Badger Meter Europa

Technical data for electromagnetic flow meters type Magnetoflow®

DETECTOR

Detector	Type II	Type III	Type Food
Connections	Flange EN 1092-1 St. 37, 1.4301 or 1.4571 Special flanges	Sandwich connection	Connection DIN11851, Tri Clamp, Special flanges
DN	6 - 1400	25 - 100	10 - 100
PN	DN 6 – DN 200 PN 16 ≥ DN 250 PN10 Up to PN 100 available	PN 40	PN 10
Flow range	0,03 - 10 m/s		
Min. conductivity	≥ 5 µS/cm		
Electrode materials	Hastelloy C (Standard), Tantalum, Platinum/Rhodium, Gold / platin plated		
Pipe material	1.4571		
Liner materials	PFA DN 6 - 10 PTFE DN 15 – 600 Hard-Soft rubber DN 25 – 1400 Halar DN 300 - 1400	PTFE DN 25 – 100	PFA DN 10 PTFE DN 15 - 100
Fluid temperature	PTFE/PFA up to 150 °C Rubber up to 80 °C Halar up to 150 °C	PTFE up to 150 °C	PTFE/PFA up to 150 °C
Housing material	St. 37 welded, painted grey, optional 1.4301 / 1.4571	St. 37 welded, painted grey, optional 1.4301 / 1.4571	1.4301 Optional 1.4571
Protection class	IP 65 / 68 as per DIN 40050		
Storage temperature	-20 up to 60 °C		
Compatible with amplifier	Primo® Classic and Primo® Advanced		
Lay length	DN 6-20 170 mm DN 25-50 225 mm DN 65-100 280 mm DN 125-200 400 mm DN 250-350 500 mm DN 400-750 600 mm DN 800-1000 800 mm DN 1200-1400 1000 mm	DN 25 - 50 100 mm DN 65 - 100 150 mm	Tri Clamp DN 10 - 50 145 mm DN 65 – 100 200 mm DIN 11851 DN 10 – 20 170 mm DN 32 – 50 225 mm DN 65 – 100 280 mm

Note: If the fluid temperature is higher than 100 °C, the amplifier has to be separated from the detector.

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Amplifier

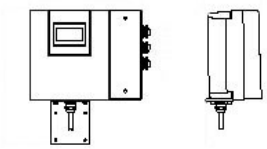
	Primo® Classic	Primo® Advanced
Power supply	115 and 230 V 50/60 Hz 24 VDC, ≤ 20 VA	85 – 265 VAC 50/60 Hz ≤ 20 VA
Flow direction	Bidirectional 2 separate totalizers	
Accuracy	≥ 0,5 m/s ±0,25% f.M. < 0,5 m/s ±1,25 mm/s f.M.	
Analog output	± 0/4 - 20 mA < 600 Ω ± 0/2 - 10 mA < 600 Ω ± 0/2 - 10 VDC > 1kΩ ± 0/1 - 5 VDC > 1kΩ	± 0/4 - 20 mA < 800 Ω ± 0/2 - 10 mA < 800 Ω
Pulse output	Scalable, max. 10 kHz Transistor active 24 V DC, 200 mA Transistor passive, 30 V DC, 200 mA	Scalable, max. 10 kHz Transistor active 24 V DC, 200 mA Optocoupler, 30 V DC, 200 mA
Frequncy output	No	500 – 5000Hz
Relay outputs	Relay, 48 V AC, 0,5 A 2 x min./max. alarm resp. preset 1 x fault indicator	Relay, 48 V AC, 0,5 A 1 x min./max. alarm resp. preset 1 x flow direction 1 x fault indicator
Pulse length	5 up to 500 ms	5 up to 500 ms
Limit switch	2 min./max., programmable	1 min./max., programmable
Preset counter	No	1 preset, programmable
Galvanic separation	All outputs are short-circuit-proof up to min. 500 Volt	All outputs are short-circuit-proof up to min. 500 Volt
Low- flow cut-off	0 - 10%	0 – 10%
Zero point	Automatic correction	Automatic correction
Error protocol	Yes	Yes
Display	LCD display 4 lines à 16 digits	LCD display 4 lines à 16 digits
Empty pipe cut-off	No	Yes
Parameter configuration	3 menu buttons and RS232	3 menu buttons and RS232
Interface	RS232 for measuring values	RS232 for measuring values + HART as an option
Housing	Cast aluminium, painted	Cast aluminium, painted
Protection class	IP 65 as per DIN 40050	IP 65 as per DIN 40050
Mounting	Compact or remote version	Compact or remote version
Connection	3 x PG13.5	3 x PG13.5
Ambient temperature	-20 up to 60 °C	-20 up to 60 °C
Compatible with detector	All	All

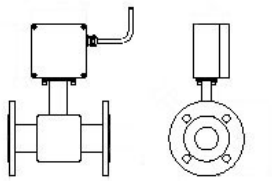
Flow rates

DN (mm)	Size (Inches)	Min. flow rate for 20 mA 0.5 m/s	Max. flow rate for 10 m/s	Flow rate at 2,5 m/s	Detector Type II	III	Food
6	1/4"	0,85 l/min	17 l/min	4 l/min	★		
8	3/10"	1,50 l/min	30 l/min	8 l/min	★		
10	3/8"	2,35 l/min	47 l/min	12 l/min	★		★
15	1/2"	5,30 l/min	106 l/min	25 l/min	★		★
20	3/4"	9,50 l/min	190 l/min	45 l/min	★		★
25	1.0"	15,00 l/min	300 l/min	75 l/min	★	★	★
32	1 1/4"	24,00 l/min	480 l/min	120 l/min	★	★	★
40	1.5"	37,70 l/min	750 l/min	190 l/min	★	★	★
50	2.0"	60,00 l/min	1200 l/min	300 l/min	★	★	★
65	2 1/2"	6,00 m^3/h	120 m^3/h	30 m^3/h	★	★	★
80	3"	9,00 m^3/h	180 m^3/h	45 m^3/h	★	★	★
100	4"	14,00 m^3/h	280 m^3/h	70 m^3/h	★	★	★
125	5"	22,00 m^3/h	440 m^3/h	110 m^3/h	★		
150	6"	31,50 m^3/h	630 m^3/h	150 m^3/h	★		
200	8"	56,50 m^3/h	1130 m^3/h	280 m^3/h	★		
250	10"	88,00 m^3/h	1760 m^3/h	440 m^3/h	★		
300	12"	127,50 m^3/h	2250 m^3/h	625 m^3/h	★		
350	14"	173,00 m^3/h	3460 m^3/h	850 m^3/h	★		
400	16"	226,00 m^3/h	4520 m^3/h	1100 m^3/h	★		
500	20"	353,50 m^3/h	7070 m^3/h	1750 m^3/h	★		
600	24"	510,00 m^3/h	10200 m^3/h	2500 m^3/h	★		
700	28"	692,50 m^3/h	13850 m^3/h	3500 m^3/h	★		
800	32"	905,00 m^3/h	18100 m^3/h	4500 m^3/h	★		
900	36"	1145,00 m^3/h	22900 m^3/h	5500 m^3/h	★		
1000	40"	1415,00 m^3/h	28300 m^3/h	7000 m^3/h	★		
1200	48"	2040,00 m^3/h	40800 m^3/h	10500 m^3/h	★		
1400	56"	2775,00 m^3/h	55450 m^3/h	14000 m^3/h	★		

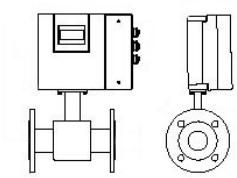
Detector type II

Flange process connection
Primo® wall mounted



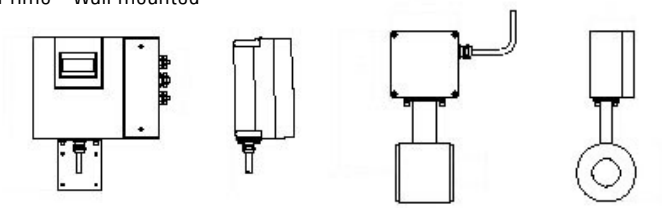


Flange process connection
Primo® meter mounted

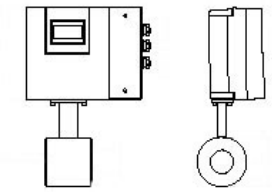


Detector type III

Wafer connection
Primo® wall mounted

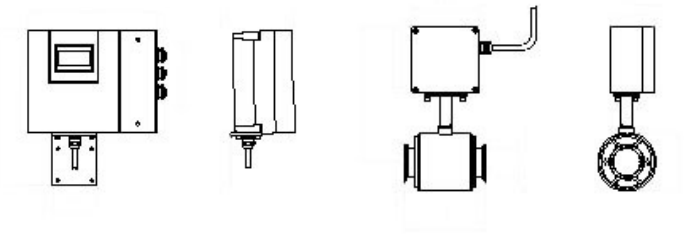


Wafer connection
Primo® meter mounted

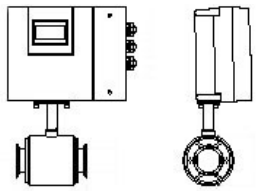


Detector type food

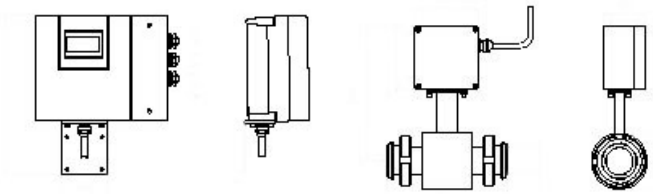
Tri-Clamp process connection
Primo® wall mounted



Tri-Clamp process connection
Primo® meter mounted



DIN 11851 process connection
Primo® wall mounted



DIN 11851 process connection
Primo® meter mounted