



SITRANS F M MAG 5000

Electromagnetic Flow Transmitter

Product scope

- Electromagnetic flow transmitter for compatible SITRANS F M sensors.
- Typical MAG 5000 accuracy is 0.4% of rate plus 1 mm/s under documented conditions.
- Supports configurable analog, digital and relay outputs with optional HART.
- Requires order-code and SENSORPROM verification before replacement.

Manufacturer source

Siemens SITRANS F M MAG 5000/6000 Operating Instructions A5E02338368-002

Selected manufacturer pages cover the family identity, technical data, output functions and mounting variants.

Request a fast quote	Product reference	
Email: info@apterpower.com Phone: +86 18106909650 apter.com/inquiry.php	SITRANS F M MAG 5000	

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SIEMENS



SITRANS F

Electromagnetic flowmeters

SITRANS F M MAG 5000/6000

Operating Instructions

Edition

12/2013

Answers for industry.

11

Technical data

11.1 Technical specifications



Mode of operation and design	Measuring principle	Electromagnetic with pulsed constant field
	Empty pipe	Detection of empty pipe (special cable required in remote mounted installation)
	Excitation frequency	Depends on sensor size
Input	Electrode input impedance	$> 1 \times 10^{14} \Omega$
	Digital input	11 ... 30 V DC, $R_i = 4.4 \text{ k}\Omega$
	Activation time	50 ms
	Current	$I_{DC \text{ 11 V}} = 2.5 \text{ mA}$, $I_{DC \text{ 30 V}} = 7 \text{ mA}$
Output	Current output	
	Signal range	0 ... 20 mA or 4 ... 20 mA, Alarm
	Load	$< 800 \Omega$
	Time constant	0.1 ... 30 s, adjustable (for batch: fixed at 0.1 s)
	Digital output	
	Frequency	0 ... 10 kHz, 50% duty cycle (uni/bidirectional)
	Pulse (active)	DC 24 V, 30 mA, $1 \text{ k}\Omega \leq R_i \leq 10 \text{ k}\Omega$, short-circuit protected (power supplied from flowmeter)
	Pulse (passive)	DC 3 ... 30 V, max. 110 mA, $200 \Omega \leq R_i \leq 10 \text{ k}\Omega$ (powered from connected equipment)
	Time constant	0.1 ... 30 s, adjustable (for batch: fixed at 0.1 s)
	Relay output	
Low flow cut off	Time constant	Changeover relay, same as current output
	Load	42 V AC/2 A, 24 V DC/1 A
Galvanic isolation	All inputs and outputs are galvanically isolated	
Max. measuring error (incl. sensor and zero point)	MAG 5000	$0.4\% \pm 1 \text{ mm/s}$ (for $v > 0.1 \text{ m/s}$)

Technical data

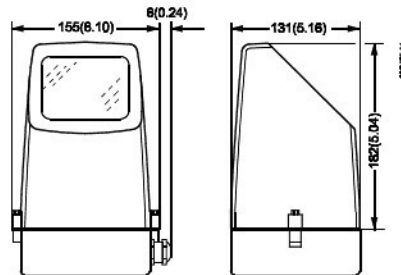
11.1 Technical specifications

	MAG 6000	0.2% ± 1 mm/s (for v > 0.1 m/s)
Functions	Flow rate, 2 totalizers, low-flow cut-off, empty pipe cut-off, flow direction, error system, operating time, uni/bidirectional flow, limit switches, pulse output, control for cleaning and batch	
Rated operation conditions	Ambient temperature	
	Operation	Standard IP67, 19", blind and SV versions: -20 ... +60 °C (-4 ... +140 °F) CT version: -20 ... +50 °C (-4 ... +122 °F)
	Storage	-40 ... +70 °C (-40 ... +158 °F)
Mechanical load	18 ... 1000 Hz, 3.17 G rms, sinusoidal in all directions to IEC 68-2-36	
Degree of protection	IP67/NEMA 4X/6 to IEC 529 and DIN 40050 (1 mH ₂ O 30 min.)	
EMC performance	EN 61326-1 (industrial environments)	
	EN 61326-2-5	
Display and keypad	Totalizer	Two eight-digit counters for forward, net or reverse flow
	Display	Background illumination with alphanumeric text, 3 x 20 characters to indicate flow rate, totalized values, settings and faults; Reverse flow indicated by negative sign
	Time constant	Time constant as current output time constant
Design	Enclosure material	Fiber glass reinforced polyamide; optional (IP67 only): AISI 316 stainless steel
	Dimensions	See dimensional drawings
	Weight	0.75 kg (2 lb)
Power supply	115 ... 230 V AC +10% -15%, 50 ... 60 Hz, Fuse: 500 mA T 11 ... 30 V DC or 11 ... 24 V AC; Fuse 2 A T	
Power consumption	115 ... 230 V AC: 17 VA 24 V AC: 9 VA, I _N = 380 mA, I _{ST} = 8 A (30 ms) 12 V DC: 11 W, I _N = 920 mA, I _{ST} = 4 A (250 ms)	
Certificates and approvals	CE, C-UL US general purpose, C-tick, CSA/FM Class 1, div 2	
	Custody transfer approval (MAG 5000/6000 CT)	Cold water pattern approval: PTB OIML R 49, MI-001 Hot water pattern approval: DANAK OIML R 75 (MAG 6000 CT) Other media than water (milk, beer etc.) pattern approval: DANAK OIML R 117 (MAG 6000 CT) Energy metering : PTB K7.2
Communication	MAG 5000	Without communication or HART as option
	MAG 6000	Prepared for client mounted add-on modules: HART, MODBUS RTU/RS485, FOUNDATION Fieldbus H1, DeviceNet, PROFIBUS PA, PROFIBUS DP as add-on modules
	MAG 5000 CT / MAG 6000 CT	No communication modules approved

Technical data

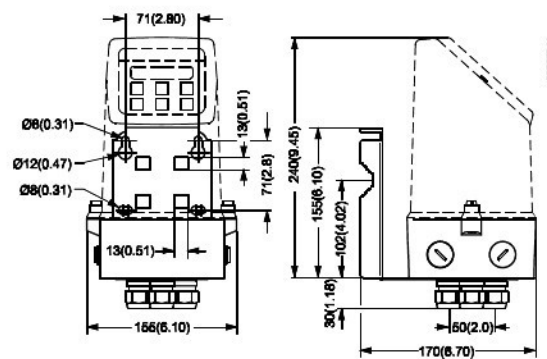
11.1 Technical specifications

Transmitter IP67/NEMA 4X/6 compact polyamide



Weight: MAG 5000/6000: 0.75 kg (1.65 lbs)

Transmitter IP67/NEMA 4X/6 wall-mounted polyamide



Weight(transmitter and wall mounting bracket): 1.65 kg (3.64 lbs)



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