

# SITRANS F flowmeters

## SITRANS F M

### MAG 3100

#### Overview



The SITRANS F M MAG 3100 is an electromagnetic flow sensor in a large variety that meets the demands of almost every flow application.

#### Benefits

- Wide range of sizes: DN 15 to DN 2000 (½" to 78")
- Wide pressure range: PN 6 to PN 100 ANSI Class 150 / 300, AS 2129 / AS 4087. On request up to 690 bar (10000 psi)
- Wide range of electrode and liner material to fit even the most extreme process media
- Fully welded construction provides a ruggedness that suits the toughest applications and environments
- Easy commissioning, the SENSORPROM unit automatically updates settings.
- Designed to allow patented SITRANS F M in-situ verification using the 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
- Steel industry
- Mining
- Utility
- Power generation & distribution
- Oil & gas / HPI
- Water & waste water

#### Design

- Compact or remote mounting possible
- Easy "plug & play" field changeability of transmitter
- Ex ATEX and CSA/FM versions
- High temperature sensor for applications with temperatures up to 180 °C (356 °F)
- Approvals for PTB, OIML R75 and OIML R117
- Meets EEC directives: PED, 97/23/EC pressure directive for EN1092-1 flanges
- Build-in length according to ISO 13359
- Onsite or factory upgrade to IP68/NEMA 6P of a standard sensor.

#### Mode of operation

The flow measuring principle is based on Faraday's law of electromagnetic induction where 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 MAG 5000, 6000 and 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/RS485.

## Technical specifications

Version	MAG 3100	MAG 3100 HT (High Temperature)	MAG 3100 P
Nominal size	DN 15 ... DN 2000 (½" ... 78")	DN 15 ... DN 300 (½" ... 12")	DN 15 ... DN 300 (½" ... 12")
Measuring principle	electromagnetic induction		
Excitation frequency	<ul style="list-style-type: none"> <li>• DN 15 ... 65 (½" ... 2½"): 12.5 Hz</li> <li>• DN 80 ... 150 (3" ... 6"): 6.25 Hz</li> <li>• DN 200 ... 1200 (8" ... 48"): 3.125 Hz</li> <li>• DN 1400 ... 2000 (54" ... 78"): 1.5625 Hz</li> </ul>	<ul style="list-style-type: none"> <li>• DN 15 ... 65 (½" ... 2½"): 12.5 Hz</li> <li>• DN 80 ... 150 (3" ... 6"): 6.25 Hz</li> <li>• DN 200 ... 300 (8" ... 12"): 3.125 Hz</li> </ul>	<ul style="list-style-type: none"> <li>• DN 15 ... 65 (½" ... 2½"): 12.5 Hz</li> <li>• DN 80 ... 150 (3" ... 6"): 6.25 Hz</li> <li>• DN 200 ... 300 (8" ... 12"): 3.125 Hz</li> </ul>

## Process connection

Flanges	MAG 3100	MAG 3100 HT (High Temperature)	MAG 3100 P
	<p>EN 1092-1, raised face (EN 1092-1, DIN 2501 &amp; BS 4504 have the same mating dimensions)</p> <ul style="list-style-type: none"> <li>• DN 65 ... 2000 (2½" ... 48"): PN 6 (87 psi)</li> <li>• DN 200 ... 2000 (8" ... 48"): PN 10 (145 psi)</li> <li>• DN 65 ... 2000 (2½" ... 78"): PN 16 (232 psi)</li> <li>• DN 200 ... 600 (8" ... 24"): PN 25 (362 psi)</li> <li>• DN 15 ... 600 (½" ... 24"): PN 40 (580 psi)</li> <li>• DN 50 ... 300 (2" ... 12"): PN 63 (913 psi)</li> <li>• DN 25 ... 300 (1" ... 12"): PN 100 (1450 psi)</li> </ul> <p>ANSI B16.5 (~BS 1560), raised face</p> <ul style="list-style-type: none"> <li>• ½" ... 24": Class 150 (20 bar (290 psi))</li> <li>• ½" ... 24": Class 300 (50 bar (725 psi))</li> </ul> <p>AWWA C-207, flat face 28" ... 78": Class D (10 bar)</p> <p>AS 2129, raised face ½" ... 48": Table E</p> <p>AS 4087, raised face:</p> <ul style="list-style-type: none"> <li>• PN 16 (DN 50 ... 1200, 16 bar (232 psi))</li> <li>• PN 21 (DN 50 ... 600, 21 bar (304 psi))</li> <li>• PN 35 (DN 50 ... 600, 35 bar (508 psi))</li> </ul> <p>Other flanges and pressure ratings on request</p>	<p>EN 1092-1, raised face (EN 1092-1, DIN 2501 &amp; BS 4504 have the same mating dimensions)</p> <ul style="list-style-type: none"> <li>• DN 15 ... 300 (½" ... 12"): PN 40 (580 psi)</li> <li>• DN 65 ... 300 (2½" ... 12"): PN 16 (232 psi)</li> <li>• DN 200 ... 300 (8" ... 12"): PN 10 (145 psi)</li> <li>• DN 200 ... 300 (8" ... 12"): PN 25 (362 psi)</li> </ul> <p>ANSI B16.5 (~BS 1560), raised face:</p> <ul style="list-style-type: none"> <li>• ½" ... 12": Class 150 (20 bar (290 psi))</li> <li>• ½" ... 12": Class 300 (50 bar (725 psi))</li> </ul> <p>AS 2129, raised face ½" ... 12": Table E</p> <p>Other flanges and pressure ratings on request</p>	<p>EN 1092-1, raised face (EN 1092-1, DIN 2501 &amp; BS 4504 have the same mating dimensions)</p> <ul style="list-style-type: none"> <li>• DN 15 ... 50 (½" ... 2"): PN 40 (580 psi)</li> <li>• DN 65 ... 300 (2½" ... 12"): PN 16 (232 psi)</li> <li>• DN 200 ... 300 (8" ... 12"): PN 10 (145 psi)</li> </ul> <p>ANSI B16.5 (~BS 1560), raised face</p> <ul style="list-style-type: none"> <li>• ½" ... 12": Class 150 (20 bar (290 psi))</li> </ul>

## Rated operation conditions

Ambient temperature (conditions also dependent on liner characteristics)	MAG 3100	MAG 3100 HT (High Temperature)	MAG 3100 P
• Sensor	-40 ... +100 °C (-40 ... +212 °F)	-40 ... +100 °C (-40 ... +212 °F)	-40 ... +100 °C (-40 ... +212 °F)
• Sensor ATEX	-20 ... +60 °C (-4 ... +140 °F)	for up to 150 °C (302 °F) temperature of medium: -20 ... +60 °C (-4 ... +140 °F) for 150 ... 180 °C (302 ... 356 °F) temperature of medium: -20 ... +50 °C (-4 ... +122 °F)	-20 ... +60 °C (-4 ... +140 °F)
• With compact transmitter MAG 5000/6000	-20 ... +50 °C (-4 ... +122 °F)	-20 ... +50 °C (-4 ... +122 °F)	-20 ... +50 °C (-4 ... +122 °F)
• With compact transmitter MAG 6000 I	-20 ... +60 °C (-4 ... +140 °F)	-20 ... +60 °C (-4 ... +140 °F)	-20 ... +60 °C (-4 ... +140 °F)
• With compact transmitter MAG 6000 I Ex d	-10 ... +60 °C (14 ... 140 °F)	-10 ... +60 °C (14 ... 140 °F)	-10 ... +60 °C (14 ... 140 °F)

# SITRANS F flowmeters

## SITRANS F M

### MAG 3100

Version	MAG 3100	MAG 3100 HT (High Temperature)	MAG 3100 P
<b>Operating pressure</b>			
<b>Operating pressure</b> [abs. bar] (maximum operating pressure decreases with increasing operating temperature and with stainless steel flanges)	<ul style="list-style-type: none"> <li>• Neoprene 0.01 ... 100 bar (0.15 ... 1450 psi)</li> <li>• EPDM 0.01 ... 40 bar (0.15 ... 580 psi)</li> <li>• Linatex® 0.01 ... 40 bar (0.15 ... 580 psi)</li> <li>• Ebonite 0.01 ... 100 bar (0.15 ... 1450 psi)</li> <li>• PTFE (DN ≤ 300, 0.3 ... 50 bar/ ≤ 12", 4 ... 725 psi) (350 ≤ DN ≤ 600/14" ≤ DN ≤ 24") 0.3 ... 40 bar (4 ... 580 psi)</li> <li>• PFA               <ul style="list-style-type: none"> <li>- DN 25 ... 100 (1" ... 4"):</li> <li>0.01 ... 50 bar (0.15 ... 725 psi)</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• PTFE Teflon               <ul style="list-style-type: none"> <li>- DN 15 ... 300 (½" ... 12") (130/180 °C (266 °F/356°F)): 0.3/0.6 ... 50 bar (4/8 ... 725 psi) (180 °C (356 °F) PTFE has factory mounted grounding SS rings type E &amp; SS terminal box)</li> </ul> </li> <li>• PFA               <ul style="list-style-type: none"> <li>- DN 25 ... 100 (1" ... 4"):</li> <li>0.01 ... 50 bar (0.15 ... 725 psi)</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• PTFE Teflon               <ul style="list-style-type: none"> <li>- DN 15 ... 300 (½" ... 12") : 0.3 ... 40 bar (4 ... 580 psi)</li> </ul> </li> <li>• PFA               <ul style="list-style-type: none"> <li>- DN 15 ... 100 (1" ... 4"):</li> <li>0.01 ... 50 bar (0.15 ... 725 psi)</li> </ul> </li> </ul>
Enclosure rating	IP67/NEMA 4X/6 to EN 60529, 1 mH <sub>2</sub> O for 30 min Option: IP68/NEMA 6P to EN 60529, 10 mH <sub>2</sub> O cont. (no ATEX)	IP67/NEMA 4X/6 to EN 60529, 1 mH <sub>2</sub> O for 30 min Option: IP68/NEMA 6P to EN 60529, 10 mH <sub>2</sub> O cont. (no ATEX)	IP67/NEMA 4X/6 to EN 60529, 1 mH <sub>2</sub> O for 30 min Option: IP68/NEMA 6P to EN 60529, 10 mH <sub>2</sub> O cont. (no ATEX)
Pressure drop at 3 m/s	As straight pipe		
Test pressure	1.5 x PN (where applicable)		
Mechanical load	<ul style="list-style-type: none"> <li>• 18 ... 1000 Hz random in x, y, z, directions for 2 hours according to EN 60068-2-36</li> <li>• Sensor: 3.17 grms</li> <li>• Sensor with compact MAG 5000/6000 mounted transmitter: 3.17 grms</li> <li>• Sensor with compact MAG 6000 I/6000 I Ex mounted transmitter: 1.14 grms</li> </ul>	<ul style="list-style-type: none"> <li>• 18 ... 1000 Hz random in x, y, z, directions for 2 hours according to EN 60068-2-36</li> <li>• Sensor: 3.17 grms</li> <li>• Sensor with compact MAG 5000/6000 mounted transmitter: 3.17 grms</li> <li>• Sensor with compact MAG 6000 I/6000 I Ex mounted transmitter: 1.14 grms</li> </ul>	<ul style="list-style-type: none"> <li>• 18 ... 1000 Hz random in x, y, z, directions for 2 hours according to EN 60068-2-36</li> <li>• Sensor: 3.17 grms</li> <li>• Sensor with compact MAG 5000/6000 mounted transmitter: 3.17 grms</li> <li>• Sensor with compact MAG 6000 I/6000 I Ex mounted transmitter: 1.14 grms</li> </ul>
Temperature of medium	<ul style="list-style-type: none"> <li>• Neoprene 0 ... +70 °C (32 ... 158 °F)</li> <li>• EPDM -10 ... +70 °C (14 ... 158 °F)</li> <li>• Linatex® (rubber) -40 ... +70 °C (-40 ... +158 °F) (for temperatures below -20 °C (-4 °F) AISI 304 or 316 flanges must be used)</li> <li>• Ebonite 0 ... 95 °C (32 ... 203 °F)</li> <li>• PTFE -20 ... +100 °C (-4 ... +212 °F)</li> <li>• PFA -20 ... +100 °C (-4 ... +212 °F)</li> </ul>	<ul style="list-style-type: none"> <li>• PTFE -20 ... +130 °C (-4 ... +266 °F)</li> <li>• PTFE -20 ... +180 °C (-4 ... +356 °F) Factory mounted grounding rings type E and SS terminal box. Can only be used with remote transmitter.</li> <li>• PFA -20 ... +150 °C (-4 ... +300 °F)</li> </ul>	<ul style="list-style-type: none"> <li>• PTFE -20 ... +130 °C (-4 ... +266 °F)</li> <li>• PFA -20 ... +150 °C (-4 ... +300 °F)</li> </ul>
EMC	89/336 ECC	89/336 ECC	89/336 ECC
<b>Design</b>			
Weight	See dimensional drawings		
Flange and housing material	Carbon steel ASTM A 105, with corrosion resistant two component epoxy coating (min. 150 µm) or AISI 304 (1.4301) flanges and carbon steel housing, with corrosion resistant two component epoxy coating (min. 150 µm) or AISI 316 L (1.4404) flanges and housing, polished	Carbon steel ASTM A 105, with corrosion resistant two component epoxy coating (min. 150 µm) or AISI 304 (1.4301) flanges and carbon steel housing, with corrosion resistant two component epoxy coating (min. 150 µm) or AISI 316 L (1.4404) flanges and housing, polished	Carbon steel ASTM A 105, with corrosion resistant two component epoxy coating (min. 150 µm)
Measuring pipe material	AISI 304 (1.4301) (AISI 316L (1.4404) flanges and housing, polished has measuring pipe of AISI 316L (1.4435))	AISI 304 (1.4301) (AISI 316L (1.4404) flanges and housing, polished has measuring pipe of AISI 316L (1.4435))	AISI 304 (1.4301)
Electrode material	<ul style="list-style-type: none"> <li>• AISI 316 Ti (1.4571)</li> <li>• Hastelloy C276 (PFA: Hastelloy C22)</li> <li>• Platinum/Iridium,</li> <li>• Titanium</li> <li>• Tantalum</li> </ul>	<ul style="list-style-type: none"> <li>• AISI 316 Ti (1.4571)</li> <li>• Hastelloy C276 (PFA: Hastelloy C22)</li> <li>• Platinum/Iridium,</li> <li>• Titanium</li> <li>• Tantalum</li> </ul>	Hastelloy C276 (PFA: Hastelloy C22)
Grounding Electrode material	Material as measuring electrodes: Exceptions - see ordering data	No grounding electrodes	No grounding electrodes

Version	MAG 3100	MAG 3100 HT (High Temperature)	MAG 3100 P
<b>Design (continued)</b>			
Terminal box (remote version only)	<ul style="list-style-type: none"> <li>Standard Fibre glass-reinforced polyamide</li> <li>Option Stainless steel AISI 316 (1.4436)</li> <li>Ex ATEX (remote version only) Stainless steel AISI 316 (1.4436)</li> </ul>	<ul style="list-style-type: none"> <li>Stainless steel AISI 316 (1.4436)</li> <li>Ex ATEX (remote version only) Stainless steel AISI 316 (1.4436)</li> </ul>	<ul style="list-style-type: none"> <li>Standard Fibre glass-reinforced polyamide</li> <li>Option Stainless steel AISI 316 (1.4436)</li> <li>Ex ATEX (remote version only) Stainless steel AISI 316 (1.4436)</li> </ul>
Cable entries	<ul style="list-style-type: none"> <li>Remote installation 2 x M20 or 2 x ½ NPT</li> <li>Compact installation               <ul style="list-style-type: none"> <li>MAG 5000/MAG 6000: 4 x M20 or 4 x ½"NPT</li> <li>MAG 6000 I: 2 x M25 (for supply/output)</li> <li>MAG 6000 I Ex. d: 2 x M20 (for supply/output)</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Remote installation 2 x M20 or 2 x ½ NPT</li> </ul>	<ul style="list-style-type: none"> <li>Remote installation 2 x M20 or 2 x ½ NPT</li> <li>Compact installation               <ul style="list-style-type: none"> <li>MAG 5000/MAG 6000: 4 x M20 or 4 x ½"NPT</li> <li>MAG 6000 I: 2 x M25 (for supply/output)</li> <li>MAG 6000 I Ex. d: 2 x M20 (for supply/output)</li> </ul> </li> </ul>
<b>Certificates and approvals</b>			
Conforms to	PED – 97/23 EC, CRN	PED – 97/23 EC, CRN	PED – 97/23 EC, CRN
Material certificate EN 10204 3.1	On request	On request	Pipe and flange certificate available as option
Ex approvals	ATEX 2G D sensor <ul style="list-style-type: none"> <li>DN 15 ... 300: EEx d e ia IIC T4 - T6</li> <li>DN 350 ... 2000 EEx e ia IIC T4 - T6</li> </ul> Non ATEX sensors <ul style="list-style-type: none"> <li>FM Class 1 Div 2</li> <li>CSA Class 1, Div 2</li> </ul>	ATEX 2G D sensor <ul style="list-style-type: none"> <li>DN 15 ... 300: EEx d e ia IIC T3 - T6</li> </ul> Non ATEX sensors <ul style="list-style-type: none"> <li>FM Class 1 Div 2</li> <li>CSA Class 1, Div 2</li> </ul>	ATEX 2G D sensor <ul style="list-style-type: none"> <li>DN 15 ... 300: EEx d e ia IIC T3 - T6</li> </ul> Non ATEX sensors <ul style="list-style-type: none"> <li>FM Class 1 Div 2</li> <li>CSA Class 1, Div 2</li> </ul>
Drinking water approvals	EPDM lining: <ul style="list-style-type: none"> <li>WRAS (WRc, BS6920 cold water, GB)</li> <li>ACS listed (F)</li> <li>DVGW W270 (D)</li> <li>Belaqua (B)</li> </ul>		
Custody transfer (CT) (≤ DN2000) (only together with MAG 5000/6000 CT), order as special	Cold water pattern approval - DANAK TS 22.36.001, PTB (Denmark and Germany) Heat meter pattern approval - OIML R 75 (Denmark) Hot water pattern approval - PTB (Germany) Other media than water - OIML R 117 (Denmark)	Cold water pattern approval - DANAK TS 22.36.001, PTB (Denmark and Germany) Heat meter pattern approval - OIML R 75 (Denmark) Hot water pattern approval - PTB (Germany) Other media than water - OIML R 117 (Denmark)	Cold water pattern approval - DANAK TS 22.36.001, PTB (Denmark and Germany) Heat meter pattern approval - OIML R 75 (Denmark) Hot water pattern approval - PTB (Germany) Other media than water - OIML R 117 (Denmark)

Technical specification for transmitter - please see transmitter pages.

# SITRANS F flowmeters

## SITRANS F M

### MAG 3100

Selection and Ordering data	Order No.
Sensor SITRANS F M MAG 3100	7ME6310-
<b>Diameter</b>	
DN 15 (½") (PTFE liner only)	1 V
DN 25 (1")	2 D
DN 40 (1½")	2 R
DN 50 (2")	2 Y
DN 65 (2½")	3 F
DN 80 (3")	3 M
DN 100 (4")	3 T
DN 125 (5")	4 B
DN 150 (6")	4 H
DN 200 (8")	4 P
DN 250 (10")	4 V
DN 300 (12")	5 D
DN 350 (14")	5 K
DN 400 (16")	5 R
DN 450 (18")	5 Y
DN 500 (20")	6 F
DN 600 (24")	6 P
DN 700 (28")	6 Y
DN 750 (30")	7 D
DN 800 (32")	7 H
DN 900 (36")	7 M
DN 1000 (40")	7 R
DN 1050 (42")	7 U
DN 1100 (44")	7 V
DN 1200 (48")	8 B
DN 1400 (54")	8 F
DN 1500 (60")	8 K
DN 1600 (66")	8 P
DN 1800 (72")	8 T
DN 2000 (78")	8 Y
<b>Flange norm and pressure rating</b>	
to EN 1092-1	
PN 6 (DN 65 ... 2000 (2½" ... 78"))	A
PN 10 (DN 200 ... 2000 (8" ... 78"))	B
PN 16 (DN 65 ... 1200 (2½" ... 48"))	C
PN 16, non PED (DN 700 ... 2000 (28" ... 78"))	D
PN 25 (DN 200 ... 600 (8" ... 24"))	E
PN 40 (DN 15 ... 600 (½" ... 24"))	F
PN 63 (DN 50 ... 300 (2" ... 12")), not PTFE or PFA	G
PN 100 (DN 25 ... 300 (1" ... 12")), not PTFE or PFA	H
to ANSI B16.5	
Class 150 (½" ... 24")	J
Class 300 (½" ... 24")	K
to AWWA C207	
Class D (28" ... 78")	L
to AS	
2129, table E	M
4087, PN 16 (DN 50 ... 1200 (2" ... 48"))	N
4087, PN 21 (DN 50 ... 600 (2" ... 24"))	P
4087, PN 35 (DN 50 ... 600 (2" ... 24"))	Q
<b>Flange material</b>	
Carbon steel flanges ASTM A 105	1
Stainless steel flanges, AISI 304	2
Stainless steel flanges and sensor body, AISI 316L, polished	3

Please also see [www.siemens.com/SITRANSOrdering](http://www.siemens.com/SITRANSOrdering) for practical examples of ordering

Selection and Ordering data	Order No.
Sensor SITRANS F M MAG 3100	7ME6310-
<b>Liner material</b>	
Neoprene	1
EPDM	2
PTFE (DN ≤ 300, PN ≤ 50 bar / ≤ 12", PN ≤ 725 psi), PTFE (350 ≤ DN ≤ 600, PN ≤ 40 bar / 14" ≤ DN ≤ 24", PN ≤ 580 psi)	3
Ebonite	4
Linatex (PN ≤ 40 bar (580 psi) DN ≤ 600 (24"))	5
PFA (DN 25, 50, 80, 100 (1", 2", 3", 4")) (PN ≤ 40 bar (580 psi))	7
<b>Electrode material</b>	
(Grounding electrodes not for PTFE/PFA liner or Pressure PN 100)	
AISI 316 Ti	1
Hastelloy C276 (PFA liner: Hastelloy C22)	2
Platinum (DN ≤ 300/12") (no grounding electrodes)	3
Titanium (not PFA liner)	4
Tantalum (DN ≤ 600 (24")) (no grounding electrodes)	5
<b>Transmitter with display</b>	
Sensor for remote transmitter (Order transmitter sep.)	A
Sensor ATEX 2G D for remote transmitter (Order transmitter separately)	B
MAG 6000 I, Alu. 18 ... 90 V DC, 115 ... 230 V AC	C
MAG 6000 I Alu. 18 ... 30 V DC, ATEX 2G D	D
MAG 6000 I Alu. 115 ... 230 V, ATEX 2G D	E
MAG 6000 Polyamid, 11... 30 V DC / 11...24 V AC	H
MAG 6000, Polyamid, 115/230 V AC	J
MAG 5000, Polyamid, 11... 30 V DC / 11...24 V AC	K
MAG 5000, Polyamid, 115/230 V AC	L
<b>Communication</b>	
No communication, add-on possible	A
HART	B
PROFIBUS PA Profile 3 (only MAG 6000/MAG 6000 I)	F
PROFIBUS DP Profile 3 (no ATEX) (only MAG 6000/MAG 6000 I)	G
MODBUS RTU/RS 485 (no ATEX) (only MAG 6000/MAG 6000 I)	E
FOUNDATION Fieldbus H1 (only MAG 6000/MAG 6000 I)	J
<b>Cable glands/terminal box</b>	
Metric: Polyamid terminal box or 6000I compact	1
½" NPT: Polyamid terminal box or 6000I compact	2
Metric: SS terminal box (mandatory for Stainless steel MAG 6000 Transmitter)	3
½" NPT: SS terminal box (mandatory for Stainless steel MAG 6000 Transmitter)	4

Selection and Ordering data	Order code
<b>Additional information</b>	
Please add <b>"-Z"</b> to Order No. and specify Order code(s) and plain text.	
Customer specific converter setup	<b>Y20</b>
Tag name plate, stainless steel fixed with SS wire (add plain text)	<b>Y17</b>
Tag name plate, plastic (self adhesive)	<b>Y18</b>
Factory certificate according to EN 10204-2.1	<b>C15</b>
Factory certificate according to EN 10204-2.2	<b>C14</b>
Sensor cables wired (specify cable order no.)	<b>Y40</b>
Sensor for remote transmitter's junction box potted to IP68 with wired cable (specify cable order no.) (no ATEX)	<b>Y41</b>
Other postproduction requirements (add desired text)	<b>Y99</b>

Description	Order No.
Potting kit for terminal box of SITRANS F M sensors for IP68/NEMA 6P (Not ATEX)	<b>FDK-085U0220</b>



Please use online Product selector to get latest updates.

Product selector link:

[www.pia-selector.automation.siemens.com](http://www.pia-selector.automation.siemens.com)

MAG 5000/6000 transmitters and sensors are packed in separate boxes, the final assembly takes place during installation at the customer's place. MAG 6000 I/MAG 6000 I ATEX 2G D transmitters and sensors are delivered compact mounted from factory.

Communication module will be pre-mounted in the transmitter.

# SITRANS F flowmeters

## SITRANS F M

### MAG 3100

#### Selection and Ordering data

Order No.

#### Sensor SITRANS F M

#### MAG 3100 HT (High Temperature)

7 ME 6 3 2 0 -

#### Diameter

DN 15 (½")  
 DN 25 (1")  
 DN 40 (1½")  
 DN 50 (2")  
 DN 65 (2½")  
 DN 80 (3")  
 DN 100 (4")  
 DN 125 (5")  
 DN 150 (6")  
 DN 200 (8")  
 DN 250 (10")  
 DN 300 (12")

1 V  
 2 D  
 2 R  
 2 Y  
 3 F  
 3 M  
 3 T  
 4 B  
 4 H  
 4 P  
 4 V  
 5 D

#### Flange norm and pressure rating

##### to EN 1092-1

PN 10 (DN 200 ... 300 (8" ... 12"))  
 PN 16 (DN 65 ... 300 (2½" ... 12"))  
 PN 25 (DN 200 ... 300 (8" ... 12"))  
 PN 40 (DN 15 ... 300 (½" ... 12"))

##### to ANSI B16.5

Class 150 (½" ... 12")  
 Class 300 (½" ... 12")

##### to AS

2129, table E

#### Flange material

Carbon steel flanges ASTM A 105  
 Stainless steel flanges, AISI 304  
 Stainless steel flanges and sensor body,  
 AISI 316L, polished

1  
 2  
 3

#### Liner material

PTFE (130 °C (266 °F))  
 PTFE including type E protection rings AISI 316  
 (180 °C (356 °F))  
 PFA (150 °C (302 °F)) (DN 25, 50, 80, 100  
 (1", 2", 3", 4"))

2  
 3  
 7

#### Electrode material (no grounding electrodes)

AISI 316 TI  
 Hastelloy C276 (PFA liner: Hastelloy C22)  
 Platinum  
 Titanium (not for PFA)  
 Tantalum

1  
 2  
 3  
 4  
 5

#### Transmitter with display

Sensor for remote transmitter (Order transmitter  
 separately) A  
 Sensor ATEX 2G D for remote transmitter (Order  
 transmitter separately) B  
 MAG 6000 I, Alu. 18 ... 90 V DC, 115 ... 230 V AC C  
 MAG 6000 I, Alu. 18 ... 30 V DC, ATEX 2G D D  
 MAG 6000 I, Alu. 115 ... 230 V, ATEX 2G D E  
 MAG 6000, Polyamid, 11 ... 30 V DC/11 ... 24 V AC H  
 MAG 6000, Polyamid, 115/230 V AC J  
 MAG 5000, Polyamid, 11 ... 30 V DC/11 ... 24 V AC K  
 MAG 5000, Polyamid, 115/230 V AC L

#### Selection and Ordering data

Order No.

#### Sensor SITRANS F M

#### MAG 3100 HT (High Temperature)

7 ME 6 3 2 0 -

#### Communication

No communication, add-on possible A  
 HART B  
 PROFIBUS PA Profile 3  
 (only MAG 6000/MAG 6000 I) F  
 PROFIBUS DP Profile 3  
 (only MAG 6000/MAG 6000 I) G  
 MODBUS RTU/RS 485  
 (only MAG 6000/MAG 6000 I) E  
 FOUNDATION Fieldbus H1  
 (only MAG 6000/MAG 6000 I) J

#### Cable glands/terminal box

Metric: Polyamid terminal box or 6000I compact 1  
 ½" NPT: Polyamid terminal box or 6000I compact 2  
 Metric: SS terminal box (mandatory for Stainless  
 steel MAG 6000 Transmitter) 3  
 ½" NPT: SS terminal box (mandatory for Stainless  
 steel MAG 6000 Transmitter) 4

#### Selection and Ordering data

Order code

#### Additional information

Please add "-Z" to Order No. and specify Order  
 code(s) and plain text.

Customer specific converter setup Y20  
 Tag name made, stainless steel fixed with SS wire  
 (add plain text) Y17  
 Tag name plate, plastic (self adhesive) Y18  
 Factory certificate according to EN 10204-2.1 C15  
 Factory certificate according to EN 10204-2.2 C14  
 Sensor cables wired (specify cable order no.) Y40  
 Other postproduction requirements (add desired text) Y99

Please use online Product selector to get latest updates.

Product selector link:

[www.pia-selector.automation.siemens.com](http://www.pia-selector.automation.siemens.com)

MAG 5000/6000 transmitters and sensors are packed in separate boxes, the final assembly takes place during installation at the customer's place. MAG 6000 I/MAG 6000 I ATEX 2G D transmitters and sensors are delivered compact mounted from factory.

Communication module will be pre-mounted in the transmitter.

Selection and Ordering data	Order No.
<b>Sensor SITRANS F M MAG 3100 P</b>	<b>7ME6340-</b>
<b>Diameter</b>	
DN 15 (½")	1 V
DN 25 (1")	2 D
DN 40 (1½")	2 R
DN 50 (2")	2 Y
DN 65 (2½")	3 F
DN 80 (3")	3 M
DN 100 (4")	3 T
DN 125 (5")	4 B
DN 150 (6")	4 H
DN 200 (8")	4 P
DN 250 (10")	4 V
DN 300 (12")	5 D
<b>Flange norm and pressure rating</b>	
to EN 1092-1	
PN 10 (DN 200 ... 300 (8" ... 12"))	B
PN 16 (DN 65 ... 300 (2½" ... 12"))	C
PN 40 (DN 15 ... 50 (½" ... 2"))	F
to ANSI B16.5	
Class 150 (½" ... 12")	J
<b>Flange material</b>	
Carbon steel flanges ASTM A 105	1
<b>Liner material</b>	
PTFE (130 °C (266 °F))	3
PFA (150 °C (302 °F)) (DN 25, 50, 80, 100 (1", 2", 3", 4"))	7
<b>Electrode material</b>	
Hastelloy C276 (PFA: Hastelloy C22)	2
<b>Transmitter</b>	
Sensor for remote transmitter (Order transmitter separately)	A
Sensor ATEX 2G D for remote transmitter (Order transmitter separately)	B
MAG 6000 I, Aluminium, 18 ... 90 V DC, 115 ... 230 V AC	C
MAG 6000 I, Aluminium, 18 ... 30 V DC, ATEX 2G D	D
MAG 6000 I, Aluminium, 115 ... 230 V AC, ATEX 2G D	E
MAG 6000, Polyamid, 11 ... 30 V DC/11 ... 24 V AC	H
MAG 6000, Polyamid, 115/230 V AC	J
MAG 5000, Polyamid, 11 ... 30 V DC/11 ... 24 V AC	K
MAG 5000, Polyamid, 115/230 V AC	L
<b>Communication</b>	
No communication, add-on possible	A
HART	B
PROFIBUS PA Profile 3 (only MAG 6000/MAG 6000 I)	F
PROFIBUS DP Profile 3 (no ATEX) (only MAG 6000/MAG 6000 I)	G
MODBUS RTU/RS 485 (no ATEX) (only MAG 6000/MAG 6000 I)	E
FOUNDATION Fieldbus H1 (only MAG 6000/MAG 6000 I)	J
<b>Cable glands/terminal box</b>	
Metric: Polyamid terminal box or 6000I compact	1
½" NPT: Polyamid terminal box or 6000I compact	2
Metric SS terminal box (mandatory for stainless steel MAG 6000 transmitter)	3
½" NPT SS terminal box (mandatory for stainless steel MAG 6000 transmitter)	4

Selection and Ordering data	Order code
<b>Additional information</b>	
Please add "-Z" to Order No. and specify Order code(s) and plain text.	
Tag name plate, stainless steel fixed with SS wire (add plain text)	Y17
Tag name plate, plastic (self adhesive)	Y18
Material certificate according to EN 10204 3.1 (Pending)	C12
Factory certificate according to EN 10204-2.1	C15
Factory certificate according to EN 10204-2.2	C14
Power cable wired (specify cable order no.)	Y40
Sensor for remote transmitter's junction box IP68 with wired cable (specify cable order no.) (no ATEX)	Y41
Customer specific test	Y90
Other postproduction requirements (add desired text)	Y99

Please also see [www.siemens.com/SITRANSOrdering](http://www.siemens.com/SITRANSOrdering) for practical examples of ordering

MAG 5000/6000 transmitters and sensors are packed in separate boxes, the final assembly takes place during installation at the customer's place. MAG 6000 I/MAG 6000 I ATEX 2G D transmitters and sensors are delivered compact mounted from factory. Communication module will be pre-mounted in the transmitter.



# SITRANS F flowmeters

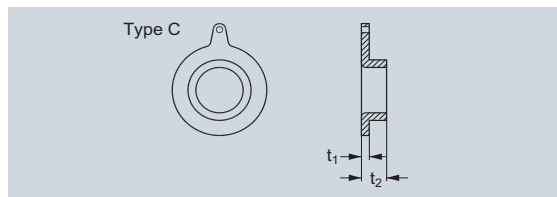
## SITRANS F M

### MAG 3100

#### Selection and Ordering data

##### MAG 3100 Type C Grounding and protection rings

AISI 304 grounding and protection rings **type C** for all liners except PTFE and PFA



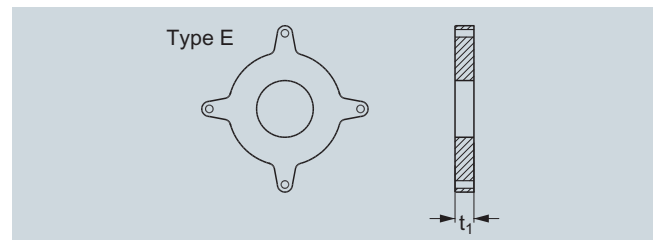
DN	PN 6	PN 10	PN 16	PN 25	PN 40	AS2129, Table E
	Order No.	Order No.	Order No.	Order No.	Order No.	Order No.
DN 25					FDK-083N8361	FDK-083N8361
DN 40					FDK-083N8362	FDK-083N8362
DN 50					FDK-083N8344	FDK-083N8344
DN 65	FDK-083N8345		FDK-083N8345		FDK-083N8345	FDK-083N8346
DN 80	FDK-083N8347		FDK-083N8347		FDK-083N8347	FDK-083N8347
DN 100	FDK-083N8070		FDK-083N8025		FDK-083N8025	FDK-083N8025
DN 125	FDK-083N8071		FDK-083N8071		FDK-083N8071	FDK-083N8071
DN 150	FDK-083N8072		FDK-083N8008		FDK-083N8008	FDK-083N8008
DN 200	FDK-083N8074	FDK-083N8011	FDK-083N8011	FDK-083N8011	FDK-083N8075	FDK-083N8011
DN 250	FDK-083N8078	FDK-083N8013	FDK-083N8013	FDK-083N8013	FDK-083N8079	FDK-083N8013
DN 300	FDK-083N8080	FDK-083N8012	FDK-083N8012	FDK-083N8081	FDK-083N8082	FDK-083N8012
DN 350	FDK-083N8083	FDK-083N8039	FDK-083N8039	FDK-083N8084	FDK-083N8085	FDK-083N8039
DN 400	FDK-083N8099	FDK-083N8100	FDK-083N8100	FDK-083N8101	FDK-083N8102	FDK-083N8100
DN 450	FDK-083N8103	FDK-083N8103	FDK-083N8104	FDK-083N8104	FDK-083N8105	FDK-083N8104
DN 500	FDK-083N8107	FDK-083N8107	FDK-083N8108	FDK-083N8108	FDK-083N8109	FDK-083N8108
DN 600	FDK-083N8111	FDK-083N8111	FDK-083N8112	FDK-083N8112		FDK-083N8113
DN 700	FDK-083N8300	FDK-083N8294	FDK-083N8294			FDK-083N8372
DN 750						FDK-083N8366
DN 800	FDK-083N8303	FDK-083N8304	FDK-083N8304			FDK-083N8373
DN 900	FDK-083N8306	FDK-083N8307	FDK-083N8307			FDK-083N8396
DN 1000	FDK-083N8309	FDK-083N8310	FDK-083N8310			FDK-083N8397
DN 1100		FDK-083N8367	FDK-083N8367			FDK-083N8367
DN 1200	FDK-083N8312	FDK-083N8313	FDK-083N8313			FDK-083N8398
DN 1400	FDK-083N8467	FDK-083N8468	FDK-083N8469			
DN 1500	FDK-083N8471	FDK-083N8472	FDK-083N8473			
DN 1600	FDK-083N8475	FDK-083N8476	FDK-083N8477			
DN 1800	FDK-083N8479	FDK-083N8480	FDK-083N8481			
DN 2000	FDK-083N8483	FDK-083N8484	FDK-083N8485			

Size	ANSI	
	Class 150 Order No.	Class 300 Order No.
1"	FDK-083N8361	FDK-083N8361
1½"	FDK-083N8362	FDK-083N8362
2"	FDK-083N8344	FDK-083N8344
2½"	FDK-083N8345	FDK-083N8345
3"	FDK-083N8347	FDK-083N8347
4"	FDK-083N8025	FDK-083N8025
5"	FDK-083N8071	FDK-083N8071
6"	FDK-083N8008	FDK-083N8073
8"	FDK-083N8011	FDK-083N8076
10"	FDK-083N8013	FDK-083N8079
12"	FDK-083N8012	FDK-083N8082
14"	FDK-083N8039	FDK-083N8085
16"	FDK-083N8100	FDK-083N8102
18"	FDK-083N8104	FDK-083N8106
20"	FDK-083N8107	FDK-083N8110
24"	FDK-083N8113	FDK-083N8114

Size	AWWA C207
	Order No.
28"	FDK-083N8302
30"	FDK-083N8366
32"	FDK-083N8305
36"	FDK-083N8308
40"	FDK-083N8311
42"	FDK-083N8394
44"	FDK-083N8395
48"	FDK-083N8314
54"	FDK-083N8470
60"	FDK-083N8474
66"	FDK-083N8478
72"	FDK-083N8482
78"	FDK-083N8486

**Selection and Ordering data****MAG 3100, 3100 HT, MAG 3100 P Type E grounding and protection ring**1 pc. AISI 316 grounding and protection rings **type E** for PTFE liners**Note:**

For MAG 3100 HT High temperature version 7ME6320... for PTFE 180 °C versions. - grounding ring type E is included and factory mounted.



DN	PN 6 Order No.	PN 10 Order No.	PN 16 Order No.	PN 25 Order No.	PN 40 Order No.
DN 15					FDK-083N8365
DN 25					FDK-083N8271
DN 40					FDK-083N8278
DN 50					FDK-083N8282
DN 65	FDK-083N8284		FDK-083N8285		FDK-083N8286
DN 80	FDK-083N8288		FDK-083N8289		FDK-083N8290
DN 100	FDK-083N8116		FDK-083N8117		FDK-083N8118
DN 125	FDK-083N8120		FDK-083N8121		FDK-083N8122
DN 150	FDK-083N8124		FDK-083N8125		FDK-083N8126
DN 200	FDK-083N8129	FDK-083N8130	FDK-083N8130	FDK-083N8131	FDK-083N8132
DN 250	FDK-083N8135	FDK-083N8136	FDK-083N8137	FDK-083N8138	FDK-083N8139
DN 300	FDK-083N8144	FDK-083N8144	FDK-083N8145	FDK-083N8146	FDK-083N8147
DN 350	FDK-083N8152	FDK-083N8153	FDK-083N8154	FDK-083N8155	FDK-083N8156
DN 400	FDK-083N8160	FDK-083N8161	FDK-083N8162	FDK-083N8163	FDK-083N8164
DN 450	FDK-083N8168	FDK-083N8169	FDK-083N8170	FDK-083N8171	FDK-083N8172
DN 500	FDK-083N8177	FDK-083N8178	FDK-083N8179	FDK-083N8180	FDK-083N8181
DN 600	FDK-083N8186	FDK-083N8187	FDK-083N8188	FDK-083N8189	

Protection of PTFE liner use 2 pcs.

Earthing of PTFE lined flowmeter use 1 pc.

Size	ANSI	
	Class 150 Order No.	Class 300 Order No.
½"	FDK-083N8365	FDK-083N8365
1"	FDK-083N8272	FDK-083N8272
1½"	FDK-083N8279	FDK-083N8279
2"	FDK-083N8283	FDK-083N8283
2½"	FDK-083N8287	FDK-083N8287
3"	FDK-083N8291	FDK-083N8292
4"	FDK-083N8118	FDK-083N8119
5"	FDK-083N8122	FDK-083N8123
6"	FDK-083N8126	FDK-083N8127
8"	FDK-083N8370	FDK-083N8133
10"	FDK-083N8140	FDK-083N8141
12"	FDK-083N8148	FDK-083N8149
14"	FDK-083N8157	FDK-083N8158
16"	FDK-083N8165	FDK-083N8166
18"	FDK-083N8173	FDK-083N8174
20"	FDK-083N8182	FDK-083N8183
24"	FDK-083N8190	FDK-083N8191

Protection of PTFE liner use 2 pcs.

Grounding of PTFE lined flowmeter use 1 pc.

**AS2129, Table E**

DN	Order No.
DN 15	FDK-083N8365
DN 25	FDK-083N8272
DN 40	FDK-083N8280
DN 50	FDK-083N8281
DN 65	FDK-083N8284
DN 80	FDK-083N8293
DN 100	FDK-083N8117
DN 125	FDK-083N8121
DN 150	FDK-083N8128
DN 200	FDK-083N8134
DN 250	FDK-083N8143
DN 300	FDK-083N8151
DN 350	FDK-083N8153
DN 400	FDK-083N8161
DN 450	FDK-083N8176
DN 500	FDK-083N8185
DN 600	FDK-083N8193

Protection of PTFE liner use 2 pcs.

Grounding of PTFE lined flowmeter use 1 pcs.

# SITRANS F flowmeters

## SITRANS F M

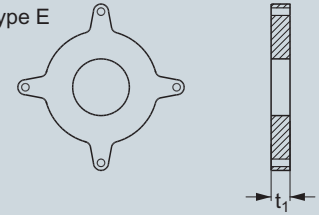
### MAG 3100

#### Selection and Ordering data

*MAG 3100, MAG 3100 HT, MAG 3100 P type E grounding and protecting ring*

1 pc. Hastelloy C-276 grounding and protection ring **type E** for PTFE liners

Type E

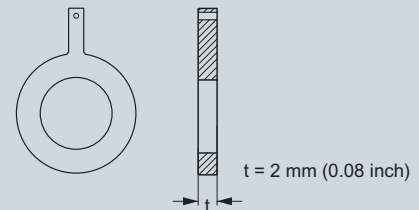


DN	PN 6	PN 16	PN 40	Size	ANSI	Class 300
	Order No.	Order No.	Order No.		Class 150	Order No.
DN 15			<b>FDK-083N8487</b>	½"	<b>FDK-083N8487</b>	<b>FDK-083N8487</b>
DN 25			<b>FDK-083N8488</b>	1"	<b>FDK-083N8489</b>	<b>FDK-083N8489</b>
DN 40			<b>FDK-083N8490</b>	1½"	<b>FDK-083N8491</b>	<b>FDK-083N8491</b>
DN 50			<b>FDK-083N8492</b>	2"	<b>FDK-083N8493</b>	<b>FDK-083N8493</b>
DN 65	<b>FDK-083N8494</b>	<b>FDK-083N8495</b>	<b>FDK-083N8496</b>	2½"	<b>FDK-083N8497</b>	<b>FDK-083N8497</b>
DN 80	<b>FDK-083N8498</b>	<b>FDK-083N8499</b>	<b>FDK-083N8500</b>	3"	<b>FDK-083N8501</b>	<b>FDK-083N8502</b>
DN 100	<b>FDK-083N8503</b>	<b>FDK-083N8504</b>	<b>FDK-083N8505</b>	4"	<b>FDK-083N8506</b>	<b>FDK-083N8507</b>

#### Selection and Ordering data

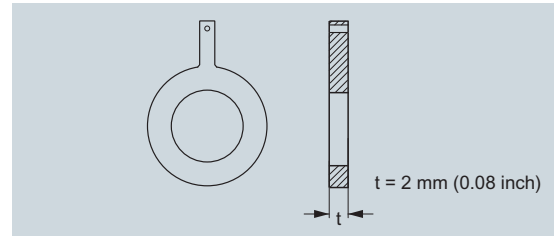
*MAG 3100, MAG 3100 HT, MAG 3100 P Grounding rings: Flat rings*

1 pc. AISI 316 grounding **flat ring** for all liners (not PTFE 180 °C)

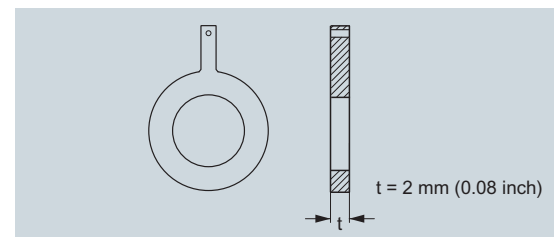


DN	PN 10	PN 16	PN 40	Size	ANSI	Class 300
	Order No.	Order No.	Order No.		Class 150	Order No.
DN 15			<b>A5E01191969<sup>F)</sup></b>	½"	<b>A5E01191968<sup>F)</sup></b>	
DN 25			<b>A5E01150880<sup>F)</sup></b>	1"	<b>A5E01150022<sup>F)</sup></b>	<b>A5E01150378<sup>F)</sup></b>
DN 40			<b>A5E01191952<sup>F)</sup></b>	1½"	<b>A5E01191961<sup>F)</sup></b>	
DN 50			<b>A5E01150918<sup>F)</sup></b>	2"	<b>A5E01151121<sup>F)</sup></b>	<b>A5E01151194<sup>F)</sup></b>
DN 65		<b>A5E01191940<sup>F)</sup></b>	<b>A5E01191954<sup>F)</sup></b>	2½"	<b>A5E01191962<sup>F)</sup></b>	
DN 80		<b>A5E01152876<sup>F)</sup></b>	<b>A5E01152876<sup>F)</sup></b>	3"	<b>A5E01152910<sup>F)</sup></b>	<b>A5E01153422<sup>F)</sup></b>
DN 100		<b>A5E01158875<sup>F)</sup></b>	<b>A5E01159072<sup>F)</sup></b>	4"	<b>A5E01159146<sup>F)</sup></b>	<b>A5E01159628<sup>F)</sup></b>
DN 125		<b>A5E01191941<sup>F)</sup></b>	<b>A5E01191956<sup>F)</sup></b>	5"	<b>A5E01191963<sup>F)</sup></b>	
DN 150		<b>A5E01191943<sup>F)</sup></b>	<b>A5E01191957<sup>F)</sup></b>	6"	<b>A5E01191964<sup>F)</sup></b>	
DN 200	<b>A5E01191951<sup>F)</sup></b>	<b>A5E01191944<sup>F)</sup></b>	<b>A5E01191958<sup>F)</sup></b>	8"	<b>A5E01191965<sup>F)</sup></b>	
DN 250	<b>A5E01191950<sup>F)</sup></b>	<b>A5E01191946<sup>F)</sup></b>	<b>A5E01191959<sup>F)</sup></b>	10"	<b>A5E01191966<sup>F)</sup></b>	
DN 300	<b>A5E01191949<sup>F)</sup></b>	<b>A5E01191947<sup>F)</sup></b>	<b>A5E01191960<sup>F)</sup></b>	12"	<b>A5E01191967<sup>F)</sup></b>	

F) Subject to export regulations AL: 91999, ECCN: N.

**Selection and Ordering data****MAG 3100, MAG 3100 HT, MAG 3100 P Grounding rings : Flat rings**1 pc. Hastelloy C-276 grounding **flat ring** for all liners (not PTFE 180 °C)

DN	PN 10 Order No. <sup>F)</sup>	PN 16 Order No. <sup>F)</sup>	PN 40 Order No. <sup>F)</sup>	Size	ANSI Class 150 Order No. <sup>F)</sup>	Class 300 Order No. <sup>F)</sup>
DN 15			A5E01191981	½"	A5E01191989	
DN 25			A5E01150882	1"	A5E01150028	A5E01150379
DN 40			A5E01191982	1½"	A5E01191990	
DN 50			A5E01150922	2"	A5E01151124	A5E01151197
DN 65		A5E01191971	A5E01191983	2½"	A5E01191991	
DN 80		A5E01152889	A5E01152889	3"	A5E01152913	A5E01153424
DN 100		A5E01158886	A5E01159074	4"	A5E01159150	A5E01159629
DN 125		A5E01191973	A5E01191984	5"	A5E01191992	
DN 150		A5E01191974	A5E01191985	6"	A5E01191993	
DN 200	A5E01191978	A5E01191975	A5E01191986	8"	A5E01191994	
DN 250	A5E01191979	A5E01191976	A5E01191987	10"	A5E01191995	
DN 300	A5E01191980	A5E01191977	A5E01191988	12"	A5E01191996	

**Selection and Ordering data****MAG 3100, MAG 3100 HT, MAG 3100 P Grounding rings : Flat rings**1 pc. Tantalum grounding **flat ring** for all liners (not PTFE 180 °C)

DN	PN 16 Order No. <sup>F)</sup>	PN 40 Order No. <sup>F)</sup>	Size	ANSI Class 150 Order No. <sup>F)</sup>	Class 300 Order No. <sup>F)</sup>
DN 15		A5E01192007	½"	A5E01192010	
DN 25		A5E01150883	1"	A5E01150030	A5E01150381
DN 40		A5E01192008	1½"	A5E01192011	
DN 50		A5E01150926	2"	A5E01151129	A5E01151199
DN 65	A5E01192005	A5E01192009	2½"	A5E01192012	
DN 80	A5E01152890	A5E01152890	3"	A5E01152916	A5E01153427
DN 100	A5E01158891	A5E01159076	4"	A5E01159156	A5E01159631

F) Subject to export regulations AL: 91999, ECCN: N.

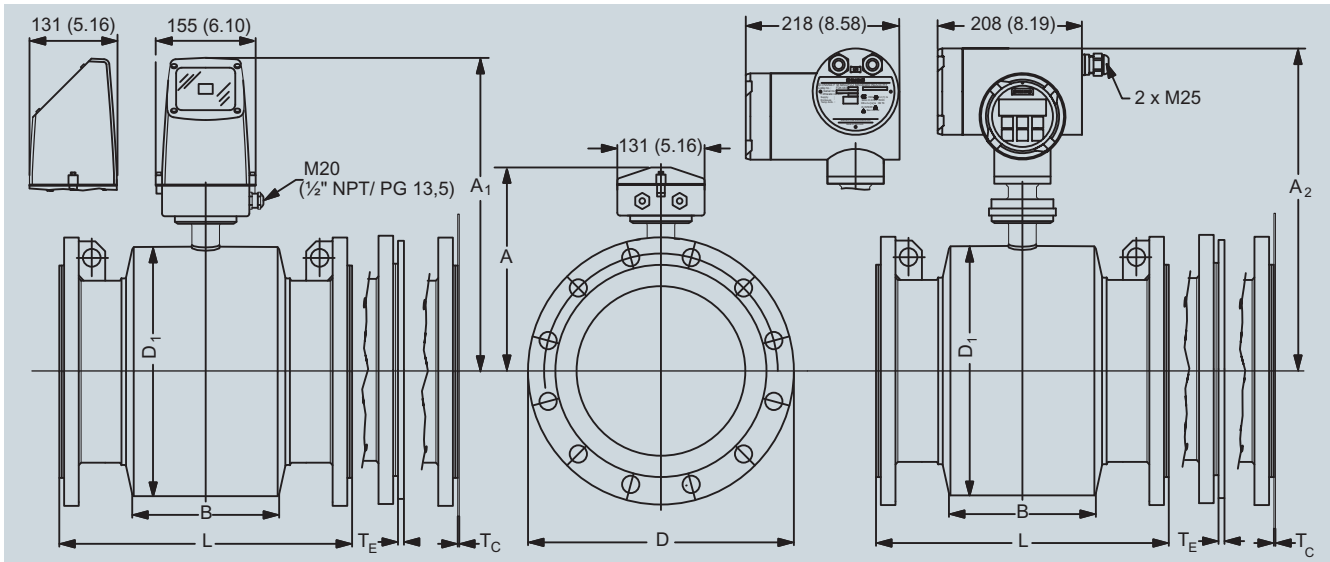
# SITRANS F flowmeters

## SITRANS F M

### MAG 3100

#### Dimensional drawings

MAG 3100, MAG 3100 HT, MAG 3100 P sensor with compact or remote transmitter



#### Metric

DN	A <sup>1)</sup>	A <sub>1</sub> /A <sub>2</sub> <sup>8)</sup>	B	D <sub>1</sub>	L <sup>2)</sup>										T <sub>C</sub> <sup>3)</sup>	T <sub>E</sub> <sup>3)</sup>	Weight <sup>4)</sup>
					EN 1092-1-201					ANSI 16.5		AS 2129 E AS 4087 PN 16, 21, 35	AWWA C-207 Class D				
					PN 6, 10	PN 16/ PN 16 non PED	PN 25	PN 40	PN 63	PN 100	Class 150			Class 300			
[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[kg]
15	187	338	59	104	-	-	-	200	-	-	200	200	200	-	-	6	4
25	187	338	59	104	-	-	-	200	-	260	200	200	200	-	1.2	6	5
40	197	348	82	124	-	-	-	200	-	280	200	200	200	-	1.2	6	8
50	205	356	72	139	-	-	-	200	276	300	200	200	200	-	1.2	6	9
65	212	363	72	154	200	200/-	-	200	320	350	200	272	200	-	1.2	6	11
80	222	373	72	174	200	200/-	-	272	323	340	272	272	200 <sup>5)</sup>	-	1.2	6	12
100	242	393	85	214	250	250/-	-	250	380	400	250	310	250	-	1.2	6	16
125	255	406	85	239	250	250/-	-	250	420	450	250	335	250	-	1.2	6	19
150	276	427	85	282	300	300/-	-	300	415	450	300	300	300	-	1.2	6	27
200	304	455	137	338	350	350/-	350	350	480	530	350	350	350	-	1.2	8	40
250	332	483	157	393	450	450/-	450	450	550	620	450	450	450	-	1.2	8	60
300	357	508	157	444	500	500/-	500	500	600	680	500	500	500	-	1.6	8	80
350	362	513	270	451	550	550/-	550	550	-	-	550	550	550	-	1.6	8	110
400	387	538	270	502	600	600/-	600	600	-	-	600	600	600	-	1.6	10	125
450	418	569	310	563	600	600/-	600	600	-	-	600	600	600	-	1.6	10	175
500	443	594	350	614	600	600/-	625	680	-	-	600	730	600 <sup>6)</sup>	-	1.6	10	200
600	494	645	430	715	600	600/-	750	800	-	-	600	860	600 <sup>7)</sup>	-	1.6	10	287
700	544	695	500	816	700	875/700	-	-	-	-	-	-	700	700	2.0	-	330
750	571	722	556	869	-	-/-	-	-	-	-	-	-	750	750	2.0	-	360
800	606	757	560	927	800	1000/800	-	-	-	-	-	-	800	800	2.0	-	450
900	653	804	630	1032	900	1125/900	-	-	-	-	-	-	900	900	2.0	-	530
1000	704	906	670	1136	1000	1250/1000	-	-	-	-	-	-	1000	1000	2.0	-	660
1100	755	906	770	1238	-	-/-	-	-	-	-	-	-	1100	1100	2.0	-	1140
1200	810	961	792	1348	1200	1500/1200	-	-	-	-	-	-	1200	1200	2.0	-	1180
1400	925	1076	1000	1675	1400	-/1400	-	-	-	-	-	-	1400	1400	2.0	-	1600
1500	972	1123	1020	1672	1500	-/1500	-	-	-	-	-	-	1500	1500	3.0	-	2460
1600	1025	1176	1130	1915	1600	-/1600	-	-	-	-	-	-	1600	1600	3.0	-	2140
1800	1123	1274	1250	1974	1800	-/1800	-	-	-	-	-	-	1800	1800	3.0	-	2930
2000	1223	1374	1375	2174	2000	-/2000	-	-	-	-	-	-	2000	2000	3.0	-	3665

1) 14.5 mm shorter with AISI terminal box (Ex and high temperature version)

2) When earthing flanges are used, the thickness of the earthing flange must be added to the build-in length

3) T<sub>C</sub> = Type C grounding ring, T<sub>E</sub> = Type E grounding ring (Included and factory mounted on high temperature 180 °C (356 °F) PTFE sensor)

4) Weights are approx. (for PN 16) without transmitter

5) PN 35 DN 80 = 272 mm

6) PN 35 DN 500 = 680 mm

7) PN 35 DN 600 = 750 mm

8) A<sub>2</sub> is 3 mm/0.12" shorter than A<sub>1</sub>

- not available

D = Outside diameter of flange, see flange tables

## MAG 3100, MAG 3100 HT, MAG 3100 P sensor with compact or remote transmitter

## Imperial

Size	A <sup>1)</sup>	A <sub>1</sub> /A <sub>2</sub> <sup>8)</sup>	B	D <sub>1</sub>	L <sup>2)</sup>									AS 2129 E AS 4087 PN 16, 21, 35	T <sub>C</sub> <sup>3)</sup>	T <sub>E</sub> <sup>3)</sup>	Weight <sup>4)</sup>
					EN 1092-1-201						ANSI 16.5		AWWA C-207 Class D				
					PN 6, 10	PN 16/ PN 16 non PED	PN 25	PN 40	PN 63	PN 100	Class 150	Class 300					
[inch]	[inch]	[inch]	[inch]	[inch]	[inch]	[inch]	[inch]	[inch]	[inch]	[inch]	[inch]	[inch]	[inch]	[in.]	[in.]	[lb]	
½	7.36	13.31	2.32	4.09	-	-	-	7.87	-	-	7.87	7.87	-	7.87	-	0.24	11
1	7.36	13.31	2.32	4.09	-	-	-	7.87	-	10.24	7.87	7.87	-	7.87	0.05	0.24	13
1½	7.76	13.70	3.23	4.88	-	-	-	7.87	-	11.02	7.87	7.87	-	7.87	0.05	0.24	17
2	8.07	14.01	2.83	5.47	-	-	-	7.87	10.87	11.81	7.87	7.87	-	7.87	0.05	0.24	28
2½	8.35	14.29	2.83	6.06	7.87	7.87/-	-	7.87	12.60	13.78	7.87	10.71	-	7.87	0.05	0.24	30
3	8.74	14.69	2.83	6.85	7.87	7.87/-	-	10.71	12.72	13.39	10.71	10.71	-	7.87 <sup>5)</sup>	0.05	0.24	33
4	9.53	15.47	3.35	8.43	9.84	9.84/-	-	9.84	14.96	-	9.84	12.20	-	9.84	0.05	0.24	44
5	10.04	15.98	3.35	9.41	9.84	9.84/-	-	9.84	16.54	-	9.84	13.10	-	9.84	0.05	0.24	55
6	10.87	16.81	5.39	11.10	11.81	11.81/-	-	11.81	16.34	-	11.81	11.81	-	11.81	0.05	0.24	66
8	11.97	17.91	5.39	13.31	13.78	13.78/-	13.78	13.78	18.90	-	13.78	13.78	-	13.78	0.05	0.31	110
10	13.07	19.02	6.18	15.47	17.72	17.72/-	17.72	17.72	-	-	17.72	17.72	-	17.72	0.05	0.31	155
12	14.05	20.00	6.18	17.48	19.69	19.69/-	19.69	19.69	-	-	19.69	19.69	-	19.69	0.06	0.31	176
14	14.25	20.20	10.63	17.76	21.65	21.65/-	21.65	21.65	-	-	21.65	21.65	-	21.65	0.06	0.31	242
16	15.24	21.18	10.63	19.76	23.62	23.62/-	23.62	23.62	-	-	23.62	23.62	-	23.62	0.06	0.39	275
18	16.45	22.40	12.20	22.16	23.62	23.62/-	23.62	23.62	-	-	23.62	23.62	-	23.62	0.06	0.39	385
20	17.44	23.39	13.78	24.17	23.62	23.62/-	24.61	26.77	-	-	23.62	28.70	-	23.62 <sup>6)</sup>	0.06	0.39	335
24	19.45	25.39	16.93	28.15	23.62	23.62/-	29.53	31.50	-	-	23.62	33.80	-	23.62 <sup>7)</sup>	0.06	0.39	630
28	21.42	27.36	19.69	32.13	27.56	34.45/27.56	-	-	-	-	-	-	27.56	27.56	0.08	-	725
30	22.48	28.43	21.89	34.21	-	-	-	-	-	-	-	-	29.52	-	0.08	-	830
32	23.86	29.80	22.05	36.50	31.50	39.37/31.50	-	-	-	-	-	-	31.50	31.50	0.08	-	990
36	25.71	31.65	24.80	40.63	35.43	44.29/35.43	-	-	-	-	-	-	35.43	35.43	0.08	-	1160
40	27.72	35.67	26.38	44.72	39.37	49.21/39.37	-	-	-	-	-	-	39.37	39.37	0.08	-	1453
42	27.72	35.67	26.38	44.72	-	-	-	-	-	-	-	-	39.37	-	0.08	-	1453
44	29.72	35.67	30.31	48.74	-	-	-	-	-	-	-	-	43.31	43.31	0.08	-	-
48	31.89	37.83	31.18	53.07	47.24	59.06/47.24	-	-	-	-	-	-	47.24	47.24	0.08	-	2592
54	36.42	42.36	39.37	65.94	55.12	-/55.12	-	-	-	-	-	-	55.12	-	0.12	-	2940
60	38.27	44.21	40.15	65.83	59.06	59.06/59.06	-	-	-	-	-	-	59.06	-	0.12	-	3422
66	40.35	46.30	44.49	75.39	62.99	-/62.99	-	-	-	-	-	-	63.00	-	0.12	-	3904
72	44.21	50.16	49.21	77.72	70.87	-/70.87	-	-	-	-	-	-	70.87	-	0.12	-	4846
78	48.15	54.09	54.13	85.59	78.74	-/78.74	-	-	-	-	-	-	78.74	-	0.12	-	6806

1) 0.512 inch shorter with AISI terminal box (Ex and high temperature version)

2) When earthing flanges are used, the thickness of the earthing flange must be added to the build-in length

3) T<sub>C</sub> = Type C grounding ring, T<sub>E</sub> = Type E grounding ring (Included and factory mounted on high temperature 180 °C (356 °F) PTFE sensor)

4) Weights are for ANSI 150 without transmitter

5) PN 35 DN 80 = 10.70 inch

6) PN 35 DN 500 = 26.77 inch

7) PN 35 DN 600 = 29.53 inch

8) A<sub>2</sub> is 0.06" shorter than A<sub>1</sub>

- not available

D = Outside diameter of flange, see flange tables

# SITRANS F flowmeters

## SITRANS F M

### Sensor calibration

#### Selection and Ordering data

Product designation	Order No.
<b>SITRANS F M - Electromagnetic flowmeters</b>	
<b>Calibrations/recalibration for MAG 1100, 1100 F, 5100 W and 3100</b>	
<i>Accessories for SITRANS F M</i>	
<b>Calibration</b>	<b>FDK - O.R.<sup>2)</sup></b>
Standard Production calibration • Zero-point 2 x 25 %, 2 x 90 %	-
MAG 8000 calibration • Zero-point 1 x 25 %, 1 x 100 %	-
<b>Standard production calibration - Matched pair</b>	
Size < DN 350 (14")	<b>O.R.</b>
Size DN 300 ... 1200 (12" ... 48")	<b>O.R.</b>
Larger sizes	<b>O.R.</b>
<b>Customer specified calibration up to 10 point<sup>1)</sup></b>	
Size ≤ DN 150 (6")	<b>O.R.</b>
Size DN 200 ... 300 (8" ... 12")	<b>O.R.</b>
Size DN 350 ... 600 (14" ... 24")	<b>O.R.</b>
Size DN 700 ... 1100 (28" ... 48")	<b>O.R.</b>
Add-on: Matched pair of any above	<b>O.R.</b>
Larger sizes	<b>O.R.</b>
<b>Accredited calibration ISO/IEC 17025 - Matched pair<sup>1)</sup></b>	
Accredited calibration report with up to 21 points <sup>1)</sup>	
Size ≤ DN 150 (6")	<b>O.R.</b>
Size DN 200 ... 300 (8" ... 12")	<b>O.R.</b>
Size DN 350 ... 600 (14" ... 24")	<b>O.R.</b>
Size DN 700 ... 1100 (28" ... 48")	<b>O.R.</b>
Larger sizes	<b>O.R.</b>
<b>CT-calibration and authority seal</b>	
Up to DN 300 (12") for PTB and DANAK	
Size ≤ DN 150 (6")	<b>O.R.</b>
Size DN 200 ... 300 (8" ... 12")	<b>O.R.</b>
Larger sizes	<b>O.R.</b>
<b>Customer witnessed calibration</b>	
Any of above calibration	
Add-on price per sensor	<b>O.R.</b>
Size DN 200 ... 300 (8" ... 12")	
Daily rates available on request for larger project.	

<sup>1)</sup> **Size** dependent restriction on maximum 42,682 flow rates may apply.

<sup>2)</sup> **Ordering O.R.** As we need dedicated information from the customer on the individual sensor, we must have the calibration forms filed and sent together with the order.