

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")
- Stock program of MAG 3100P (7ME6340) secures short delivery time
- Wide pressure range: PN 6 to PN 100 ANSI Class 150 / 300, AS 2129 / AS 4087. On request up to 690 bar (10 000 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 R 75 and OIML R 117
- 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.

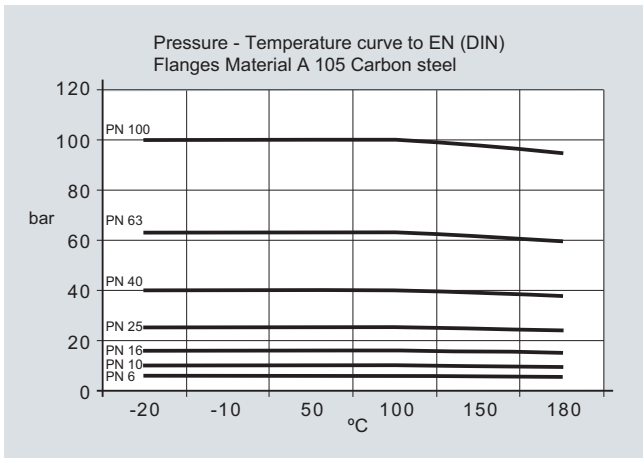
The flexible communication concept USM II simplifies integration and update to a variety of fieldbus systems such as HART, FOUNDATION Fieldbus H1, DeviceNet, PROFIBUS DP and PA, MODBUS RTU/RS485.

SITRANS F flowmeters

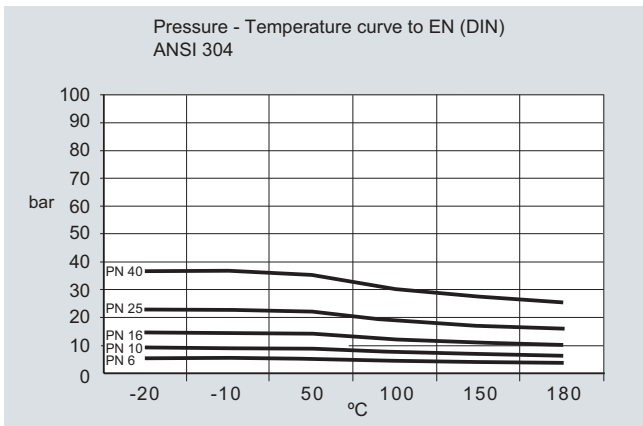
SITRANS F M

Flow sensor MAG 3100

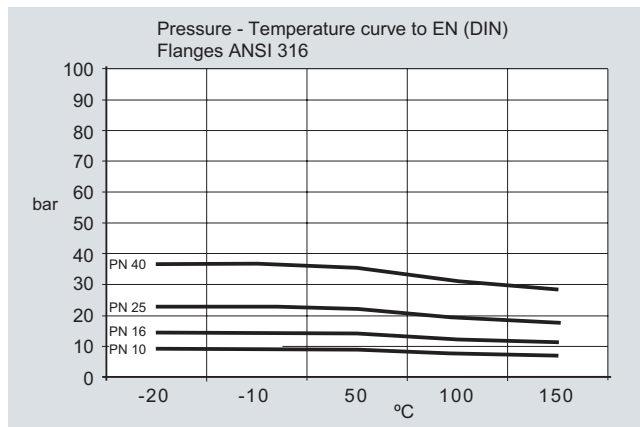
Pressure-temperature curve to EN (DIN) flanges, material A 105 carbon steel



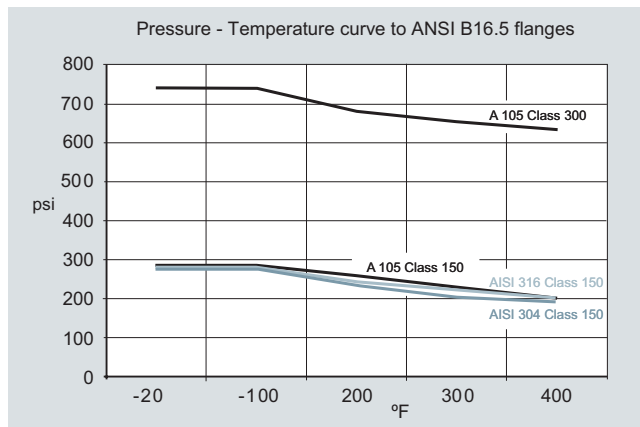
Pressure-temperature curve to EN (DIN) flanges ANSI 304



Pressure-temperature curve to EN (DIN) flanges ANSI 316



Pressure-temperature curve to ANSI B16.5 flanges



Note: The pressure-temperature curves only assist in the selection of a system. No responsibility is taken for the correctness of the information. For exact data please refer to the PED requirements.

4

Technical specifications

Version	MAG 3100 P	MAG 3100	MAG 3100 HT (High Temperature)
Product characteristic	Short lead time	Flexible product program	Process temperature above 150°C (300°F)
Nominal size	DN 15 ... DN 300 (½" ... 12")	DN 15 ... DN 2000 (½" ... 78")	DN 15 ... DN 300 (½" ... 12")
Measuring principle		electromagnetic induction	
Excitation frequency (Mains supply: 50 Hz/60 Hz)	<ul style="list-style-type: none"> • DN 15 ... 65 (½" ... 2½"): 12.5 Hz/15 Hz • DN 80 ... 150 (3" ... 6"): 6.25 Hz/7.5 Hz • DN 200 ... 300 (8" ... 12"): 3.125 Hz/3.75 Hz 	<ul style="list-style-type: none"> • DN 15 ... 65 (½" ... 2½"): 12.5 Hz/15 Hz • DN 80 ... 150 (3" ... 6"): 6.25 Hz/7.5 Hz • DN 200 ... 1200 (8" ... 48"): 3.125 Hz/3.75 Hz • DN 1400 ... 2000 (54" ... 78"): 1.5625 Hz/1.875 Hz 	<ul style="list-style-type: none"> • DN 15 ... 65 (½" ... 2½"): 12.5 Hz/15 Hz • DN 80 ... 150 (3" ... 6"): 6.25 Hz/7.5 Hz • DN 200 ... 300 (8" ... 12"): 3.125 Hz/3.75 Hz
Process connection			
Flanges	<p>EN 1092-1, raised face (EN 1092-1, DIN 2501 & BS 4504 have the same mating dimensions)</p> <ul style="list-style-type: none"> • DN 15 ... 50 (½" ... 2"): PN 40 (580 psi) • DN 65 ... 300 (2½" ... 12"): PN 16 (232 psi) • DN 200 ... 300 (8" ... 12"): PN 10 (145 psi) <p>ANSI B16.5 (~BS 1560), raised face</p> <ul style="list-style-type: none"> • ½" ... 12": Class 150 (20 bar (290 psi)) 	<p>EN 1092-1, raised face (EN 1092-1, DIN 2501 & BS 4504 have the same mating dimensions)</p> <ul style="list-style-type: none"> • DN 65 ... 2000 (2½" ... 78"): PN 6 (87 psi) • DN 200 ... 2000 (8" ... 78"): PN 10 (145 psi) • DN 65 ... 2000 (2½" ... 78"): PN 16 (232 psi) • DN 200 ... 600 (8" ... 24"): PN 25 (362 psi) • DN 15 ... 600 (½" ... 24"): PN 40 (580 psi) • DN 50 ... 300 (2" ... 12"): PN 63 (913 psi) • DN 25 ... 300 (1" ... 12"): PN 100 (1450 psi) <p>ANSI B16.5 (~BS 1560), raised face</p> <ul style="list-style-type: none"> • ½" ... 24": Class 150 (20 bar (290 psi)) • ½" ... 24": Class 300 (50 bar (725 psi)) <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"> • PN 16 (DN 50 ... 1200, 16 bar (232 psi)) • PN 21 (DN 50 ... 600, 21 bar (304 psi)) • PN 35 (DN 50 ... 600, 35 bar (508 psi)) <p>JIS B 2220:2004</p> <ul style="list-style-type: none"> • K10 (1" ... 24") • K20 (1" ... 24") <p>Other flanges and pressure ratings on request</p>	<p>EN 1092-1, raised face (EN 1092-1, DIN 2501 & BS 4504 have the same mating dimensions)</p> <ul style="list-style-type: none"> • DN 15 ... 300 (½" ... 12"): PN 40 (580 psi) • DN 65 ... 300 (2½" ... 12"): PN 16 (232 psi) • DN 200 ... 300 (8" ... 12"): PN 10 (145 psi) • DN 200 ... 300 (8" ... 12"): PN 25 (362 psi) <p>ANSI B16.5 (~BS 1560), raised face:</p> <ul style="list-style-type: none"> • ½" ... 12": Class 150 (20 bar (290 psi)) • ½" ... 12": Class 300 (50 bar (725 psi)) <p>AS 2129, raised face ½" ... 12": Table E</p> <p>Other flanges and pressure ratings on request</p>
Rated operation conditions			
Ambient temperature (conditions also dependent on liner characteristics)			
<ul style="list-style-type: none"> • Sensor • Sensor ATEX 	<p>-40 ... +100 °C (-40 ... +212 °F)</p> <p>-20 ... +60 °C (-4 ... +140 °F)</p>	<p>-40 ... +100 °C (-40 ... +212 °F)</p> <p>-20 ... +60 °C (-4 ... +140 °F)</p>	<p>-40 ... +100 °C (-40 ... +212 °F)</p> <p>for up to 150 °C (302 °F) temperature of medium:</p> <p>-20 ... +60 °C (-4 ... +140 °F)</p> <p>for 150 ... 180 °C (302 ... 356 °F) temperature of medium:</p> <p>-20 ... +50 °C (-4 ... +122 °F)</p>
<ul style="list-style-type: none"> • With compact transmitter - MAG 5000/6000 - MAG 6000 I - MAG 6000 I Ex d 	<p>-20 ... +60 °C (-4 ... +140 °F)</p> <p>-20 ... +60 °C (-4 ... +140 °F)</p> <p>-10 ... +60 °C (14 ... 140 °F)</p>	<p>-20 ... +60 °C (-4 ... +140 °F)</p> <p>-20 ... +60 °C (-4 ... +140 °F)</p> <p>-10 ... +60 °C (14 ... 140 °F)</p>	<p>-20 ... +60 °C (-4 ... +140 °F)</p> <p>-20 ... +60 °C (-4 ... +140 °F)</p> <p>-10 ... +60 °C (14 ... 140 °F)</p>

SITRANS F flowmeters

SITRANS F M

Flow sensor MAG 3100

Version	MAG 3100 P	MAG 3100	MAG 3100 HT (High Temperature)
Operating pressure [abs. bar] (maximum operating pressure decreases with increasing operating temperature and with stainless steel flanges)	<ul style="list-style-type: none"> • PTFE/FEP <ul style="list-style-type: none"> - DN 15 ... 300 (½" ... 12") : 0.3 ... 40 bar (4 ... 580 psi) • PFA <ul style="list-style-type: none"> - DN 25 ... 100 (1" ... 4") : Vacuum 0.02 ... 50 bar (0.29 ... 725 psi) 	<ul style="list-style-type: none"> • Neoprene 0.01 ... 100 bar (0.15 ... 1450 psi) • EPDM 0.01 ... 40 bar (0.15 ... 580 psi) • Linatex[®] 0.01 ... 40 bar (0.15 ... 580 psi) • Ebonite 0.01 ... 100 bar (0.15 ... 1450 psi) • PTFE <ul style="list-style-type: none"> - DN ≤ 300 (≤ 12") : 0.3 ... 50 bar (4 ... 725 psi) - 350 ≤ DN ≤ 600 (14" ≤ DN ≤ 24") : 0.3 ... 40 bar (4 ... 580 psi) • PFA <ul style="list-style-type: none"> - DN 25 ... 100 (1" ... 4") : Vacuum 0.02 ... 50 bar (0.29 ... 725 psi) 	<ul style="list-style-type: none"> • PTFE/FEP <ul style="list-style-type: none"> - 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 & SS terminal box) • PFA <ul style="list-style-type: none"> - DN 25 ... 100 (1" ... 4") : Vacuum 0.02 ... 50 bar (0.29 ... 725 psi)
Enclosure rating	IP67/NEMA 4X/6 to EN 60529, 1 mH ₂ O for 30 min Option: IP68/NEMA 6P to EN 60529, 10 mH ₂ O cont. (not for ATEX)	IP67/NEMA 4X/6 to EN 60529, 1 mH ₂ O for 30 min Option: IP68/NEMA 6P to EN 60529, 10 mH ₂ O cont. (not for ATEX)	IP67/NEMA 4X/6 to EN 60529, 1 mH ₂ O for 30 min Option: IP68/NEMA 6P to EN 60529, 10 mH ₂ O cont. (not for 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"> • 18 ... 1000 Hz random in x, y, z, directions for 2 hours according to EN 60068-2-36 • Sensor: 3.17 grms • Sensor with compact MAG 5000/6000 mounted transmitter: 3.17 grms • Sensor with compact MAG 6000 I/6000 I Ex mounted transmitter: 1.14 grms 	<ul style="list-style-type: none"> • 18 ... 1000 Hz random in x, y, z, directions for 2 hours according to EN 60068-2-36 • Sensor: 3.17 grms • Sensor with compact MAG 5000/6000 mounted transmitter: 3.17 grms • Sensor with compact MAG 6000 I/6000 I Ex mounted transmitter: 1.14 grms 	<ul style="list-style-type: none"> • 18 ... 1000 Hz random in x, y, z, directions for 2 hours according to EN 60068-2-36 • Sensor: 3.17 grms • Sensor with compact MAG 5000/6000 mounted transmitter: 3.17 grms • Sensor with compact MAG 6000 I/6000 I Ex mounted transmitter: 1.14 grms
Temperature of medium	<ul style="list-style-type: none"> • PTFE -20 ... +130 °C (-4 ... +266 °F) • PFA -20 ... +150 °C (-4 ... +300 °F) 	<ul style="list-style-type: none"> • Neoprene 0 ... +70 °C (32 ... 158 °F) • EPDM -10 ... +70 °C (14 ... 158 °F) • Linatex[®] (rubber) -40 ... +70 °C (-40 ... +158 °F) (for temperatures below -20 °C (-4 °F) AISI 304 or 316 flanges must be used) • Ebonite 0 ... 95 °C (32 ... 203 °F) • PTFE -20 ... +100 °C (-4 ... +212 °F) • PFA -20 ... +100 °C (-4 ... +212 °F) 	<ul style="list-style-type: none"> • PTFE -20 ... +130 °C (-4 ... +266 °F) • PTFE -20 ... +180 °C (-4 ... +356 °F) Factory mounted grounding rings type E and SS terminal box. Can only be used with remote transmitter. • PFA -20 ... +150 °C (-4 ... +300 °F)
EMC	89/336 ECC	89/336 ECC	89/336 ECC
Design			
Weight	See dimensional drawings		
Flange and housing material	Carbon steel ASTM A 105, with corrosion resistant two component epoxy coating (min. 150 μm)	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
Measuring pipe material	AISI 304 (1.4301)	AISI 304 (1.4301)	AISI 304 (1.4301)
Electrode material	Hastelloy C276 (PFA: Hastelloy C22)	<ul style="list-style-type: none"> • AISI 316 Ti (1.4571) • Hastelloy C276 (PFA: Hastelloy C22) • Platinum/Iridium, • Titanium • Tantalum 	<ul style="list-style-type: none"> • AISI 316 Ti (1.4571) • Hastelloy C276 (PFA: Hastelloy C22) • Platinum/Iridium, • Titanium • Tantalum
Grounding Electrode material	No grounding electrodes	Material as measuring electrodes: Exceptions - see ordering data	No grounding electrodes

Version	MAG 3100 P	MAG 3100	MAG 3100 HT (High Temperature)
Design (continued)			
Terminal box (remote version only)	<ul style="list-style-type: none"> Standard fibre glass reinforced polyamide Option Stainless steel AISI 316 (1.4436) Ex ATEX (remote version only) Stainless steel AISI 316 (1.4436) 	<ul style="list-style-type: none"> Standard fibre glass reinforced polyamide Option Stainless steel AISI 316 (1.4436) Ex ATEX (remote version only) Stainless steel AISI 316 (1.4436) 	<ul style="list-style-type: none"> Stainless steel AISI 316 (1.4436) Ex ATEX (remote version only) Stainless steel AISI 316 (1.4436)
Cable entries	<ul style="list-style-type: none"> Remote installation 2 x M20 or 2 x ½" NPT Compact installation <ul style="list-style-type: none"> MAG 5000/MAG 6000: 4 x M20 or 4 x ½" NPT MAG 6000 I: 2 x M25 (for supply/output) MAG 6000 I Ex. d: 2 x M25 (for supply/output) 	<ul style="list-style-type: none"> Remote installation 2 x M20 or 2 x ½" NPT Compact installation <ul style="list-style-type: none"> MAG 5000/MAG 6000: 4 x M20 or 4 x ½" NPT MAG 6000 I: 2 x M25 (for supply/output) MAG 6000 I Ex. d: 2 x M25 (for supply/output) 	<ul style="list-style-type: none"> Remote installation 2 x M20 or 2 x ½" NPT
Certificates and approvals			
Calibration			
Standard production calibration, calibration report shipped with sensor	Zero-point, 2 x 25 % and 2 x 90 %	Zero-point, 2 x 25 % and 2 x 90 %	Zero-point, 2 x 25 % and 2 x 90 %
Conforms to	PED (All EN1092-1 flanges conforms to PED) – 97/23 EC ¹⁾ CRN	PED (All EN1092-1 flanges conforms to PED) – 97/23 EC ¹⁾ CRN	PED (All EN1092-1 flanges conforms to PED) – 97/23 EC ¹⁾ CRN
Material certificate EN 10204 3.1	Pipe and flange certificate available as option	On request	On request
Ex approvals	ATEX 2G D sensor <ul style="list-style-type: none"> DN 15 ... 300: EEx d e ia IIC T3 - T6 FM Class 1 zone 1 CSA Class 1 Zone 1 IEC Ex de ia IIC T3-T6 Ex tD A21 IP67 Non ATEX sensors <ul style="list-style-type: none"> FM Class 1 Div 2 CSA Class 1, Div 2 	ATEX 2G D sensor <ul style="list-style-type: none"> DN 15 ... 300: EEx d e ia IIC T4 - T6 DN 350 ... 2000 EEx e ia IIC T4 - T6 FM Class 1 zone 1 CSA Class 1 zone 1 IEC Ex de ia IIC T3-T6 Ex tD A21 IP67 Non ATEX sensors <ul style="list-style-type: none"> FM Class 1 Div 2 CSA Class 1, Div 2 	ATEX 2G D sensor <ul style="list-style-type: none"> DN 15 ... 300: EEx d e ia IIC T3 - T6 FM Class 1 zone 1 CSA Class 1 zone 1 IEC Ex de ia IIC T3-T6 Ex tD A21 IP67 Non ATEX sensors <ul style="list-style-type: none"> FM Class 1 Div 2 CSA Class 1, Div 2
Drinking water approvals		EPDM lining: <ul style="list-style-type: none"> WRAS (WRc, BS6920 cold water, GB) NSF/ANSI Standard 61 (Cold water, US) ACS listed (F) DVGW W270 (D) Belgaqua (B) MCERTS (GB) (EPDM or PTFE lining with AISI 316 or Hastelloy electrodes) 	
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)	Heat meter pattern approval - OIML R 75 (Denmark) Hot water pattern approval - PTB (Germany)

Technical specification for transmitter - please see transmitter pages.

¹⁾ For sizes larger than 600 mm (24") in PN 16 PED conformity is available as a cost-added option. The basic unit will carry the LVD (Low Voltage Directive) and EMC approval.

All products sold outside of EU and EFTA are excluded from the Pressure Equipment directive, also products sold into certain market sectors are excluded. These include

- 1) Meters used in networks for the supply, distribution and discharge of water.
- 2) Meters used in pipelines for the conveyance of any fluid from offshore to onshore.
- 3) Meters used in the extraction of petroleum or gas, including christmas tree and manifold equipment.
- 4) Any meter mounted on a ship or mobile offshore platform.

SITRANS F flowmeters

SITRANS F M

Flow sensor MAG 3100

Selection and Ordering data	Order No.
Sensor SITRANS F M MAG 3100 P (Short delivery time)	7ME 6 3 4 0 -
Diameter	
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
Flange norm and pressure rating	
<u>EN 1092-1</u>	
PN 10 (DN 200 ... 300 (8" ... 12"))	◆ B
PN 16 (DN 65 ... 300 (2½" ... 12"))	◆ C
PN 40 (DN 15 ... 50 (½" ... 2"))	◆ F
<u>ANSI B16.5</u>	
Class 150 (½" ... 12")	◆ J
Flange material	
Carbon steel flanges ASTM A 105	◆ 1
Liner material	
PTFE (130 °C (266 °F))	◆ 3
PFA (150 °C (302 °F)) (DN 25, 50, 80, 100 (1", 2", 3", 4"))	◆ 7
Electrode material	
Hastelloy C276 (PFA: Hastelloy C22)	◆ 2
Transmitter	
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, Polyamide, 11 ... 30 V DC/11 ... 24V 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 ATEX) (only MAG 6000/MAG 6000 I)	◆ G
MODBUS RTU/RS 485 (not for ATEX) (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 6000 I compact	◆ 1
½" NPT: Polyamide terminal box or 6000 I 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.	
Material certificate according to EN 10204 3.1	C12
Factory certificate according to EN 10204-2.2	C14
Factory certificate according to EN 10204-2.1	C15
Tag name plate, stainless steel fixed with SS wire (add plain text)	Y17
Tag name plate, plastic (self adhesive)	Y18
Power cable wired (specify cable order no.)	Y40
Sensor for remote transmitter's junction box IP68 with wired cable (specify cable order no.) (not for ATEX)	Y41
Customer specific test	Y90
Other postproduction requirements (add desired text)	Y99
Additional calibrations	
• Matched pair - (Standard production calibration where sensor and transmitter is calibrated together)	On request¹⁾
• Accredited Siemens Flow Instruments matched pair Calibration acc. to ISO/IEC 17025: 2005	On request¹⁾
• Customer specified calibration up to 10 point	On request¹⁾
• CT verification and authority seal according to: Cold water pattern approval - DANAK TS 22.36.001, PTB (Denmark and Germany)	On request¹⁾
• Customer witnessed calibration Any of above calibration	On request¹⁾
◆ Short lead time (details in PMD)	

This device is shipped with a Quick Start guide and the SITRANS F manual CD containing the complete manual library. Printed Operating Instructions are available for purchase via PMD

¹⁾ Ordering On request as dedicated information from the customer on the individual sensors is required. Please fill in the calibration form found on pi.khe.siemens.de/index.aspx?Nr=17460 and send together with the order. (Size dependent restriction on maximum flow rates may apply)

Please also see www.siemens.com/SITRANSForordering 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

Flow sensor MAG 3100

Selection and Ordering data	Order No.	Selection and Ordering data	Order No.
Sensor SITRANS F M MAG 3100	7ME6310-	Sensor SITRANS F M MAG 3100	7ME6310-
Diameter		Liner material	
DN 15 (½") (PTFE liner only)	1 V	Neoprene	1
DN 25 (1")	2 D	EPDM	2
DN 40 (1½")	2 R	PTFE (DN ≤ 300, PN ≤ 50 bar / ≤ 12", PN ≤ 725 psi), PTFE (350 ≤ DN ≤ 600, PN ≤ 40 bar / 14" ≤ DN ≤ 24", PN ≤ 580 psi)	3
DN 50 (2")	2 Y	Ebonite	4
DN 65 (2½")	3 F	Linatex (PN ≤ 40 bar (580 psi) DN ≤ 600 (24"))	5
DN 80 (3")	3 M	PFA (DN 25, 50, 80, 100 (1", 2", 3", 4")) (PN ≤ 40 bar (580 psi))	7
DN 100 (4")	3 T		
DN 125 (5")	4 B	Electrode material	
DN 150 (6")	4 H	(Grounding electrodes not for PTFE/PFA liner or Pressure PN 100)	
DN 200 (8")	4 P	AISI 316 Ti	1
DN 250 (10")	4 V	Hastelloy C276 (PFA liner: Hastelloy C22)	2
DN 300 (12")	5 D	Platinum (DN ≤ 300/12") (no grounding electrodes)	3
DN 350 (14")	5 K	Titanium (not PFA liner)	4
DN 400 (16")	5 R	Tantalum (DN ≤ 600 (24")) (no grounding electrodes)	5
DN 450 (18")	5 Y		
DN 500 (20")	6 F	Transmitter with display	
DN 600 (24")	6 P	Sensor for remote transmitter (Order transmitter sep.)	A
DN 700 (28")	6 Y	Sensor ATEX 2G D for remote transmitter (Order transmitter separately)	B
DN 750 (30") (AWWA and AS 2129 only)	7 D	MAG 6000 I, Alu. 18 ... 90 V DC, 115 ... 230 V AC	C
DN 800 (32")	7 H	MAG 6000 I Alu. 18 ... 30 V DC, ATEX 2G D	D
DN 900 (36")	7 M	MAG 6000 I Alu. 115 ... 230 V, ATEX 2G D	E
DN 1000 (40")	7 R	MAG 6000 Polyamide, 11... 30 V DC / 11...24 V AC	H
DN 1050 (42") (AWWA only)	7 U	MAG 6000, Polyamide, 115 ... 230 V AC	J
DN 1100 (44") (AWWA only)	7 V	MAG 5000, Polyamide, 11... 30 V DC / 11...24 V AC	K
DN 1200 (48")	8 B	MAG 5000, Polyamide, 115 ... 230 V AC	L
DN 1400 (54")	8 F		
DN 1500 (60")	8 K	Communication	
DN 1600 (66")	8 P	No communication, add-on possible	A
DN 1800 (72")	8 T	HART	B
DN 2000 (78")	8 Y	PROFIBUS PA Profile 3 (only MAG 6000/MAG 6000 I)	F
		PROFIBUS DP Profile 3 (not for ATEX) (only MAG 6000/MAG 6000 I)	G
Flange norm and pressure rating		MODBUS RTU/RS 485 (not for ATEX) (only MAG 6000/MAG 6000 I)	E
<u>EN 1092-1</u>		FOUNDATION Fieldbus H1 (only MAG 6000/MAG 6000 I)	J
PN 6 (DN 65 ... 2000 (2½" ... 78"))	A		
PN 10 (DN 200 ... 2000 (8" ... 78"))	B	Cable glands/terminal box	
PN 16 (DN 65 ... 1200 (2½" ... 48"))	C	Metric: Polyamide terminal box or 6000 I compact	1
PN 16, non PED (DN 700 ... 2000 (28" ... 78"))	D	½" NPT: Polyamide terminal box or 6000 I compact	2
PN 25 (DN 200 ... 600 (8" ... 24"))	E	Metric: SS terminal box (mandatory for Stainless steel MAG 6000 Transmitter)	3
PN 40 (DN 15 ... 600 (½" ... 24"))	F	½" NPT: SS terminal box (mandatory for Stainless steel MAG 6000 Transmitter)	4
PN 63 (DN 50 ... 300 (2" ... 12")), not PTFE or PFA	G		
PN 100 (DN 25 ... 300 (1" ... 12")), not PTFE or PFA	H	◆ Short lead time (details in PMD)	
<u>ANSI B16.5</u>			
Class 150 (½" ... 24")	J		
Class 300 (½" ... 24")	K		
<u>AWWA C207</u>			
Class D (28" ... 78")	L		
<u>AS</u>			
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		
<u>JIS B 2220:2004</u>			
K10 (1" ... 24")	R		
K20 (1" ... 24")	S		
Flange material			
Carbon steel flanges ASTM A 105	1		
Stainless steel flanges, AISI 304	2		
Stainless steel flanges and sensor body, AISI 316L, polished	3		

SITRANS F flowmeters

SITRANS F M

Flow sensor MAG 3100

Selection and Ordering data Order code

Additional information

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

Factory certificate according to EN 10204-2.2	C14
Factory certificate according to EN 10204-2.1	C15
Tag name plate, stainless steel fixed with SS wire (add plain text)	Y17
Tag name plate, plastic (self adhesive)	Y18
Customer-specific converter setup	Y20
Sensor cables wired (specify cable order no.)	Y40
Sensor for remote transmitter's junction box potted to IP68 with wired cable (specify cable order no.) (not for ATEX)	Y41
Other postproduction requirements (add desired text)	Y99
Additional calibrations	
• Matched pair - (Standard production calibration where sensor and transmitter is calibrated together)	On request¹⁾
• Accredited Siemens Flow Instruments matched pair Calibration acc. to ISO/IEC 17025: 2005	On request¹⁾
• Customer specified calibration up to 10 point	On request¹⁾
• CT verification and authority seal according to: Cold water pattern approval - DANAK TS 22.36.001, PTB (Denmark and Germany)	On request¹⁾
• Customer witnessed calibration Any of above calibration	On request¹⁾

¹⁾ Ordering On request as dedicated information from the customer on the individual sensors is required. Please fill in the calibration form found on pi.khe.siemens.de/index.aspx?Nr=17460 and send together with the order. (Size dependent restriction on maximum flow rates may apply)

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



Please use online Product selector to get latest updates.

Product selector link:

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

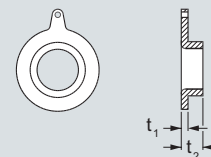
Flow sensor MAG 3100

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

Type C



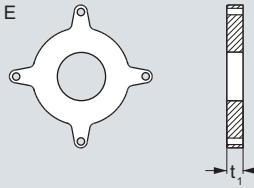
DN	PN 6	PN 10	PN 16	PN 25	PN 40	AS2129, Table E
	Order No.	Order No.	Order No.	Order No.	Order No.	Order No.
DN 25					FDK-083N8361	FDK-083N8361
DN 40					FDK-083N8362	FDK-083N8362
DN 50					FDK-083N8344	FDK-083N8344
DN 65	FDK-083N8345		FDK-083N8345		FDK-083N8345	FDK-083N8346
DN 80	FDK-083N8347		FDK-083N8347		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						
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					Size	AWWA C207
	Class 150	Class 300	JIS K10	JIS K20			
	Order No.	Order No.	Order No.	Order No.		Order No.	
1"	FDK-083N8361	FDK-083N8361	FDK-083N8361	FDK-083N8361	28"	FDK-083N8302	
1½"	FDK-083N8362	FDK-083N8362	FDK-083N8362	FDK-083N8362	30"	FDK-083N8366	
2"	FDK-083N8344	FDK-083N8344	FDK-083N8344	FDK-083N8344	32"	FDK-083N8305	
2½"	FDK-083N8345	FDK-083N8345	FDK-083N8345	FDK-083N8345	36"	FDK-083N8308	
3"	FDK-083N8347	FDK-083N8347	FDK-083N8347	FDK-083N8347	40"	FDK-083N8311	
4"	FDK-083N8025	FDK-083N8025	FDK-083N8070	FDK-083N8025	42"	FDK-083N8394	
5"	FDK-083N8071	FDK-083N8071	FDK-083N8071	FDK-083N8071	44"	FDK-083N8395	
6"	FDK-083N8008	FDK-083N8073	FDK-083N8008	FDK-083N8008	48"	FDK-083N8314	
8"	FDK-083N8011	FDK-083N8076	FDK-083N8011	FDK-083N8011	54"	FDK-083N8470	
10"	FDK-083N8013	FDK-083N8079	FDK-083N8013	FDK-083N8079	60"	FDK-083N8474	
12"	FDK-083N8012	FDK-083N8082	FDK-083N8012	FDK-083N8081	66"	FDK-083N8478	
14"	FDK-083N8039	FDK-083N8085	FDK-083N8083	FDK-083N8039	72"	FDK-083N8482	
16"	FDK-083N8100	FDK-083N8102	FDK-083N8100	FDK-083N8101	78"	FDK-083N8486	
18"	FDK-083N8104	FDK-083N8106	FDK-083N8103	FDK-083N8104			
20"	FDK-083N8107	FDK-083N8110	FDK-083N8107	FDK-083N8108			
24"	FDK-083N8113	FDK-083N8114	FDK-083N8111	FDK-083N8112			

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.

Type E



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.	JIS K10 Order No.	JIS K20 Order No.
½"	FDK-083N8365	FDK-083N8365		
1"	FDK-083N8272	FDK-083N8272	FDK-083N8271	FDK-083N8271
1½"	FDK-083N8279	FDK-083N8279	FDK-083N8278	FDK-083N8278
2"	FDK-083N8283	FDK-083N8283	FDK-083N8282	FDK-083N8282
2½"	FDK-083N8287	FDK-083N8287	FDK-083N8285	FDK-083N8285
3"	FDK-083N8291	FDK-083N8292	FDK-083N8288	FDK-083N8289
4"	FDK-083N8118	FDK-083N8119	FDK-083N8116	FDK-083N8117
5"	FDK-083N8122	FDK-083N8123	FDK-083N8121	FDK-083N8122
6"	FDK-083N8126	FDK-083N8127	FDK-083N8125	FDK-083N8126
8"	FDK-083N8370	FDK-083N8133	FDK-083N8130	FDK-083N8131
10"	FDK-083N8140	FDK-083N8141	FDK-083N8137	FDK-083N8139
12"	FDK-083N8148	FDK-083N8149	FDK-083N8144	FDK-083N8146
14"	FDK-083N8157	FDK-083N8158	FDK-083N8152	FDK-083N8154
16"	FDK-083N8165	FDK-083N8166	FDK-083N8161	FDK-083N8163
18"	FDK-083N8173	FDK-083N8174	FDK-083N8169	FDK-083N8171
20"	FDK-083N8182	FDK-083N8183	FDK-083N8178	FDK-083N8180
24"	FDK-083N8190	FDK-083N8191	FDK-083N8187	FDK-083N8189

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

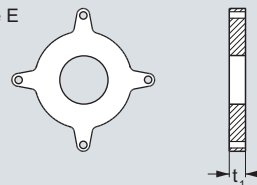
Flow sensor MAG 3100

Selection and Ordering data

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

1 pc. Hastelloy C276 grounding and protection ring **type E** for PTFE liners

Type E



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

Selection and Ordering data

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

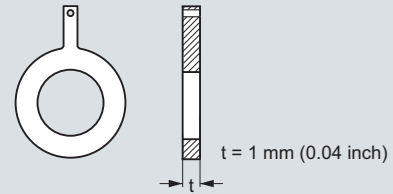
1 pc. AISI 316 grounding **flat ring** for all liners (not PTFE 180 °C)



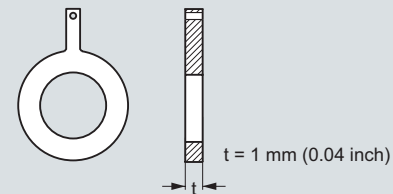
t = 1 mm (0.04 inch)

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

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 C276 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			A5E01191981 ^{F)}	½"	A5E01191989 ^{F)}	
DN 25			A5E01150882 ^{F)}	1"	A5E01150028 ^{F)}	A5E01150379 ^{F)}
DN 40			A5E01191982 ^{F)}	1½"	A5E01191990 ^{F)}	
DN 50			A5E01150922 ^{F)}	2"	A5E01151124 ^{F)}	A5E01151197 ^{F)}
DN 65		A5E01191971 ^{F)}	A5E01191983 ^{F)}	2½"	A5E01191991 ^{F)}	
DN 80		A5E01152889 ^{F)}	A5E01152889 ^{F)}	3"	A5E01152913 ^{F)}	A5E01153424 ^{F)}
DN 100		A5E01158886 ^{F)}	A5E01159074 ^{F)}	4"	A5E01159150 ^{F)}	A5E01159629 ^{F)}
DN 125		A5E01191973 ^{F)}	A5E01191984 ^{F)}	5"	A5E01191992 ^{F)}	
DN 150		A5E01191974 ^{F)}	A5E01191985 ^{F)}	6"	A5E01191993 ^{F)}	
DN 200	A5E01191978 ^{F)}	A5E01191975 ^{F)}	A5E01191986 ^{F)}	8"	A5E01191994 ^{F)}	
DN 250	A5E01191979 ^{F)}	A5E01191976 ^{F)}	A5E01191987 ^{F)}	10"	A5E01191995 ^{F)}	
DN 300	A5E01191980 ^{F)}	A5E01191977 ^{F)}	A5E01191988 ^{F)}	12"	A5E01191996 ^{F)}	

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

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

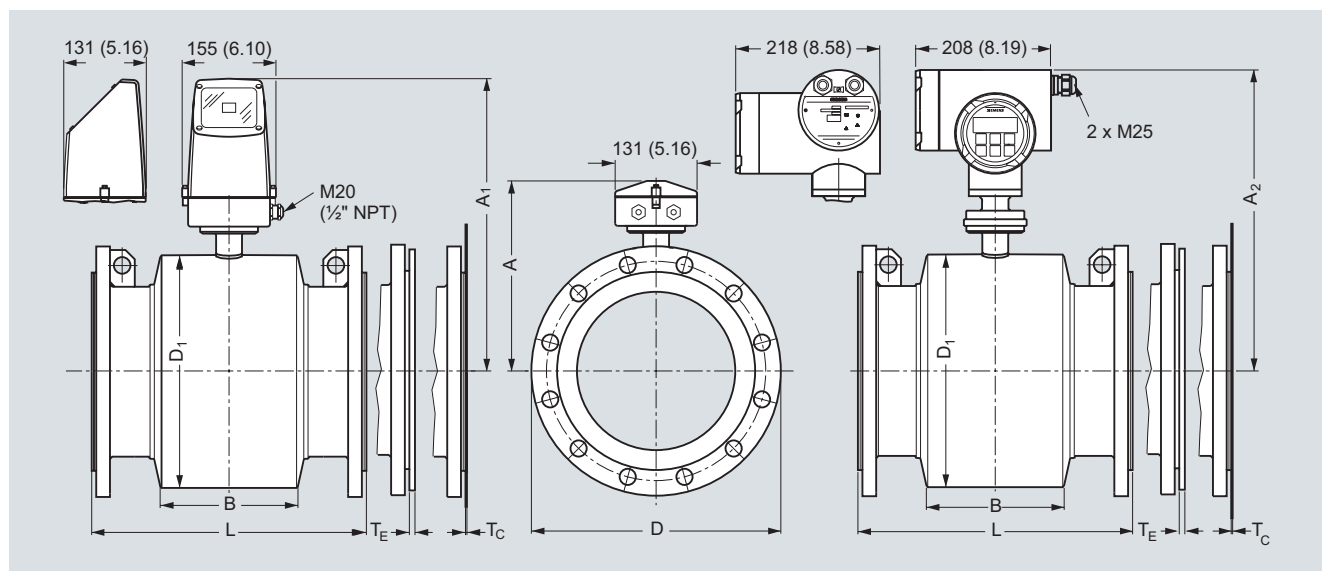
SITRANS F flowmeters

SITRANS F M

Flow sensor MAG 3100

Dimensional drawings

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



Dimensions in mm (inch)

Metric

DN	A ¹⁾	A ₁ /A ₂ ⁸⁾	B	D ₁	L ²⁾							
					EN 1092-1-201						ANSI 16.5	
					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]	
15	187	338	59	104	-	-	-	200	-	-	200	200
25	187	338	59	104	-	-	-	200	-	260	200	200
40	197	348	82	124	-	-	-	200	-	280	200	200
50	205	356	72	139	-	-	-	200	276	300	200	200
65	212	363	72	154	200	200/-	-	200	320	350	200	272
80	222	373	72	174	200	200/-	-	272	323	340	272	272
100	242	393	85	214	250	250/-	-	250	380	400	250	310
125	255	406	85	239	250	250/-	-	250	420	450	250	335
150	276	427	85	282	300	300/-	-	300	415	450	300	300
200	304	455	137	338	350	350/-	350	350	480	530	350	350
250	332	483	157	393	450	450/-	450	450	550	620	450	450
300	357	508	157	444	500	500/-	500	500	600	680	500	500
350	362	513	270	451	550	550/-	550	550	-	-	550	550
400	387	538	270	502	600	600/-	600	600	-	-	600	600
450	418	569	310	563	600	600/-	600	600	-	-	600	640
500	443	594	350	614	600	600/-	625	680	-	-	600	730
600	494	645	320	715	600	600/-	750	800	-	-	600	860
700	544	695	450	816	700	875/700	-	-	-	-	-	-
750	571	722	556	869	-	-/-	-	-	-	-	-	-
800	606	757	560	927	800	1000/800	-	-	-	-	-	-
900	653	804	630	1032	900	1125/900	-	-	-	-	-	-
1000	704	906	670	1136	1000	1250/1000	-	-	-	-	-	-
1050	704	906	670	1136	-	-/-	-	-	-	-	-	-
1100	755	906	770	1238	-	-/-	-	-	-	-	-	-
1200	810	961	792	1348	1200	1500/1200	-	-	-	-	-	-
1400	925	1076	1000	1675	1400	-/1400	-	-	-	-	-	-
1500	972	1123	1020	1672	1500	-/1500	-	-	-	-	-	-
1600	1025	1176	1130	1915	1600	-/1600	-	-	-	-	-	-
1800	1123	1274	1250	1974	1800	-/1800	-	-	-	-	-	-
2000	1223	1374	1375	2174	2000	-/2000	-	-	-	-	-	-

DN	L ²⁾				T _C ³⁾	T _E ³⁾	T _F ³⁾	Wgt. ⁴⁾
	AS 2129 E AS 4087 PN 16, 21, 35	AWWA C-207 Class D	JIS K10	JIS K20				
[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[kg]
15	200	-	200	200	-	6	2	4
25	200	-	200	200	1.2	6	2	5
40	200	-	200	240	1.2	6	2	8
50	200	-	200	240	1.2	6	2	9
65	200	-	200	272	1.2	6	2	11
80	200 ⁵⁾	-	200	272	1.2	6	2	12
100	250	-	250	310	1.2	6	2	16
125	250	-	250	335	1.2	6	2	19
150	300	-	300	300	1.2	6	2	27
200	350	-	350	350	1.2	8	2	40
250	450	-	450	450	1.2	8	2	60
300	500	-	500	500	1.6	8	2	80
350	550	-	550	550	1.6	8	-	110
400	600	-	600	600	1.6	10	-	125
450	600	-	600	640	1.6	10	-	175
500	600 ⁶⁾	-	600	680	1.6	10	-	200
600	600 ⁷⁾	-	600	800	1.6	10	-	287
700	700 ⁹⁾	700	-	-	2.0	-	-	330
750	750 ⁹⁾	750	-	-	2.0	-	-	360
800	800 ⁹⁾	800	-	-	2.0	-	-	450
900	900 ⁹⁾	900	-	-	2.0	-	-	530
1000	1000 ⁹⁾	1000	-	-	2.0	-	-	660
1050	-	1050	-	-	2.0	-	-	660
1100	1100 ⁹⁾	1100	-	-	2.0	-	-	1140
1200	1200 ⁹⁾	1200	-	-	2.0	-	-	1180
1400	-	1400	-	-	2.0	-	-	1600
1500	-	1500	-	-	3.0	-	-	2460
1600	-	1600	-	-	3.0	-	-	2525
1800	-	1800	-	-	3.0	-	-	2930
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 built-in length

3) T_C = Type C grounding ring, T_E = Type E grounding ring (Included and factory mounted on high temperature 180 °C (356 °F) PTFE sensor),
T_F = Flat type grounding rings

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) A₂ is 3 mm shorter than A₁

9) Not AS 4087 PN 21 or PN 35

- not available

D = Outside diameter of flange, see flange tables

SITRANS F flowmeters

SITRANS F M

Flow sensor MAG 3100

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

Imperial

Size	A ¹⁾	A ₁ /A ₂ ⁸⁾	B	D ₁	L ²⁾								
					EN 1092-1-201						ANSI 16.5		
					PN 6, 10	PN 16/ PN 16 non PED	PN 25	PN 40	PN 63	PN 100	Class 150	Class 300	
[in.]	[inch]	[inch]	[inch]	[inch]	[inch]	[inch]	[inch]	[inch]	[inch]	[inch]	[inch]	[inch]	
½	7.36	13.31	2.32	4.09	-	-	-	7.87	-	-	-	7.87	7.87
1	7.36	13.31	2.32	4.09	-	-	-	7.87	-	-	10.24	7.87	7.87
1½	7.76	13.70	3.23	4.88	-	-	-	7.87	-	-	11.02	7.87	7.87
2	8.07	14.01	2.83	5.47	-	-	-	7.87	10.87	-	11.81	7.87	7.87
2½	8.35	14.29	2.83	6.06	7.87	7.87/-	-	7.87	12.60	-	13.78	7.87	10.71
3	8.74	14.69	2.83	6.85	7.87	7.87/-	-	10.71	12.72	-	13.39	10.71	10.71
4	9.53	15.47	3.35	8.43	9.84	9.84/-	-	9.84	14.96	-	-	9.84	12.20
5	10.04	15.98	3.35	9.41	9.84	9.84/-	-	9.84	16.54	-	-	9.84	13.10
6	10.87	16.81	5.39	11.10	11.81	11.81/-	-	11.81	16.34	-	-	11.81	11.81
8	11.97	17.91	5.39	13.31	13.78	13.78/-	13.78	13.78	18.90	-	-	13.78	13.78
10	13.07	19.02	6.18	15.47	17.72	17.72/-	17.72	17.72	-	-	-	17.72	17.72
12	14.05	20.00	6.18	17.48	19.69	19.69/-	19.69	19.69	-	-	-	19.69	19.69
14	14.25	20.20	10.63	17.76	21.65	21.65/-	21.65	21.65	-	-	-	21.65	21.65
16	15.24	21.18	10.63	19.76	23.62	23.62/-	23.62	23.62	-	-	-	23.62	23.62
18	16.45	22.40	12.20	22.16	23.62	23.62/-	23.62	23.62	-	-	-	23.62	23.62
20	17.44	23.39	13.78	24.17	23.62	23.62/-	24.61	26.77	-	-	-	23.62	28.70
24	19.45	25.39	12.59	28.15	23.62	23.62/-	29.53	31.50	-	-	-	23.62	33.80
28	21.42	27.36	17.72	32.13	27.56	34.45/27.56	-	-	-	-	-	-	-
30	22.48	28.43	21.89	34.21	-	-/-	-	-	-	-	-	-	-
32	23.86	29.80	22.05	36.50	31.50	39.37/31.50	-	-	-	-	-	-	-
36	25.71	31.65	24.80	40.63	35.43	44.29/35.43	-	-	-	-	-	-	-
40	27.72	35.67	26.38	44.72	39.37	49.21/39.37	-	-	-	-	-	-	-
42	27.72	35.67	26.38	44.72	-	-/-	-	-	-	-	-	-	-
44	29.72	35.67	30.31	48.74	-	-/-	-	-	-	-	-	-	-
48	31.89	37.83	31.18	53.07	47.24	59.06/47.24	-	-	-	-	-	-	-
54	36.42	42.36	39.37	65.94	55.12	-/55.12	-	-	-	-	-	-	-
60	38.27	44.21	40.15	65.83	59.06	59.06/59.06	-	-	-	-	-	-	-
66	40.35	46.30	44.49	75.39	62.99	-/62.99	-	-	-	-	-	-	-
72	44.21	50.16	49.21	77.72	70.87	-/70.87	-	-	-	-	-	-	-
78	48.15	54.09	54.13	85.59	78.74	-/78.74	-	-	-	-	-	-	-

4

Size	L ²⁾				T _C ³⁾	T _E ³⁾	T _F ³⁾	Wgt. ⁴⁾
	AS 2129 E AS 4087 PN 16, 21, 35	AWWA C-207 Class D	JIS K10	JIS K20				
[in.]	[inch]	[inch]	[inch]	[inch]	[in.]	[in.]	[in.]	[lb]
½	7.87	-	7.87	7.87	-	0.24	0.08	9
1	7.87	-	7.87	7.87	0.05	0.24	0.08	11
1½	7.87	-	7.87	9.44	0.05	0.24	0.08	17
2	7.87	-	7.87	9.44	0.05	0.24	0.08	20
2½	7.87	-	7.87	10.70	0.05	0.24	0.08	24
3	7.87 ⁵⁾	-	7.87	10.70	0.05	0.24	0.08	26
4	9.84	-	9.84	12.20	0.05	0.24	0.08	35
5	9.84	-	9.84	13.18	0.05	0.24	0.08	42
6	11.81	-	11.81	11.81	0.05	0.24	0.08	60
8	13.78	-	13.77	13.77	0.05	0.31	0.08	88
10	17.72	-	17.71	17.71	0.05	0.31	0.08	132
12	19.69	-	19.68	19.68	0.06	0.31	0.08	176
14	21.65	-	21.65	21.65	0.06	0.31	-	242
16	23.62	-	23.62	23.62	0.06	0.39	-	275
18	23.62	-	23.62	25.19	0.06	0.39	-	385
20	23.62 ⁶⁾	-	23.62	26.77	0.06	0.39	-	440
24	23.62 ⁷⁾	-	23.62	31.49	0.06	0.39	-	633
28	27.56	27.56			0.08	-	-	728
30	-	29.52			0.08	-	-	794
32	31.50	31.50			0.08	-	-	992
36	35.43	35.43			0.08	-	-	1168
40	39.37	39.37			0.08	-	-	1455
42	-	39.37			0.08	-	-	1455
44	43.31	43.31			0.08	-	-	2513
48	47.24	47.24			0.08	-	-	2601
54	-	55.12			0.12	-	-	3528
60	-	59.06			0.12	-	-	5423
66	-	63.00			0.12	-	-	5566
72	-	70.87			0.12	-	-	6460
78	-	78.74			0.12	-	-	8080

¹⁾ 0.571 inch shorter with ANSI terminal box (Ex and high temperature version)

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

³⁾ T_C = Type C grounding ring, T_E = Type E grounding ring (Included and factory mounted on high temperature 180 °C (356 °F) PTFE sensor),

T_F = Flat type grounding rings

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⁾ A₂ is 0.06" shorter than A₁

- not available

D = Outside diameter of flange, see flange tables