



Overview



Transmitter MAG 5000/6000 compact version (left) and 19" insert version (right)

The MAG 5000 and 6000 are transmitters engineered for high performance, easy installation, commissioning and maintenance. The transmitters evaluate the signals from the SITRANS F M sensors type MAG 1100, MAG 1100 F, MAG 3100, MAG 3100 P and MAG 5100 W.

Transmitter types:

- MAG 5000: Max. measuring error $\pm 0.4 \% \pm 1 \text{ mm/s}$ (incl. sensor)
- MAG 6000: Max. measuring error $\pm 0.2 \% \pm 1 \text{ mm/s}$ (incl. sensor, see also sensor specifications) and with additional features such as: "plug & play" add-on bus modules; integrated batch functions.

Benefits

- Superior signal resolution for optimum turn down ratio
- Digital signal processing with many possibilities
- Automatic reading of SENSORPROM data for easy commissioning
- User configurable operation menu with password protection.
- 3 lines, 20 characters display in 11 languages.
- Flow rate in various units
- Totalizer for forward, reverse and net flow as well as additional information available
- Multiple functional outputs for process control, minimum configuration with analogue, pulse/frequency and relay output (status, flow direction, limits)
- Comprehensive self-diagnostic for error indication and error logging (see under SITRANS F M diagnostics)
- Batch control (MAG 6000 only)
- Custody transfer approval: PTB, OIML R 117, OIML R 49, MI-001, PTB K 7.2 and OE12/C 040 for chilled water
- MAG 6000 with add-on bus modules for HART, FOUNDATION Fieldbus H1, DeviceNet, Modbus RTU/RS 485, PROFIBUS PA and DP

Application

The SITRANS F M flowmeters are suitable for measuring the flow of almost all electrically conductive liquids, pastes and slurries. The main applications can be found in:

- Water and waste water
- Chemical and pharmaceutical industries
- Food and beverage industries
- Power generation and utility

Design

The transmitter is designed as either IP67 NEMA 4X/6 enclosure for compact or wall mounting or 19" version as a 19" insert as a base to be used in:

- 19" rack systems
- Front panel mounting IP65/NEMA 2
- Panel mounting IP20/NEMA 1
- Wall mounting IP66/NEMA 4X

Several options on 19" versions are available such as:

- Transmitters mounted in safe area for Ex ATEX approved flow sensors (incl. barriers)
- Transmitters with electrode cleaning unit on request

Function

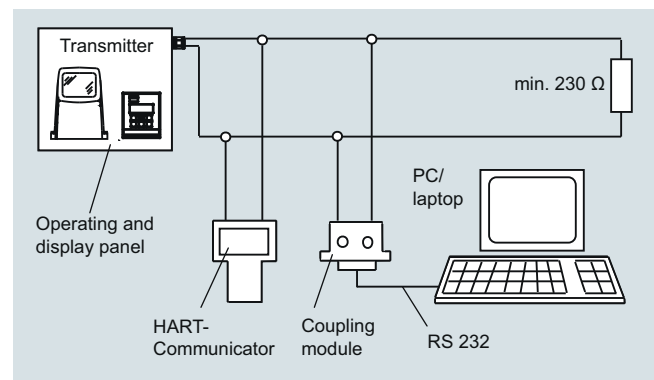
The MAG 5000/6000 are transmitters with a built-in alphanumeric display in several languages. The transmitters evaluate the signals from the associated electromagnetic sensors and also fulfil the task of a power supply unit which provides the magnet coils with a constant current.

Further information on connection, mode of operation and installation can be found in the data sheets for the sensors.

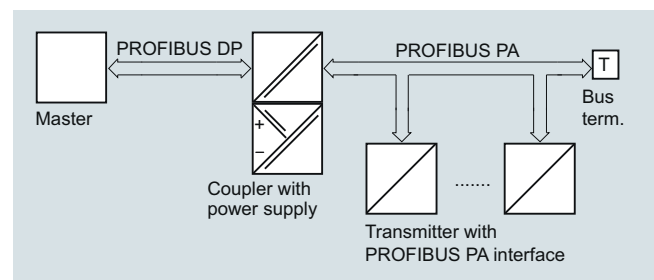
Displays and controls

Operation of the transmitter can be carried out using:

- Control and display unit
- HART communicator
- PC/laptop and SIMATIC PDM software via HART communication
- PC/laptop and SIMATIC PDM software using PROFIBUS or Modbus communication



HART communication



PROFIBUS PA communication

Flow Measurement

SITRANS F M

Transmitter MAG 5000/6000

Technical specifications

Mode of operation and design	
Measuring principle	Electromagnetic with pulsed constant field
Empty pipe	Detection of empty pipe (special cable required in remote mounted installation)
Excitation frequency	Depend on sensor size
Electrode input impedance	$> 1 \times 10^{14} \Omega$
Input	
Digital input	11 ... 30 V DC, $R_i = 4.4 \text{ K}\Omega$
• Activation time	50 ms
• Current	$I_{11 \text{ V DC}} = 2.5 \text{ mA}$, $I_{30 \text{ V DC}} = 7 \text{ mA}$
Output	
Current output	
• Signal range	0 ... 20 mA or 4 ... 20 mA
• Load	$< 800 \Omega$
• Time constant	0.1 ... 30 s, adjustable
Digital output	
• Frequency	0 ... 10 kHz, 50 % duty cycle (uni/bidirectional)
• Pulse (active)	24 V DC, 30 mA, $1 \text{ K}\Omega \leq R_i \leq 10 \text{ K}\Omega$, short-circuit-protected (power supplied from flowmeter)
• Pulse (passive)	3 ... 30 V DC, max. 110 mA, $200 \Omega \leq R_i \leq 10 \text{ K}\Omega$ (powered from connected equipment)
• Time constant	0.1 ... 30 s, adjustable
Relay output	
• Time constant	Changeover relay, same as current output
• Load	42 V AC/2 A, 24 V DC/1 A
Low flow cut off	0 ... 9.9 % of maximum flow
Galvanic isolation	All inputs and outputs are galvanically isolated.
Max. measuring error (incl. sensor and zero point)¹⁾	
• MAG 5000	0.4 % $\pm 1 \text{ mm/s}$
• MAG 6000	0.2 % $\pm 1 \text{ mm/s}$
Rated operation conditions	
Ambient temperature	
• Operation	- Display version: -20 ... +60 °C (-4 ... +140 °F) - Blind version: -20 ... +60 °C (-4 ... +140 °F) - MI-001 version: -25 ... +55 °C (-13 ... +131 °F) - Custody transfer (CT) version: -20 ... +50 °C (-4 ... +122 °F)
• Storage	-40 ... +70 °C (-40 ... +158 °F)
Mechanical load (vibration)	
Compact version	18 ... 1000 Hz, 3.17 g RMS, sinusoidal in all directions to IEC 60068-2-36
19" insert	1 ... 800 Hz, 1 g, sinusoidal in all directions to IEC 60068-2-36
Degree of protection	
Compact version	IP67/NEMA 4X/6 to IEC 529 and DIN 40050 (1 mH ₂ O 30 min.)
19" insert	IP20/NEMA 1 to IEC 529 and DIN 40050
EMC performance	
	IEC/EN 61326-1 (all environments) IEC/EN 61326-2-5

Display and keypad	
Totalizer	Two eight-digit counters for forward, net or reverse flow
Display	
	Background illumination with alphanumeric text, 3 x 20 characters to indicate flow rate, totaled values, settings and faults; Reverse flow indicated by negative sign
Time constant	Time constant as current output time constant
Design	
Enclosure material	Fiber glass reinforced polyamide; stainless steel AISI 316/1.4436 (IP65)
• Compact version	Standard 19" insert of aluminum/steel (DIN 41494), width: 21 TE, height: 3 HE
• 19" insert	IP20/NEMA 1; Aluminum
• Back of panel	IP20/NEMA 1 (prepared for IP65/NEMA 2 display side); ABS plastic
• Panel mounting	IP66/NEMA 4X; ABS plastic
• Wall mounting	
Dimensions	
Compact version	See dimensional drawings
19" insert	See dimensional drawings
Weight	
Compact version	0.75 kg (2 lb)
19" insert	See dimensional drawings
Power supply	
	115 ... 230 V AC +10 % -15 %, 50 ... 60 Hz 11 ... 30 V DC or 11 ... 24 V AC
Power consumption	
	230 V AC: 17 VA 24 V AC: 9 VA, $I_N = 380 \text{ mA}$, $I_{ST} = 8 \text{ A}$ (30 ms) 12 V DC: 11 W, $I_N = 920 \text{ mA}$, $I_{ST} = 4 \text{ A}$ (250 ms) 24 V DC: 8.4 VA, $I_N = 350 \text{ mA}$, $I_{ST} = 4 \text{ A}$ (10 ms)
	$I_{ST} = 4 \text{ A}$ (250 ms): For solar panel please secure stable current supply
Certificates and approvals	
General purpose	- CE (LVD, EMC, PED, RoHS) - UL (c-UL-us)
Hazardous areas	- FM, CSA - NI Class I Div. 2 Groups A, B, C, D
Custody transfer	- Cold water: MI-001 - Chilled water - PTB K 7.2 (Germany) - OE12/C 040 (Austria) - TS 27.02 008 (Denmark)
Marine	- ABS - Bureau Veritas - DNV - GL - Lloyd' s Register of Shipping
(only for remote version with MAG 5100 W, DN 50 ... DN 300)	- CMC/CPA (China) - C-TICK (Australia and New Zealand EMC) - EAC (Russia, Belarus, Kazakhstan) - KCC (South Korea)
Others	

Communication

Standard

- MAG 5000

- MAG 6000

Optional (MAG 6000 only)

- MAG 5000/6000 CT

Without serial communication or HART as option
 Prepared for client-mounted add-on modules
 HART, Modbus RTU/RS 485, FOUNDATION Fieldbus H1, DeviceNet, PROFIBUS PA, PROFIBUS DP as add-on modules
 No communication modules approved

1) For detailed accuracy specifications, see page 3/20

Safety barrier (e/ia)


Application	For use with MAG 5000/6000 19" and MAG 1100 Ex/MAG 3100 Ex		
Ex approval	MAG 1100 Ex [EEx e ia] IIB ATEX, EAC Ex MAG 3100 Ex [EEx e ia] IIC ATEX, EAC Ex		
Cable parameter	Group	Capacity in μF	Inductance in mH
Electrode	IIC	≤ 4.1	≤ 80
	IIB	≤ 45	≤ 87
	IIA	≤ 45	≤ 87
Ambient temperature			
• During operation	-20 ... +50 °C (-4 ... +122 °F)		
• During storage	-20 ... +70 °C (-4 ... +158 °F)		
Enclosure			
• Material	Standard 19" insert in aluminum/steel (DIN 41494)		
• Width	21 TE (4.75")		
• Height	3 HE (5.25")		
• Rating	IP20 / NEMA 1 to EN 60529		
• Mechanical load	1 g, 1 ... 800 Hz sinusoidal in all directions to EN 60068-2-36		

Flow Measurement

SITRANS F M

Transmitter MAG 5000/6000

Selection and Ordering data

Transmitter MAG 5000

Description	Article No.	
Transmitter MAG 5000 Blind for compact and wall mounting; IP67/NEMA 4X/6, fibre glass reinforced polyamide		
• 11 ... 30 V DC/ 11 ... 24 V AC	7ME6910-1AA30-0AA0	
• 115 ... 230 V AC, 50/60 Hz	7ME6910-1AA10-0AA0	
Transmitter MAG 5000 Display for compact and wall mounting; IP67/NEMA 4X/6, fibre glass reinforced polyamide		
• 11 ... 30 V DC/ 11 ... 24 V AC	7ME6910-1AA30-1AA0	
• 115 ... 230 V AC, 50/60 Hz	7ME6910-1AA10-1AA0	
• 115 ... 230 V AC, 50/60 Hz, with HART	7ME6910-1AA10-1BA0	
Transmitter MAG 5000 CT for compact and wall mounting, approved for custody transfer, without verification (no approval marks - only a complete flowmeter can be verified, i.e. sensor together with the transmitter); IP67/NEMA 4X/6, fibre glass reinforced polyamide		
• 11 ... 30 V DC/ 11 ... 24 V AC	7ME6910-1AA30-1AD0	
• 115 ... 230 V AC, 50/60 Hz	7ME6910-1AA10-1AD0	
Transmitter MAG 5000 for 19" rack and wall mounting		
• 11 ... 30 V DC/ 11 ... 24 V AC	7ME6910-2CA30-1AA0	
• 115 ... 230 V AC, 50/60 Hz	7ME6910-2CA10-1AA0	

Transmitter MAG 6000

Description	Article No.	
Transmitter MAG 6000 Blind for compact and wall mounting; IP67/NEMA 4X/6, fibre glass reinforced polyamide		
• 11 ... 30 V DC/ 11 ... 24 V AC	7ME6920-1AA30-0AA0	
• 115 ... 230 V AC, 50/60 Hz	7ME6920-1AA10-0AA0	
Transmitter MAG 6000 for compact and wall mounting; IP67/NEMA 4X/6, fibre glass reinforced polyamide		
• 11 ... 30 V DC/ 11 ... 24 V AC	7ME6920-1AA30-1AA0	
• 115 ... 230 V AC, 50/60 Hz	7ME6920-1AA10-1AA0	
Transmitter MAG 6000 for compact and wall mounting; IP65/NEMA 4, stainless steel AISI 316/1.4436 (only for sensor with stainless steel terminal box) (for remote version order stainless steel terminal box separately)		
• 11 ... 30 V DC/ 11 ... 24 V AC	7ME6920-1QA30-1AA0	
• 115 ... 230 V AC, 50/60 Hz	7ME6920-1QA10-1AA0	
Transmitter MAG 6000 CT for compact and wall mounting, approved for custody transfer, without verification (no approval marks - only a complete flowmeter can be verified, i.e. sensor together with the transmitter); IP67/NEMA 4X/6, fibre glass reinforced polyamide		
• 11 ... 30 V DC/ 11 ... 24 V AC	7ME6920-1AA30-1AD0	
• 115 ... 230 V AC, 50/60 Hz	7ME6920-1AA10-1AD0	
<u>Spare part transmitter for CT systems produced before 12/2016 or with firmware version 3.03</u>		
• 11 ... 30 V DC/ 11 ... 24 V AC	7ME6920-1AA30-1AB0	
• 115 ... 230 V AC, 50/60 Hz	7ME6920-1AA10-1AB0	
Transmitter MAG 6000 SV for compact and wall mounting; special excitation frequency 44 Hz for Batch application DN ≤ 25/1" IP67/NEMA 4X/6, fibre glass reinforced polyamide		
11 ... 30 V DC/ 11 ... 24 V AC	7ME6920-1AB30-1AA0	
115 ... 230 V AC, 50/60 Hz	7ME6920-1AB10-1AA0	

Description	Article No.	
Transmitter MAG 6000 for 19" rack and wall mounting		
• 11 ... 30 V DC/ 11 ... 24 V AC	7ME6920-2CA30-1AA0	
• 115 ... 230 V AC, 50/60 Hz	7ME6920-2CA10-1AA0	
Transmitter MAG 6000 SV for 19" rack and wall mounting; special excitation frequency 44 Hz for Batch application DN ≤ 25/1"		
• 11 ... 30 V DC/ 11 ... 24 V AC	7ME6920-2CB30-1AA0	
• 115 ... 230 V AC, 50/60 Hz	7ME6920-2CB10-1AA0	
MAG 6000 19" insert, complete mounted with IP66/ NEMA 4X wall mounting enclosure in ABS plastic; 115 ... 230 V AC, 50/60 Hz; cable gland PG13.5	7ME6920-2EA10-1AA0	
MAG 6000 19" insert with safety barrier for Ex-approved sensors, complete mounted with IP66/NEMA 4X wall mounting enclosure in ABS plastic; 115 ... 230 V AC, 50/60 Hz; cable gland PG13.5		
• For ATEX 2G D sensors	7ME6920-2MA11-1AA0	
MAG 6000 SV 19" insert, complete mounted with IP66/NEMA 4X wall mounting enclosure in ABS plastic, special excitation frequency 44 Hz for Batch application DN ≤ 25/1"; cable gland PG13.5		
• 11 ... 30 V DC, 11 ... 24 V AC	7ME6920-2EB30-1AA0	
• 115 ... 230 V AC, 50/60 Hz	7ME6920-2EB10-1AA0	

Operating instructions for SITRANS F M MAG 5000/6000

Description	Article No.	
For SITRANS F M MAG 5000/6000 IP67		
• English	A5E02338368	
• German	A5E02944982	
For SITRANS F M MAG 5000/6000 19"		
• English	A5E02082880	

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

Communication modules for MAG 6000

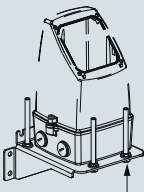
Description	Article No.	
HART (not for MAG 6000 I)	FDK:085U0226	
Modbus RTU/RS 485	FDK:085U0234	
PROFIBUS PA Profile 3	FDK:085U0236	
PROFIBUS DP Profile 3	FDK:085U0237	
DeviceNet	FDK:085U0229	
FOUNDATION Fieldbus H1	A5E02054250	

Operating instructions for SITRANS F add-on modules

Description	Article No.	
HART		
• English	A5E03089708	
PROFIBUS PA/DP		
• English	A5E00726137	
• German	A5E01026429	
Modbus		
• English	A5E00753974	
• German	A5E03089262	
FOUNDATION Fieldbus		
• English	A5E02318728	
• German	A5E02488856	
DeviceNet		
• English	A5E03089720	

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Accessories for MAG 5000 and MAG 6000

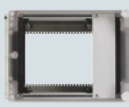
Description	Article No.	
Accessory kit for remote use of sensor with two 5-pin terminal blocks	A5E34827189	
Wall mounting unit for MAG 5000/6000 IP67/NEMA 4X/6, terminal box in polyamide ¹⁾		
• 4 x M20 cable glands	FDK:085U1018	
• 4 x 1/2" NPT cable glands	FDK:085U1053	
Special wall mounting unit for MAG 5000/6000 IP67/ NEMA 4X/6, mounting bracket in stainless steel AISI 316 (1.4401), terminal box in polyamide		
• 4 x M20 cable glands	A5E36699702	
• 4 x 1/2" NPT cable glands	A5E36699938	
Sun lid for MAG 5000/6000 transmitter (Frame and lid)	A5E02328485	
Standard coil or electrode cable, 3 x 1.5 mm ² / 18 gage, single shielded with PVC jacket, Temp. range: -30 ... +70 °C (-22 ... +158 °F)		
• 5 m (16.5 ft)	A5E02296523	
• 10 m (33 ft)	FDK:083F0121	
• 20 m (65 ft)	FDK:083F0210	
• 30 m (98 ft)	A5E02297309	
• 40 m (131 ft)	FDK:083F0211	
• 50 m (164 ft)	A5E02297317	
• 60 m (197 ft)	FDK:083F0212	
• 100 m (328 ft)	FDK:083F0213	
• 150 m (492 ft)	FDK:083F3052	
• 200 m (656 ft)	FDK:083F3053	
• 500 m (1640 ft)	FDK:083F3054	

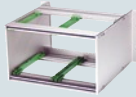
¹⁾ For stainless steel wall mounting kit, order:
- M20: FDK:085U1018 and A5E00836867
- 1/2" NPT: FDK:085U1053 and A5E00836868

Flow Measurement

SITRANS F M

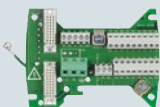
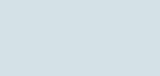
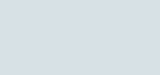
Transmitter MAG 5000/6000

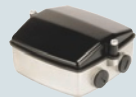
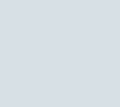
Description	Article No.	
Special electrode cable ¹⁾ (empty pipe detection or low conductivity), 3 x 0.25 mm ² , double shielded with PVC jacket; Temperature range : -30 ... +70 °C (-22 ... +158 °F)		
• 10 m (33 ft)	FDK:083F3020	
• 20 m (65 ft)	FDK:083F3095	
• 40 m (131 ft)	FDK:083F3094	
• 60 m (197 ft)	FDK:083F3093	
• 100 m (328 ft)	FDK:083F3092	
• 150 m (492 ft)	FDK:083F3056	
• 200 m (656 ft)	FDK:083F3057	
• 500 m (1640 ft)	FDK:083F3058	
Low-noise electrode coax cable for low conductivity and high vibration levels, 3 x 0.13 mm ² ; Temp. range: -25 ... +85 °C (-13 ... +185 °F)		
• 2 m (6.6 ft)	A5E02272692	
• 5 m (16.5 ft)	A5E02272723	
• 10 m (33 ft)	A5E02272730	
Cable kit including standard coil cable (3 x 1.5 mm ² / 18 gage, single shielded with PVC jacket) and special electrode cable ¹⁾ (3 x 0.25 mm ² , double shielded with PVC jacket); Temperature range: -30 ... +70 °C (-22 ... +158 °F)		
• 5 m (16.5 ft)	A5E02296329	
• 10 m (33 ft)	A5E01181647	
• 15 m (49 ft)	A5E02296464	
• 20 m (65 ft)	A5E01181656	
• 25 m (82 ft)	A5E02296490	
• 30 m (98 ft)	A5E02296494	
• 40 m (131 ft)	A5E01181686	
• 50 m (164 ft)	A5E02296498	
• 60 m (197 ft)	A5E01181689	
• 100 m (328 ft)	A5E01181691	
• 150 m (492 ft)	A5E01181699	
• 200 m (656 ft)	A5E01181703	
• 500 m (1640 ft)	A5E01181705	
Potting kit for IP68/NEMA 6P sealing of sensor junction box	FDK:085U0220	
19" safety barrier (21 TE) ¹⁾ [Ex e ia] IIC for MAG 1100 Ex sensors and MAG 3100 Ex sensors 12 ... 24 V, 115 ... 230 V, incl. back plate (A5E02559810)	FDK:083F5034	
Front panel mounting enclosure IP65/NEMA 2 in ABS plastic for 19" insert (21 TE)	FDK:083F5030	
Front panel mounting enclosure IP65/NEMA 2 in ABS plastic for 19" insert (42 TE)	FDK:083F5031	

Description	Article No.	
Panel mounting enclosure IP20/NEMA 1 in aluminium for 19" insert (21 TE)	FDK:083F5032	
Panel mounting enclosure IP20/NEMA 1 in aluminium for 19" insert (42 TE)	FDK:083F5033	
Wall mounting enclosure IP66/NEMA 4X in ABS plastic for 19" insert (cable glands and connection board not included)		
• 21 TE	FDK:083F5037	
• 42 TE	FDK:083F5038	
Front cover (7TE) for panel mounting enclosure	FDK:083F4525	
Sun shield for MAG 5000/6000 transmitters in remote design	A5E01209496	
Sun Shield for MAG 5000/6000 transmitter in compact design on MAG 3100 (DN 15 ... 2000/1/2" ... 78") or MAG 5100 W (DN 150 ... 1200/6" ... 48")	A5E01209500	

¹⁾ Special cables cannot be used with 19" safety barrier

Spare parts

Description	Article No.	
Connection board (for polyamide terminalbox)		
• 12 ... 24 V	A5E02559817	
• 115 ... 230 V	A5E02559816	
Connection board (for stainless steel terminalbox)		
• 12 ... 24 V	A5E02604280	
• 115 ... 230 V	A5E02604272	
Connection board MAG 5000/6000 19" insert for panel mounting enclosure, 12 ... 24 V/115 ... 230 V	A5E02559809	
Connection board MAG 5000/6000 19" insert with safety barrier for panel mount- ing enclosure, 12 ... 24 V/115 ... 230 V	A5E02559810	
Connection board MAG 5000/6000 19" insert with safety barrier for panel mount- ing enclosure, 12 ... 24 V/115 ... 230 V (only for sensors produced before October 2007)	A5E02559811	
Connection board MAG 5000/6000 19" insert with cleaning unit for panel mount- ing enclosure, 12 ... 24 V/115 ... 230 V	FDK:083F4123	
SENSORPROM memory unit (Sensor code and serial num- bers must be specified on order)		
• 2 kB (for MAG 5000/6000/ MAG 6000 I)		
- 1 pc.	FDK:085U1005	
- 10 pcs.	FDK:083F5052	
• 250 B (for MAG 2500/3000)	FDK:085U1008	
Display unit for MAG 5000/6000		
• Black neutral front	FDK:085U1038	
• Siemens front	FDK:085U1039	
HW key	On request	
Cable glands (polyamide), 4 pcs.		
• M20	A5E00822490	
• 1/2" NPT	A5E00822501	
• PG 13.5, 2 pcs.	FDK:083G0228	

Description	Article No.	
Sealing screws for sensor/ transmitter, 2 pcs	FDK:085U0221	
Terminal box, in polyamide, inclusive lid, terminal blocks, gasket and screws		
• M20	FDK:085U1050	
• 1/2" NPT	FDK:085U1052	
Terminal box lid, in polyamide	FDK:085U1003	
Terminal box, in stainless steel, inclusive lid, terminal blocks, gasket and screws, for MAG 6000 in stainless steel and for all Ex sensors,		
• M20	A5E00836867	
• 1/2" NPT	A5E00836868	
Terminal box (3A) for MAG 1100 F in polyamide, inclusive lid, terminal blocks, gasket and screws		
• M20	A5E00822478	
• 1/2" NPT	A5E00822479	
Gasket for terminal box lid in polyamide or for MAG 5000/ 6000 IP67/ NEMA 4X/6 enclo- sure in polyamide (5 pcs.)	A5E37086797	
Spare part kit for remote use of sensor with 20 pcs. 5-pin ter- minal blocks	A5E34346873	
Display frame in polyamide for MAG 5000/6000 IP67/ NEMA 4X/6 (5 pcs.)	A5E43491675	
Connection board MAG 5000/6000 19" insert for wall mounting enclosure, 12 ... 24 V / 115 ... 230 V	A5E02559813	
Connection board MAG 5000/ 6000 19" insert with safety bar- rier for wall mounting enclosure, 12 ... 24 V/115 ... 230 V	A5E02559814	
Connection board MAG 5000/ 6000 19" insert with safety bar- rier for wall mounting enclo- sure, 12 ... 24 V/115 ... 230 V (only for sensors produced before October 2007)	A5E02559812	
Connection board MAG 5000/ 6000 19" insert with cleaning unit for wall mounting enclo- sure, 12 ... 24 V/115 ... 230 V	A5E02559815	
SENSORPROM programmer with RS 232 interface	FDK:083H4246	

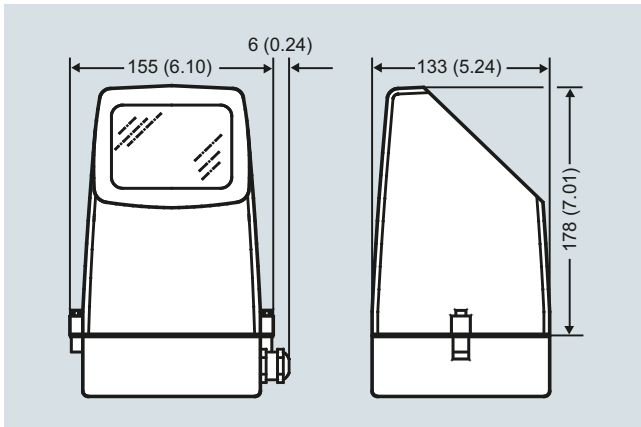
Flow Measurement

SITRANS F M

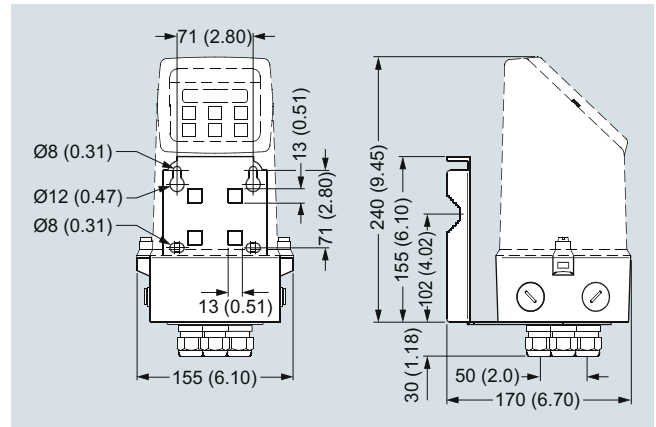
Transmitter MAG 5000/6000

Dimensional drawings

Transmitter IP67/NEMA 4X/6 compact polyamide

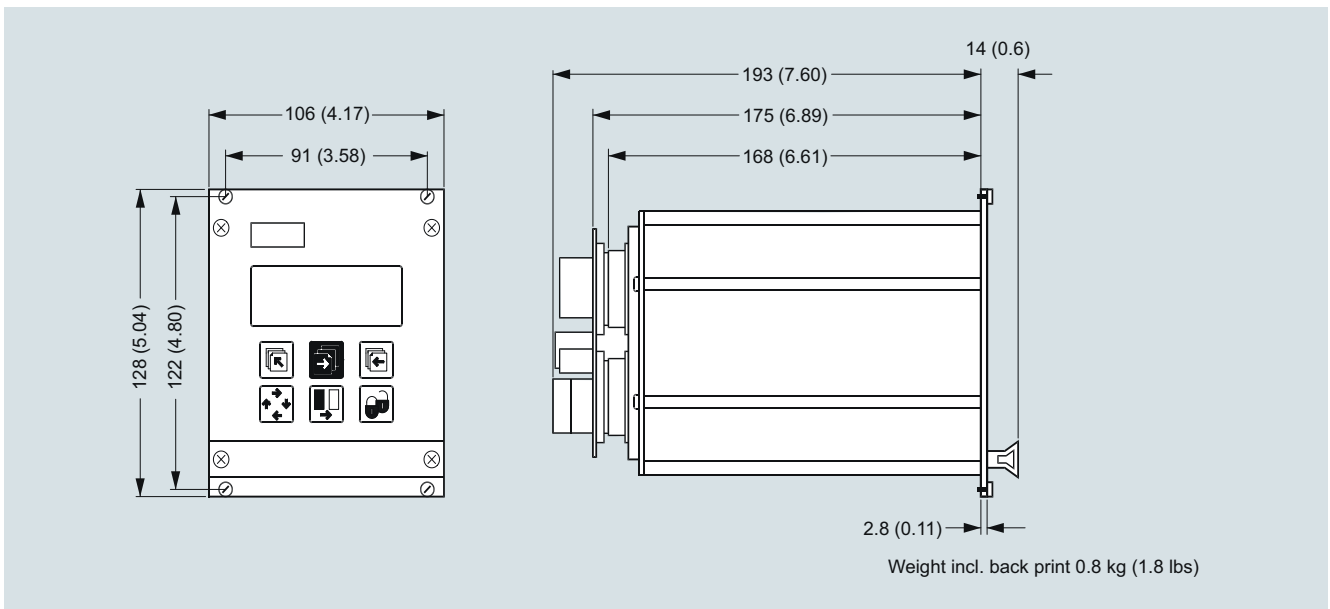


Transmitter compact mounted, dimensions in mm (inch)

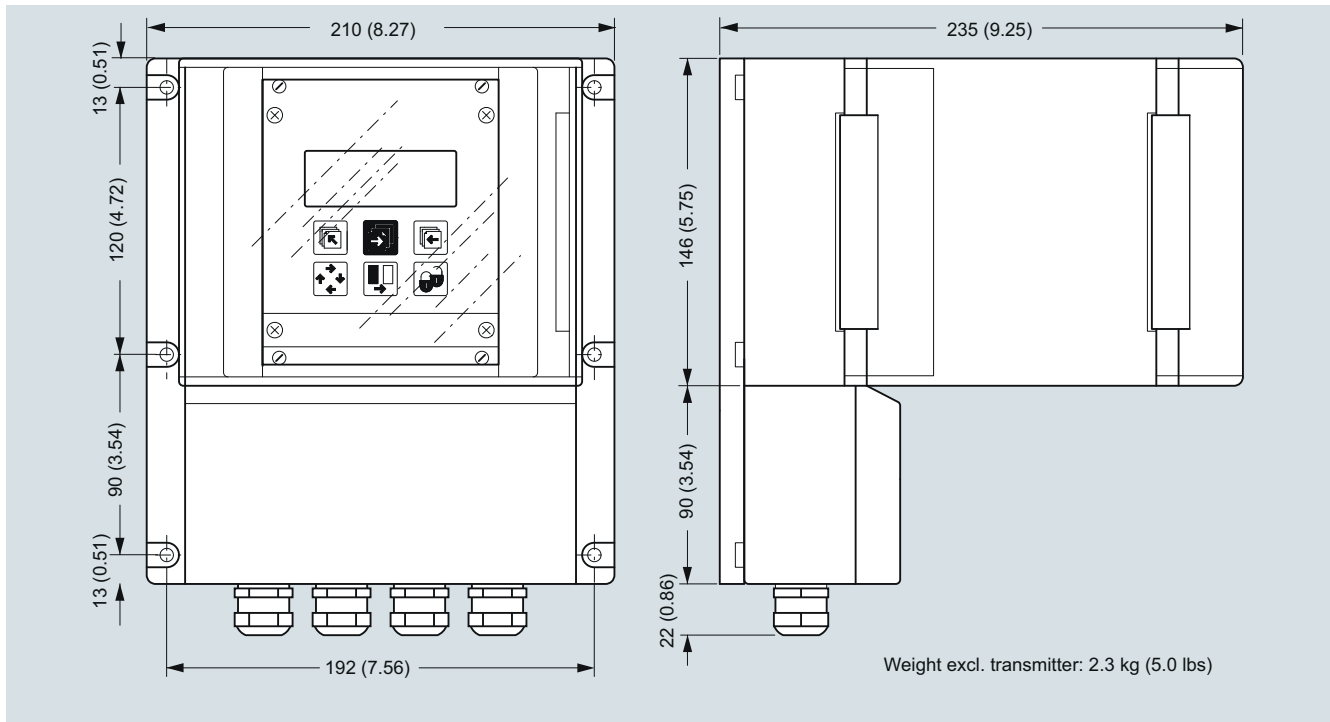


Transmitter wall mounted, dimensions in mm (inch)

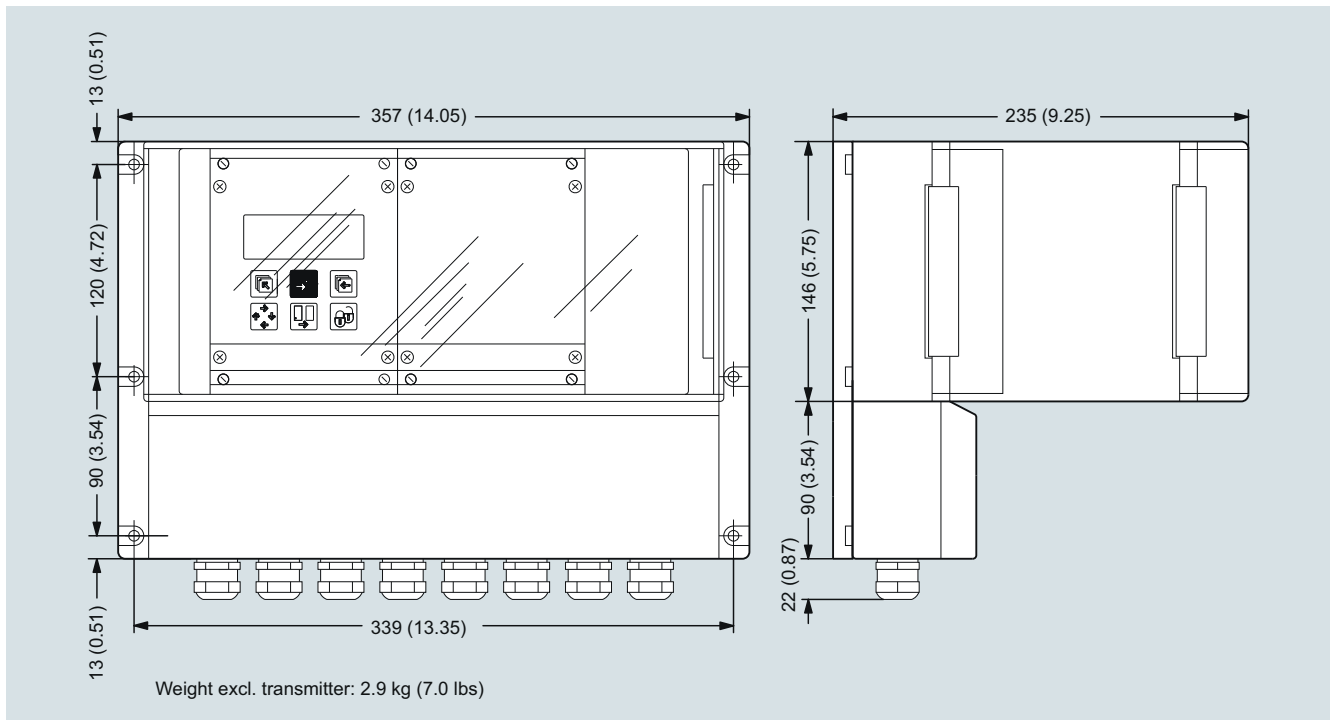
Transmitter, 19" IP20/NEMA 1 standard unit



Dimensions in mm (inch)

Transmitter, wall mounting IP66/NEMA 4X, 21 TE


Dimensions in mm (inch)

Transmitter, wall mounting IP66/NEMA 4X, 42 TE


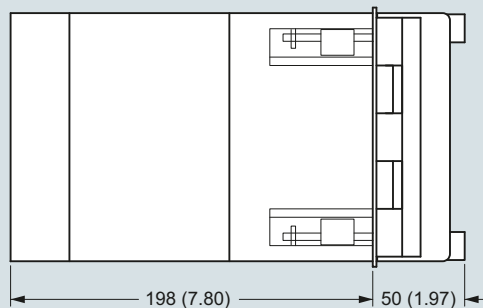
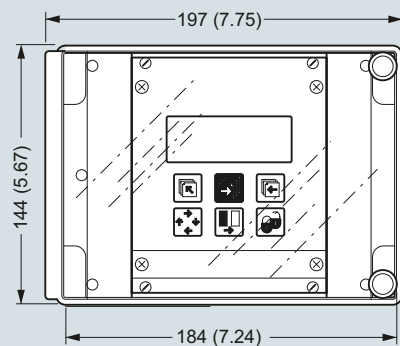
Dimensions in mm (inch)

Flow Measurement

SITRANS F M

Transmitter MAG 5000/6000

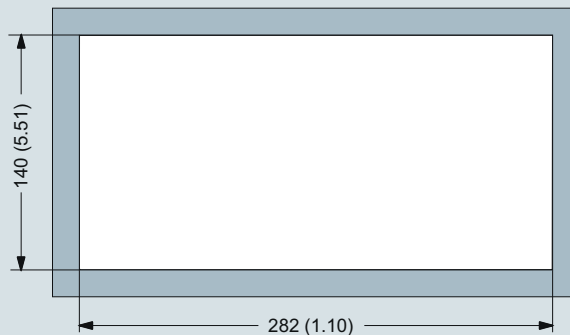
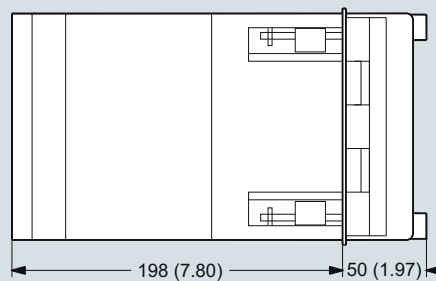
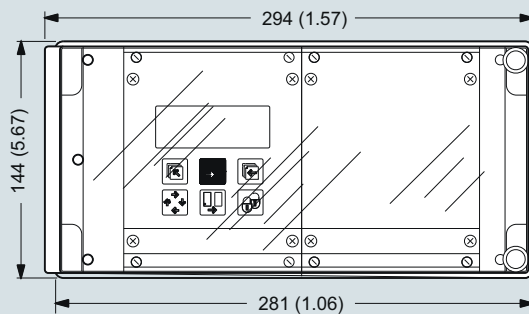
Transmitter, panel front IP20/NEMA 1, 21 TE



Weight excl. transmitter: 1.2 kg (2.7 lbs)

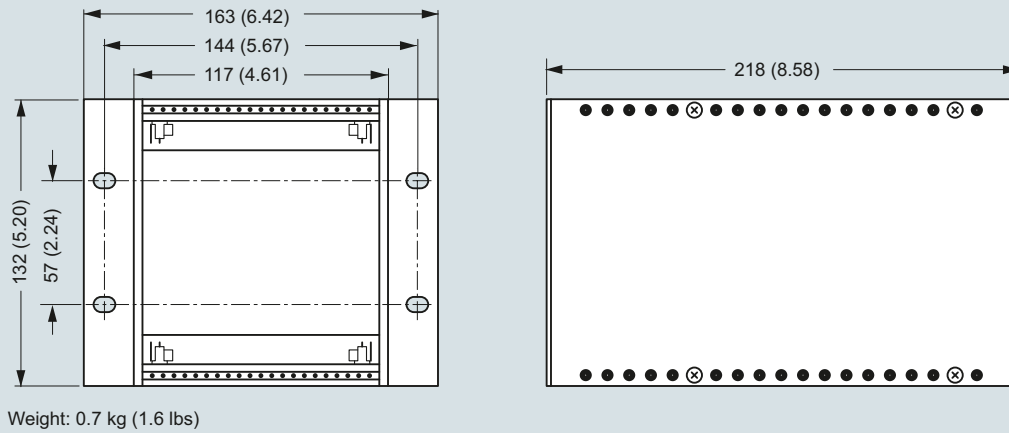
Dimensions in mm (inch)

Transmitter, panel front IP20/NEMA 1, 42 TE

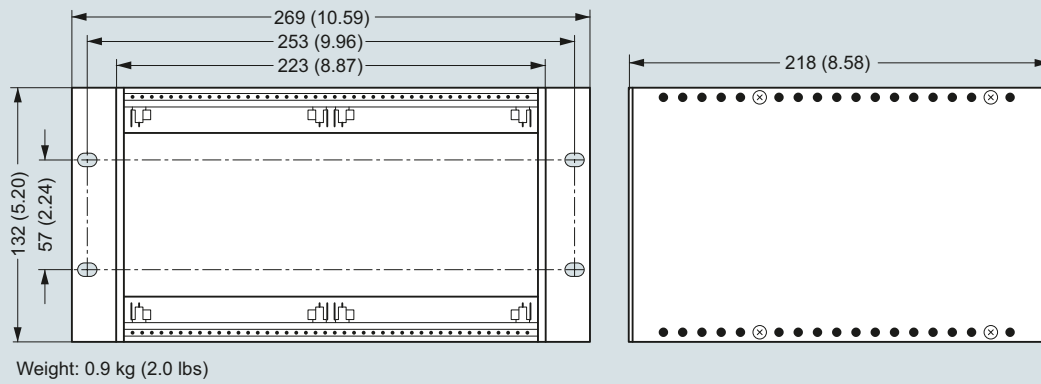


Weight excl. transmitter: 1.6 kg (3.5 lbs)

Dimensions in mm (inch)

Transmitter, back of panel IP20/NEMA 1, 21 TE


Dimensions in mm (inch)

Transmitter, back of panel IP20/NEMA 1, 42 TE


Dimensions in mm (inch)

Flow Measurement

SITRANS F M

Transmitter MAG 5000/6000

Schematics

Electrical connection

Grounding

PE must be connected due to safety class 1 power supply.

Mechanical counters

When mounting a mechanical counter to terminals 57 and 58 (active output), a 1000 μ F capacitor must be connected to the terminals 56 and 58. Capacitor + is connected to terminal 56 and capacitor - to terminal 58.

Output cables

If the output cable length is long in noisy environment, we recommend to use shielded cable.

Power supply

Transmitter



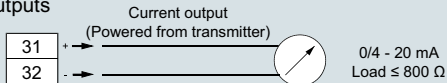
115 ... 230 V AC

L1 ← L
N ← N
PE ← PE

11 ... 30 V DC/11 ... 24 V AC

1 ← +
2 ← -
PE ← PE

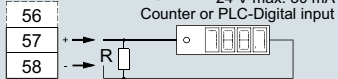
Outputs



Passive output (External powered)



Active output (Powered from transmitter)

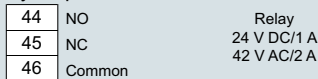


Menu setup

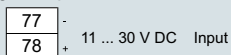
Negative: Positive:

R = Pull up/down resistor
1 ... 10 K Ω may be
required - depending on
Cables/Input resistance

Relay output

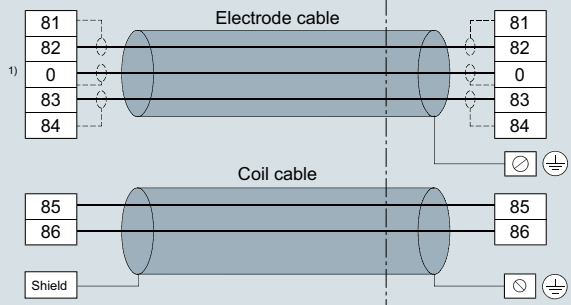


Digital input



91 92 93 94 95 96 97
Reserved for communication modules

Sensor connection



1) Note:
Special cable with individual wire shields (shown as dotted lines) are only required
when using empty pipe function or long cables.



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