

CHECKMAG

SPECIFICATION



SMART 99



CHECKMAG



Sanitary fittings
DIN 11851 (S)



Wafer (W)

Transmitter Specification

CheckMag

Min. Media electrical conductivity	$\geq 5 \mu\text{S/cm}$ / $\geq 20 \mu\text{S/cm}$ for demineralised water
Flow range	0.1 to 10 m/s
Accuracy	$\pm 0.5\%$ of reading, 10 - 100 % of reading value
Power supply	110 V / 230 VAC, 50 Hz
Power consumption	20 VA
Outputs	- Frequency optocoupler standard 0-1 kHz (30 V / 20 mA A/DC) - Pulse, Total volume, programmable relay (volt free 30 V/DC $\wedge$ 125V/AC/2A) 2 or 3 Relay contacts (volt free 30 V/DC $\wedge$ 125V/AC/2A) programmable function as an option - Current 0(4) - 20 mA / 500 Ω
Input	Not available on CheckMag
Communication	RS232-C/RS485
Displayed values	- Flowrate (m^3/h, l/s) - Volume (m^3, l) - Positive, total and negative volume
Control	Four push button keypad / RS232
Low flow cut-off	Adjustable in steps of 0,1%
Time delay	Programmable value
Electronics Protection	IP 65 / Nema 4
Weight of electronics	2 kg
Dimensions of electronics	190 x 140 x 115 mm
Housing material	ABS plastic
Display	LCD alphanumeric display, 2x16 digits, illuminated
Flow direction	Bi-directional measurement
Other features	Automatic zero
Real time	Clock and calendar inc. Leap years until 2099 with back-up
Data logger	Datalogger memory up to 35 000 values (4 months divided into 5-min intervals) with real time circuit.
Control Principle	Pulsed DC from transmitter
Hazardous Area Approval	Zone 2 approved
Measurement filtration	Multi-mode adjustment
Cable terminals	Max. 3 pieces PG 11
Data storage	Total volume storage even in case of power failure
Data back-up	Data back-up in case of power failure
Error	Measuring / Error indicator

Sensor Specification

Flange	DIN (ANSI, BS) / hygienic DIN 11 851
Nominal size	DN 10 - DN 1000
Maximum nominal pressure	Standard 16 bar (1.6MPa), (0.6/1.0/2.5/4.0 MPa)
Max. media temperature	Hard + soft rubber -5°C - +90°C / Teflon PTFE -25°C - 150°C
Ambient temperature	-20 to +60°C (-4 to + 140 F)
Sensor Protection	Standard IP 67 / Nema 5 (IP 68 / Nema 6)
Liner	Soft + hard rubber (DN 10 - DN 1000) / Teflon PTFE (DN 10 - DN 500)
Electrodes	Stainless steel 316Ti,L (Tantalum, Hastelloy, Titanium, Platinum)
Measuring tube	Stainless steel 321 to DIN 17457
Accessories options	Earthing rings for plastic and lined pipes
Hazardous area approval	Sensor for explosive area Zone 2
Class of excitation coils isolation	E
Outer casing and flanges	Carbon steel standard (Stainless steel 304, 321)
Interconnecting cable	Remote version - standard 8mm / 2 x 2 x 0,25 mm ²
External coating	Powder coated (komaxit - anticorrosive)
Conformity requirements	- LVD (safety) according to EN 61010-1, EN61010-1/A2 - PED according to directive 97/23/EC - EMC according to EN 61000 part 3-2, 3-3, EN 61000 4-3, 4-4, 4-5, 4-6, 4-8, 4-11, EN 61000 part 6-2, EN 50081-1

SENSOR SIZING AND INSTALLATION

HYGIENIC AND WAFER SENSOR SPECIFICATION



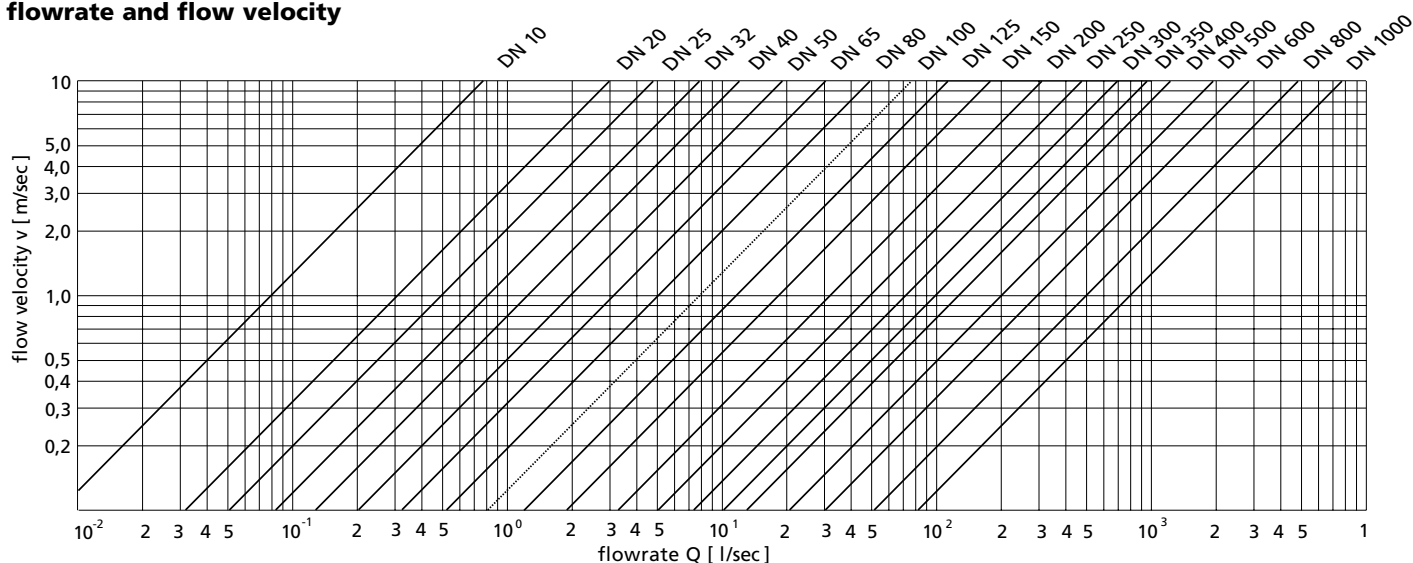
Sanitary fittings
DIN 11851 (S)



Wafer (W)

Hygienic Sensor specification	
Fittings	10 mm to 100 mm 1/2 inch to 4 inch Sanitary fittings DIN 11 851
Option	DIN Flanges
Flow Tube material	Non Magnetic Stainless Steel
Liner	Extruded White PTFE
Electrodes	Stainless Steel
Outer Casing	Stainless Steel
Protection	Standard IP 67 / Nema 5, (IP 68 / Nema 6)
Max. Temperature, and Pressure	356°F / 230 psig (150 degC / 16 bar)
Wafer (W)	
DN	Wafer
50 - 100	PN 10, 16

Diagram for size,
flowrate and flow velocity



Recommended positions
for sensor installation

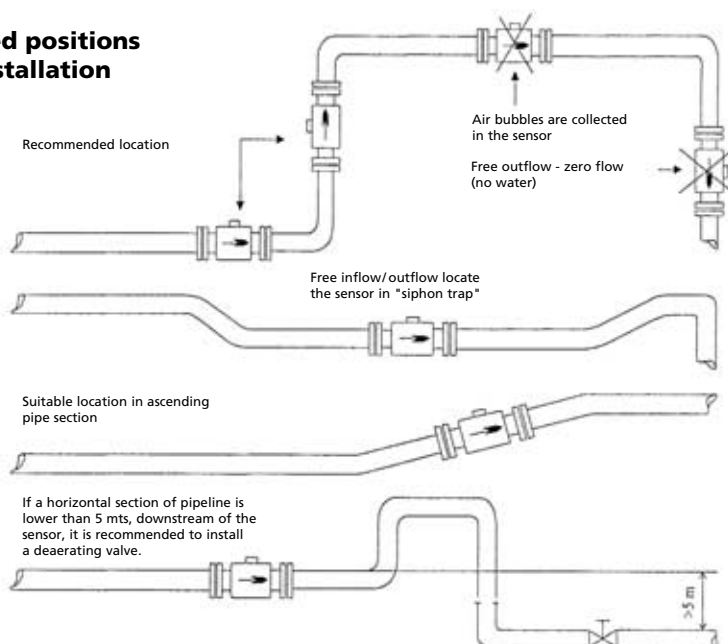


Table for
1 m/s flowrates

DN	m ³ / h	l / min	l / s
10	0,283	4,712	0,079
20	1,131	18,85	0,314
25	1,767	29,452	0,491
32	2,895	48,255	0,804
40	4,524	75,398	1,257
50	7,069	117,81	1,964
65	11,946	199,1	3,318
80	18,096	301,59	5,027
100	28,274	471,23	7,854
125	44,179	736,31	12,272
150	63,617	1060,3	17,671
200	113,10	1885	31,42
250	176,71	2945,2	49,087
300	254,47	4241,2	70,686
350	346,36	5772,7	96,211
400	452,39	7539,8	125,66
500	706,86	11781	196,35
600	1017,9	16965	282,74
800	1809,6	30159	502,65
1000	2827,4	47124	785,4