Flow sensor MAG 1100 and MAG 1100 HT

Overview

The SITRANS F M MAG 1100 is an electromagnetic flow sensor in a compact wafer design designed for flow applications in the process industry.

Benefits

- Sensor sizes: DN 2 to 100 (1/12” to 4”)
- Compact wafer design meets EN 1092, DIN and ANSI flange standards
- Corrosion resistant AISI 316 stainless steel sensor housing
- Highly resistant liner and electrodes fitting most extreme process media
- Temperature rating up to 200 °C (392 °F)
- Hose proof IP67/NEMA 4X enclosure rating
- Designed that patented in-situ verification can be conducted. Using SENSORPROM fingerprints.

Application

The main applications of the SITRANS F M electromagnetic flow sensors can be found in the following fields:

- Process industry
- Chemical industry
- Pharmaceutical industry
- Water treatment like e.g. chemical dosing

Design

- Compact or remote mounting possible
- Easy "plug & play" field changeability of transmitter
- Simple on site upgrade to IP68/NEMA 6P terminal box
- ATEX 2G D version
- FM Class I, Div 2

Mode of operation

The flow measuring principle is based on Faraday’s law of electromagnetic induction according to which the sensor converts the flow into an electrical voltage proportional to the velocity of the flow.

Integration

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

Technical specifications

Version	MAG 1100	MAG 1100 HT (High temperature)
Measuring principle	Electromagnetic induction	Electromagnetic induction
Excitation frequency (Mains supply: 50 Hz/60 Hz)	DN 2 ... 65 (1/12“ … 2½”): 12.5 Hz/15 Hz DN 80, 100 (3”, 4”): 6.25 Hz/7.5 Hz	DN 15 ... 50 (½“ … 2”): 12.5 Hz/15 Hz DN 80, 100 (3”, 4”): 6.25 Hz/7.5 Hz
Process connection		
Nominal size		
• MAG 1100 (Ceramic)	DN 2 … DN 100 (1/12" … 4")	DN 15 … DN 100 (½” … 4")
• MAG 1100 (PFA)	DN 10 … DN 100 (3/8" … 4")	
Mating flanges	EN 1092-1 (DIN 2501), ANSI B 16.5 class 150 and 300 or equivalent Option: DN 2 ... 10 (1/12” ... 3/8”): G½” / NPT ½” pipe connection adapters	EN 1092-1 (DIN 2501), ANSI B 16.5 class 150 and 300 or equivalent
Rated operating conditions		
Ambient conditions		
Ambient temperature		
• Standard sensor	-40 … +100 °C (-40 … +212 °F)	-40 … +100 °C (-40 … +212 °F)
• Ex sensor	-20 … +60 °C (-4 … +140 °F)	-20 … +60 °C (-4 … +140 °F)
• Compact with transmitter MAG 5000/6000	-20 … +60 °C (-4 … +140 °F)	
• Compact with transmitter MAG 6000 I	-20 … +60 °C (-4 … +140 °F)	
• Compact with transmitter MAG 6000 I Ex	-20 … +60 °C (-4 … 140 °F)	
Temperature of medium		
• MAG 1100 (Ceramic)	-20 … +150 °C (-4 … +302 °F)	-20 … +200 °C (-4 … +392 °F)
• MAG 1100 Ex (Ceramic)	-20 … +150 °C (-4 … +302 °F)	-20 … +180 °C (-4 … +356 °F)
• MAG 1100 (PFA)	-30 … +130 °C (-22 … +266 °F) Suitable for steam sterilization at 150 °C (302 °F)	
Temperature shock		
• MAG 1100 (Ceramic)		
- Duration ≤ 1 min, followed by 10 min rest	• DN 2, 3 (1/12”, 1/8”) No limitations • DN 6, 10, 15, 25: Max. ΔT ≤ 80 °C/min (¼”, 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)	• DN 15, 25: Max. ΔT ≤ 80 °C/min (½”, 1”: Max. ΔT ≤ 144 °F/min) • DN 40, 50: Max. ΔT ≤ 70 °C/min (1½”, 2”: Max. ΔT ≤ 126 °F/min) • DN 80, 100: Max. ΔT ≤ 60 °C/min (3”, 4”: Max. ΔT ≤ 108 °F/min)
• MAG 1100 (PFA)	Max. ± 100 °C (212 °F) momentarily	
Operating pressure		
• MAG 1100 (Ceramic)	• DN 2 ... 65: 40 bar (1/12” … 2½”: 580 psi) • DN 80: 37.5 bar (3”: 540 psi) • DN 100: 30 bar (4”: 435 psi) Vacuum: 1 x 10^{-6} bar_{abs} (1.5 x 10^{-5} psi_{abs})	• DN 15 ... 50: 40 bar (½” … 2”: 580 psi) • DN 80: 37.5 bar (3”: 540 psi) • DN 100: 30 bar (4”: 435 psi) Vacuum: 1 x 10^{-6} bar_{abs} (1.5 x 10^{-5} psi_{abs})
• MAG 1100 (PFA)	20 bar (290 psi) Vacuum: 0.02 bar_{abs} (0.3 psi_{abs}) DN 80 ... DN 100: CO_2 pressure max. 7 bar (101.5 psi)	
Mechanical load (vibration)	• 18 ... 1000 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 g RMS • Sensor with compact MAG 6000 I/ 6000 I Ex mounted transmitter: 1.14 g RMS • For compact installation with the MAG 6000 I, transmitter to be supported to avoid tension on sensor part.	• 18 ... 1000 Hz random in x, y z, directions for 2 hours according to EN 60068-2-36 • Sensor: 3.17 g RMS
Enclosure rating (standard)	IP67 to EN 60529 (NEMA 4X), 1 mH_2O for 30 min	IP67 to EN 60529 (NEMA 4X), 1 mH_2O for 30 min
EMC	2014/30/EU	2014/30/EU

Flow sensor MAG 1100 and MAG 1100 HT

Version	MAG 1100	MAG 1100 HT (High temperature)
Design		
Weight	See Dimensional drawings	See Dimensional drawings
Material		
• Enclosure		
- MAG 1100	Stainless steel AISI 316L/1.4404	Stainless steel AISI 316L/1.4404
• Terminal box		
- Standard	Fibre glass reinforced polyamide (not for Ex)	Stainless steel AISI 316/1.4436
- Option	Stainless steel AISI 316/1.4436	
• Fixing studs	Stainless steel AISI 304/1.4301, Number and size to EN 1092-1:2001	Stainless steel AISI 304/1.4301, Number and size to EN 1092-1:2001
• Gaskets		
- Standard	EPDM (max. 150 °C, PN 40 (max. 302 °F, 600 psi))	Graphite (max. 200 °C, PN 40 (max. 392 °F, 600 psi))
- Option	• Graphite (max. 200 °C, PN 40 (max. 392 °F, 600 psi)) • PTFE (max. 130 °C, PN 25 (max. 266 °F, 300 psi))	
• Pipe connection adapters: DN 2, 3, 6 and 10 (1/12“, 1/8“, ¼” and 3/8”)	• Stainless steel, AISI 316/1.4436 • Hastelloy C22/2.4602 • PVDF	
Liner		
• MAG 1100 (Ceramic)	• DN 2, 3 (1/12“, 1/8“): Zirconium oxide (ZrO_2) (ceramic) • DN 6 ... 100 (¼“ ... 4“): Aluminum oxide Al_2O_3	DN 15 ... 100 (½“ ... 4“): Aluminum oxide Al_2O_3
• MAG 1100 (PFA)	Reinforced PFA (not for Ex)	
Electrodes		
• MAG 1100 (Ceramic)	• DN10 ... 100 (3/8" ... 4") : Platinum with gold / Titanium brazing alloy • DN 2 ... 6 (1/12" ... ¼"): Platinum	Platinum with gold / Titanium brazing alloy
• MAG 1100 (PFA)	• DN 10 ... 15 (3/8" ... ½"): Hastelloy C276/2.4819 • DN 25 ... 100 (1" ... 4"): Hastelloy C22/2.4602	
Cable entries	• Remote installation 2 x M20 or 2 x ½" NPT • Compact installation - MAG 5000/MAG 6000: 4 x M20 or 4 x ½" NPT - MAG 6000 I: 2 x M25 (for supply/output) - MAG 6000 I Ex: 2 x M25 (for supply/output)	Remote installation 2 x M20 or 2 x ½“ NPT
Certificates and approvals		
Calibration		
• Standard production calibration	Zero-point, 2 x 25 %, 2 x 90 %	Zero-point, 2 x 25 %, 2 x 90 %
• Special calibration	5-point calibration: 20 %, 40 %, 60 %, 80 %, 100 % of factory Q_{max} 10-point calibration: ascending and descending at 20 %, 40 %, 60 %, 80 %, 100 % of factory Q_{max} Matched-pair calibration: default, 5-point or 10-point	
Hazardous areas		
• MAG 1100 F (Ceramic)		
- Ex sensor in compact or remote version with MAG 6000 I Ex	ATEX, EAC Ex - Zone 1 Ex d e ia IIB T6 Gb ATEX - Zone 21 Ex tD A21 IP67	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	FM - NI Class I Div. 2 Groups A, B, C, D	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	FM - NI Class I Div. 2 Groups A, B, C, D	
Hygienic		
• MAG 1100 F (Ceramic)	3A (remote version with Polyamide terminal box)	
• MAG 1100 F (PFA)	3A (remote version with Polyamide terminal box) EHEDG (remote version with Polyamide terminal box, DN 25 ... 100/1 ... 4") Hygienic EC 1935:2004 European food contact material	
Pressure Equipment	PED - 2014/68/EU CRN (only PFA)	PED - 2014/68/EU
Others	EAC (Russia, Belarus, Kazakhstan) KCC (South Korea)	EAC (Russia, Belarus, Kazakhstan) KCC (South Korea)

For technical specification for transmitter - see transmitter pages.

Selection and Ordering data		Article No.
Sensor SITRANS F M MAG 1100 EPDM gaskets included	↗	7ME6110 - ■■A■0 - ■■■■
↗ Click on the Article No. for the online configuration in the PIA Life Cycle Portal.		
Diameter		
DN 2 (1/12“)	⬟ [1)]	1D
DN 3 (1/8“)	⬟ [1)]	1H
DN 6 (¼“)	⬟ [1)]	1M
DN 10 (3/8“)	⬟	1R
DN 15 (½“)	⬟	1V
DN 25 (1“)	⬟	2D
DN 40 (1½“)	⬟	2R
DN 50 (2“)	⬟	2Y
DN 65 (2½“)	⬟	3F
DN 80 (3“)	⬟	3M
DN 100 (4“)	⬟	3T
Liner material		
PFA - DN 10 ... 100 (3/8“ ... 4“)	⬟	1
Ceramic	⬟	2
Electrode material		
Hastelloy C (only with PFA liner)	⬟	1
Platinum (only with ceramic liner)	⬟	2
Transmitter		
Standard sensor for remote transmitter (order transmitter separately)	⬟	A
Ex sensor for remote transmitter (order transmitter separately)		B
MAG 6000 I, Aluminum 18 ... 90 V DC, 115 ... 230 V AC		C
MAG 6000 I, Aluminum 18 ... 30 V DC, Ex		D
MAG 6000 I, Aluminum 115 ... 230 V AC, Ex		E
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
½" NPT: Polyamide terminal box or MAG 6000 I compact	⬟	2
Metric: Stainless steel terminal box		3
½" NPT: Stainless steel terminal box		4

⬟ We can offer shorter delivery times for configurations designated with the Quick Ship Symbol ⬟. For details see page 10/11 in the appendix.

1) Quick ship only in combination with Ceramic liner

Selection and Ordering data	Order code
Additional information	
Please add **“-Z“** to Article No. and specify Order code(s) and plain text.	
Certificates	
• 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**
Special calibration	
• 5-point calibration[1)]	**D01**
• 10-point calibration[2)]	**D06**
• Default (2 x 25 % and 2 x 90 %) matched-pair calibration	**D11**
• 5-point, matched-pair calibration[1)]	**D15**
• 10-point, matched-pair calibration[2)]	**D18**
Terminal blocks	
• Factory mounted terminal blocks	**N02**
Region/customer specific labels	
• KCC label (South Korea)	**W28**
Tag name plate, stainless steel (specify in plain text)	**Y17**
Tag name plate, plastic (self adhesive)	**Y18**
Customer-specific transmitter setup	**Y20**
Sensor cables wired (specify Article No. for sensor cables)	**Y40**
Sensor cables wired and IP68 sealing (specify Article No. for sensor cables)	**Y41**
Special version (specify in plain text)	**Y99**
Additional calibrations	
• Accredited Siemens Flow Instruments matched pair Calibration acc. to ISO/IEC 17025: 2005	**On request[3)]**
• Customer-specified calibration up to 10 points	**On request[3)]**
• Customer-witnessed calibration Any of above calibration	**On request[3)]**

1) 20 %, 40 %, 60 %, 80 %, 100 % of factory Q_{max}

2) Ascending and descending at 20 %, 40 %, 60 %, 80 %, 100 % of factory Q_{max}

3) Product Variation Request (PVR)

Operating instructions for SITRANS F M MAG 1100

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**	

⬟ We can offer shorter delivery times for configurations designated with the Quick Ship Symbol ⬟. For details see page 10/11 in the appendix.

Flow sensor MAG 1100 and MAG 1100 HT

Selection and Ordering data	Article No.
Sensor SITRANS F M	
MAG 1100 HT High Temperature ↗	**7ME6120-**
Ceramic liner, Platinum electrode, Graphite gaskets included	**A20-2**
↗ Click on the Article No. for the online configuration in the PIA Life Cycle Portal.	
Diameter	
DN 15 (½")	**1V**
DN 25 (1")	**2D**
DN 40 (1½")	**2R**
DN 50 (2")	**2Y**
DN 80 (3")	**3M**
DN 100 (4")	**3T**
Transmitter	
Standard sensor for remote transmitter (order transmitter separately)	**A**
Ex sensor for remote transmitter (order transmitter separately)	**B**
Cable glands/terminal box	
Metric: Stainless steel terminal box	**3**
½" NPT: Stainless steel terminal box	**4**

Selection and Ordering data	Order code
Additional information	
Please add **"-Z"** to Article No. and specify Order code(s) and plain text.	
Certificates	
• 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**
Special calibration	
• 5-point calibration[1)]	**D01**
• 10-point calibration[2)]	**D06**
• Default (2 x 25 % and 2 x 90 %) matched-pair calibration	**D11**
• 5-point, matched-pair calibration[1)]	**D15**
• 10-point, matched-pair calibration[2)]	**D18**
Terminal blocks	
• Factory mounted terminal blocks	**N02**
Region/customer specific labels	
• KCC label (South Korea)	**W28**
Tag name plate, stainless steel (specify in plain text)	**Y17**
Tag name plate, plastic (self adhesive)	**Y18**
Customer-specific transmitter setup	**Y20**
Sensor cables wired (specify Article No. for sensor cables)	**Y40**
Sensor cables wired and IP68 sealing (specify Article No. for sensor cables)	**Y41**
Special version (specify in plain text)	**Y99**
Additional calibrations	
• Accredited Siemens Flow Instruments matched pair Calibration acc. to ISO/IEC 17025: 2005	**On request[3)]**
• Customer-specified calibration up to 10 points	**On request[3)]**
• Customer-witnessed calibration Any of above calibration	**On request[3)]**

1) 20 %, 40 %, 60 %, 80 %, 100 % of factory Q_{max}
2) Ascending and descending at 20 %, 40 %, 60 %, 80 %, 100 % of factory Q_{max}
3) Product Variation Request (PVR)

Operating instructions for SITRANS F M MAG 1100

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Please use online Product selector to get latest updates.

Product selector link:
www.pia-portal.automation.siemens.com

Accessories

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

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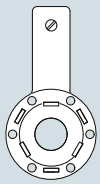
Accessories for MAG 1100 sensor	Article No.
Pipe connection ½" external thread	
For DN 2 ... 10 (1/12" ... 3/8") sensor, material: Stainless steel AISI 316L 2 pipe connections, 2 EPDM gaskets, 12 pcs M4 x 12 screws	
• ½" G, ISO 7-1 tappered thread, AISI 316L	FDK:083G0080
• ½" NPT thread, AISI 316L	FDK:083G4330
For DN 2 ... 10 (1/12" ... 3/8") sensor, material: Hastelloy C 2 pipe connections, 2 PTFE gaskets, 12 pcs M4 x 14 screws	
• ½" G, ISO 7-1 tappered thread	FDK:083G4332
• ½" NPT thread	FDK:083G4331
For DN 2…10 (1/12"…3/8") sensor 2 PVDF pipe connections (Max. 70 °C, PN 8 bar/max 158 °F, 116 PSI), 1 grounding ring[1], 1 grounding wire, 3 PTFE gaskets, 2 space rings, 6 pcs. M4 x 12 and 6 pcs. M4 x 20 screws	
• ½"G, ISO 7-1 tapered thread PVDF incl. grounding ring Hastelloy C22/2.4602	A5E01018395
• ½" NPT thread PVDF incl. grounding ring Hastelloy C22/2.4602	A5E01018400
EPDM gaskets	
Material: EPDM; each set includes: 2 EPDM gaskets, 1 grounding wire, 1 M6 screw, 1 nut, 1 washer, 1 bolt grounding plate	
• DN 2 ... 10 (1/12" ... 3/8")	FDK:083G3116
• DN 15 (½")	FDK:083G3117
• DN 25 (1")	FDK:083G3119
• DN 40 (1½")	FDK:083G3121
• DN 50 (2")	FDK:083G3122
• DN 65 (2½")	FDK:083G3123
• DN 80 (3")	FDK:083G3124
• DN 100 (4")	FDK:083G3125
PTFE gaskets	
Material: PTFE; each set includes: 2 gaskets, 2 grounding wires, 3 M6 screws (DN 2 ... DN 10: 12 pcs M4 x 14)	
• DN 2 ... 10 (1/12" ... 3/8")	FDK:083G0156
• DN 15 (½")	FDK:083G0157
• DN 25 (1")	FDK:083G0159
• DN 40 (1½")	FDK:083G0161
• DN 50 (2")	FDK:083G0162
• DN 65 (2½")	FDK:083G0163
• DN 80 (3")	FDK:083G0164
• DN 100 (4")	FDK:083G0165
Graphite gaskets	
Material: Graphite; conductive, each set includes: 2 gaskets (can also be used as grounding ring)	
• DN 2 ... 10 (1/12" ... 3/8")	FDK:083G0116
• DN 15 (½")	FDK:083G0117
• DN 25 (1")	FDK:083G0119
• DN 40 (1½")	FDK:083G0121
• DN 50 (2")	FDK:083G0122
• DN 65 (2½")	FDK:083G0123
• DN 80 (3")	FDK:083G0124
• DN 100 (4")	FDK:083G0125

Accessories for MAG 1100 sensor	Article No.
Grounding ring SS	
Material: AISI 316/1.4436; each set includes: 1 grounding ring[1], 3 PTFE gaskets, 1 grounding wire, 1 M6 screw	
• DN 2 ... 10 (1/12" ... 3/8")	FDK:083G0686
• DN 15 (½")	FDK:083G0687
• DN 25 (1")	FDK:083G0689
• DN 40 (1½")	FDK:083G0691
• DN 50 (2")	FDK:083G0692
• DN 65 (2½")	FDK:083G0693
• DN 80 (3")	FDK:083G0694
• DN 100 (4")	FDK:083G0695
Grounding ring (Hastelloy C)	
Material: Hastelloy C22/2.4602; each set includes: 1 grounding ring[1], 3 PTFE gaskets, 1 grounding wire, 1 M6 screw	
• DN 2 ... 10 (1/12" ... 3/8")	FDK:083G3256
• DN 15 (½")	FDK:083G3257
• DN 25 (1")	FDK:083G3259
• DN 40 (1½")	FDK:083G3261
• DN 50 (2")	FDK:083G3262
• DN 65 (2½")	FDK:083G3263
• DN 80 (3")	FDK:083G3264
• DN 100 (4")	FDK:083G3265
Grounding ring (Tantalum)	
Material: Tantalum; each set includes: 1 grounding ring[1], 3 PTFE gaskets, 1 grounding wire, 1 M6 screw	
• DN 2 ... 10 (1/12" ... 3/8")	A5E01181599
	
• DN 15 (½")	A5E01181606
• DN 25 (1")	A5E01181610
• DN 40 (1½")	A5E01181613
• DN 50 (2")	A5E01181615
• DN 65 (2½")	A5E01181616
• DN 80 (3")	A5E01181619
• DN 100 (4")	A5E01181622
Studs and nuts	
for DN 100 PN 25/40, 8 M20 studs, 16 M20 nuts	
Material: AISI 304/1.4305	
• DN 100 (4")	FDK:083G0226

[1] Thickness of grounding ring is 2 mm (0.08 inch)

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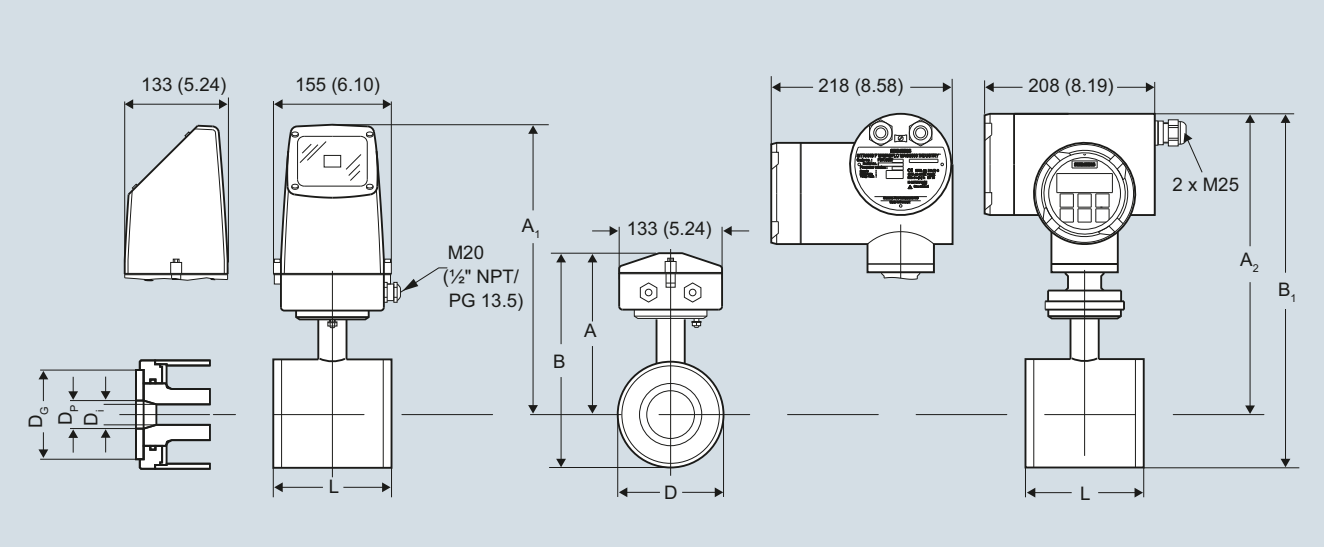
Dimensional drawings

Sensor MAG 1100, compact/remote



Dimensions in mm (inch)

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

Size DN	A[1] [mm]	B[1] [mm]	A_1/A_2[3] [mm]	B_1 [mm]	D [mm]	D_i [mm]	D_i (PFA) [mm]	D_P [mm]	D_G [mm]	Weight[2] [kg]
2	161	186	315	340	48.7	2		17.3	34	2.2
3	161	186	315	340	48.7	3		17.3	34	2.2
6	161	186	315	340	48.7	6		17.3	34	2.2
10	161	186	315	340	48.7	10	10	13.6	34	2.2
15	161	186	315	340	48.7	15	16	17.3	40	2.2
25	169	201	323	354	63.5	25	26	28.5	56	2.7
40	179	221	333	375	84.0	40	38	43.4	75	3.4
50	188	239	342	393	101.6	50	50	54.5	90	4.2
65	198	258	351	412	120.9	65	66	68.0	112	5.5
80	204	270	357	424	133.0	80	81	82.5	124	7.0
100	217	296	370	450	159.0	100	100	107.1	150	10.0

Size [inch]	A[1] [inch]	B[1] [inch]	A_1/A_2[3] [inch]	B_1 [inch]	D [inch]	D_i [inch]	D_i (PFA) [inch]	D_P [inch]	D_G [inch]	Weight[2] [lb]
1/12	6.34	7.33	12.40	13.39	1.92	0.08		0.68	1.34	4.8
1/8	6.34	7.33	12.40	13.39	1.92	0.12		0.68	1.34	4.8
¼	6.34	7.33	12.40	13.39	1.92	0.24		0.68	1.34	4.8
3/8	6.34	7.33	12.40	13.39	1.92	0.39	0.39	0.53	1.34	4.8
½	6.34	7.33	12.40	13.39	1.92	0.59	0.63	0.68	1.57	4.8
1	6.66	7.92	12.72	13.94	2.50	0.98	1.02	1.12	2.20	4.9
1½	7.05	8.70	13.11	14.76	3.31	1.57	1.50	1.71	2.95	7.5
2	7.40	9.41	13.47	15.47	4.00	1.97	1.97	2.15	3.54	9.2
2½	7.80	10.16	13.82	16.22	4.76	2.56	2.60	2.68	4.41	12
3	8.03	10.63	14.06	16.70	5.24	3.15	3.19	3.25	4.88	15
4	8.54	11.65	14.57	17.72	6.26	3.94	3.94	4.22	5.91	22

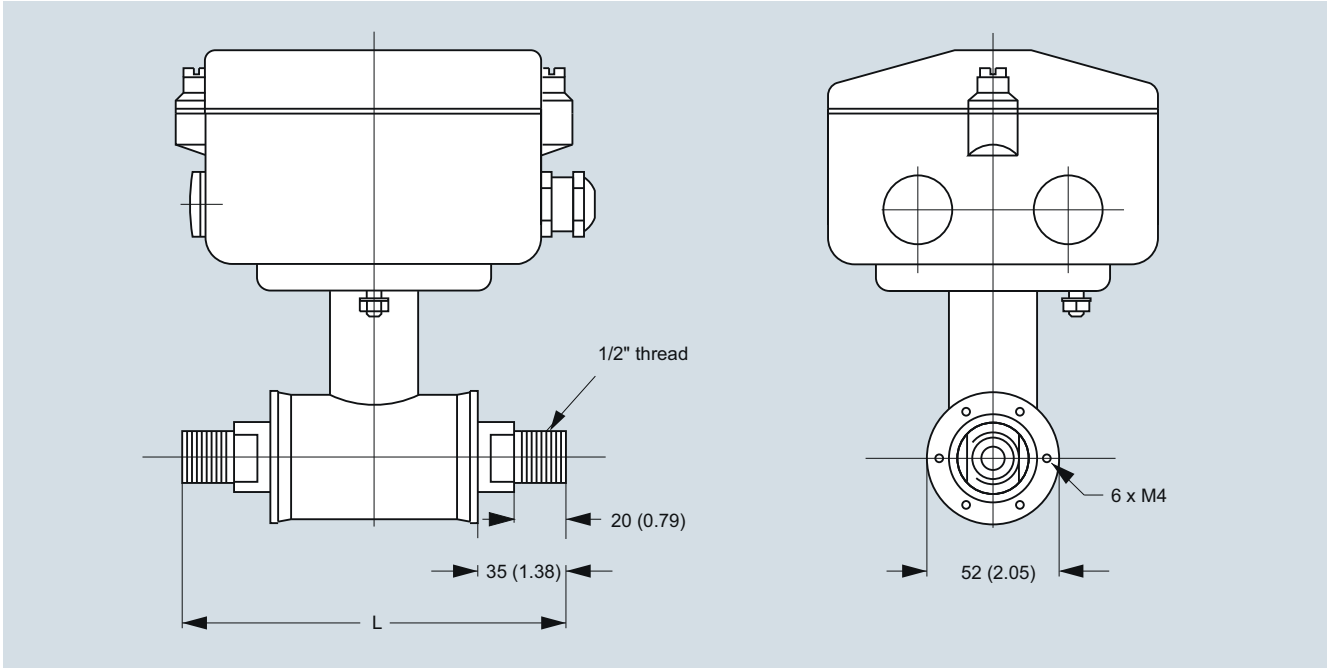
1) 14.5 mm/0.571" shorter when the AISI terminal box is used (Ex or high temperature 200 °C (392 °F) version)
2) With transmitter MAG 5000 or MAG 6000 installed, weight is increased by approximately 0.8 kg (1.8 lb).
With MAG 6000 I weight is increased with 5.5 kg (12.1 lb).
3) A_2 is 3 mm (0.12") shorter than A_1

The total built-in length “L” [mm]/[inch] before assembling depends on the gasket selected

Size		EPDM		Graphite		PTFE (Teflon)		Without gasket		Grounding ring	
DN	inch	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]
2 ... 10[1)]	1/12 ... 3/8	64	2.52	66	2.60	70	2.75	64	2.52	77	3.03
15	½	65	2.56	66	2.60	70	2.75	64	2.52	77	3.03
25	1	80	3.15	81	3.19	85	3.35	79	3.10	92	3.62
40	1½	95	3.74	96	3.78	100	3.94	94	3.70	107	4.21
50	2	105	4.13	106	4.17	110	4.33	104	4.05	117	4.61
65	2½	130	5.12	131	5.15	135	5.31	129	5.05	142	5.60
80	3	155	6.10	156	6.14	160	6.30	154	6.00	167	6.57
100	4	185	7.28	186	7.31	190	7.48	184	7.20	197	7.76

[1)] Mounting between two flanges

Sensor MAG 1100 DN 2 ... 10 (1/12“ ... 3/8“) with adapters



The MAG 1100 DN 2, 3, 6 and 10 (1/12“, 1/8“, ¼” and 3/8”) are prepared for assembly with the ½” pipe connections. Dimensions in mm (inch)

The length “L“ varies dependent on the gasket choice.

Stainless steel and Hastelloy pipe connections								PVDF pipe connections	
Without gasket		EPDM		Graphite		PTFE		PTFE	
[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]
150	5.9	150	5.9	152	6.0	156	6.1	133	5.2

Important note:
For compact installation with the MAG 6000 I, transmitter to be supported to avoid tension on sensor part.