

Flow Measurement

SITRANS FM (electromagnetic)

Flow sensors / SITRANS FM MAG 1100 F

Overview



The electromagnetic sensor SITRANS FM MAG 1100 F is designed to meet applications in the food and beverage industry.

Benefits

- Unique mechanical design with a wide range of sanitary process connections
- Sensor sizes: DN 10 to DN 100 (3/8" to 4")
- AISI 316 stainless steel sensor housing
- Sanitary design for CIP/SIP cleaning
- Hose proof IP67/NEMA 6 enclosure rating
- SENSORPROM Technology provides an automatic upload of startup settings and calibration data for easy commissioning
- Designed to allow in situ verification for easy performance check
- Approved for hazardous areas for maximum safety and reliability
- Option for IP68 / NEMA 6P protection class ex works or for upgrading on site

Application

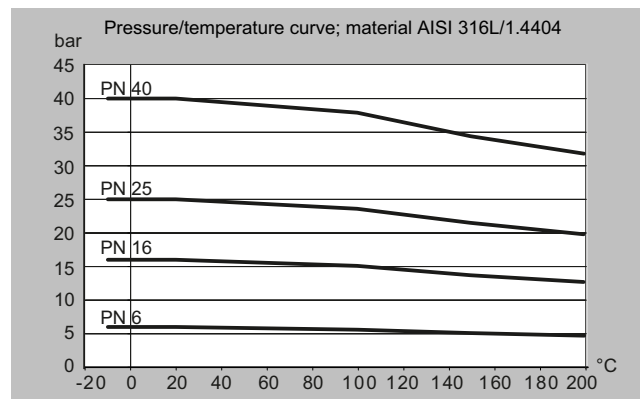
The main applications of the SITRANS FM electromagnetic sensors can be found in the following fields:

- Food industry
- Beverage industry
- Pharmaceutical industry

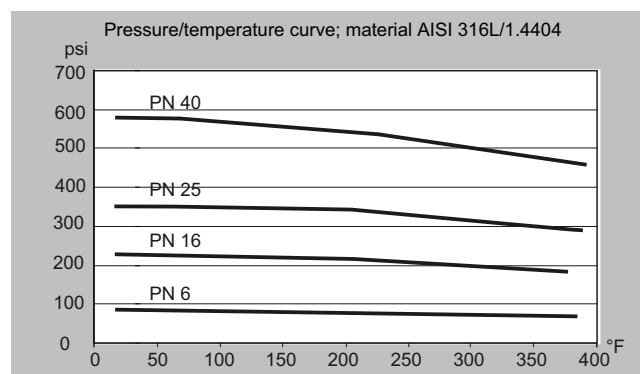
Integration

The complete flowmeter consists of a sensor and an associated transmitter SITRANS FM MAG 5000, 6000 and 6000 I. The flexible communication concept simplifies integration and update to a variety of fieldbus systems such as PROFIBUS DP and PA, Modbus RTU/RS 485, HART, FOUNDATION Fieldbus H1, DeviceNet.

Pressure/temperature curve; material AISI 316L/1.4404



Pressure/temperature curve; material AISI 316L/1.4404



Selection and ordering data

Sensor SITRANS FM MAG 1100 F	Article No. 7ME6140-			
Click on the Article No. for the online configuration in the PIA Life Cycle Portal.				
Diameter				
DN 10 (3/8")	1	R		
DN 15 (1/2")	1	V		
DN 25 (1")	2	D		
DN 40 (1 1/2")	2	R		
DN 50 (2")	2	Y		
DN 65 (2 1/2")	3	F		
DN 80 (3")	3	M		
DN 100 (4")	3	T		
Process connections				
None (not suitable for 3A approval)			A	
Weld in				
DIN 11850			B	
ISO 2037 (SMS 3008)			C	
Tri-Weld/BS 4825-1			D	
Clamp type				
DIN 32676			G	
ISO 2852 (SMS 3016)			H	
Tri-Clamp/BS 4825-3			J	
Threaded type				
DIN 11851			M	
SMS 1145 ¹⁾			N	
Liner material				
PFA				1
Ceramic				2
Gasket material¹⁾				
EPDM flat gasket (3A)				0
FPM/FKM flat gasket (3A) (only with ceramic liner)				2
EPDM P gasket (3A) (only with PFA liner)				3
Electrode material				
Hastelloy C22 / 2.4602 (only with PFA liner)				1
Platinum (only with ceramic liner)				2
Transmitter				
Standard sensor for remote transmitter (order transmitter separately), 3A approved				A
Ex sensor for remote transmitter (order transmitter separately), 3A approved				B
MAG 6000 I, Aluminum, 18 ... 90 V DC, 115 ... 230 V AC, FM / CSA Class I Div. 2				C
MAG 6000 I, Aluminum, 18 ... 30 V DC, Ex				D
MAG 6000 I, Aluminum, 115 ... 230 V AC, Ex				E
MAG 6000 I, Aluminum, 18 ... 90 V DC, 115 ... 230 V AC (non-Ex)				F
MAG 6000, Polyamide, 11 ... 30 V DC/11 ... 24 V AC				H
MAG 6000, Polyamide, 115 ... 230 V AC				J
MAG 5000, Polyamide, 11 ... 30 V DC/11 ... 24 V AC				K
MAG 5000, Polyamide, 115 ... 230 V AC				L
Communication				
No communication, add-on possible				A
HART				B
PROFIBUS PA Profile 3 (only MAG 6000/MAG 6000 I)				F
PROFIBUS DP Profile 3 (not for Ex) (only MAG 6000/MAG 6000 I)				G
Modbus RTU/RS 485 (not for Ex) (only MAG 6000/MAG 6000 I)				E
FOUNDATION Fieldbus H1 (only MAG 6000/MAG 6000 I)				J
Cable glands/terminal box				
Metric: Polyamide terminal box or MAG 6000 I compact				1
1/2" NPT: Polyamide terminal box or MAG 6000 I compact				2
Metric: Stainless steel terminal box				3
1/2" NPT: Stainless steel terminal box				4

1) SMS 1145 standard is not approved by 3A.

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Selection and ordering data (continued)

Additional information	Order code
Please add "-Z" to Article No. and specify Order code(s) and plain text.	
Certificates	
Pressure test certificate according to EN 10204-3.1	C01
Material certificate according to EN 10204-3.1	C12
Factory certificate according to EN 10204-2.2	C14
Factory certificate according to EN 10204-2.1	C15
Country specific label	
CRN (Canadian Registration Number)	H25
Terminal blocks	
Factory mounted terminal blocks	N02
Device identification	
Tag name, stainless steel plate for transmitter (specify in plain text)	Y16
Tag name, stainless steel plate (specify in plain text)	Y17
Tag name, adhesive label (specify in plain text)	Y18
Device settings	
Customer-specific transmitter setting	Y20

Additional information	Order code
Sensor cables	
Factory mounted sensor cables	Y40
Factory mounted and potted sensor cables, IP68 protection class for sensor	Y41
Additional calibrations	
Matched-pair calibration	On request ¹⁾
Accredited matched-pair calibration acc. to ISO/IEC 17025: 2005	On request ¹⁾
Customer-specified calibration up to 10 points	On request ¹⁾
Customer-witnessed calibration (any of above calibration)	On request ¹⁾

¹⁾ Product Variation Request (PVR).

Description	Article No.
• English	A5E02435647

All literature is available to download for free, in a range of languages, at www.siemens.com/processinstrumentation/documentation

Accessories

Description	Article No.
Potting kit for IP68/ NEMA 6P sealing of sensor junction box	FDK:085U0220

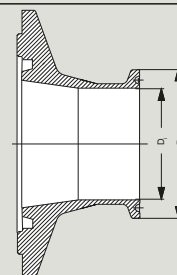


Spare parts for MAG 1100 F sensor

Description	Article No.																				
Weld-in connection fittings for use with P gaskets (stainless steel) Material: AISI 316L (1.4404) Only for PFA liner 2 pcs. fittings 2 pcs. clamps (to join flow sensor and fitting), P gaskets not included																					
DIN 11850 Adapter																					
<table border="1"> <thead> <tr> <th colspan="3">Adapter</th> <th>Sensor</th> <th></th> </tr> <tr> <th>DN (mm)</th> <th>D_o (mm)</th> <th>D_i (mm)</th> <th>DN (mm)</th> <th></th> </tr> </thead> <tbody> <tr> <td>10</td> <td>13</td> <td>1.5</td> <td>10</td> <td>A5E02054630</td> </tr> <tr> <td>15</td> <td>19</td> <td>1.5</td> <td>15</td> <td>A5E02054633</td> </tr> </tbody> </table>	Adapter			Sensor		DN (mm)	D _o (mm)	D _i (mm)	DN (mm)		10	13	1.5	10	A5E02054630	15	19	1.5	15	A5E02054633	
Adapter			Sensor																		
DN (mm)	D _o (mm)	D _i (mm)	DN (mm)																		
10	13	1.5	10	A5E02054630																	
15	19	1.5	15	A5E02054633																	

Selection and ordering data (continued)

Description				Article No.
20	23	1.5	15	A5E02054634
25	29	1.5	25	A5E02054635
32	35	1.5	25	A5E02054637
40	41	1.5	40	A5E02054638
50	53	1.5	50	A5E02054640
65	70	2.0	65	A5E02054643
80	85	2.0	80	A5E02054644
100	104	2.0	100	A5E02054646
ISO 2037				
Adapter			Sensor	
DN (mm)	D _o (mm)	D _i (mm)	DN (mm)	
12.7	12.7	1.0	10	A5E03727946
17.2	17.2	1.0	15	A5E03728098
25	25	1.6	25	A5E02196073
33	33.7	1.6	25	A5E02196074
38	38	1.6	40	A5E02196075
40	40	1.6	40	A5E02196076
51	51	1.6	50	A5E02196077
63.5	63.5	1.6	65	A5E02196078
76.1	76.1	1.6	80	A5E02196080
101.6	101.6	2.0	100	A5E02196082
Tri-Weld (BS 4825-1)				
Adapter			Sensor	
DN (mm)	D _o (mm)	D _i (mm)	DN (mm)	
12.7	12.7	1.2	10	A5E02199113
19.05	19.05	1.2	15	A5E02199114
25.4	25.4	1.6	25	A5E02199115
38.1	38.1	1.6	40	A5E02199116
50.8	50.8	1.6	50	A5E02199117
63.5	63.5	1.6	65	A5E02199118
76.2	76.2	1.6	80	A5E02199119
101.6	101.6	2.0	100	A5E02199120
Description				
Clamp-type connection fittings for use with P gaskets (stainless steel)				Article No.
Material: AISI 316L (1.4404) Only for liner PFA 2 pcs. fittings 2 pcs. clamps (to join flow sensor and fitting), P gaskets not included				
DIN 32676				
Adapter			Sensor	
DN (mm)	D _o (mm)	D _i (mm)	DN (mm)	
10	34	10	10	A5E02211143
15	34	16	15	A5E02211144



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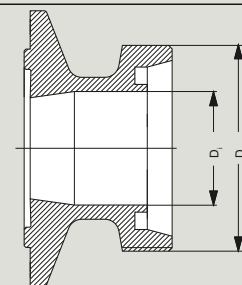
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Selection and ordering data (continued)

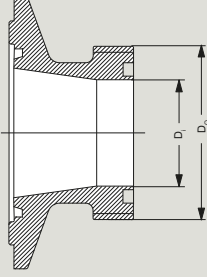
Description				Article No.
25	50.5	22.6	25	A5E02211146
40	50.5	38	40	A5E02211147
50	64	50	50	A5E02211148
65	91	66	65	A5E02211151
80	106	81	80	A5E02211152
100	119	100	100	A5E02211153
ISO 2852				
<u>Adapter</u>			<u>Sensor</u>	
DN (mm)	D _o (mm)	D _i (mm)	DN (mm)	
25	50.5	22.6	25	A5E02213581
33.7	50.5	31.3	25	A5E02213582
38	50.5	35.6	40	A5E02213583
51	64	48.6	50	A5E02213584
63.5	77.5	60.3	65	A5E02213585
76.1	91	72.9	80	A5E02213586
101.6	119	97.6	100	A5E02213587
Tri-Clamp (BS 4825-3)				
<u>Adapter</u>			<u>Sensor</u>	
DN (mm)	D _o (mm)	D _i (mm)	DN (mm)	
12.7	25.4	9.5	10	A5E02213596
19.05	25.4	15.85	15	A5E02213597
25.4	50.5	22.2	25	A5E02213598
38.1	50.5	34.9	40	A5E02213599
50.8	64	47.6	50	A5E02213600
63.5	77.5	60.3	65	A5E02213601
76.2	91	73	80	A5E02213602
101.6	119	97.6	100	A5E02213603

D_o: Outer diameterD_i: Inner diameter

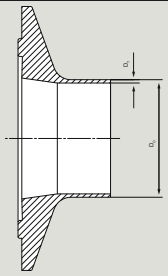
Description				Article No.
Threaded type connection fittings for use with P gaskets (stainless steel)				
Material: AISI 316L (1.4404)				
Only for PFA liner				
2 pcs. fittings				
2 pcs. clamps (to join flow sensor and fitting),				
P gaskets not included				
DIN 11851				
<u>Adapter</u>			<u>Sensor</u>	
DN (mm)	D _o (mm)	D _i (mm)	DN (mm)	
10	28	10	10	A5E02218293
15	34	16	15	A5E02218294
20	44	20	15	A5E02218295
25	52	26	25	A5E02218296
32	58	32	25	A5E02218297



Selection and ordering data (continued)

Description				Article No.
40	65	38	40	A5E02218298
50	78	50	50	A5E02218299
65	95	66	65	A5E02218300
80	110	81	80	A5E02218301
100	130	100	100	A5E02218302
SMS 1145				
Adapter			Sensor	
DN (mm)	D _o (mm)	D _i (mm)	DN (mm)	
25	40	22.6	25	A5E02218310
38	60	35.6	40	A5E02218312
51	70	48.6	50	A5E02218313
63.5	85	60.3	65	A5E02218314
76	98	72	65	A5E02218315

D_o: Outer diameterD_i: Inner diameter

Description				Article No.
Weld-in connection fittings for use with flat gaskets (stainless steel)				
Material: AISI 316L (1.4404) For PFA liner and ceramic 2 pcs. fittings 2 pcs. clamps (to join flow sensor and fitting), Flat gaskets not included				
DIN 11850¹⁾				
Adapter			Sensor	
DN (mm)	D _o (mm)	D _i (mm)	DN (mm)	
10	13	1.5	10	FDK:083G2116
15	19	1.5	15	FDK:083G2117
20	23	1.5	15	FDK:083G2118
25	29	1.5	25	FDK:083G2119
32	35	1.5	25	FDK:083G2120
40	41	1.5	40	FDK:083G2121
50	53	1.5	50	FDK:083G2122
65	70	2.0	65	FDK:083G2123
80	85	2.0	80	FDK:083G2124
100	104	2.0	100	FDK:083G2125
ISO 2037¹⁾				
Adapter			Sensor	
DN (mm)	D _o (mm)	D _i (mm)	DN (mm)	

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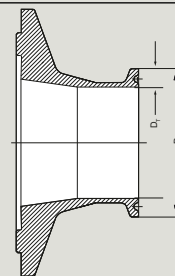
Selection and ordering data (continued)

Description				Article No.
12.7	12.7	1.0	10	A5E03720273
17.2	17.2	1.0	15	FDK:083G2107
25	25.6	1.6	25	FDK:083G2109
33.7	33.7	1.6	25	FDK:083G2100
38	38	1.6	40	FDK:083G2111
40	40	1.6	40	FDK:083G2101
51	51	1.6	50	FDK:083G2112
63.5	63.5	1.6	65	FDK:083G2113
76.1	76.1	1.6	80	FDK:083G2114
101.6	101.6	2.0	100	FDK:083G2115
114.3	118.3	2.0	100	FDK:083G2105

Tri-Weld (BS 4825-1)¹⁾

Adapter			Sensor	
DN (mm)	D _o (mm)	D _T (mm)	DN (mm)	
12.7	12.7	1.2	10	FDK:083G2276
19.05	19.05	1.2	15	FDK:083G2277
25.4	25.4	1.6	25	FDK:083G2279
38	38.1	1.6	40	FDK:083G2281
50.8	50.8	1.6	50	FDK:083G2282
63.5	63.5	1.6	65	FDK:083G2283
76.2	76.2	1.6	80	FDK:083G2284
101.6	101.6	2.0	100	FDK:083G2285

Description				Article No.
Clamp-type connection fittings for use with flat gaskets (stainless steel) Material: AISI 316L (1.4404) For PFA liner and ceramic 2 pcs. fittings 2 pcs. clamps (to join flow sensor and fitting), Flat gaskets not included				
DIN 32676¹⁾				
Adapter			Sensor	
DN (mm)	D _o (mm)	D _T (mm)	DN (mm)	
10	34	10	10	FDK:083G2186
15	34	16	15	FDK:083G2187
25	50.5	26	25	FDK:083G2179
40	50.5	38	40	FDK:083G2181
50	64	50	50	FDK:083G2182
65	91	66	65	FDK:083G2183
80	106	81	80	FDK:083G2184
100	119	100	100	FDK:083G2185
ISO 2852¹⁾				
Adapter			Sensor	
DN (mm)	D _o (mm)	D _T (mm)	DN (mm)	
25	50.5	22.6	25	FDK:083G2189
33.7	50.5	31.3	25	FDK:083G2190
38	50.5	35.6	40	FDK:083G2191

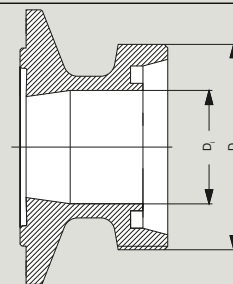


Selection and ordering data (continued)

Description				Article No.
51	64	48.6	50	FDK:083G2192
63.5	77.5	60.3	65	FDK:083G2193
76.1	91	72.9	80	FDK:083G2194
101.6	119	97.6	100	FDK:083G2195
Tri-Clamp (BS 4825-3)¹⁾				
Adapter		Sensor		
DN (mm)	D _o (mm)	D _i (mm)	DN (mm)	
12.7	25.4	9.5	10	FDK:083G2286
19.05	25.4	15.85	15	FDK:083G2287
25.4	50.5	22.2	25	FDK:083G2289
38.1	50.5	34.9	40	FDK:083G2291
50.8	64	47.6	50	FDK:083G2292
63.5	77.5	60.3	65	FDK:083G2293
76.2	91	73	80	FDK:083G2294
101.6	119	97.6	100	FDK:083G2295

D_o: Outer diameterD_i: Inner diameter¹⁾ Suitable for 3A

Description				Article No.
Threaded type connection fittings for use with flat gaskets (stainless steel)				
Material: AISI 316L (1.4404) For PFA liner and ceramic 2 pcs. fittings 2 pcs. clamps (to join flow sensor and fitting), Flat gaskets not included				
DIN 11851¹⁾				
Adapter		Sensor		
DN (mm)	D _o (mm)	D _i (mm)	DN (mm)	
10	28	10	10	FDK:083G2156
15	34	16	15	FDK:083G2157
20	44	20	15	FDK:083G2158
25	52	26	25	FDK:083G2159
32	58	32	25	FDK:083G2160
40	65	38	40	FDK:083G2161
50	78	50	50	FDK:083G2162
65	95	66	65	FDK:083G2163
80	110	81	80	FDK:083G2164
100	130	100	100	FDK:083G2165
ISO 2853¹⁾				
Adapter		Sensor		

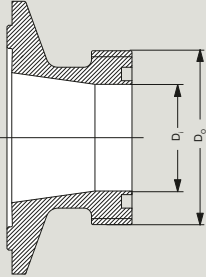


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Selection and ordering data (continued)

Description				Article No.	
DN (mm)	D _o (mm)	D _i (mm)	DN (mm)		
25	37	22.6	25		FDK:083G2149
38	51	35.6	40		FDK:083G2151
51	64	48.6	50		FDK:083G2152
63.5	78	60.3	65		FDK:083G2153
76.1	91	72.9	80		FDK:083G2154
BS 4825-4¹⁾					
Adapter			Sensor		
DN (mm)	D _o (mm)	D _i (mm)	DN (mm)		
101.6	126	97.6	100	FDK:083G2145	
SMS 1145²⁾					
Adapter			Sensor		
DN (mm)	D _o (mm)	D _i (mm)	DN (mm)		
25	40	22.6	25		FDK:083G2139
38	60	35.6	40		FDK:083G2141
51	70	48.6	50		FDK:083G2142
63.5	85	60.3	65		FDK:083G2143
76	98	72	65		FDK:083G2144

D_o: Outer diameterD_i: Inner diameter¹⁾ Suitable for 3A²⁾ Not suitable for 3A

Accessories for MAG 1100 F sensor

Description	Article No.
Gaskets (delivered in pairs, to be placed between flow sensor and adapter)	
MAG 1100 F (PFA) - P gaskets	
Rubber: EPDM ¹⁾	
• DN 10	A5E02055286
• DN 15	A5E02055287
• DN 25	A5E02055290
• DN 40	A5E02055291

Description	Article No.
• DN 50	A5E02055292
• DN 65	A5E02055293
• DN 80	A5E02055295
• DN 100	A5E02055297
MAG 1100 F (ceramic) - Flat gaskets	
Rubber: FKM/FPM	
• DN 10	A5E00915707
• DN 15	A5E00915764
• DN 25	A5E00915771
• DN 40	A5E00915773

Selection and ordering data (continued)

Description	Article No.
• DN 50	A5E00915775
• DN 65	A5E00915780
• DN 80	A5E00915782
• DN 100	A5E00915784
<u>MAG 1100 F (PFA, ceramic) - Flat gaskets</u>	
Rubber: EPDM	
• DN 10	FDK:083G2206
• DN 15	FDK:083G2207
• DN 25	FDK:083G2209
• DN 40	FDK:083G2211
• DN 50	FDK:083G2212
• DN 65	FDK:083G2213
• DN 80	FDK:083G2214

Description	Article No.
• DN 100	FDK:083G2215
Rubber: NBR	
• DN 10	FDK:083G2216
• DN 15	FDK:083G2217
• DN 25	FDK:083G2219
• DN 40	FDK:083G2221
• DN 50	FDK:083G2222
• DN 65	FDK:083G2223
• DN 80	FDK:083G2224
• DN 100	FDK:083G2225

1) Suitable for 3A

Flow Measurement

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Technical specifications

MAG 1100 F	
Measuring principle	Electromagnetic induction
Excitation frequency (Mains supply: 50 Hz/60 Hz)	DN 10 ... 65 (¼" ... 2½"): 12.5 Hz/15 Hz DN 80 ... 100 (3", 4"): 6.25 Hz/7.5 Hz
Process connection	
Nominal size	DN 10 ... 100 (3/8" ... 4")
Process connection	Hygienic adapters available for: <ul style="list-style-type: none"> • Direct welding onto pipe • Clamp fitting • Threaded fitting
Rated operating conditions	
Ambient temperature	
• Sensor	-40 ... +100 °C (-40 ... +212 °F)
• Ex sensor	-20 ... +60 °C (-4 ... +140 °F)
• Compact with transmitter MAG 5000/6000	-20 ... +60 °C (-4 ... +140 °F)
• Compact with transmitter MAG 6000 I ¹⁾	-20 ... +60 °C (-4 ... +140 °F)
• Compact with transmitter MAG 6000 I Ex ¹⁾	-10 ... +60 °C (14 ... 140 °F)
Temperature of medium	
• MAG 1100 F (Ceramic)	-20 ... +150 °C (-4 ... +302 °F) Suitable for steam sterilization
• MAG 1100 F (PFA)	-30 ... +130 °C (-22 ... +266 °F) Suitable for steam sterilization at 150 °C (302 °F)
Temperature shock	Duration ≤ 1 min, followed by 10 min rest
• MAG 1100 F	<ul style="list-style-type: none"> • DN 10, 15, 25: Max. ΔT ≤ 80 °C/min (3/8", ½", 1": Max. ΔT ≤ 144 °F/min) • DN 40, 50, 65: Max. ΔT ≤ 70 °C/min (1½", 2", 2½": Max. ΔT ≤ 126 °F/min) • DN 80, 100: Max. ΔT ≤ 60 °C/min (3", 4": Max. ΔT ≤ 108 °F/min)
• MAG 1100 F (PFA)	<ul style="list-style-type: none"> • DN 15, 25, 40, 50, 65: Max. ΔT 120 °C/min (1½", 1", 1 1/2", 2", 2 1/2": Max. ΔT 248 °F/min) • DN 80, 100: Max. ΔT 110 °C/min (3", 4": Max. ΔT 230 °F/min)
Operating pressure	
• MAG 1100 F (Ceramic)	<ul style="list-style-type: none"> • DN 10 ... 65: 40 bar (3/8" ... 2½": 580 psi) • DN 80: 25 bar (3": 363 psi) • DN 100: 25 bar (4": 363 psi)
• MAG 1100 F (PFA)	Vacuum: 1 × 10 ⁻⁶ bar _{abs} (1.5 × 10 ⁻⁵ psi _{abs}) 20 bar (290 psi) Vacuum: 0.02 bar _{abs} (0.3 psi _{abs}) DN 80 ... 100: CO ₂ pressure max. 7 bar (101.5 psi)
Mechanical load (vibration)	<ul style="list-style-type: none"> • 18 ... 1 000 Hz random in x, y, z, directions for 2 hours according to EN 60068-2-36 • Sensor: 3.17 g RMS • Sensor with compact MAG 5000/6000 mounted transmitter: 3.17 grms • Sensor with compact MAG 6000 I/MAG 6000 I Ex mounted transmitter: 1.14 grms • For compact installation with the MAG 6000 I/MAG 6000 I Ex, transmitter to be supported to avoid tension on sensor part.
Protection class	IP67, NEMA 6
EMC	2014/30/EU
Design	
Weight	See Dimensional drawings
Enclosure	Stainless steel AISI 316L/1.4404

Technical specifications (continued)

MAG 1100 F	
<ul style="list-style-type: none"> • Terminal box (remote version only) 	
- Standard	Fibre glass reinforced polyamide
- Option	Stainless steel AISI 316/1.4436
• Liner	Aluminum oxide (Al ₂ O ₃) Reinforced PFA (not for Ex)
• Electrodes	
- MAG 1100 F (Ceramic)	Platinum with Gold / Titanium brazing alloy
- MAG 1100 F (PFA)	Hastelloy C22/2.4602
Cable entries	<ul style="list-style-type: none"> • Remote installation 2 × M20 or 2 × ½" NPT • Compact installation - MAG 5000/MAG 6000: 4 × M20 or 4 × ½" NPT - MAG 6000 I : 2 × M20 (M25 for PROFIBUS) or 2 × ½" NPT
Certificates and approvals	
Calibration	
• Default calibration	Zero-point, 2 × 25 %, 2 × 90 %
Hazardous areas	
• MAG 1100 F (Ceramic)	
- Ex-sensor in compact or remote version with MAG 6000 I Ex	<ul style="list-style-type: none"> • ATEX, EAC Ex - Zone 1 Ex d e ia IIB T6 Gb • ATEX - Zone 21 Ex tD A21 IP67
- Standard sensor in compact or remote version with MAG 5000/6000/6000 I Ex	<ul style="list-style-type: none"> • FM - NI Class I Div. 2 Groups A, B, C, D
• MAG 1100 F (PFA)	
- Standard sensor in compact or remote version with MAG 5000/6000/6000 I Ex	<ul style="list-style-type: none"> • FM - NI Class I Div. 2 Groups A, B, C, D
Hygienic	
• MAG 1100 F (Ceramic)	<ul style="list-style-type: none"> • 3A (remote version with Polyamide terminal box)
• MAG 1100 F (PFA)	<ul style="list-style-type: none"> • 3A (remote version with Polyamide terminal box) • Hygienic EC 1935:2004 European food contact material • CE (LVD, PED, EMC, RoHS), UKCA • EAC (Kazakhstan)
General purpose	
Others	

Accessories for MAG 1100 F

Weld-in adapter	
Adapter for welding onto dairy pipe, stainless steel 1.4404	Tri-Weld ISO 2037, DIN 11850, SMS 3008, BS 4825-1
• DN 10, 15, 25, 40, 50 and 65 (3/8", ½", 1", 1½", 2" and 2½")	PN 40 (600 psi)
• DN 8 and DN 100 (3" and 4")	PN 25 (350 psi)
Clamp adapter	Tri-Clamp, ISO 2852, DIN 32676, SMS 3016, BS 4825-3
DN 10, 15, 25, 40 and 50 (3/8", ½", 1", 1½" and 2")	PN 16 (200 psi)
DN 65, 80 and 100 (2½", 3" and 4")	PN 10 (150 psi)
Thread adapter	
DIN 11851	
• DN 10, 15, 25, and 40 (3/8", ½", 1", and 1½")	PN 40 (600 psi)
• DN 50, 65, 80 and 100 (2", 2½", 3" and 4")	PN 25 (350 psi)
ISO 2853, BS 4825-4	
• DN 10, 15, 25, 40, 50, 65 and 80 (3/8", ½", 1", 1½", 2", 2½" and 3")	PN 16 (200 psi)

Technical specifications (continued)

Accessories for MAG 1100 F	
SMS 1145	
• DN 25, 40, 50, 65 and 80 (1", 1½", 2", 2½" and 3")	PN 6 (80 psi)
Design	
Material	
Adapter	Stainless steel AISI 316/1.4436
Gasket	
• MAG 1100 F (Ceramic)	FKM/FPM with stainless steel insert (AISI 304/1.4301) (-20 ... +150 °C (-4 ... +302 °F))
	EPDM (-20 ... +150 °C (-4 ... +302 °F))
• MAG 1100 F (PFA)	EPDM (-20 ... +150 °C (-4 ... +302 °F))
	NBR (-20 ... +100 °C (-4 ... +212 °F))

¹⁾ With HART communication max. ambient temperature 50 °C (122 °F).

Note:

When combined sensor and adapter, the operating pressure is the lower rated of the pair.

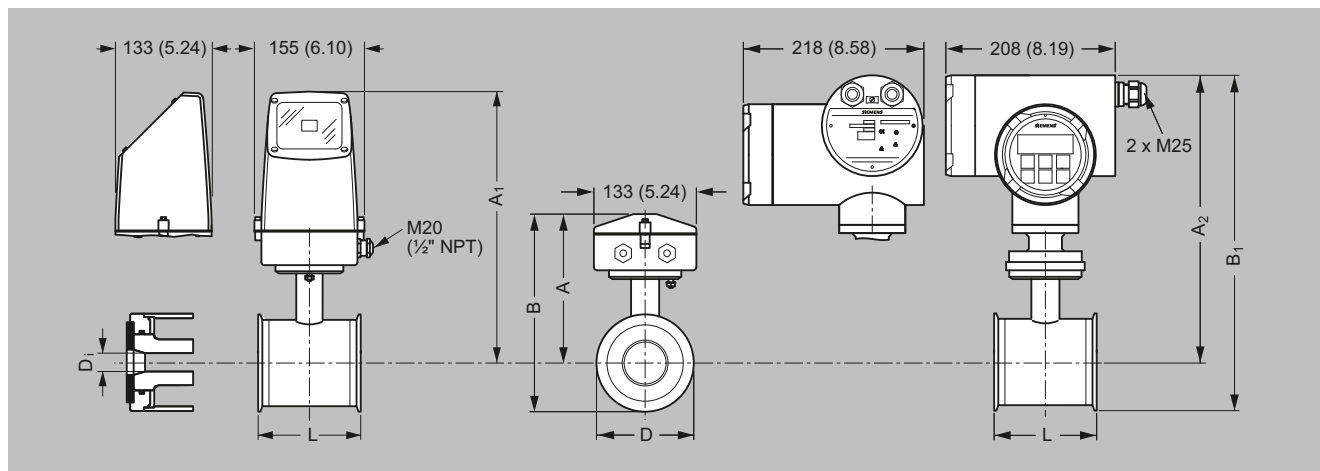
Flow Measurement

SITRANS FM (electromagnetic)

Flow sensors / SITRANS FM MAG 1100 F

Dimensional drawings

Sensor MAG 1100 F compact/remote



Dimensions in mm (inch)

Important note: For compact installation with MAG 6000 I/Ex - Supports the transmitter to avoid tension on the sensor part.

Size DN	L [mm]	A [mm]	B ²⁾ [mm]	B ₁ [mm]	D [mm]	D _i (Al ₂ O ₃) [mm]	D _i PFA [mm]	Weight ¹⁾ [kg]
10	64	161	315	193.7	344.7	64.0	10	2.2
15	64	161	315	193.7	344.7	64.0	15	2.2
25	79	169	323	207.5	359.0	77.5	26	2.7
40	94	179	333	228.0	379.0	91.0	38	3.4
50	104	188	342	247.7	398.7	119.0	50	4.2
65	131	197.5	351	262.6	413.6	130.0	66	5.5
80	156	204	357	281.0	432.0	155.0	81	7.0
100	186	217	370	308.0	459.0	183.0	100	10.0

Size [inch]	L [inch]	A [inch]	B ²⁾ [inch]	B ₁ [inch]	D [inch]	D _i (Al ₂ O ₃) [inch]	D _i PFA [inch]	Weight ¹⁾ [lb]
3/8	2.52	6.34	12.40	7.62	13.57	2.52	0.39	4.8
1/2	2.52	6.34	12.40	7.62	13.57	2.52	0.59	4.8
1	3.11	6.66	12.72	8.17	14.13	3.05	1.02	4.9
1 1/2	3.70	7.05	13.11	8.98	14.92	3.58	1.50	7.5
2	4.09	7.40	13.47	9.75	15.70	4.68	1.97	9.2
2 1/2	5.16	7.78	13.82	10.34	16.28	5.12	2.60	12.0
3	6.14	8.03	14.06	11.06	17.01	6.10	3.19	15.0
4	7.32	8.54	14.57	12.13	18.07	7.20	3.94	22.0

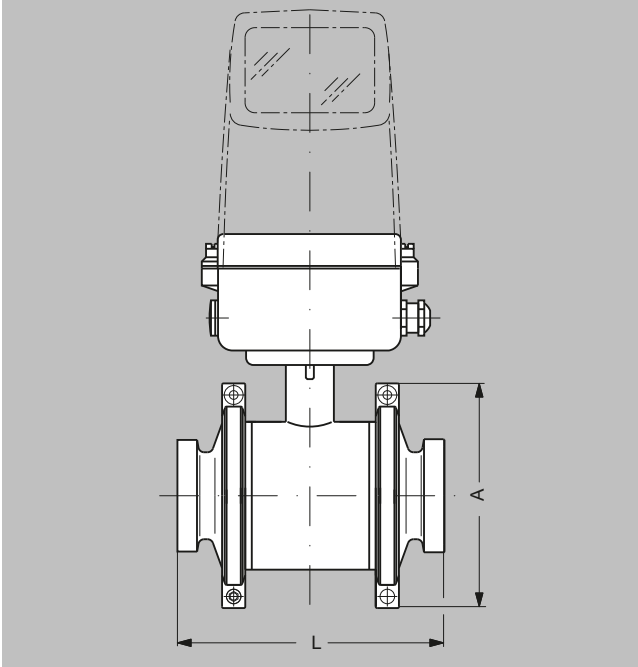
¹⁾ With transmitter MAG 5000 or MAG 6000 compact, weight is increased by approximately 0.8 kg (1.8 lb). With MAG 6000 I weight is increased with 5.5 kg (12.1 lbs).

²⁾ 14.5 mm (0.571") shorter when the stainless steel terminal box is used (always Ex version).

³⁾ A₂ is 3 mm (0.12") shorter than A₁.

Dimensional drawings (continued)

Sensor MAG 1100 F compact/separate – built-in length



Size DN	[Inch]	A [mm]	[inch]	L ¹⁾ [mm]	[inch]
10	3/8	99	3.90	146	5.75
15	1/2	99	3.90	146	5.75
25	1	113	4.45	161	6.34
40	1½	126	4.96	176	6.93
50	2	154	6.06	186	7.32
65	2½	165	6.50	223	8.78
80	3	200	7.87	258	10.16
100	4	225	8.86	288	11.34

¹⁾ The total built-in length "L" is independent of the adapter type selected.