

Flow Measurement

SITRANS F M

MAG 8000 for abstraction and distribution network applications (7ME6810)

3

Selection and Ordering data	Article No.	Selection and Ordering data	Article No.
SITRANS F M MAG 8000 water meter	7 ME 6 8 1 0 -	SITRANS F M MAG 8000 water meter	7 ME 6 8 1 0 -
Diameter		Communication interface	
DN 25 (1")	2 D	No additional "add-on" communication module installed	A
DN 40 (1½")	2 R	Serial RS 485 with Modbus RTU (Terminated as end device)	B
DN 50 (2")	2 Y	Serial RS 232 with Modbus RTU	C
DN 65 (2½")	3 F	GSM/GPRS communication module with remote antenna; 5 m (16.4 ft) cable	S
DN 80 (3")	3 M	GSM/GPRS communication module with analog inputs and remote antenna; 5 m (16.4 ft) cable	T
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") ¹⁾	6 Y		
DN 750 (30") ¹⁾	7 D		
DN 800 (32") ¹⁾	7 H		
DN 900 (36") ¹⁾	7 M		
DN 1000 (40") ¹⁾	7 R		
DN 1050 (42") ¹⁾	7 U		
DN 1100 (44") ¹⁾	7 V		
DN 1200 (48") ¹⁾	8 B		
Flange norm and pressure rating		Power supply	
EN 1092-1		Internal battery (no battery included)	0
PN 10 (DN 200 ... 1200 (8" ... 48"))	B	Internal battery pack installed ²⁾	1
PN 16 (DN 50 ... 1200 (2" ... 48"))	C	Power cable (1.5 m (4.9 ft)) with IP68/NEMA 6P plugs for external battery (no battery included)	2
PN 16 non-PED (DN 700 ... 1200 (28" ... 48"))	D	12/24 V AC/DC power supply with battery backup and 3 m (9.8 ft) power cable for external connection (no battery included)	3
PN 40 (DN 25 ... 40 (1" ... 1½"))	F	115 ... 230 V AC power supply with battery backup and 3 m (9.8 ft) power cable for external connection (no battery included)	4
ANSI B16.5			
Class 150	J		
AWWA C-207			
Class D (28" ... 48")	L		
AS4087			
PN 16 (DN 50 ... 1200 (2" ... 48"))	N		
Sensor version			
EPDM liner and Hastelloy electrodes	3		
Calibration			
Standard ± 0.4 % of rate ± 2 mm/s	1		
Extended ± 0.2 % of rate ± 2 mm/s DN 25... 300 (1" ... 12")	2		
Region version			
Europe (m ³ , m ³ /h, 50 Hz)	1		
USA (Gallon, GPM, 60 Hz)	2		
Australia (Ml, Ml/d, 50 Hz)	3		
Transmitter type and installation			
Basic version integral on sensor	A		
Basic version remote, cable mounted on sensor with IP68/NEMA 6P plugs:			
• 5 m (16.4 ft)	B		
• 10 m (32.8 ft)	C		
• 20 m (65.6 ft)	D		
• 30 m (98.4 ft)	E		
Advanced version integral on sensor	K		
Advanced version remote, cable mounted on sensor with IP68/NEMA 6P plugs:			
• 5 m (16.4 ft)	L		
• 10 m (32.8 ft)	M		
• 20 m (65.6 ft)	N		
• 30 m (98.4 ft)	P		

Communication interface

No additional "add-on" communication module installed

Serial RS 485 with Modbus RTU (Terminated as end device)

Serial RS 232 with Modbus RTU

GSM/GPRS communication module with remote antenna; 5 m (16.4 ft) cable

GSM/GPRS communication module with analog inputs and remote antenna; 5 m (16.4 ft) cable

Power supply

Internal battery (no battery included)

Internal battery pack installed²⁾


Power cable (1.5 m (4.9 ft)) with IP68/NEMA 6P plugs for external battery (no battery included)

12/24 V AC/DC power supply with battery backup and 3 m (9.8 ft) power cable for external connection (no battery included)

115 ... 230 V AC power supply with battery backup and 3 m (9.8 ft) power cable for external connection (no battery included)

¹⁾ The Diameter DN 700 (28") to DN 1200 (48") is only available as remote transmitter type installation.

²⁾ Lithium batteries are subject to special transportation regulations according to United Nations "Regulation of Dangerous Goods, UN 3090 and UN 3091". Special transport documentation is required to observe these regulations. This may influence both transport time and costs.

• We can offer shorter delivery times for configurations designated with the Quick Ship Symbol . For details see page 9/5 in the appendix.

Operating instructions for SITRANS F M MAG 8000

Description	Article No.
• English	A5E03071515
• German	A5E00740986
• Spanish	A5E00741031
• French	A5E00741021

This device is shipped with a Quick Start guide and a CD containing further SITRANS F literature.

All literature is also available for free at:
<http://www.siemens.com/flowdocumentation>

Operating instructions for MAG 8000 GSM/GPRS communication module

Description	Article No.
• English	A5E03644134

Flow Measurement

SITRANS F M

MAG 8000 for abstraction and distribution network applications (7ME6810)

Selection and Ordering data

Order code

Additional information

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

Flow unit

l/s	L00
MGD	L01
CFS	L02
l/min	L03
m ³ /min	L04
GPM	L05
CFM	L06
l/h	L07
m ³ /h	L08
GPH	L09
CFH	L10
GPS	L11
MI/d	L12
m ³ /d	L13
GPD	L14

Totalizer

Volume calculation (default totalizer 1= forward and totalizer 2 = reverse)

Totalizer 1 = RV, reverse flow	L20
Totalizer 1 = NET, net flow	L22
Totalizer 2 = FW, forward flow	L30
Totalizer 2 = NET, net flow	L31

Volume unit

m ³	L40
MI	L41
G	L42
AF	L43
l x 100	L44
m ³ x 100	L45
G x 100	L46
CF x 100	L47
MG	L48
G x 1000	L49
CF x 1000	L50
AI	L51
kl	L52

Pulse set up

(default pulse A= forward and pulse B = Alarm)

A function = RV, reverse flow	L62
A function = FWnet, forward net flow	L63
A function = RVnet, reverse net flow	L64
A function = Off	L65
Volume per pulse A = x 0.0001	L70
Volume per pulse A = x 0.001	L71
Volume per pulse A = x 0.01	L72
Volume per pulse A = x 0.1	L73
Volume per pulse A = x 1	L74
B function = FW, forward flow	L80
B function = RV, verse flow	L81
B function = FWnet, forward net flow	L82
B function = RVnet, reverse net flow	L83
B function = Alarm	L84
B function = Call up	L85
Volume per pulse B = x 0.0001	L90
Volume per pulse B = x 0.001	L91
Volume per pulse B = x 0.01	L92
Volume per pulse B = x 0.1	L93
Volume per pulse B = x 1	L94

Selection and Ordering data

Order code

Additional information

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

Data logger set up (default month logging)

DataloggerInterval = Daily	M31
DataloggerInterval = Weekly	M32

Factory mounted cables

5 m (16.4 ft) pulse cable A+B	M81
5 m (16.4 ft) communication cable RS 232/RS 485 terminated as end device	M82
20 m (65.6 ft) pulse cable A+B	M84
20 m (65.6 ft) communication cable RS 232/RS 485 terminated as end device	M85
Cello 2 channel, input cable 3 m (9.84 ft) with Brad Harrison micro-change 3 way connector	M87
Cello 2 channel, input cable 5 m (16.4 ft) with MIL-C-26482 spec. connectors	M89
SOFREL data logger cable 2 m with connector for SOFREL GSM module	M92

FM Fire Service Approval

(with ANSI B16.5 Class 150 flanges)

DN 50, DN 80 and DN 100 (2", 3" and 4")	P20
DN 150 and DN 200 (6" and 8")	P21
DN 250 and DN 300 (10" and 12")	P22

Flow Measurement SITRANS F M

MAG 8000 CT for revenue and bulk metering (7ME6820)

3

Selection and Ordering data	Article No.
SITRANS F M	
MAG 8000 CT water meter with EPDM liner and Hastelloy electrodes	7 ME 6 8 2 0 -
	0 -
Diameter	
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") ¹⁾	5 Y
DN 500 (20") ¹⁾	6 F
DN 600 (24") ¹⁾	6 P
Flange norm and pressure rating	
<u>EN 1092-1</u>	
PN 16	C
<u>ANSI B16.5</u>	
Class 150	J
<u>AS4087</u>	
PN 16	N
Approval/Verification³⁾	
Without verification according to OIML R 49 ⁴⁾	0
MI-001 Q3/Q1 = 25	1
MI-001 Q3/Q1 = 63	2
MI-001 Q3/Q1 = 80	3
MI-001 Q3/Q1 = 160	4
MI-001 Q3/Q1 = 200	5
MI-001 Q3/Q1 = 250	6
Without verification calibrated to OIML R 49-Class II (Q3/Q1 = 100)	7
Without verification calibrated to OIML R 49-Class II (Q3/Q1 = 250)	8
Region version	
Europe (m ³ , m ³ /h, 50 Hz)	1
USA (m ³ , m ³ /h, 60 Hz)	2
Transmitter type and installation	
Basic version integral on sensor	A
Basic version remote, 5 m (16.4 ft) mounted cable on sensor with IP68/NEMA 6P plugs	B
Do - 10 m (32.8 ft)	C
Do - 20 m (65.6 ft)	D
Do - 30 m (98.4 ft)	E
Advanced version integral on sensor	K
Advanced version remote, 5 m mounted cable on sensor with IP68/NEMA 6P plugs	L
Do - 10 m (32.8 ft)	M
Do - 20 m (65.6 ft)	N
Do - 30 m (98.4 ft)	P

Selection and Ordering data	Article No.
SITRANS F M	
MAG 8000 CT water meter with EPDM liner and Hastelloy electrodes	7 ME 6 8 2 0 -
	0 -
Communication interface	
No additional "add-on" communication module installed	A
Serial RS 485 with Modbus RTU (Terminated as end device)	B
Serial RS 232 with Modbus RTU	C
Encoder interface for ITRON 200WP radio with "Sensus" protocol"	D
GSM/GPRS module without analog inputs cable	S
GSM/GPRS module with analog inputs cable	T
Power supply	
Internal battery (no battery included)	0
Internal battery pack installed ²⁾	1
Power cable (1.5 m (4.9 ft)) with IP68/NEMA 6P plugs for external battery (no battery included)	2
12/24 V AC/DC power supply with battery backup and 3 m (9.8 ft) power cable for external connection (no battery included)	3
115 ... 230 V AC power supply with battery backup and 3 m (9.8 ft) power cable for external connection. (no battery included)	4
¹⁾ Under preparation. ²⁾ Lithium batteries are subject to special transportation regulations according to United Nations "Regulation of Dangerous Goods, UN 3090 and UN 3091". Special transport documentation is required to observe these regulations. This may influence both transport time and costs. ³⁾ For more details and references of the ranges please see the tables on pages 3/126 to 3/128. ⁴⁾ Standard calibration or according to FM Fire Service requirements if P20, P21 or P22 is selected as Z option.	

Operating instructions for SITRANS F M MAG 8000

Description	Article No.
English	A5E03071515
German	A5E00740986
Spanish	A5E00741031
French	A5E00741021

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Operating instructions for MAG 8000 GSM/GPRS communication module

Description	Article No.
English	A5E03644134

Flow Measurement

SITRANS F M

**MAG 8000 CT for revenue and bulk metering
(7ME6820)**

Selection and Ordering data	Order code
Additional information	
Please add "-Z" to Article No. and specify Order code(s) and plain text.	
FP2E marking (France only)	C17
Totalizer	
Volume calculation (default totalizer 1 = forward and totalizer 2 = reverse)	
Totalizer 1 = RV, reverse flow	L20
Totalizer 1 = NET, net flow	L22
Totalizer 2 = FW, forward flow	L30
Totalizer 2 = NET, net flow	L31
Pulse set up (default pulse A = forward and pulse B = Alarm)	
A function = RV, reverse flow	L62
A function = FWnet, forward net flow	L63
A function = RVnet, reverse net flow	L64
A function = Off	L65
Volume per pulse A = x 0.001	L71
Volume per pulse A = x 0.01	L72
Volume per pulse A = x 0.1	L73
Volume per pulse A = x 1	L74
B function = FW, forward flow	L80
B function = RV, reverse flow	L81
B function = FWnet, forward net flow	L82
B function = RVnet, reverse net flow	L83
B function = Alarm	L84
B function = Call up	L85
Volume per pulse B = x 0.001	L91
Volume per pulse B = x 0.01	L92
Volume per pulse B = x 0.1	L93
Volume per pulse B = x 1	L94
Data logger set up (default month logging)	
DataloggerInterval = Daily	M31
DataloggerInterval = Weekly	M32
Factory mounted cables	
5 m (16.4 ft) pulse cable A+B	M81
5 m (16.4 ft) communication cable RS 232/RS 485 terminated as end device	M82
20 m (65.6 ft) pulse cable A+B	M84
20 m (65.6 ft) communication cable RS 232/RS 485 terminated as end device	M85
Cello 2 channel, input cable 3 m (9.84 ft) with Brad Harrison micro-change 3 way connector	M87
Cello 2 channel, input cable 5 m (16.4 ft) with MIL-C-26482 spec. connectors	M89
5 ft. Encoder interface cable with connector for ITRON 200WP radio	M91
25 ft. Encoder interface cable with connector for ITRON 200WP radio	M90
SOFREL data logger cable 2 m with connector for SOFREL GSM module	M92
FM Fire Service Approval (with ANSI B16.5 Class 150 flanges)	
DN 50, DN 80 and DN 100 (2", 3" and 4")	P20
DN 150 and DN 200 (6" and 8")	P21
DN 250 and DN 300 (10" and 12")	P22

Flow Measurement

SITRANS F M

MAG 8000 for irrigation applications
(7ME6880)

Selection and Ordering data	Article No.
SITRANS F M MAG 8000 water meter including factory-mounted grounding rings	7 ME 6 8 8 0 -
	0 -
Diameter	
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
Flange norm and pressure rating	
EN 1092-1 drilled pattern PN 10/max. 7 bar (101 psi)	B
ANSI B16.5 drilled pattern CI 150/max. 7 bar (101 psi)	J
AS2129 drilled pattern table D/max. 7 bar (101 psi)	M
Sensor version	
Ebonite liner and stainless steel electrodes	4
Region version	
Europe (m ³ , m ³ /h, 50 Hz)	1
USA (Gallon, GPM, 60 Hz)	2
Australia (MI, MI/d, 50 Hz)	3
Transmitter type and installation	
Basic version integral on sensor	A
Basic version remote, 2 m (6.56 ft) mounted cable on sensor with IP68/NEMA 6P plugs	T
Do - 5 m (16.4 ft)	B
Do - 10 m (32.8 ft)	C

Selection and Ordering data	Article No.
SITRANS F M MAG 8000 water meter including factory-mounted grounding rings	7 ME 6 8 8 0 -
	0 -
Communication interface	
No additional "add-on" communication module installed	A
Serial RS 485 with Modbus RTU (Terminated as end device)	B
Serial RS 232 with Modbus RTU	C
Encoder interface	D
Power supply	
Internal battery (no battery included)	0
Internal battery pack installed 2 D-cell ^{1) 2)}	1
Power cable (1.5 m (4.9 ft)) with IP68/NEMA 6P plugs for external battery (no battery included)	2
12/24 V AC/DC power supply with battery backup and 3 m (9.8 ft) power cable for external connection (no battery included)	3
115 ... 230 V AC power supply with battery backup and 3 m (9.8 ft) power cable for external connection (no battery included)	4
Internal battery pack installed 1 D-cell ^{1) 2)}	5
¹⁾ Lithium batteries are subject to special transportation regulations according to United Nations "Regulation of Dangerous Goods, UN 3090 and UN 3091". Special transport documentation is required to observe these regulations. This may influence both transport time and costs. ²⁾ Can be ordered by US region only.	
Operating instructions for SITRANS F M MAG 8000	
Description	Article No.
• English	A5E03071515
• German	A5E00740986
• Spanish	A5E00741031
• French	A5E00741021

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Flow Measurement

SITRANS F M

MAG 8000 for irrigation applications
(7ME6880)

3

Selection and Ordering data	Order code	Selection and Ordering data	Order code
Additional information		Additional information	
Please add "-Z" to Article No. and specify Order code(s) and plain text.		Please add "-Z" to Article No. and specify Order code(s) and plain text.	
<u>Flow unit</u>		<u>Data logger set up</u> (default month logging)	
l/s	L00	DataloggerInterval = Daily	M31
MGD	L01	DataloggerInterval = Weekly	M32
CFS	L02	<u>Factory mounted cables</u>	
l/min	L03	5 m (16.4 ft) pulse cable A+B	M81
m ³ /min	L04	5 m (16.4 ft) communication cable RS 232/RS 485 terminated as end device	M82
GPM	L05	20 m (65.6 ft) pulse cable A+B	M84
CFM	L06	20 m (65.6 ft) communication cable RS 232/RS 485 terminated as end device	M85
l/h	L07	Cello 2 channel, input cable 3 m (9.84 ft) with Brad Harrison micro-change 3 way connector	M87
m ³ /h	L08	Cello 2 channel, input cable 5 m (16.4 ft) with MIL-C-26482 spec. connectors	M89
GPH	L09	5 ft Encoder interface cable with connector for ITRON 200WP radio	M91
CFH	L10	25 ft Encoder interface cable with connector for ITRON 200WP radio	M90
GPS	L11	SOFREL data logger cable 2 m with connector for SOFREL GSM module	M92
MI/d	L12		
m ³ /d	L13		
GPD	L14		
<u>Totalizer</u>			
Volume calculation (default totalizer 1= forward and totalizer 2 = reverse)			
Totalizer 1 = RV, reverse flow	L20		
Totalizer 1 = NET, net flow	L22		
Totalizer 2 = FW, forward flow	L30		
Totalizer 2 = NET, net flow	L31		
<u>Volume unit</u>			
m ³	L40		
MI	L41		
G	L42		
AF	L43		
l x 100	L44		
m ³ x 100	L45		
G x 100	L46		
CF x 100	L47		
MG	L48		
G x 1000	L49		
CF x 1000	L50		
AI	L51		
kl	L52		
<u>Pulse set up</u>			
(default pulse A= forward and pulse B = Alarm)			
A function = RV, reverse flow	L62		
A function = FWnet, forward net flow	L63		
A function = RVnet, reverse net flow	L64		
A function = Off	L65		
Volume per pulse A = x 0.0001	L70		
Volume per pulse A = x 0.001	L71		
Volume per pulse A = x 0.01	L72		
Volume per pulse A = x 0.1	L73		
Volume per pulse A = x 1	L74		
B function = FW, forward flow	L80		
B function = RV, verse flow	L81		
B function = FWnet, forward net flow	L82		
B function = RVnet, reverse net flow	L83		
B function = Alarm	L84		
B function = Call up	L85		
Volume per pulse B = x 0.0001	L90		
Volume per pulse B = x 0.001	L91		
Volume per pulse B = x 0.01	L92		
Volume per pulse B = x 0.1	L93		
Volume per pulse B = x 1	L94		