rate $\pm \left[\left(\frac{\text{zero stability}}{\text{flow rate}} \right) \times 100 \right] \% \text{ of rate}$	
Zero stability		lb/min	kg/hr
CMF010		0.000075	0.002
High-pressure CMF010P		0.00015	0.004
CMF025		0.001	0.027
CMF050		0.006	0.163
CMF100		0.025	0.680
CMF200		0.08	2.18
CMF300		0.25	6.80
CMF400		1.50	40.91

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

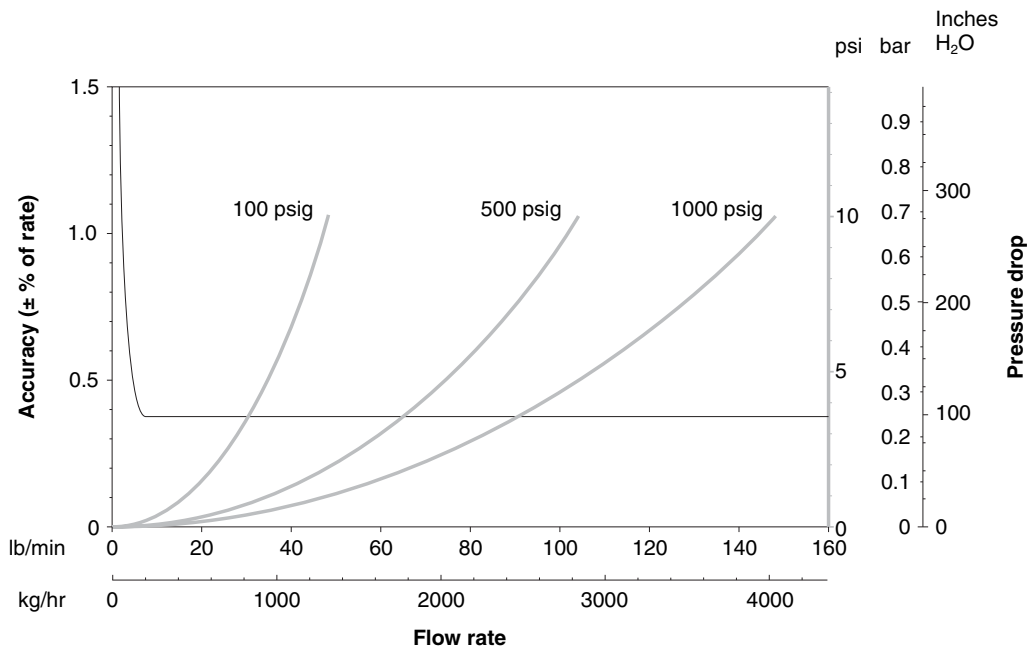
(2) When flow rate is less than $\frac{\text{zero stability}}{0.0035}$, accuracy equals $\pm \left[\left(\frac{\text{zero stability}}{\text{flow rate}} \right) \times 100 \right] \% \text{ of rate}$ and

repeatability equals $\pm \left[\frac{1}{2} \left(\frac{\text{zero stability}}{\text{flow rate}} \right) \times 100 \right] \% \text{ of rate}$.

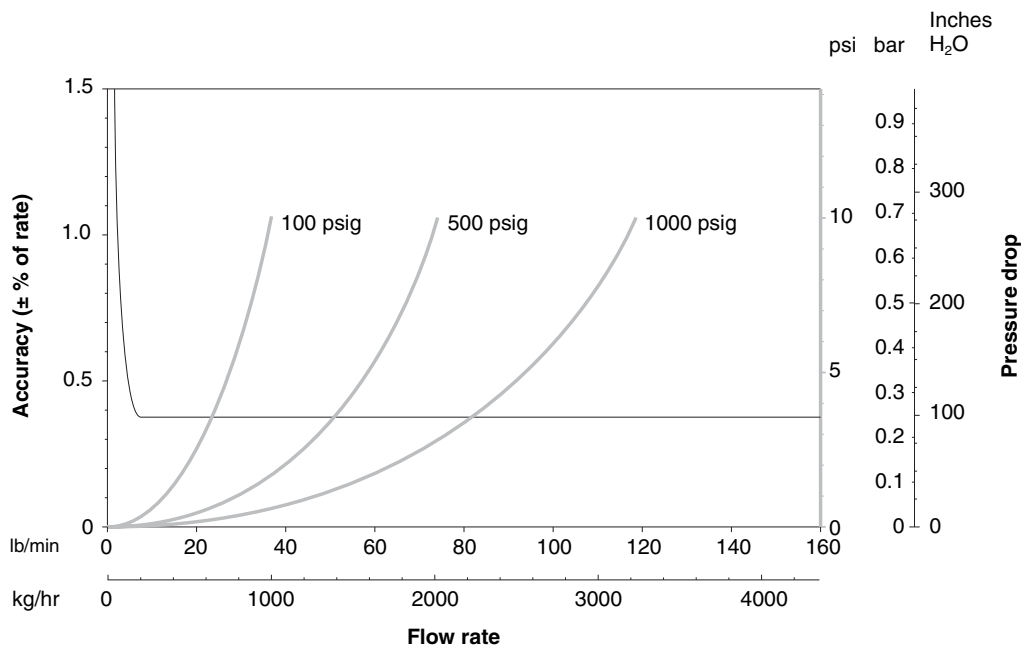
Gas flow performance *continued*

Typical accuracy and pressure drop with CMF100 and transmitter 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 pressure as indicated on graph



Density performance

			with Model 3500, 3700, or RFT9739 transmitter or transmitter with MVD Technology		with IFT9701 transmitter	
			g/cc	kg/m ³	g/cc	kg/m ³
Accuracy⁽¹⁾	High-pressure CMF010P	liquid	±0.002	±2.0	±0.008	±8.0
	All other models	liquid	±0.0005	±0.5	±0.002	±2.0
Repeatability⁽¹⁾	High-pressure CMF010P	liquid	±0.001	±1.0	±0.004	±4.0
	All other models	liquid	±0.0002	±0.2	±0.001	±1.0
Range	All models		0 to 5	0 to 5000	0 to 5	0 to 5000

(1) 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.

Temperature limits

Accuracy	All models		$\pm 1\text{ }^{\circ}\text{C} \pm 0.5\%$ of reading in $^{\circ}\text{C}$	
Repeatability	All models		$\pm 0.2\text{ }^{\circ}\text{C}$	
Process fluid			$^{\circ}\text{F}$	$^{\circ}\text{C}$
	CMF010, CMF025, CMF050, CMF100, CMF200, CMF300M, CMF300H, CMF400	with core processor with junction box with core processor on extended mount	-60 to $+257$ -400 to $+400$ -60 to $+400$	-50 to $+125$ -240 to $+204$ -50 to $+204$
	High-temperature CMF300A	sensor	$+32$ to $+650$	0 to $+343$
Ambient	High-temperature CMF300A	junction box	-40 to $+248$	-40 to $+120$
Ambient temperature range			$^{\circ}\text{F}$	$^{\circ}\text{C}$
	UL	with junction box with core processor	$+104$ maximum -40 to $+104$	$+40$ maximum -40 to $+40$
	CSA	with junction box with core processor	$+140$ maximum -40 to $+140$	$+60$ maximum -40 to $+60$
	ATEX ⁽¹⁾	Refer to graphs on pages 13–14		
	MMI	With core processor	-40 to $+140$	-40 to $+60$

(1) For ATEX-compliant sensors:

The "T" rating and hazardous area classification depend on the maximum process fluid and ambient temperature. See pages 13–14.

The maximum ambient temperature is $55\text{ }^{\circ}\text{C}$ ($60\text{ }^{\circ}\text{C}$ for CMF400 sensors). Use of sensors with a junction box above this temperature is acceptable, provided the ambient temperature does not exceed the "T" rating listed on pages 13–14 for temperature of the fluid.

The minimum process fluid and ambient temperature is $-20\text{ }^{\circ}\text{C}$ ($-50\text{ }^{\circ}\text{C}$ for CMF400 sensors). If the process fluid remains at or above $0\text{ }^{\circ}\text{C}$, ambient temperature below $-20\text{ }^{\circ}\text{C}$ (CMF400 sensors, minimum ambient temperature is $-50\text{ }^{\circ}\text{C}$) is acceptable for sensors with a junction box. For sensors with a core processor, an ambient temperature of $-40\text{ }^{\circ}\text{C}$ is allowed.

Pressure ratings

Flow tube rating ⁽¹⁾		psi	bar		
	Stainless steel sensors	1450	100		
	Nickel-alloy sensors	2160	148		
	High-pressure CMF010P	6000	413		
PED compliance	Sensors comply with council directive 97/23/EC of 29 May 1997 on Pressure Equipment				
		ASME B31.3 secondary containment rating ⁽¹⁾		Burst pressure used to determine ASME B31.3 secondary containment rating	
Housing rating ⁽¹⁾		psi	bar	psi	bar
	CMF010 ⁽²⁾	425	29	3042	209
	CMF025	1130	78	5480	372
	CMF050	1130	78	5286	359
	CMF100	830	57	3299	224
	CMF200	730	50	2786	189
	CMF300	365	25	1568	106
	CMF400	325	22	1556	106

(1) 10-hour pressure ratings at 77 °F (25 °C), according to ASME B31.3. For higher operating temperatures, pressure needs to be derated as follows. For ratings between 10 hours and 50 hours, multiply rating by 0.90; for ratings over 50 hours, multiply rating by 0.75.

		Flow tubes 316L sensors	Flow tubes nickel alloy sensors	Housing all sensors
All sensors	201 to 300 °F (94 to 148 °C)	none	2% derating	none
	301 to 400 °F (149 to 204 °C)	7.2% derating	9.2% derating	7.2% derating
High-temperature CMF300A	401 to 500 °F (205 to 260 °C)	13.8% derating	not applicable	11.4% derating
	501 to 600 °F (261 to 316 °C)	19.2% derating	not applicable	16.2% derating
	601 to 650 °F (317 to 343 °C)	20.1% derating	not applicable	18.0% derating

(2) Optional rupture disks for high-pressure CMF010 will burst if pressure inside sensor housing reaches 400 psi (27 bar).

Environmental effects

Process temperature effect Process temperature effect is defined as the worst-case zero offset due to process fluid temperature change away from the zeroing temperature for flow rate and calibration temperature for density.

	Process temperature effect	
	% of nominal flow rate per °C ⁽¹⁾	density accuracy per °C ⁽²⁾
CMF010	±0.00025	±0.000015 g/cc
CMF025	±0.00025	±0.000015 g/cc
CMF050	±0.00025	±0.000015 g/cc
CMF100	±0.00025	±0.000015 g/cc
CMF200	±0.001	±0.000015 g/cc
CMF300	±0.001	±0.000015 g/cc
CMF400	±0.001	±0.000015 g/cc

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. Pressure effect can be corrected.

	Pressure effect on flow accuracy	
	% of rate per psi	% of rate per bar
CMF010	None	None
CMF025	None	None
CMF050	None	None
CMF100	-0.0002	-0.003
CMF200	-0.0008	-0.012
CMF300	-0.0006	-0.009
CMF400	-0.001	-0.015

	Pressure effect on density accuracy	
	g/cc per psi	kg/m ³ per bar
CMF010	None	None
CMF025	0.000004	0.0002
CMF050	-0.000002	-0.0001
CMF100	-0.000006	-0.0004
CMF200	0.000001	None
CMF300	0.0000002	None
CMF400	0.000007	0.0004

(1) Nominal flow rate is the upper limit of the nominal flow range.

(2) For -100 °C and above.

Power consumption

All meters with core processor	3 watts
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Hazardous area classifications


UL is a U.S.A. approvals agency. CSA is a Canadian approvals agency that provides approvals accepted both in the U.S.A. and in Canada. ATEX is a European directive, and SAA is an Australian approvals agency.

UL and CSA⁽¹⁾	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	
SAA	CMF010	Ex ib IIC T5
	CMF025	Ex ib IIC T5
	CMF050	Ex ib IIC T5
	CMF100	Ex ib IIC T6
	CMF200	Ex ib IIB T6
	CMF300	Ex ib IIB T6
	CMF400	SAA approval not available


ATEX ATEX "T" rating depends on the maximum temperature shown in the graphs.

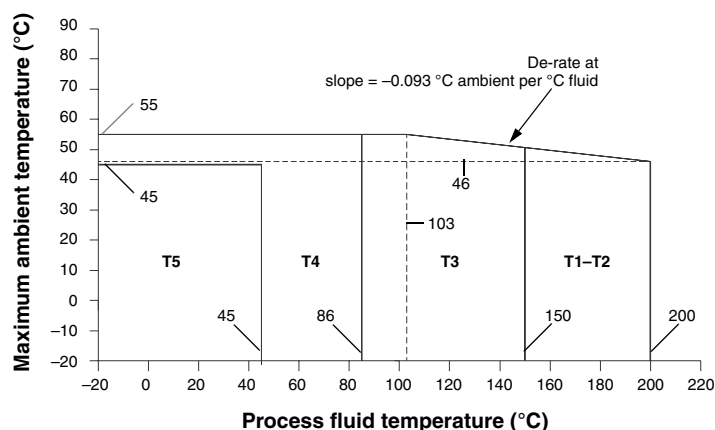
Sensors with core processor

CMF010, CMF025, CMF050, CMF100


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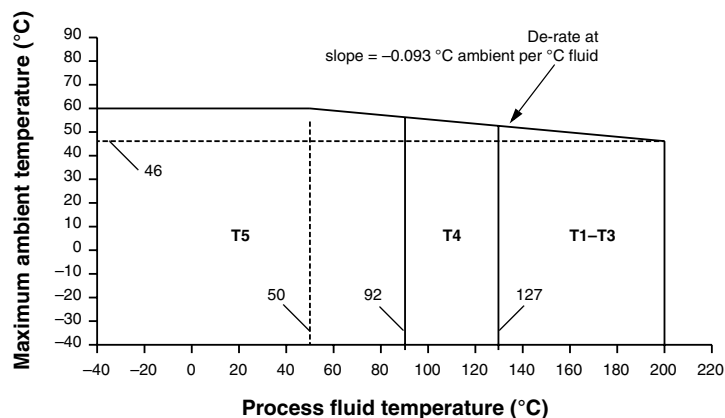
CMF200, CMF300

CE 0575  II 2G EEx ib IIB T1 . . . T5



CMF400

CE 0575  II 2G EEx ib IIB T1 . . . T5



(1) For approval temperature limits, see page 10.

Hazardous area classifications *continued*

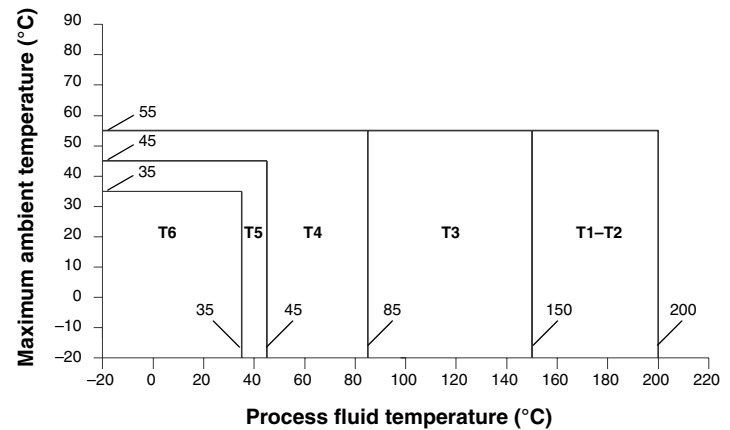
Sensors with junction box

CMF010, CMF025, CMF050, CMF100

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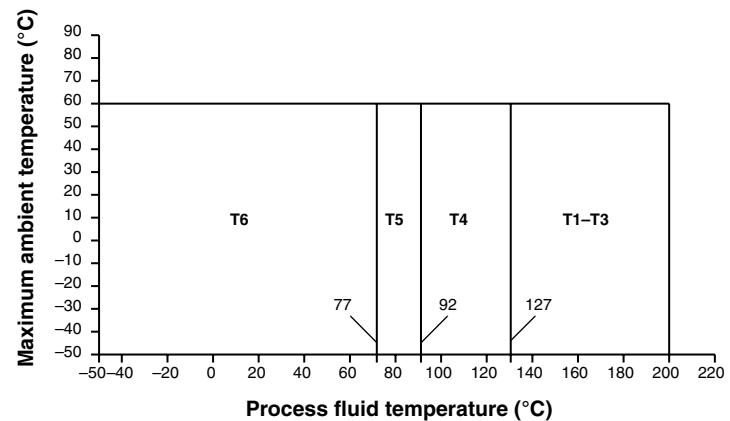
CMF200, CMF300

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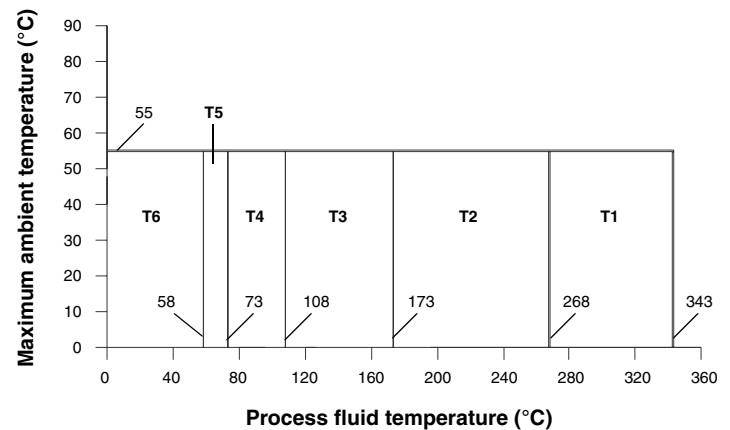
CMF400

CE 0575  II 2G EEx ib IIB T1 . . . T6



CMF300A

CE 0575  II 2G EEx ib IIB T1 . . . T5



Materials of construction

Wetted parts ⁽¹⁾		Stainless steel	Nickel alloy
	CMF010 ⁽²⁾	316L or 304L	Inconel® alloy 686
	CMF025	316L or 304L	Hastelloy C-22
	CMF050	316L or 304L	Hastelloy C-22
	CMF100	316L or 304L	Hastelloy C-22
	CMF200	316L or 304L	Hastelloy C-22
	CMF300	316L or 304L	Hastelloy C-22
	High-temperature CMF300A	316L	Not available
	CMF400	316L	Not available
Housing	304L stainless steel		
Junction box	Epoxy-coated aluminum		
Core processor <i>not available with CMF300A</i>	316L stainless steel or epoxy-coated aluminum		

- (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 sensor. Please refer to Micro Motion's corrosion guide for proper material compatibility information.
- (2) The CMF010P has nickel alloy tubes and SST fittings.

Weight

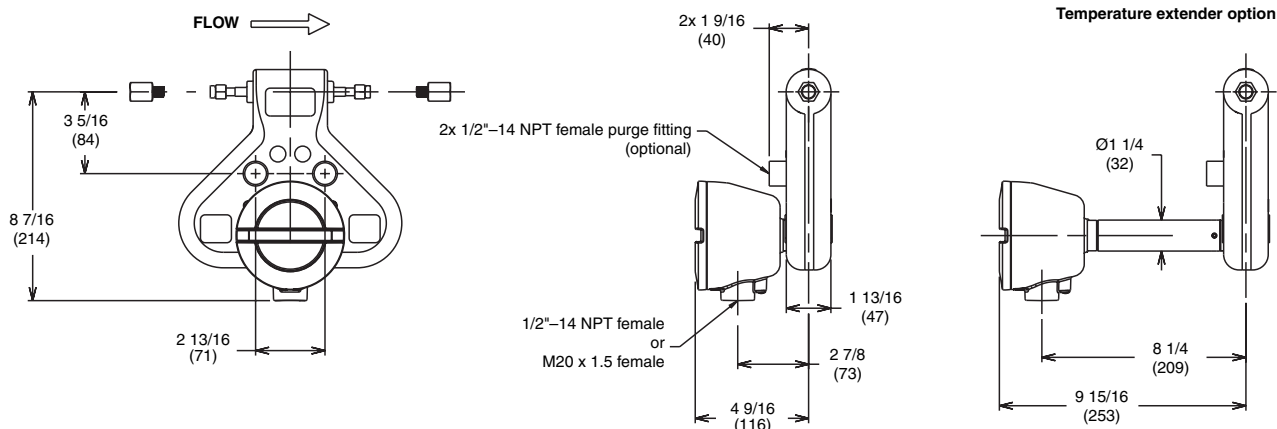
Weights provided are the weight of the flowmeter with 150 lb weld neck raised face flanges.

	With junction box		With core processor	
	lb	kg	lb	kg
CMF010	14	7	19	9
CMF025	8	4	13	6
CMF050	12	6	17	8
CMF100	29	13	34	16
CMF200	63	29	68	31
CMF300	165	75	170	77
CMF400	441	200	446	202

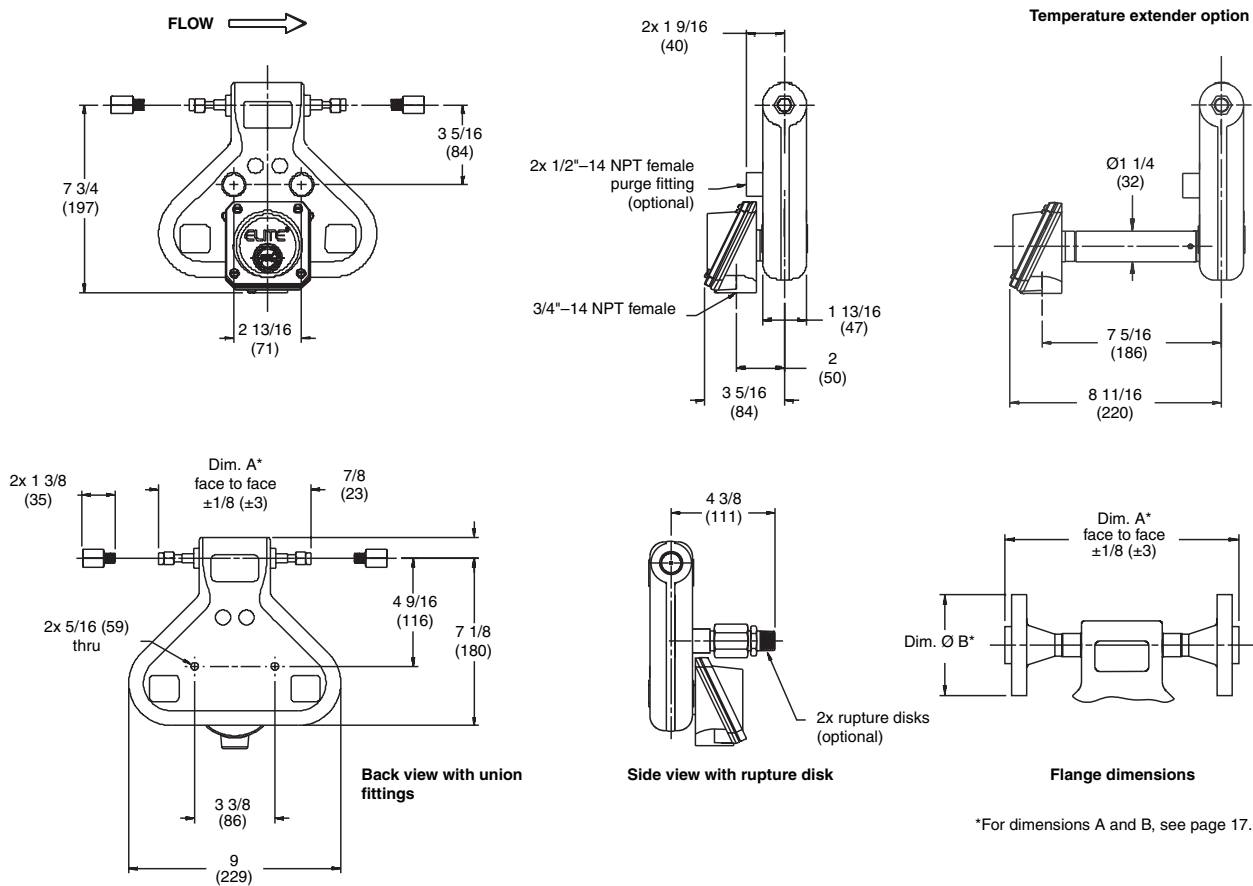
CMF010 dimensions

Dimensions in inches
(mm)

CMF010 with core processor



CMF010 with junction box



*For dimensions A and B, see page 17.

CMF010 process fittings

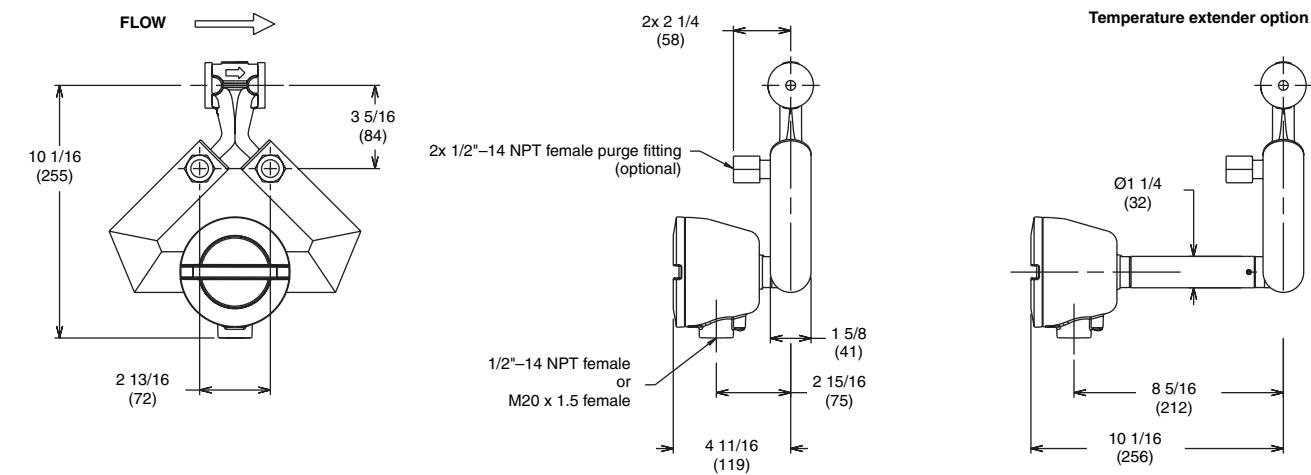
Fittings for 316L stainless steel sensors⁽¹⁾	Fitting code	Dim. A Face-to-face inches (mm)	Dim. B Outside diam. inches (mm)
1/2-inch 150 lb ANSI weld neck raised face flange	313	7 7/8 (199)	3 1/2 (89)
1/2-inch 300 lb ANSI weld neck raised face flange	314	8 3/16 (209)	3 3/4 (95)
1/2-inch 600 lb ANSI weld neck raised face flange	315	8 11/16 (221)	3 3/4 (95)
1/2-inch sanitary fitting	321	6 15/16 (177)	1 (25)
15 mm DIN PN40 weld neck, DIN 2635, type C face	300	7 7/16 (189)	3 3/4 (95)
15 mm DIN PN100 weld neck, DIN 2637, type E face	302	8 (203)	4 1/8 (105)
15 mm JIS 10K weld neck	304	7 3/16 (183)	3 3/4 (95)
15 mm JIS 20K weld neck	305	7 3/16 (183)	3 3/4 (95)
1/4-inch NPT female union fitting	323	6 7/16 (164)	---
1/4-inch tube compression fitting	324	6 7/16 (164)	---
6 mm tube compression fitting	325	6 7/16 (164)	---
Fittings for 304L stainless steel sensors⁽¹⁾			
1/2-inch 150 lb ANSI weld neck raised face flange	413	7 7/8 (199)	3 1/2 (89)
1/2-inch 300 lb ANSI weld neck raised face flange	414	8 3/16 (209)	3 3/4 (95)
15 mm DIN PN40 weld neck, DIN 2635 type C face	423	7 7/16 (189)	3 3/4 (95)
Fittings for nickel alloy sensors⁽¹⁾			
1/2-inch 150 lb ANSI lap joint flange	520	7 7/8 (199)	3 1/2 (89)
1/2-inch 300 lb ANSI lap joint flange	521	8 3/16 (209)	3 3/4 (95)
15 mm DIN PN40 lap joint, DIN 2656	523	9 7/16 (240)	3 3/4 (95)
15 mm JIS 10K lap joint flange	522	8 3/16 (208)	3 3/4 (95)
1/4-inch NPT female union fitting	323	6 7/16 (164)	---
Fittings for high-pressure sensors⁽¹⁾			
1/4-inch NPT female union fitting	323	6 7/16 (164)	---
1/4-inch tube compression fitting	324	6 7/16 (164)	---
6 mm tube compression fitting	325	6 7/16 (164)	---

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

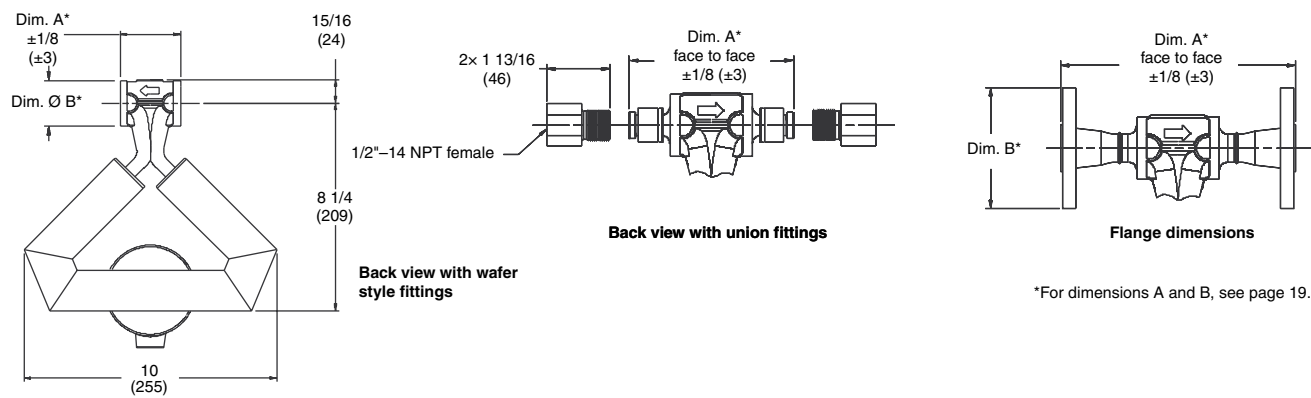
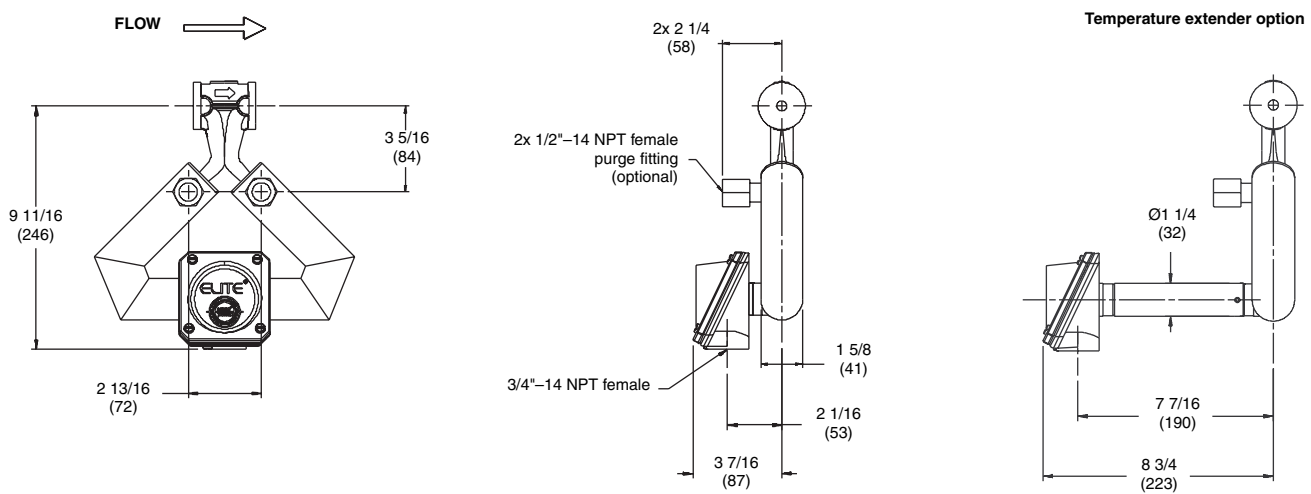
CMF025 dimensions

Dimensions in *inches*
(mm)

CMF025 with core processor



CMF025 with junction box



*For dimensions A and B, see page 19.

CMF025 process fittings

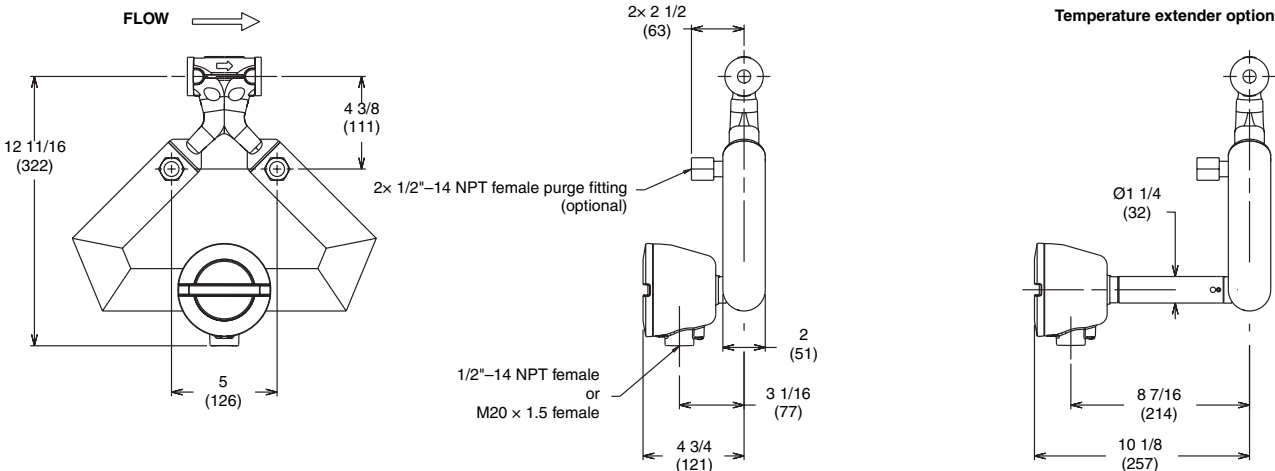
Fittings for 316L stainless steel sensors⁽¹⁾	Fitting code	Dim. A Face-to-face inches (mm)	Dim. B Outside diam. inches (mm)
Wafer style, 1/2" ANSI (150 lb, 300 lb, 600 lb bolt kit)	009	2 3/8 (60)	1 13/16 (46)
Wafer style, 15 mm DIN 2635, type C facing (PN40 bolt kit)	016	2 3/8 (60)	1 13/16 (46)
Wafer style, 15 mm DIN 2635, type N grooved facing (PN40 bolt kit)	017	2 3/8 (60)	1 13/16 (46)
Wafer style, 15 mm DIN 2637, type E facing (PN100 bolt kit)	018	2 3/8 (60)	1 13/16 (46)
Wafer style, 15 mm DIN 2637, type N grooved facing (PN100 bolt kit)	019	2 3/8 (60)	1 13/16 (46)
Wafer style, 15 mm, standard JIS facing (10K, 20K bolt kit)	029	2 3/8 (60)	1 13/16 (46)
1/2" ANSI 150 lb weld neck raised face flange	313	6 3/4 (172)	3 1/2 (89)
1/2" ANSI 300 lb weld neck raised face flange	314	7 1/8 (181)	3 3/4 (95)
1/2" ANSI 600 lb weld neck raised face flange	315	7 5/8 (194)	3 3/4 (95)
1/2" NPT female union fitting	319	4 11/16 (119)	----
1/2" sanitary fitting	321	4 11/16 (119)	1 (25)
15 mm DIN PN40 weld neck, DIN 2635, type C facing	300	6 5/16 (160)	3 3/4 (95)
15 mm DIN PN40 weld neck, DIN 2635, type N grooved facing	301	6 5/16 (160)	3 3/4 (95)
15 mm DIN PN100 weld neck, DIN 2637, type E facing	302	6 15/16 (176)	4 1/8 (105)
15 mm DIN PN100 weld neck, DIN 2637, type N grooved facing	303	6 15/16 (176)	4 1/8 (105)
15 mm JIS 10K weld neck	304	6 1/8 (156)	3 3/4 (95)
15 mm JIS 20K weld neck	305	6 1/8 (156)	3 3/4 (95)
Fittings for 304L stainless steel sensors⁽¹⁾			
1/2" ANSI 150 lb weld neck raised face flange	413	6 3/4 (172)	3 1/2 (89)
1/2" ANSI 300 lb weld neck raised face flange	414	7 1/8 (181)	3 3/4 (95)
15 mm DIN PN40 weld neck, DIN 2635 type C face	423	6 5/16 (160)	3 3/4 (95)
Fittings for nickel alloy sensors⁽¹⁾			
1/2" ANSI 150 lb lap joint flange	520	6 3/4 (172)	3 1/2 (89)
1/2" ANSI 300 lb lap joint flange	521	7 1/8 (181)	3 3/4 (95)
15 mm DIN PN40 lap joint flange, DIN 2626	523	7 5/16 (186)	3 3/4 (95)
15 mm JIS 10K lap joint flange	522	7 1/8 (181)	3 3/4 (95)

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

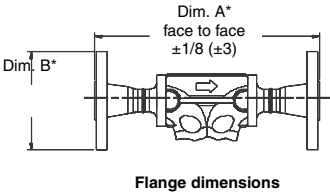
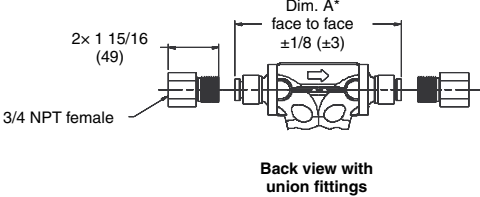
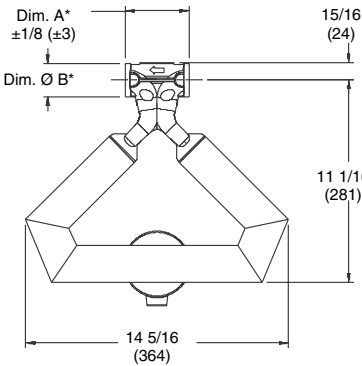
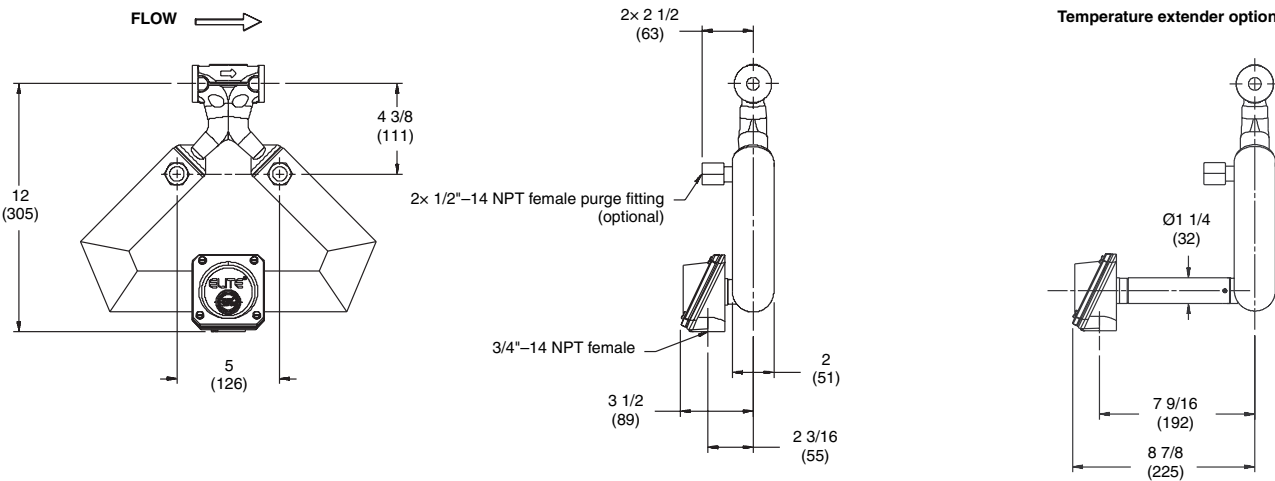
CMF050 dimensions

Dimensions in inches (mm)

CMF050 with core processor



CMF050 with junction box



*For dimensions A and B, see page 21.

CMF050 process fittings

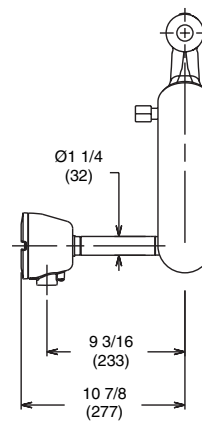
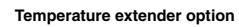
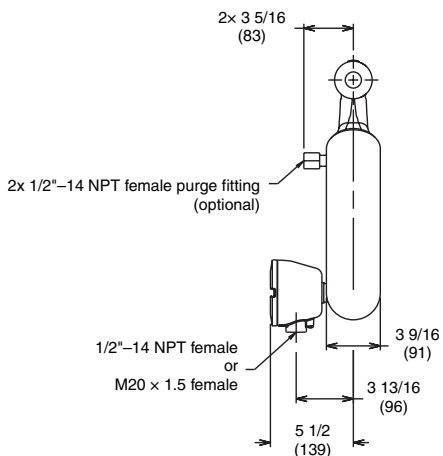
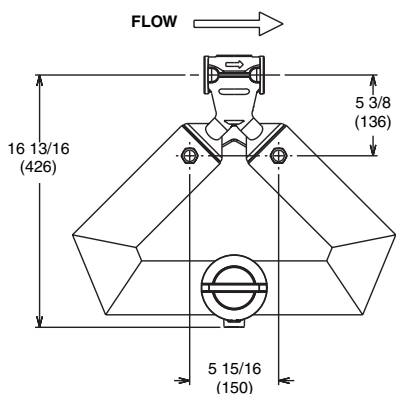
Fittings for 316L stainless steel sensors⁽¹⁾	Fitting code	Dim. A Face-to-face inches (mm)	Dim. B Outside diam. inches (mm)
Wafer style, 1/2" ANSI (150 lb, 300 lb, 600 lb bolt kit)	009	3 1/2 (89)	1 13/16 (46)
Wafer style, 15 mm DIN 2635, type C facing (PN40 bolt kit)	016	3 1/2 (89)	1 13/16 (46)
Wafer style, 15 mm DIN 2635, type N grooved facing (PN40 bolt kit)	017	3 1/2 (89)	1 13/16 (46)
Wafer style, 15 mm DIN 2637, type E facing (PN100 bolt kit)	018	3 1/2 (89)	1 13/16 (46)
Wafer style, 15 mm DIN 2637, type N grooved facing (PN100 bolt kit)	019	3 1/2 (89)	1 13/16 (46)
Wafer style, 15 mm (10K, 20K bolt kit)	029	3 1/2 (89)	1 13/16 (46)
1/2" ANSI 150 lb weld neck raised face flange	313	7 15/16 (202)	3 1/2 (89)
1/2" ANSI 300 lb weld neck raised face flange	314	8 5/16 (211)	3 3/4 (95)
1/2" ANSI 600 lb weld neck raised face flange	315	8 13/16 (224)	3 3/4 (95)
3/4" NPT female union fitting	320	6 1/2 (165)	----
3/4" sanitary fitting	322	6 1/2 (165)	1 (25)
15 mm DIN PN40 weld neck, DIN 2635, type C facing	300	7 1/2 (191)	3 3/4 (95)
15 mm DIN PN40 weld neck, DIN 2635, type N grooved facing	301	7 1/2 (191)	3 3/4 (95)
15 mm DIN PN100 weld neck, DIN 2637, type E facing	302	8 1/16 (205)	4 1/8 (105)
15 mm DIN PN100 weld neck, DIN 2637, type N grooved facing	303	8 1/16 (205)	4 1/8 (105)
15 mm JIS 10K weld neck	304	7 1/4 (184)	3 3/4 (95)
15 mm JIS 20K weld neck	305	7 1/4 (184)	3 3/4 (95)
Fittings for 304L stainless steel sensors⁽¹⁾			
1/2" ANSI 150 lb weld neck raised face flange	413	7 15/16 (202)	3 1/2 (89)
1/2" ANSI 300 lb weld neck raised face flange	414	8 5/16 (211)	3 3/4 (95)
15 mm DIN PN40 weld neck, DIN 2635 type C face	423	7 1/2 (191)	3 3/4 (95)
Fittings for nickel alloy sensors⁽¹⁾			
1/2" ANSI 150 lb lap joint flange	520	7 15/16 (202)	3 1/2 (89)
1/2" ANSI 300 lb lap joint flange	521	8 5/16 (211)	3 3/4 (95)
15 mm DIN PN40 lap joint flange, DIN 2626	523	8 1/2 (216)	3 3/4 (95)
15 mm JIS 10K lap joint flange	522	8 1/4 (210)	3 3/4 (95)

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

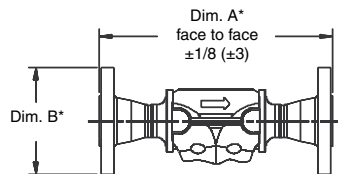
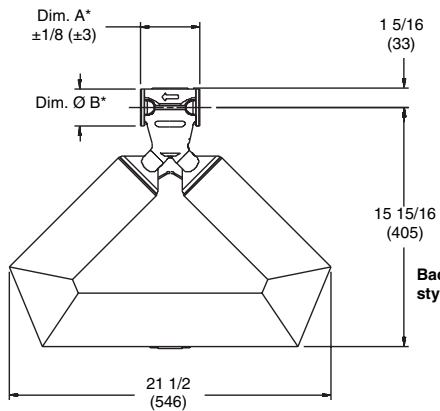
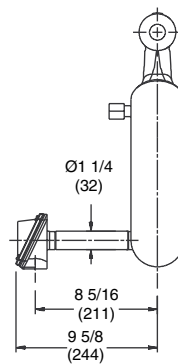
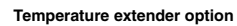
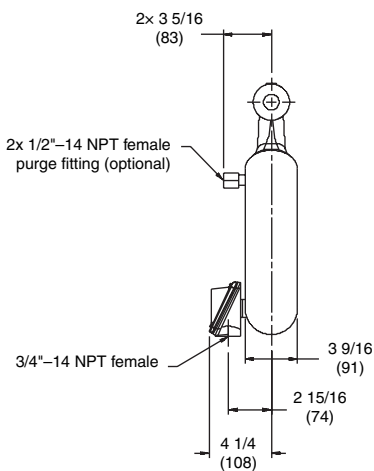
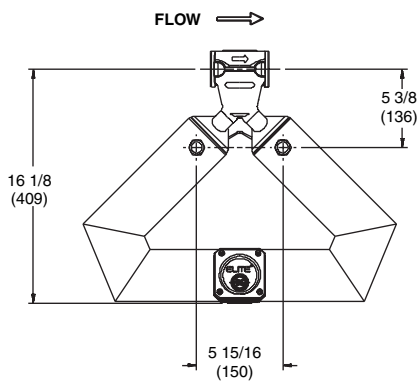
CMF100 dimensions

Dimensions in inches
(mm)

CMF100 with core processor



CMF100 with junction box



Flange dimensions

*For dimensions A and B, see page 23.

CMF100 process fittings

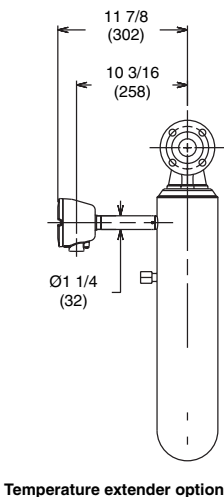
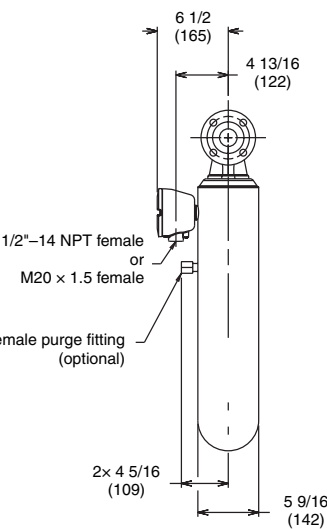
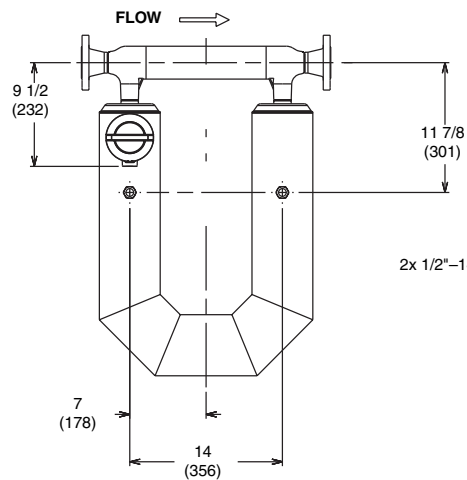
Fittings for 316L stainless steel sensors⁽¹⁾	Fitting code	Dim. A Face-to-face inches (mm)	Dim. B Outside diam. inches (mm)
Wafer style, 1" ANSI (150 lb bolt kit)	010	4 (102)	2 1/2 (64)
Wafer style, 1" ANSI (300 lb, 600 lb bolt kit)	011	4 (102)	2 1/2 (64)
Wafer style, 25 mm DIN 2635, type C facing (PN40 bolt kit)	020	4 (102)	2 1/2 (64)
Wafer style, 25 mm DIN 2635, type N grooved facing (PN40 bolt kit)	021	4 (102)	2 1/2 (64)
Wafer style, 25 mm DIN 2637, type E facing (PN100 bolt kit)	022	4 (102)	2 1/2 (64)
Wafer style, 25 mm DIN 2637, type N grooved facing (PN100 bolt kit)	023	4 (102)	2 1/2 (64)
Wafer style, 25 mm (10K, 20K, 30K bolt kit)	030	4 (102)	2 1/2 (64)
1" ANSI 150 lb weld neck raised face flange	328	9 1/4 (235)	4 1/4 (108)
1" ANSI 300 lb weld neck raised face flange	329	9 3/4 (248)	4 7/8 (124)
1" ANSI 600 lb weld neck raised face flange	330	10 1/4 (260)	4 7/8 (124)
1 1/2" ANSI 600 lb weld neck raised face flange	331	10 7/8 (276)	6 1/8 (156)
1" sanitary fitting	339	8 3/8 (213)	2 (50)
25 mm DIN PN40 weld neck, DIN 2635, type C facing	306	8 5/16 (211)	4 1/2 (115)
25 mm DIN PN40 weld neck, DIN 2635, type N grooved facing	307	8 5/16 (211)	4 1/2 (115)
25 mm DIN PN100 weld neck, DIN 2637, type E facing	308	9 11/16 (246)	5 1/2 (140)
25 mm DIN PN100 weld neck, DIN 2637, type N grooved facing	309	9 11/16 (246)	5 1/2 (140)
25 mm JIS 10K weld neck	317	8 5/16 (211)	4 15/16 (125)
25 mm JIS 20K weld neck	318	8 5/16 (211)	4 15/16 (125)
Fittings for 304L stainless steel sensors⁽¹⁾			
1" ANSI 150 lb weld neck raised face flange	415	9 1/4 (235)	4 1/4 (108)
1" ANSI 300 lb weld neck raised face flange	416	9 3/4 (248)	4 7/8 (124)
25 mm DIN PN40 weld neck, DIN 2635 type C face	424	8 9/16 (217)	4 1/2 (115)
Fittings for nickel alloy sensors⁽¹⁾			
1" ANSI 150 lb lap joint flange	530	9 1/4 (235)	4 1/4 (108)
1" ANSI 300 lb lap joint flange	531	9 3/4 (248)	4 7/8 (124)
25 mm DIN PN40 lap joint flange, DIN 2626	533	9 9/16 (243)	4 1/2 (115)
25 mm JIS 10K lap joint flange	532	9 5/16 (237)	4 15/16 (125)

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

CMF200 dimensions

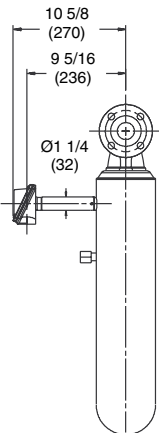
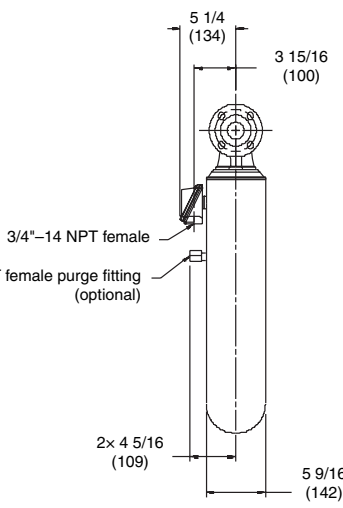
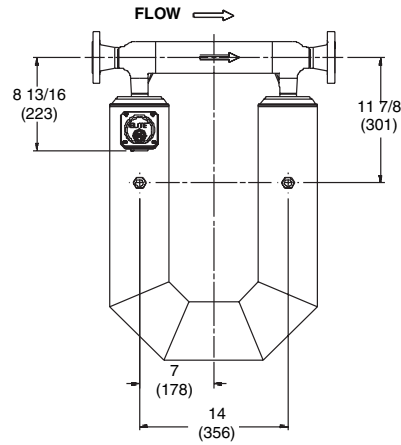
Dimensions in inches
(mm)

CMF200 with core processor

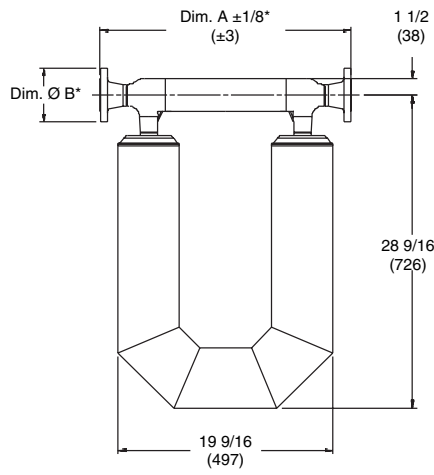


Temperature extender option

CMF200 with junction box



Temperature extender option



Back view and flange dimensions

*For dimensions A and B, see page 25.

CMF200 process fittings

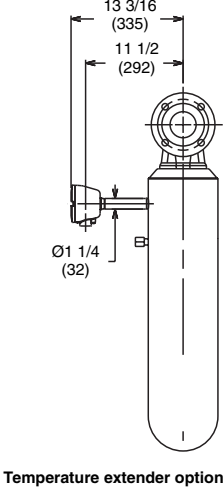
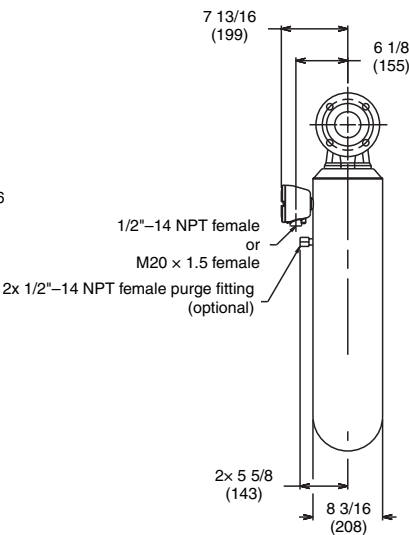
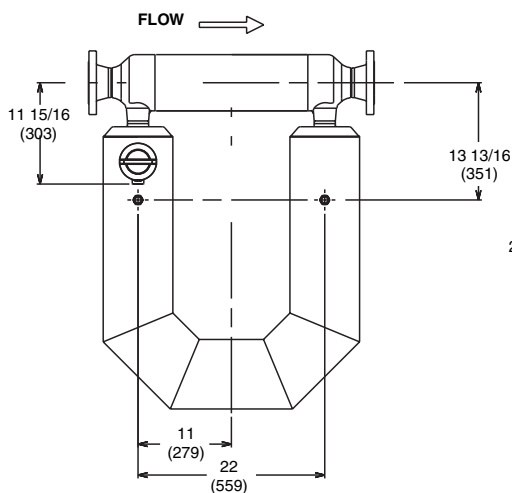
Fittings for 316L stainless steel sensors⁽¹⁾	Fitting code	Dim. A Face-to-face inches (mm)	Dim. B Outside diam. inches (mm)
1 1/2" ANSI 150 lb weld neck raised face flange	341	22 7/8 (581)	5 (127)
1 1/2" ANSI 300 lb weld neck raised face flange	342	23 3/8 (594)	6 1/8 (156)
1 1/2" ANSI 600 lb weld neck raised face flange	343	23 7/8 (606)	6 1/8 (156)
2" ANSI 150 lb weld neck raised face flange	418	22 7/8 (581)	6 (152)
2" ANSI 300 lb weld neck raised face flange	419	23 3/8 (594)	6 1/2 (165)
2" ANSI 600 lb weld neck raised face flange	420	23 5/8 (600)	6 1/2 (165)
1 1/2" sanitary fitting	351	21 3/8 (543)	2 (51)
2" sanitary fitting	352	21 3/8 (543)	2 1/2 (64)
40 mm DIN PN40 weld neck, DIN 2635, type C facing	381	21 11/16 (551)	5 15/16 (150)
40 mm DIN PN40 weld neck, DIN 2635, type N grooved facing	383	21 11/16 (551)	5 15/16 (150)
40 mm DIN PN100 weld neck, DIN 2637, type E facing	377	23 1/8 (587)	6 11/16 (170)
40 mm DIN PN100 weld neck, DIN 2637, type N grooved facing	379	23 1/8 (587)	6 11/16 (170)
50 mm DIN PN40 weld neck, DIN 2635, type C facing	382	21 15/16 (557)	6 1/2 (165)
50 mm DIN PN40 weld neck, DIN 2635, type N grooved facing	384	21 15/16 (557)	6 1/2 (165)
50 mm DIN PN100 weld neck, DIN 2637, type E facing	378	23 9/16 (598)	7 11/16 (195)
50 mm DIN PN100 weld neck, DIN 2637, type N grooved facing	380	23 9/16 (598)	7 11/16 (195)
40 mm JIS 10K weld neck	385	21 9/16 (548)	5 1/2 (140)
40 mm JIS 20K weld neck	387	21 9/16 (548)	5 1/2 (140)
50 mm JIS 10K weld neck	386	21 13/16 (554)	6 1/8 (156)
50 mm JIS 20K weld neck	388	21 13/16 (554)	6 1/8 (156)
Fittings for 304L stainless steel sensors⁽¹⁾			
1 1/2" ANSI 150 lb weld neck raised face flange	441	22 7/8 (581)	5 (127)
1 1/2" ANSI 300 lb weld neck raised face flange	442	23 3/8 (594)	6 1/8 (156)
2" ANSI 150 lb weld neck raised face flange	518	22 7/8 (581)	6 (152)
2" ANSI 300 lb weld neck raised face flange	519	23 1/2 (597)	6 1/2 (165)
40 mm DIN PN40 weld neck, DIN 2635, type C face	481	21 11/16 (551)	5 15/16 (150)
50 mm DIN PN40 weld neck, DIN 2635, type C face	482	21 15/16 (557)	6 1/2 (165)
Fittings for nickel alloy sensors⁽¹⁾			
1 1/2" ANSI 150 lb lap joint flange	540	22 7/8 (581)	5 (127)
1 1/2" ANSI 300 lb lap joint flange	541	23 3/8 (594)	6 1/8 (156)
2" ANSI 150 lb lap joint flange	544	22 7/8 (581)	6 (152)
2" ANSI 300 lb lap joint flange	545	23 3/8 (594)	6 1/2 (165)
40 mm DIN PN40 lap joint flange, DIN 2626	543	21 11/16 (551)	5 15/16 (150)
50 mm DIN PN40 lap joint flange, DIN 2626	547	21 15/16 (557)	6 1/2 (165)
40 mm JIS 10K lap joint flange	542	21 9/16 (548)	5 1/2 (140)
50 mm JIS 10K lap joint flange	546	21 13/16 (554)	6 1/8 (155)

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

CMF300 dimensions

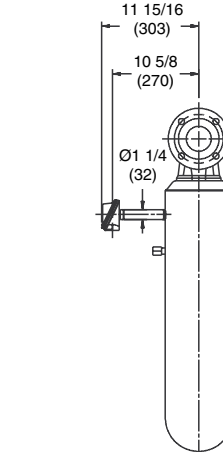
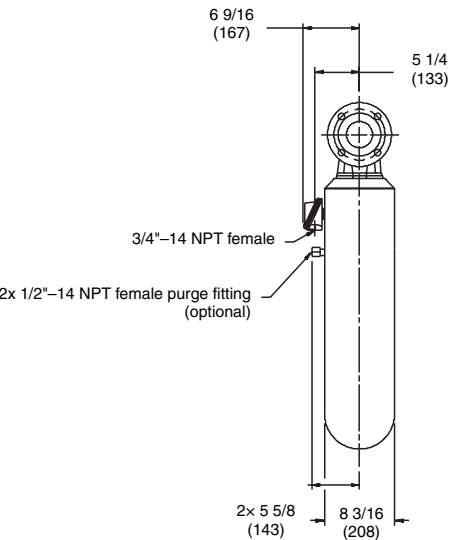
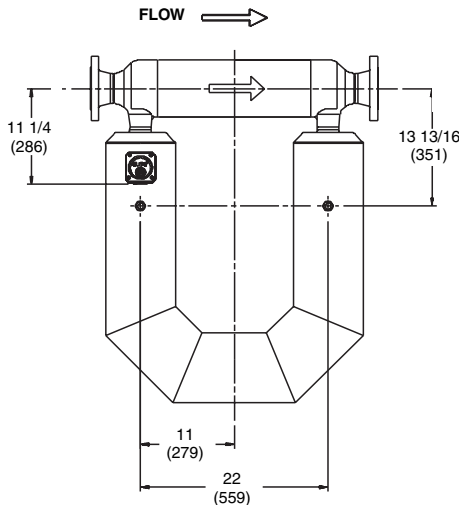
Dimensions in inches
(mm)

CMF300 with core processor

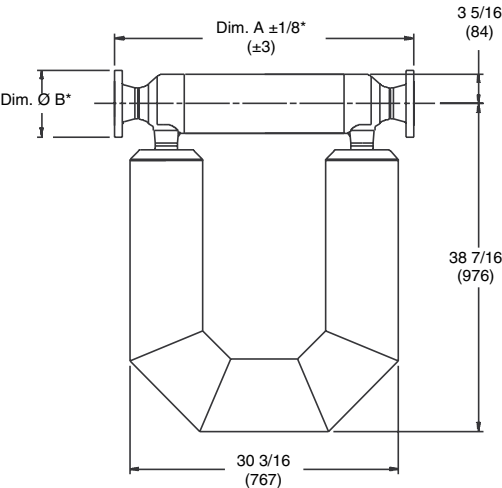


Temperature extender option

CMF300 with junction box



Temperature extender option



Back view and flange dimensions

*For dimensions A and B, see page 27.

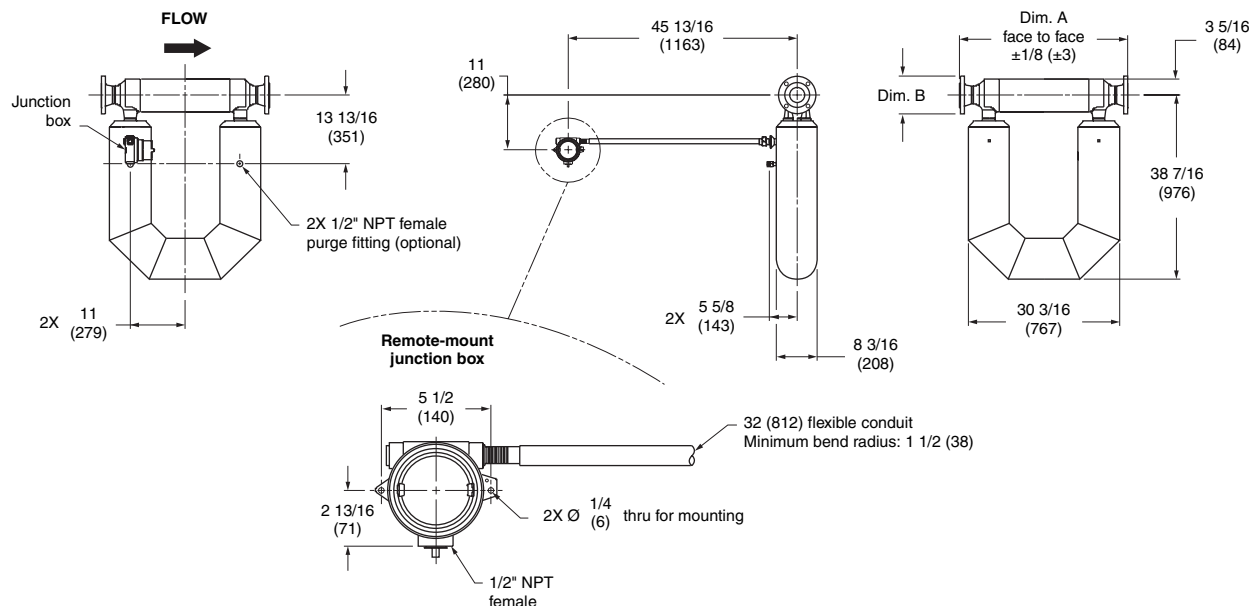
CMF300 process fittings

Fittings for 316L stainless steel sensors⁽¹⁾	Fitting code	Dim. A Face-to-face inches (mm)	Dim. B Outside diam. inches (mm)
3" ANSI 150 lb weld neck raised face flange	355	33 11/16 (856)	7 1/2 (191)
3" ANSI 300 lb weld neck raised face flange	356	34 7/16 (875)	8 1/4 (210)
3" ANSI 600 lb weld neck raised face flange	357	35 3/16 (894)	8 1/4 (210)
4" ANSI 150 lb weld neck raised face flange	425	34 1/16 (865)	9 (229)
4" ANSI 300 lb weld neck raised face flange	426	35 (889)	10 (254)
4" ANSI 600 lb weld neck raised face flange	427	36 11/16 (932)	10 3/4 (273)
3" sanitary fitting	361	32 (813)	3 9/16 (90)
80 mm DIN PN40 weld neck, DIN 2635, type C facing	391	32 7/8 (835)	7 7/8 (200)
80 mm DIN PN40 weld neck, DIN 2635, type N grooved facing	393	32 7/8 (835)	7 7/8 (200)
80 mm DIN PN100 weld neck, DIN 2637, type E facing	395	34 9/16 (878)	9 1/16 (230)
80 mm DIN PN100 weld neck, DIN 2637, type N grooved facing	397	34 9/16 (878)	9 1/16 (230)
100 mm DIN PN40 weld neck, DIN 2635, type C facing	392	33 7/16 (849)	9 1/4 (235)
100 mm DIN PN40 weld neck, DIN 2635, type N grooved facing	394	33 7/16 (849)	9 1/4 (235)
100 mm DIN PN100 weld neck, DIN 2637, type E facing	396	35 9/16 (903)	10 7/16 (265)
100 mm DIN PN100 weld neck, DIN 2637, type N grooved facing	398	35 9/16 (903)	10 7/16 (265)
80 mm JIS 10K weld neck	400	33 3/8 (848)	7 5/16 (186)
80 mm JIS 20K weld neck	402	33 3/8 (848)	7 7/8 (200)
100 mm JIS 10K weld neck	401	33 9/16 (853)	8 1/4 (210)
100 mm JIS 20K weld neck	403	33 9/16 (853)	8 7/8 (225)
Fittings for 304L stainless steel sensors⁽¹⁾			
3" ANSI 150 lb weld neck raised face flange	455	33 11/16 (856)	7 1/2 (191)
3" ANSI 300 lb weld neck raised face flange	456	34 7/16 (875)	8 1/4 (210)
80 mm DIN PN40 weld neck, DIN 2635, type C face	491	32 7/8 (835)	7 7/8 (200)
Fittings for nickel alloy sensors⁽¹⁾			
3" ANSI 150 lb lap joint flange	550	33 11/16 (856)	7 1/2 (191)
3" ANSI 300 lb lap joint flange	551	34 7/16 (875)	8 1/4 (210)
80 mm DIN PN40 lap joint flange, DIN 2626	553	32 7/8 (835)	7 7/8 (200)
80 mm JIS 10K lap joint flange	552	33 3/8 (848)	7 5/16 (185)

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

High-temperature CMF300A dimensions and process fittings

Dimensions in
inches
(mm)



Fittings⁽¹⁾

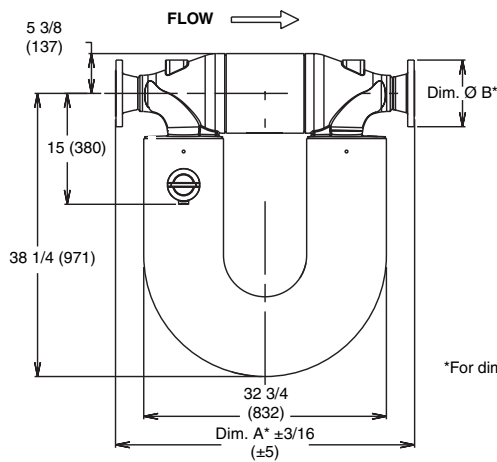
	Fitting code	Dim. A Face-to-face inches (mm)	Dim. B Outside diam. inches (mm)
3" ANSI 150 lb weld neck raised face flange	355	33 11/16 (856)	7 1/2 (190)
3" ANSI 300 lb weld neck raised face flange	356	34 7/16 (875)	8 1/4 (210)
3" ANSI 600 lb weld neck raised face flange	357	35 3/16 (894)	8 1/4 (210)
3" ANSI 900 lb weld neck raised face flange	358	36 11/16 (932)	9 1/2 (241)
4" ANSI 150 lb weld neck raised face flange	425	34 1/16 (865)	9 (229)
4" ANSI 300 lb weld neck raised face flange	426	35 (889)	10 (254)
4" ANSI 600 lb weld neck raised face flange	427	36 11/16 (932)	10 3/4 (273)
4" ANSI 900 lb weld neck raised face flange	428	37 3/16 (945)	11 1/2 (292)
80 mm DIN PN40 weld neck, DIN 2635, type C facing	391	32 7/8 (835)	7 7/8 (200)
80 mm DIN PN40 weld neck, DIN 2635, type N grooved facing	393	32 7/8 (835)	7 7/8 (200)
80 mm DIN PN100 weld neck, DIN 2637, type E facing	395	34 9/16 (878)	9 1/16 (230)
80 mm DIN PN100 weld neck, DIN 2637, type N grooved facing	397	34 9/16 (878)	9 1/16 (230)
100 mm DIN PN40 weld neck, DIN 2635, type C facing	392	33 7/16 (849)	9 1/4 (235)
100 mm DIN PN40 weld neck, DIN 2635, type N grooved facing	394	33 7/16 (849)	9 1/4 (235)
100 mm DIN PN100 weld neck, DIN 2637, type E facing	396	35 9/16 (903)	10 7/16 (265)
100 mm DIN PN100 weld neck, DIN 2637, type N grooved facing	398	35 9/16 (903)	10 7/16 (265)
80 mm JIS 10K weld neck	400	33 3/8 (848)	7 5/16 (185)
80 mm JIS 20K weld neck	402	33 3/8 (848)	7 7/8 (200)
100 mm JIS 10K weld neck	401	33 9/16 (852)	8 1/4 (210)
100 mm JIS 20K weld neck	403	33 9/16 (852)	8 7/8 (225)

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

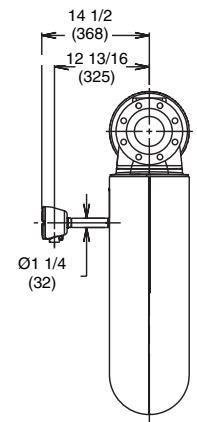
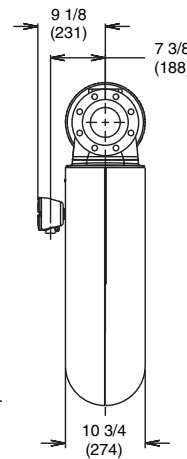
CMF400 dimensions

Dimensions in inches
(mm)

CMF400 with core processor

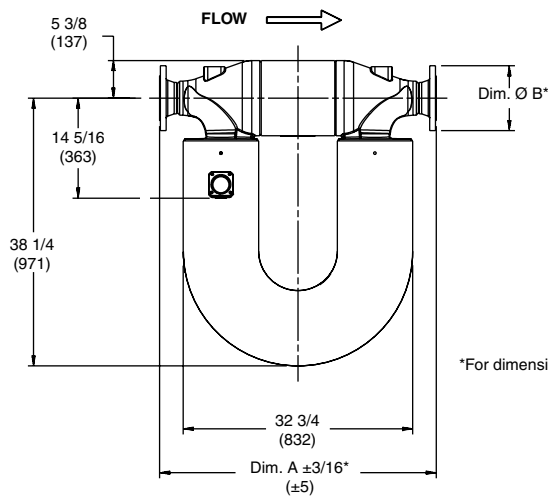


*For dimensions A and B, see page 30.

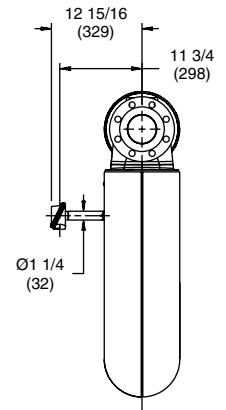
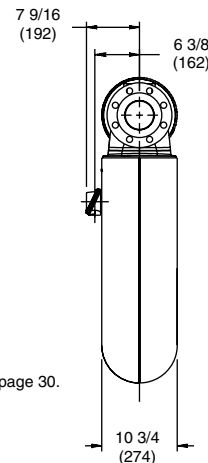


Temperature extender option

CMF400 with junction box



*For dimensions A and B, see page 30.



Temperature extender option

CMF400 process fittings

Fittings ⁽¹⁾	Fitting code	Dim. A Face-to-face inches (mm)	Dim. B Outside diam. inches (mm)
4" ANSI 150 lb weld neck raised face flange	435	40 3/16 (1021)	9 (229)
4" ANSI 300 lb weld neck raised face flange	436	41 (1041)	10 (254)
4" ANSI 600 lb weld neck raised face flange	437	42 11/16 (1084)	10 3/4 (273)
6" ANSI 150 lb weld neck raised face flange	451	40 5/16 (1024)	11 (279)
6" ANSI 300 lb weld neck raised face flange	452	41 5/16 (1049)	12 1/2 (318)
6" ANSI 600 lb weld neck raised face flange	453	43 1/2 (1105)	14 (356)
100 mm DIN PN40 weld neck, DIN 2635, type C facing	460	39 5/16 (999)	9 1/4 (235)
100 mm DIN PN40 weld neck, DIN 2635, type N facing	462	39 5/16 (999)	9 1/4 (235)
100 mm DIN PN100 weld neck, DIN 2637, type E facing	464	41 5/16 (1049)	10 7/16 (265)
100 mm DIN PN100 weld neck, DIN 2637, type N facing	466	41 5/16 (1049)	10 7/16 (265)
150 mm DIN PN40 weld neck, DIN 2635, type C facing	461	39 5/8 (1006)	11 13/16 (300)
150 mm DIN PN40 weld neck, DIN 2635, type N facing	463	39 5/8 (1006)	11 13/16 (300)
150 mm DIN PN100 weld neck, DIN 2637, type E facing	465	41 15/16 (1065)	14 (355)
150 mm DIN PN100 weld neck, DIN 2637, type N facing	467	41 15/16 (1065)	14 (355)
100 mm JIS 10K weld neck	470	39 5/16 (999)	8 1/4 (210)
100 mm JIS 20K weld neck	472	39 13/16 (1011)	8 7/8 (225)
150 mm JIS 10K weld neck	471	39 5/8 (1006)	11 (280)
150 mm JIS 20K weld neck	473	40 1/8 (1018)	12 (305)

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

Ordering information

Model	Sensor model
CMF010	ELITE 1/8 inch sensor
CMF025	ELITE 1/4 inch sensor
CMF050	ELITE 1/2 inch sensor
CMF100	ELITE 1 inch sensor
CMF200	ELITE 2 inch sensor
CMF300	ELITE 3 inch sensor
CMF400	ELITE 4 inch sensor
Code	Pressure, temperature and wetted material
M	Standard pressure, standard temperature, 316L stainless steel
L	Standard pressure, standard temperature, 304L stainless steel — not available with CMF400
H	Standard pressure, standard temperature, Nickel Alloy — not available with CMF010 or CMF400
N	Standard pressure, standard temperature, Inconel 686 — CMF010 only
A	Standard pressure, high temperature, 316L stainless steel — CMF300 only
P	High pressure, standard temperature, nickel alloy and 316L stainless steel — CMF010 only
Code	Process connections
###	See fittings tables on pages 17-30
Code	Case options
N	Standard pressure containment
P	Purge fittings (two 1/2-inch NPT female) — not available with CMF400
D	Rupture disks (two 400-psi disks) — CMF010 with pressure/material code P only
Code	Electronics interface
Q	4-wire epoxy-painted aluminum integral core processor for remotely mounted transmitter with MVD Technology — not available with CMF300A
A	4-wire stainless steel integral core processor for remotely mounted transmitter with MVD Technology — not available with CMF300A
V	4-wire epoxy-painted aluminum integral core processor with extended mount for remotely mounted transmitter with MVD Technology — not available with CMF300A
B	4-wire stainless steel integral core processor with extended mount for remotely mounted transmitter with MVD Technology — not available with CMF300A
W ⁽¹⁾	MVD Solo; epoxy-painted aluminum integral core processor for direct host communication — not available with CMF300A
D ⁽¹⁾	MVD Solo; stainless steel integral core processor for direct host communication — not available with CMF300A
Y ⁽¹⁾	MVD Solo; epoxy-painted aluminum integral core processor with extended mount for direct host communication — not available with CMF300A
E ⁽¹⁾	MVD Solo; stainless steel integral core processor with extended mount for direct host communication — not available with CMF300A
R	9-wire epoxy-painted aluminum junction box
H	9-wire epoxy-painted aluminum junction box with extended mount — not available with CMF300A
continued on next page	

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

Ordering information *continued*

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	M20 with brass/nickel cable gland (cable dia. 8.5 mm to 10.0 mm)
G	M20 with stainless steel cable gland (cable dia. 8.5 mm to 10.0 mm)
	Electronics interface codes R and H (9-wire junction box)
A	3/4 inch NPT — no gland
H	Brass/nickel cable gland
J	Stainless steel cable gland
Code	Approvals
M	Micro Motion Standard (no approval)
N	Micro Motion standard/PED compliant (no approval)
U	UL
C	CSA — Canada only
A	CSA — US and Canada
Z	ATEX — Equipment Category 2 (Zone 1)/PED compliant
S	SAA — Electronic Interface Codes R and H only; not available with CMF400
Code	Language
A	Danish Quick Reference and English Manual
D	Dutch Quick Reference and English Manual
E	English Quick Reference and English Manual
F	French Quick Reference and French Manual
G	German Quick Reference and German Manual
H	Finnish Quick Reference and English Manual
I	Italian Quick Reference and English Manual
J	Japanese Quick Reference and English Manual
M	Chinese Quick Reference and English Manual
N	Norwegian Quick Reference and English Manual
O	Polish Quick Reference and English Manual
P	Portuguese Quick Reference and English Manual
R	Russian Quick Reference and English Manual
S	Spanish Quick Reference and Spanish Manual
W	Swedish Quick Reference and English Manual
Code	Measurement application software
Z	None
A	Petroleum measurement ⁽¹⁾
Code	Future options
Z	Reserved for future use
Typical Model Number: CMF010M 313 N A B U E Z Z	

(1) Available with electronics interfaces W, D, Y and E. For all others, order with Model 2700 transmitter.

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