



FlowGuard® FT420

Magnetic inductive flow meter

Article no. 1318/ [Diameter]/ [Process connection]/ [Pressure]/ [Material pipe cladding]/ [Material electrodes]/ [Protection class]/ [Output signal]

Description

The magnetic inductive flowmeter FlowGuard® FT420 is used for bidirectional flow measurement of liquid media, from drinking water to chemically aggressive media, in the temperature range up to 90°C.

In addition to a pulse output, the sensor has a 4 ... 20 mA analog output to transmit the volume flow and quantity detection; two status LEDs indicate the sensor status precisely at all times. The process connection can be designed as a flange, thread, sandwich or clamp in accordance with DIN 32676/DIN 11851.

Product highlights

- 900 measurements per second enable precise dosing processes
- Meets the highest demands on measuring accuracy (0.5 % of the measured value) and repeatability (0.2 %)
- Suitable for media temperatures up to 90°C
- Large measuring range from 0.01 m³/hour to 12,200 m³/hour depending on pipe diameter (DN4...DN600)

Areas of application

The FlowGuard® FT420 is used in a wide range of industrial applications. With its 900 measurements per second, it is particularly suitable for dosing processes, e.g. in the pharmaceutical, food and chemical industries. Thanks to its robust design and its ability to deliver reliable and highly precise measurement results under the most demanding operating conditions, a pure stainless steel version is also available.

Allgemeine Informationen

Areas of application	Liquids (min. conductivity capability 20 $\mu\text{S}/\text{cm}$)
Device type	Magnetic inductive flow meter
Geräte-Bauart	Compact device
Flow measuring range	0.2 ... 12 m/s Bidirectional measurement
Flow measurement accuracy	$\leq 0,5\%$ vom Messwert Wiederholgenauigkeit 0,2%
Medientemperatur Strömung	Max. 90°C (higher temperatures on request) with manufacturer)
Print	PN10, PN16, PN25 PN40, PN64, PN100 150lb(ANSI), 300lb(ANSI), 40K
Display	2 LED with four colors
Protection class evaluation unit	IP65, IP67 or IP68 available
Sensor protection class	IP65, IP67 or IP68 available
Special features	600 measurements per se-customer Empty pipe detection DN10...DN600 Pressure loss negligible Additional electrodes for earthing and detection of empty conduits lines

Outputs/inputs

Output signal	Pulse output, analog output
Specification analog signal	4 ... 20mA Pulse output/ current switch

Mechanische Daten

Diameter	DN4 ... 600 (more Diameter on request)
Process connection	Stainless steel flange (EN 1092) Sandwich design Thread (EN ISO 228-1) Dairy pipe fitting DIN11851
Material of the pipe cladding	Gummi (Hart) Rubber with drinking water supply PTFE- DN10...DN80 PFA- DN100...DN600 ETFE- DN100...DN600 PVDF- DN4...DN20

Material of the evaluation unit

RILSAN- DN25...DN600
Stainless steel or steel
ST37 (coated)
CrNi-Stahl DIN
1.4571(316 Ti)
Hastelloy C4
Titan
Tantal

Material of the electrodes

Elektrische Daten

Power supply	24 VAC/ VDC with reverse polarity protection
Operating voltage tolerance	$\pm 15\%$
Electrical connection	M12, 8 Pin
Power consumption max.	4,2 VA

Weitere Informationen

Ambient temperature	0 ... 55°C (Evaluation unit)
Accessories	Earthing rings

Elektrischer Anschluss

Order number

Item number 1318/

Durchmesser

Siehe Tabelle Messbereiche DN04 ... 600

Prozessanschluss

Flansch Steel ST37 lackiert	FSt
Flansch Stainless steel	FE304L
1.4306/304L	FE316L
Flansch Stainless steel	
1.4404/316L (EN1092)	S
Sandwich designGewinde (EN ISO 228-1)	G
Milk pipe fitting (DIN11851)	M
Clamp (DIN32676)	C

Print

PN10	10
PN16	16
PN25	25
PN40	40
PN64	64
PN100	100
150 lb (ANSI)	150
300lb (ANSI)	300
40K (JIS)	40K

Material pipe cladding

Gummi (Hart)	GH
Gummi mit Trinkwasserzulassung	GT
PTFE	PTFE
PFA	PFA
ETFE	ETFE
PVDF	PVDF
RILSAN	RILSAN

Material Elektroden

CrNi-Steel DIN 1.4571 (316Ti)	ST
Hastelloy C4	HA
Titan	TI
Tantal	TA

Schutzart

IP65	65
IP67	67
IP68	68

Ausgangssignal

Impulsausgang/ Flow-Switch	1
Impulsausgang/ Flow-Switch + 4...20 mA	2

Verfügbare Messbereiche

	Qmin [m3/h]	Qmax [m3/h]
Durchmesser, in mm	1/60 (0,2 m/s)	- (12 m/s)
DN 4	0,01	0,6
DN 6	0,02	1,2
DN 8	0,04	2,2
DN 10	0,06	3,4
DN 15	0,13	7,6
DN 20	0,24	14,2
DN 25	0,35	21
DN 32	0,6	34
DN 40	0,9	54
DN 50	1,4	84
DN 65	2,4	144
DN 80	3,6	220
DN 100	5,6	340
DN 125	8,9	534
DN 150	13	760
DN 200	23	1350
DN 250	35	2115
DN 300	51	3050
DN 350	70	4150
DN 400	90	5426
DN 500	141	8480
DN 600	203	12200

Anzeige

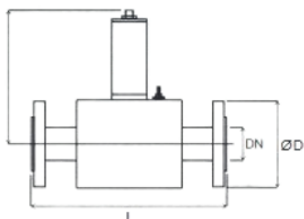
LED 1	LED 2	Status	Stromausgang
●		Kein Fluss oder negative Flussrichtung (abh.ob bidirektionaler Fluss aktiviert)	4 mA
●	●	Positive Flussrichtung Die blaue LED zeigt die Pulse an	4...20 mA
●	●	Leerrohr im Messbereich	<4 mA
●		Der Sensor ist defekt und muss zum Service	<4 mA
●	●	Messwert außerhalb der Spezifikation	<4 mA
		Fehlerhafte Spannungsversorgung	-

Abmessungen

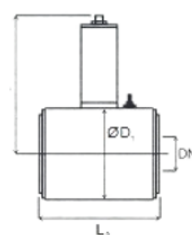
Abmessungen									
Anschluss, in mm	Flansch	Sandwich (DN 25)	Länge, in mm			Außendurchmesser, in mm		Gesamthöhe, in mm	
			Gewinde	Milchrohrver- schraubungen	Tri Clamp	Sandwich (DN 25)	Gewinde Milchrohrver- schraubungen Tri Clamp	Flansch Sandwich (DN 25)	Gewinde Milchrohrver- schraubungen Tri Clamp
DN	L1	L2	L3	L3	L3	D1	D2	H1	H2
4	–	–	157 (1/2")	–	–	–	70/-/-	-/146	150
6	–	–	157 (1/2")	–	–	–	70/-/-	-/146	150
8	–	–	157 (1/2")	–	–	–	70/-/-	-/146	150
10	200	90	186 (3/8")	173	180	51	70/-/-	146	150
15	200	90	190 (1/2")	165	175	51	70	146	150
20	200	90	200 (3/4")	170	175	61	80	146	155
25	200	90	200 (1")	180	175	71	90	151	160
32	200	90	228 (1 1/4")	192	175	82	100	156	165
40	200	110	248 (1 1/2")	215	203	92	116	161	173
50	200	110	258 (2")	228	211	107	136	169	183
65	200	130	–	–	–	127	151	179	191
80	200	130	–	–	–	142	177	186	204
100	250	200	–	–	–	168	–	199	–
125	250	200	–	–	–	194	–	212	–
150	300	200	–	–	–	224	–	227	–
200	350	200	–	–	–	284	–	257	–
250	450	–	–	–	–	–	–	300/-	–
300	500	–	–	–	–	–	–	325 / -	–
350	550	–	–	–	–	–	–	355 / -	–
400	600	–	–	–	–	–	–	385 / -	–
500	600	–	–	–	–	–	–	–	–
600	600	–	–	–	–	–	–	–	–

Execution

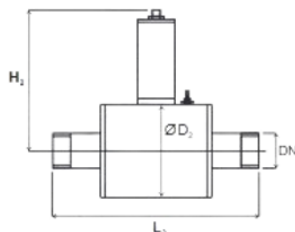
Flange



Sandwich



Thread



Milk pipe fitting

