

Flow Measurement

SITRANS FM (electromagnetic)

Flow sensors

MAG 1100 and MAG 1100 HT

Overview



The SITRANS FM 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 ... 100 ($1/12''$... 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 FM 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 FM 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" ... 2 1/2"): 12.5 Hz/15 Hz DN 80, 100 (3", 4"): 6.25 Hz/7.5 Hz	DN 15 ... 50 (1/2" ... 2"): 12.5 Hz/15 Hz DN 80, 100 (3", 4"): 6.25 Hz/7.5 Hz
Process connection		
Nominal size	DN 2 ... DN 100 (1/12" ... 4") DN 10 ... DN 100 (3/8" ... 4")	DN 15 ... DN 100 (1/2" ... 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"): G 1/2"/NPT 1/2" pipe connection adapters	EN 1092-1 (DIN 2501), ANSI B 16.5 class 150 and 300 or equivalent
Rated operating conditions		
<u>Ambient conditions</u>		
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)	
<u>Temperature of medium</u>		
• 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)	
<u>Temperature shock</u>		
• MAG 1100 (Ceramic)		
- Duration ≤ 1 min, followed by 10 min rest	• DN 2, 3 (1/12", 1/8") No limitations	• DN 15, 25: Max. ΔT ≤ 80 °C/min (1/2", 1": Max. ΔT ≤ 144 °F/min)
	• DN 6, 10, 15, 25: Max. ΔT ≤ 80 °C/min (1/4", 3/8", 1/2", 1": Max. ΔT ≤ 144 °F/min)	• DN 40, 50: Max. ΔT ≤ 70 °C/min (1 1/2", 2": Max. ΔT ≤ 126 °F/min)
	• DN 40, 50, 65: Max. ΔT ≤ 70 °C/min (1 1/2", 2", 2 1/2": Max. ΔT ≤ 126 °F/min)	• DN 80, 100: Max. ΔT ≤ 60 °C/min (3", 4": Max. ΔT ≤ 108 °F/min)
	• DN 80, 100: Max. ΔT ≤ 60 °C/min (3", 4": Max. ΔT ≤ 108 °F/min) Max. ± 100 °C (212 °F) momentarily	
• MAG 1100 (PFA)		
<u>Operating pressure</u>		
• MAG 1100 (Ceramic)	• DN 2 ... 65: 40 bar (1/12" ... 2 1/2": 580 psi) • DN 80: 37.5 bar (3": 540 psi) • DN 100: 30 bar (4": 435 psi)	• DN 15 ... 50: 40 bar (1/2" ... 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}) 20 bar (290 psi)	Vacuum: 1 x 10 ⁻⁶ bar _{abs} (1.5 x 10 ⁻⁵ psi _{abs})
• MAG 1100 (PFA)	Vacuum: 0.02 bar _{abs} (0.3 psi _{abs}) DN 80 ... DN 100: CO ₂ pressure max. 7 bar (101.5 psi)	
<u>Mechanical load (vibration)</u>		
	• 18 ... 1000 Hz random in x, y, z, directions for 2 hours according to EN 60068-2-36	• 18 ... 1000 Hz random in x, y, z, directions for 2 hours according to EN 60068-2-36
	• Sensor: 3.17 g RMS	• 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.	
<u>Enclosure rating (standard)</u>	IP67 to EN 60529 (NEMA 4X), 1 mH ₂ O for 30 min	IP67 to EN 60529 (NEMA 4X), 1 mH ₂ O for 30 min
EMC	2014/30/EU	2014/30/EU

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MAG 1100 and MAG 1100 HT

Technical specifications (continued)

Version	MAG 1100	MAG 1100 HT (High temperature)
Design		
Weight	See Dimensional drawings	See Dimensional drawings
Material		
• Enclosure	Stainless steel AISI 316L/1.4404	Stainless steel AISI 316L/1.4404
- MAG 1100		
• Terminal box	Fibre glass reinforced polyamide (not for Ex)	Stainless steel AISI 316/1.4436
- Standard	Stainless steel AISI 316/1.4436	
- Option	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
• Fixing studs		
• Gaskets	EPDM (max. 150 °C, PN 40 (max. 302 °F, 600 psi))	Graphite (max. 200 °C, PN 40 (max. 392 °F, 600 psi))
- Standard	• Graphite (max. 200 °C, PN 40 (max. 392 °F, 600 psi))	
- Option	• PTFE (max. 130 °C, PN 25 (max. 266 °F, 300 psi))	
• Pipe connection adapters: DN 2, 3, 6 and 10 (1/12", 1/8", 1/4" 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 (1/4" ... 4"): Aluminum oxide Al ₂ O ₃ Reinforced PFA (not for Ex)	DN 15 ... 100 (1/2", 4"): Aluminum oxide Al ₂ O ₃
• MAG 1100 (PFA)		
Electrodes		
• MAG 1100 (Ceramic)	• DN 10 ... 100 (3/8" ... 4"): Platinum with gold/Titanium brazing alloy • DN 2 ... 6 (1/12" ... 1/4"): Platinum • DN 10 ... 15 (3/8" ... 1/2"): Hastelloy C276/2.4819 • DN 25 ... 100 (1" ... 4"): Hastelloy C22/2.4602	Platinum with gold/Titanium brazing alloy
• MAG 1100 (PFA)		
Cable entries	• Remote installation 2 x M20 or 2 x 1/2" NPT • Compact installation - MAG 5000/MAG 6000: 4 x M20 or 4 x 1/2" 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 1/2" NPT
Certificates and approvals		
Calibration		
• Default 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)	• ATEX, EAC Ex - Zone 1 Ex d e ia IIB T6 Gb • ATEX - Zone 21 Ex tD A21 IP67 • FM - NI Class I Div. 2 Groups A, B, C, D	• ATEX, EAC Ex - Zone 1 Ex d e ia IIB T6 Gb • ATEX - Zone 21 Ex tD A21 IP67 • FM - NI Class I Div. 2 Groups A, B, C, D
- Ex-sensor in compact or remote version with MAG 6000 I Ex		
- Standard sensor in compact or remote version with MAG 5000/6000/6000 I		
• MAG 1100 F (PFA)	• FM - NI Class I Div. 2 Groups A, B, C, D	
- Standard sensor in compact or remote version with MAG 5000/6000/6000 I		
Pressure equipment	• PED – 2014/68/EU • CRN (only PFA)	• PED – 2014/68/EU
Others	• EAC (Russia, Belarus, Kazakhstan)	• EAC (Russia, Belarus, Kazakhstan)

For technical specification for transmitter - please see section about transmitters.

Selection and ordering data	Article No.	Order code
Sensor SITRANS FM MAG 1100	7ME6110-	
EPDM gaskets included	A 0 -	
Click on the Article No. for the online configuration in the PIA Life Cycle Portal.		
Diameter		
DN 2 (1/12")	1 D	
DN 3 (1/8")	1 H	
DN 6 (1/4")	1 M	
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	
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	
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	
		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
		• Factory certificate according to EN 10204-2.2
		• Factory certificate according to EN 10204-2.1
		Special calibration
		• 5-point calibration ¹⁾
		• 10-point calibration ²⁾
		• Default (2 × 25 % and 2 × 90 %) matched-pair calibration
		• 5-point, matched-pair calibration ¹⁾
		• 10-point, matched-pair calibration ²⁾
		Terminal blocks
		• Factory mounted terminal blocks
		Country specific label
		• CRN (Canadian Registration Number)
		Tag name plate, stainless steel (specify in plain text)
		Tag name plate, plastic (self adhesive)
		Customer-specific transmitter setting
		Factory mounted sensor cables
		• Sensor cables wired (specify Article No. for sensor cables and order cables separately)
		• Sensor cables wired and IP68 sealing (specify Article No. for sensor cables and order cables separately)
		Additional calibrations
		• Accredited matched-pair calibration acc. to ISO/IEC 17025: 2005
		• Customer-specified calibration up to 10 points
		• Customer-witnessed calibration
		Any of above calibration
		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)

¹⁾ Quick ship only in combination with Ceramic liner

Flow Measurement

SITRANS FM (electromagnetic) Flow sensors

MAG 1100 and MAG 1100 HT

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Selection and ordering data

Article No.

Sensor SITRANS FM MAG 1100 HT High Temperature Ceramic liner, Platinum electrode, Graphite gaskets included ↗ Click on the Article No. for the online configuration in the PIA Life Cycle Portal.	↗ 7ME6120- A 2 0 - 2 A
Diameter DN 15 (½") DN 25 (1") DN 40 (1½") DN 50 (2") DN 80 (3") DN 100 (4")	1 V 2 D 2 R 2 Y 3 M 3 T
Transmitter Standard sensor for remote transmitter (order transmitter separately) Ex sensor for remote transmitter (order transmitter separately)	A B
Cable glands/terminal box Metric: Stainless steel terminal box ½" NPT: Stainless steel terminal box	3 4
Additional information Please add "-Z" to Article No. and specify Order code(s) and plain text.	Order code
Certificates <ul style="list-style-type: none"> Material certificate according to EN 10204-3.1 Factory certificate according to EN 10204-2.2 Factory certificate according to EN 10204-2.1 	C12 C14 C15
Special calibration <ul style="list-style-type: none"> 5-point calibration¹⁾ 10-point calibration²⁾ Default (2 × 25 % and 2 × 90 %) matched-pair calibration 5-point, matched-pair calibration¹⁾ 10-point, matched-pair calibration²⁾ 	D01 D06 D11 D15 D18
Terminal blocks <ul style="list-style-type: none"> Factory mounted terminal blocks Tag name plate, stainless steel (specify in plain text) Tag name plate, plastic (self adhesive) Customer-specific transmitter setting	N02 Y17 Y18 Y20
Factory mounted sensor cables <ul style="list-style-type: none"> Sensor cables wired (specify Article No. for sensor cables and order cables separately) Sensor cables wired and IP68 sealing (specify Article No. for sensor cables and order cables separately) 	Y40 Y41
Additional calibrations <ul style="list-style-type: none"> Accredited matched-pair calibration acc. to ISO/IEC 17025: 2005 Customer-specified calibration up to 10 points Customer-witnessed calibration Any of above calibration 	On request³⁾ On request³⁾ On request³⁾

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 FM MAG 1100






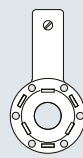


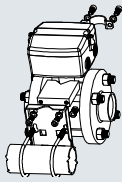
Description	Article No.
• English	A5E02435647

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

Accessories

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



Selection and ordering data	Article No.	Article No.
Accessories for MAG 1100 sensor		
Pipe connection ½" external thread For DN 2 ... 10 (1/12" ... 3/8") sensor, material: Stainless steel AISI 316L 2 pcs. pipe connections, 2 pcs. EPDM gaskets, 12 pcs. M4x12 screws <ul style="list-style-type: none"> • R½" ISO 7-1 tapered thread • ½" NPT thread For DN 2 ... 10 (1/12" ... 3/8") sensor, material: Hastelloy C, 2 pcs. pipe connections, 2 pcs. PTFE gaskets, 12 pcs. M4x12 screws <ul style="list-style-type: none"> • R½" ISO 7-1 tapered thread • ½" NPT thread For DN 2 ... 10 (1/12" ... 3/8") sensor, material PVDF (Kynar 1000) 2 pcs. pipe connections (max. 70 °C, PN 8 bar/max 158 °F, 116 PSI), 1 pc. grounding ring 1), 1 pc. grounding wire, 3 pcs. PTFE gaskets, 2 pcs. space rings, 6 pcs. M4x12 and 6 pcs. M4x20 screws <ul style="list-style-type: none"> • R½" ISO 7-1 tapered thread incl. grounding ring • ½" NPT thread incl. grounding ring 	 <p>FDK:083G0080 FDK:083G4330</p> <p>FDK:083G4332 FDK:083G4331</p> <p>A5E01018395 A5E01018400</p>	 <p>FDK:083G0686 FDK:083G0687 FDK:083G0689 FDK:083G0691 FDK:083G0692 FDK:083G0693 FDK:083G0694 FDK:083G0695</p>
EPDM gaskets Material: EPDM; each set includes: 2 pcs. EPDM gaskets, 1 pc. grounding wire, 1 pc. M6 screw, 1 pc. nut, 1 pc. washer, 1 pc. bolt grounding plate <ul style="list-style-type: none"> • DN 2 ... 10 (1/12" ... 3/8") • DN 15 (½") • DN 25 (1") • DN 40 (1½") • DN 50 (2") • DN 65 (2½") • DN 80 (3") • DN 100 (4") 	 <p>FDK:083G3116 FDK:083G3117 FDK:083G3119 FDK:083G3121 FDK:083G3122 FDK:083G3123 FDK:083G3124 FDK:083G3125</p>	 <p>FDK:083G3256 FDK:083G3257 FDK:083G3259 FDK:083G3261 FDK:083G3262 FDK:083G3263 FDK:083G3264 FDK:083G3265</p>
PTFE gaskets Material: PTFE; each set includes: 2 pcs. gaskets, 2 pcs. grounding wires, 3 pcs. M6 screws (DN 2 ... DN 10: 12 pcs. M4x14) <ul style="list-style-type: none"> • DN 2 ... 10 (1/12" ... 3/8") • DN 15 (½") • DN 25 (1") • DN 40 (1½") • DN 50 (2") • DN 65 (2½") • DN 80 (3") • DN 100 (4") 	 <p>FDK:083G0156 FDK:083G0157 FDK:083G0159 FDK:083G0161 FDK:083G0162 FDK:083G0163 FDK:083G0164 FDK:083G0165</p>	 <p>A5E01181599</p>
Graphite gaskets Material: Graphite; conductive, each set includes: 2 pcs. gaskets (can also be used as grounding ring) <ul style="list-style-type: none"> • DN 2 ... 10 (1/12" ... 3/8") • DN 15 (½") • DN 25 (1") • DN 40 (1½") • DN 50 (2") • DN 65 (2½") • DN 80 (3") • DN 100 (4") 	 <p>FDK:083G0116 FDK:083G0117 FDK:083G0119 FDK:083G0121 FDK:083G0122 FDK:083G0123 FDK:083G0124 FDK:083G0125</p>	 <p>FDK:083G0226</p>
Grounding ring (stainless steel) Material: AISI 316/1.4436; each set includes: 1 pc. grounding ring ¹⁾ , 3 pcs. PTFE gaskets, 1 pc. earth wire, 1 pc. M6 screw <ul style="list-style-type: none"> • DN 2 ... 10 (1/12" ... 3/8") • DN 15 (½") • DN 25 (1") • DN 40 (1½") • DN 50 (2") • DN 65 (2½") • DN 80 (3") • DN 100 (4") 		 <p>A5E38288519</p>
Grounding ring (Hastelloy C) Material: Hastelloy C22/2.4602; each set includes: 1 pc. grounding ring ¹⁾ , 3 pcs. PTFE gaskets, 1 pc. earth wire, 1 pc. M6 screw <ul style="list-style-type: none"> • DN 2 ... 10 (1/12" ... 3/8") • DN 15 (½") • DN 25 (1") • DN 40 (1½") • DN 50 (2") • DN 65 (2½") • DN 80 (3") • DN 100 (4") 		<p>A5E01181606 A5E01181610 A5E01181613 A5E01181615 A5E01181616 A5E01181619 A5E01181622</p>
Grounding ring (Tantalum) Material: Tantalum; each set includes: 1 pc. grounding ring ¹⁾ , 3 pcs. PTFE gaskets, 1 pc. earth wire, 1 pc. M6 screw <ul style="list-style-type: none"> • DN 2 ... 10 (1/12" ... 3/8") 		<p>A5E01181606 A5E01181610 A5E01181613 A5E01181615 A5E01181616 A5E01181619 A5E01181622</p>
Studs and nuts for DN 100 PN 25/40, 8 pcs. M20 studs, 16 pcs. M20 nuts Material: AISI 304/1.4305 <ul style="list-style-type: none"> • DN 100 (4") 		
Mounting kit Material: Stainless steel 300 series, each kit includes: 1 pc. clamp block, 1 pc. clamp, 1 pc. bracket, 4 pcs. M8x20 screw, 2 pcs. M8 nut, 6 pcs. M8 split lockwasher, 2 pcs. M6 U-bolts <ul style="list-style-type: none"> • DN 2 ... 100 (1/12" ... 4") 		

¹⁾ Thickness of grounding ring is 2 mm (0.08 inch), material Hastelloy C22/2.4602.

Flow Measurement

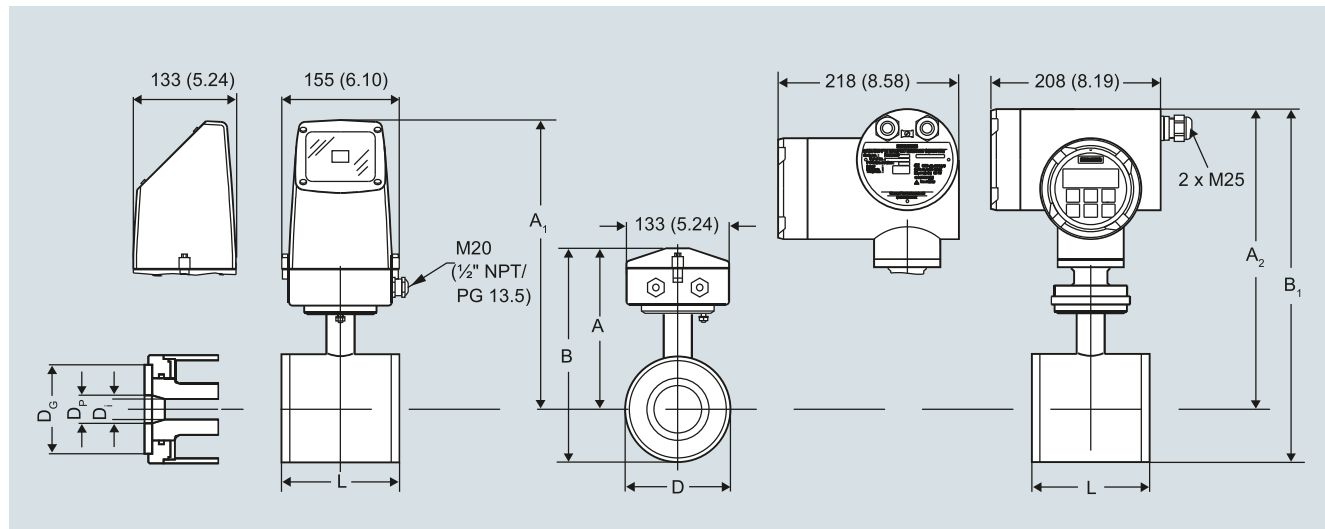
SITRANS FM (electromagnetic)

Flow sensors

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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⁾ [lbs]
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
1/4	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
1/2	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	5.9
1 1/2	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
2 1/2	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 stainless steel 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 lbs).

³⁾ A₂ is 3 mm (0.12") shorter than A₁

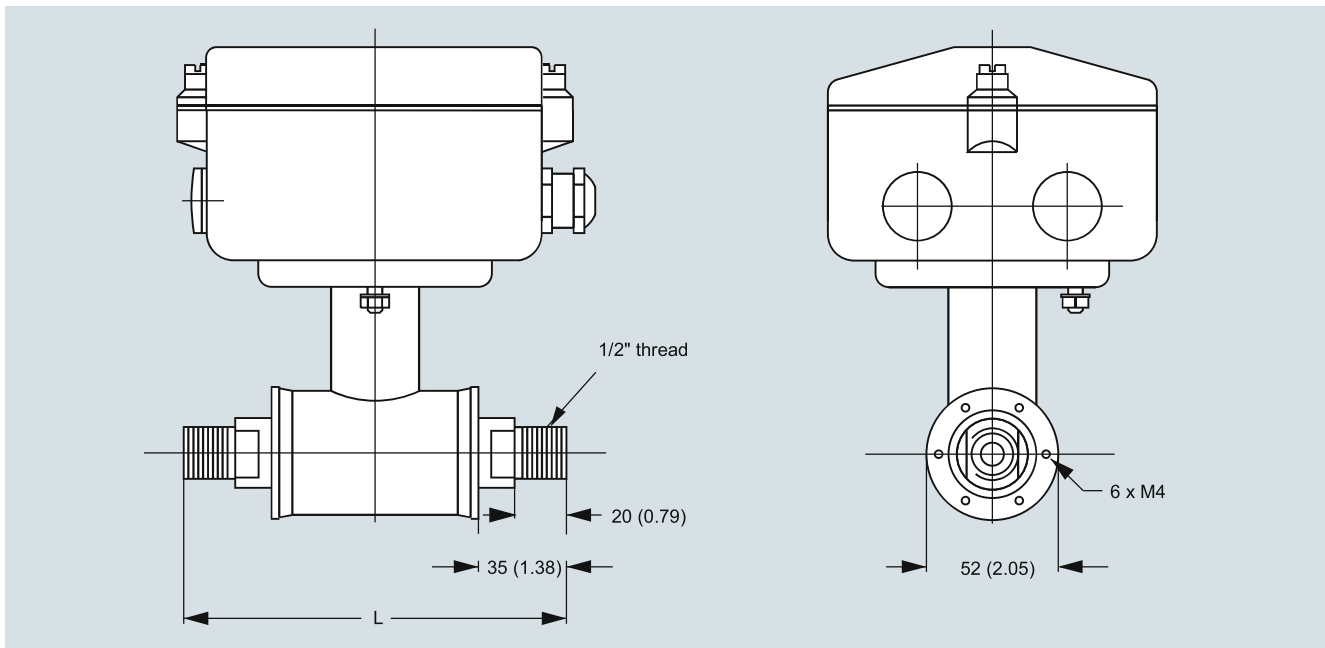
Dimensional drawings (continued)

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

Size DN	Inch	EPDM		Graphite		PTFE (Teflon)		Without gasket		Grounding ring	
		[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	1/2	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	1 1/2	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	2 1/2	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", 1/4" and 3/8") are prepared for assembly with the 1/2" 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.