



Rocksensor Automation

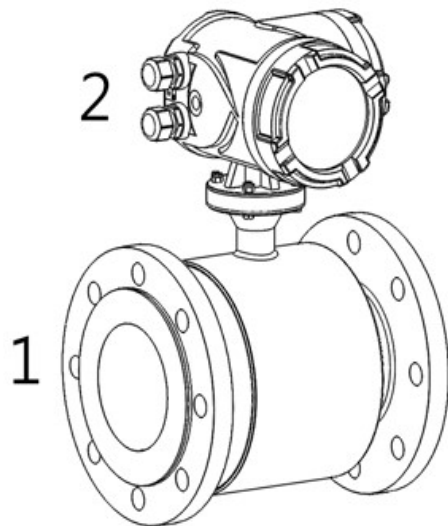


Electromagnetic Flow Meter



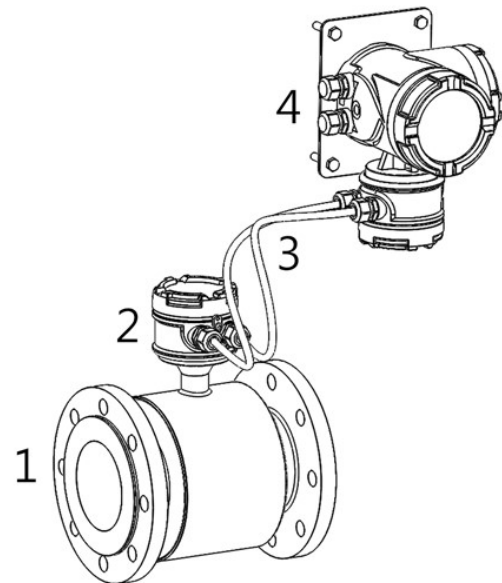
1. PRODUCT

COMPACT VERSION



- 1 Sensor
- 2 Converter

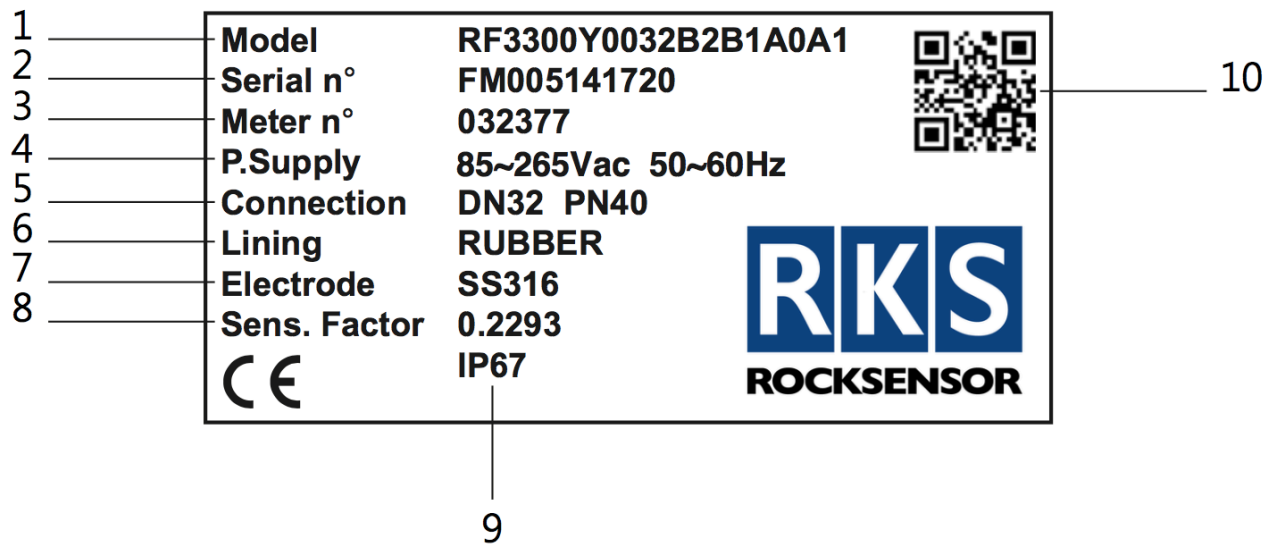
REMOTE VERSION



- 1 Sensor
- 2 Connection Housing
- 3 Connection Cables
- 4 Converter, Wall

1.1 IDENTIFICATION

Each meter has an adhesive identification plate on which are the meter main data. The following picture describes the information and data on the identification plate.



- 1 Product code
- 2 Serial number
- 3 Production batch
- 4 Power supply
- 5 Process connection
- 6 Lining material
- 7 Electrodes material
- 8 Sensor factor
- 9 Protection
- 10 QR code, linked to instrument web page

2. FEATURES

Flow rate range

RF3300 is able to process signals from fluids with flow velocity up to 15m/s in both directions (bidirectional meter).

Range dimension / lining material

PTFE DN10 ~ DN500 RUBBER DN65 ~ DN2000

Sensor material

SS321

Housing material

Aluminium

Electrodes material

SS316L - Hastelloy C - Titanium - Tantalum - Platinum

Measurement range

<0,1m³/h ~ >110000m³/h

Accuracy

±0.5% standard; ±0.2% optional

Repeatability

±0.1%

Fluid conductivity

>5μS/cm.

Power supply

85 ~ 265Vac, 24Vdc, 12Vdc. Consumption 6W, max. 8W.

Ambient Temperature Limits

Remote version operating temperature: RUBBER -10 ~ +80°C; PTFE -40 ~ +150°C

Compact version operating temperature: RUBBER -10 ~ +80°C; PTFE -40 ~ +100°C

Storage temperature

-40 ~ 85°C

Communication protocol

Modbus or HART (opt.)

Output

4 ~ 20mA: 0 ~ 750 ohm load

Frequency output: 0.1 ~ 5000 Hz

Pulse output: 24VDC pull up open collector or galvanically isolated open collector (opt.)

Alarm output: 2 relays, 3A 230Vac NO (not available for 12VDC power supply version)

Reverse Flow

Allow measure reverse flow.

Output Testing

Current Source: Transmitter can be commanded to supply a specified test current between 4.0 and 20.0 mA.

Frequency Source: Transmitter can be commanded to supply a specified test frequency between 0.1 and 5000 Hz

Start-up Time

0.5 seconds.

Low Flow Cutoff

Adjustable between 0.0 and 9.9% Q_{max} . Below selected value, output is driven to the zero flow rate signal level.

Humidity Limits

0-100% RH to 150°F (65°C), not condensing.

Damping

Adjustable between 0.1 and 99 seconds.

IP Rating

Compact version: IP67

Remote version: Sensor IP67 / IP68 (by request) - Converter IP67

Anti-condensation/Noise filter

Installed in converter

Excitation Method

Dual Frequency Excitation for sizes up to 500mm after that Single Excitation either AC or pulsed DC

Excitation Frequency

DC Excitation: 3.125 ~ 12.5 Hz

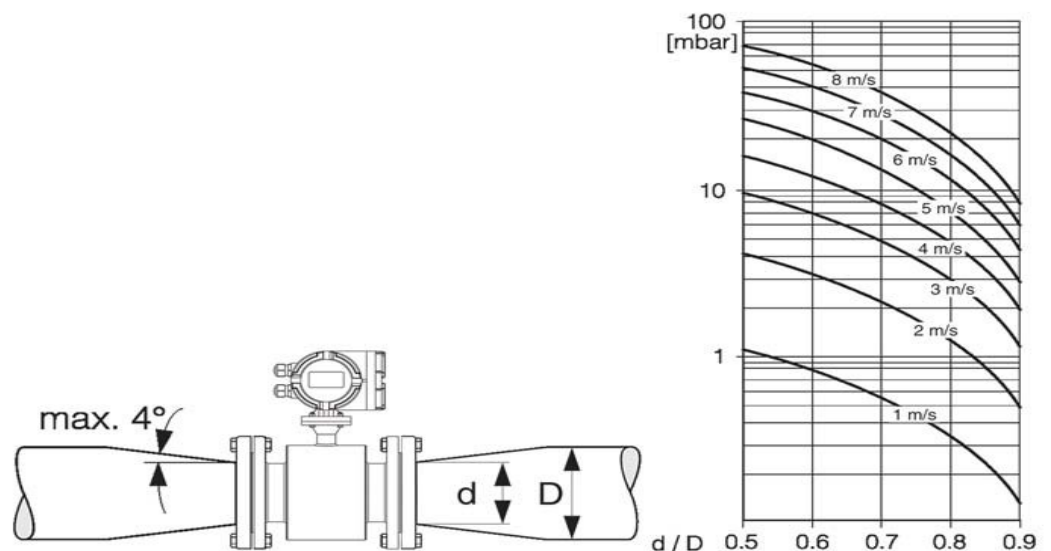
AC Excitation: 50 ~ 60 Hz

3. FLOW RANGE

Size	Flow Range (m ³ /h) & Velocity Table							
(mm)	0.1m/s	0.2m/s	0.5m/s	1m/s	4m/s	10m/s	12m/s	15m/s
3	0.003	0.005	0.013	0.025	0.102	0.254	0.305	0.382
6	0.01	0.020	0.051	0.102	0.407	1.017	1.221	1.526
10	0.028	0.057	0.141	0.283	1.130	2.826	3.391	4.239
15	0.064	0.127	0.318	0.636	2.543	6.359	7.630	9.538
20	0.113	0.226	0.565	1.130	4.522	11.304	13.56	16.956
25	0.177	0.353	0.883	1.766	7.065	17.663	21.2	26.494
32	0.289	0.579	1.447	2.894	11.575	28.938	34.73	43.407
40	0.452	0.904	2.261	4.522	18.086	45.216	54.26	67.824
50	0.707	1.413	3.533	7.065	28.260	70.650	84.78	105.98
65	1.19	2.39	5.97	11.94	47.76	119.40	143.3	179.10
80	1.81	3.62	9.04	18.09	72.35	180.86	217.0	271.30
100	2.83	5.65	14.13	28.26	113.04	282.60	339.1	423.90
125	4.42	8.83	22.08	44.16	176.63	441.56	529.9	662.34
150	6.36	12.72	31.79	63.59	254.34	635.85	763.0	953.78
200	11.3	22.61	56.52	113.04	452.16	1130.40	1356	1696
250	17.66	35.33	88.31	176.53	706.50	1766.25	2120	2649
300	25.43	50.87	127.2	254.34	1017	2543.40	3052	3815
350	34.62	69.24	173.1	346.19	1385	3461.85	4154	5193
400	45	90	226.1	452	1809	4522	5426	6782
450	57	114	286.1	572	2289	5723	6867	8584
500	71	141	353.3	707	2826	7065	8478	10598
600	102	203	508.7	1017	4069	10174	12208	15260
700	138	277	692.4	1385	5539	13847	16617	20771
800	181	362	904.3	1809	7235	18086	21704	27130
900	229	458	1145	2289	9156	22891	27469	34336
1000	283	565	1413	2826	11304	28260	33912	42390
1200	407	814	2035	4069	16278	40694	48833	61042
1400	554	1108	2769	5539	22156	55390	66468	83084
1600	723	1447	3617	7235	28938	72346	86815	108518
1800	916	1831	4578	9156	36625	91562	109875	137344
2000	1130	2261	5652	11304	45216	113040	135648	169560
2200	1368	2736	6839	13678	54711	136778	164134	205168
2400	1628	3256	8139	16278	65111	162778	195333	244166
2600	1910	3821	9552	19104	76415	191038	229245	286556
2800	2216	4431	11078	22156	88623	221558	265870	332338
3000	2543	5087	12717	25434	101736	254340	305208	381510

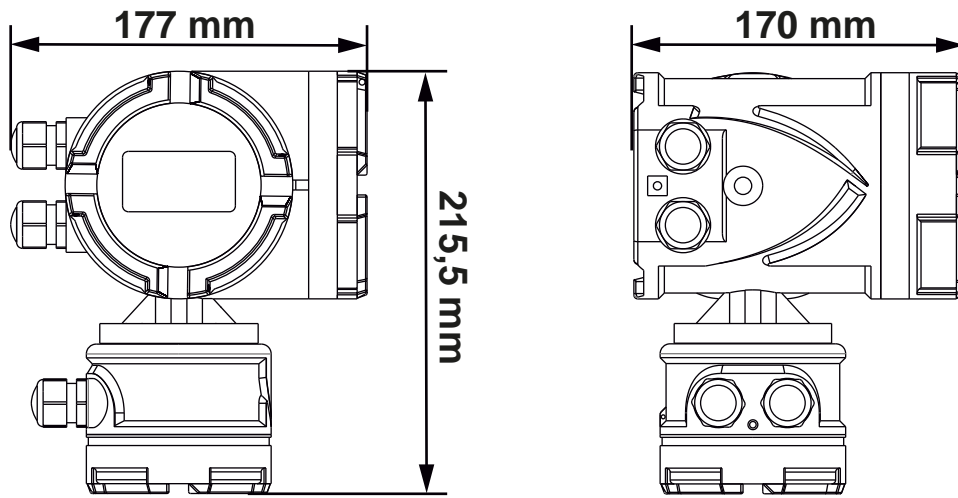
Remark : For better accuracy we suggest velocity range 0.5 to 10m/s.

3.2 LOAD LOSS

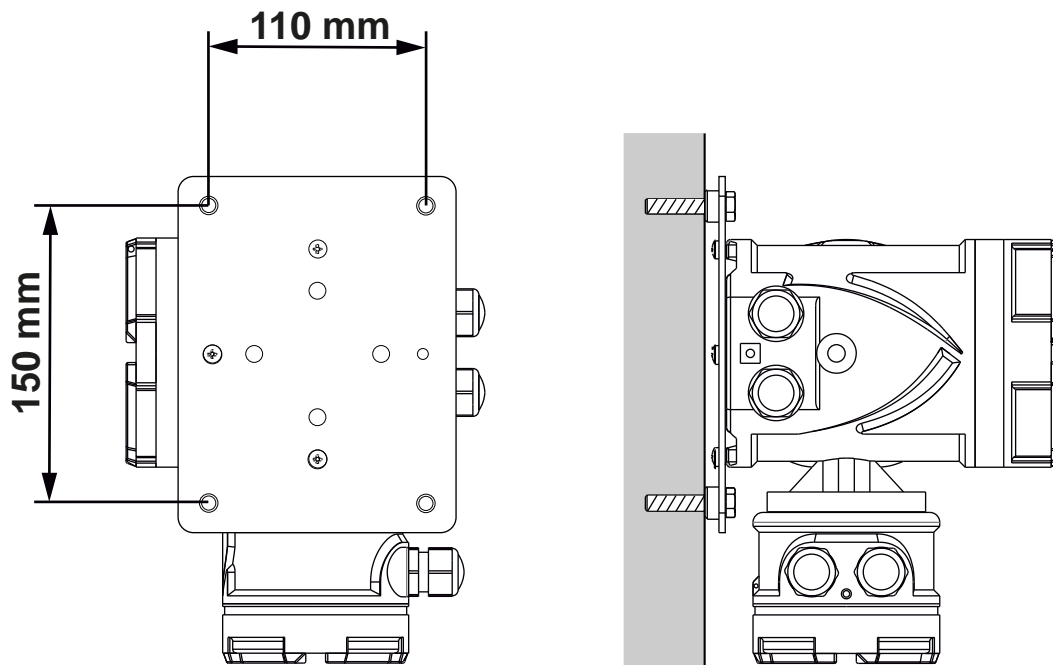


4 DIMENSIONS

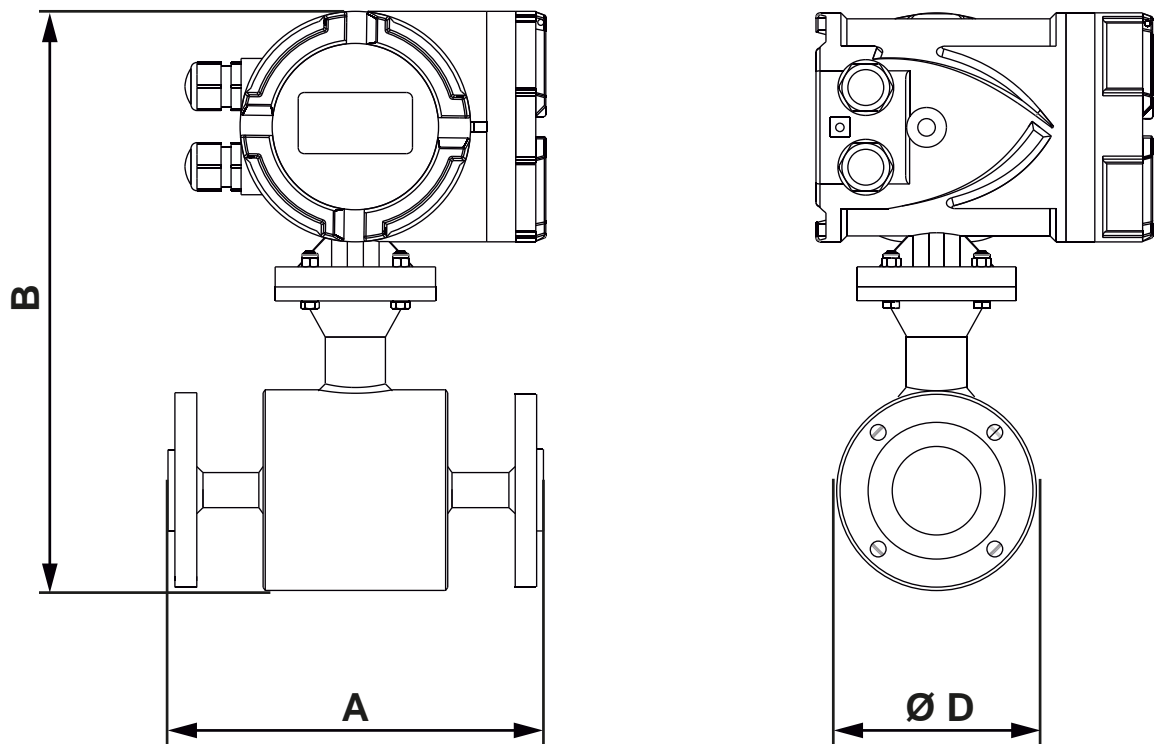
4.1 REMOTE VERSION CONVERTER



4.2 WALL MOUNTING REMOTE VERSION CONVERTER

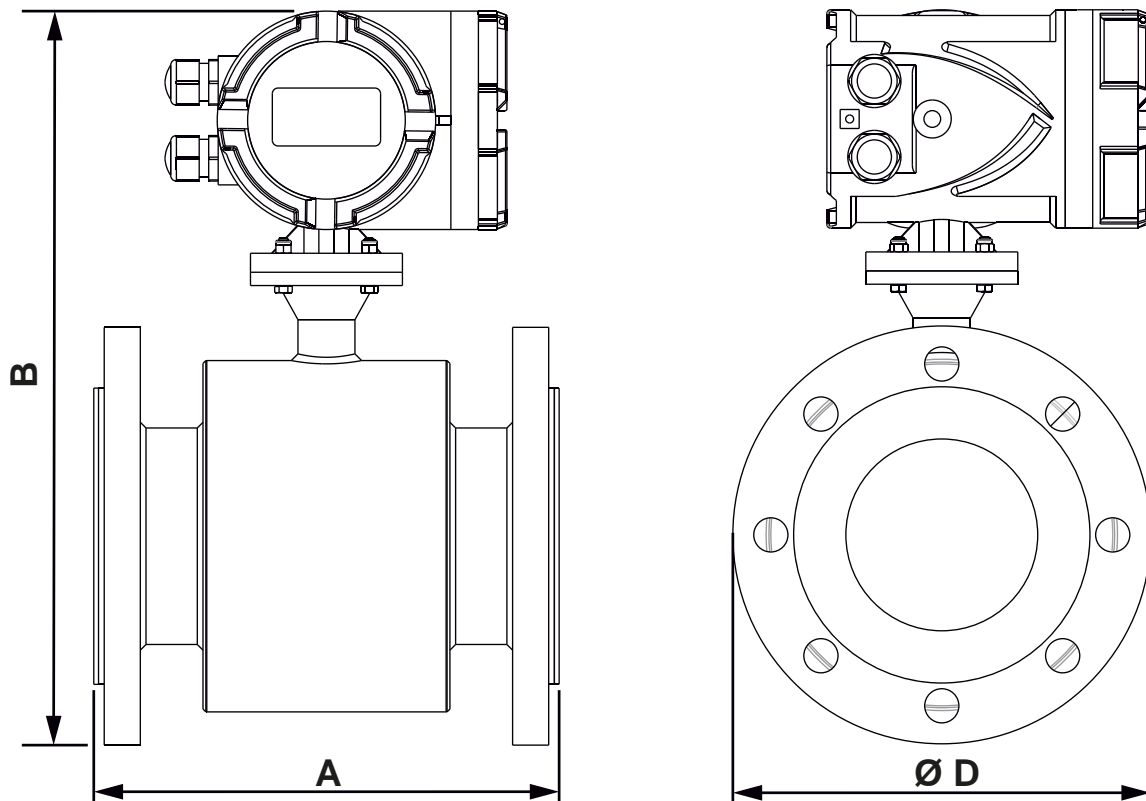


4.3 COMPACT VERSION DN10 ~ DN80 PN16 - PN40



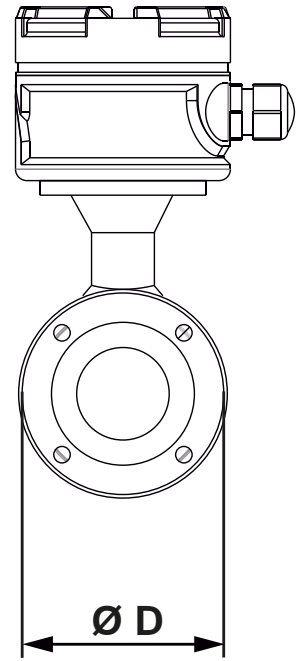
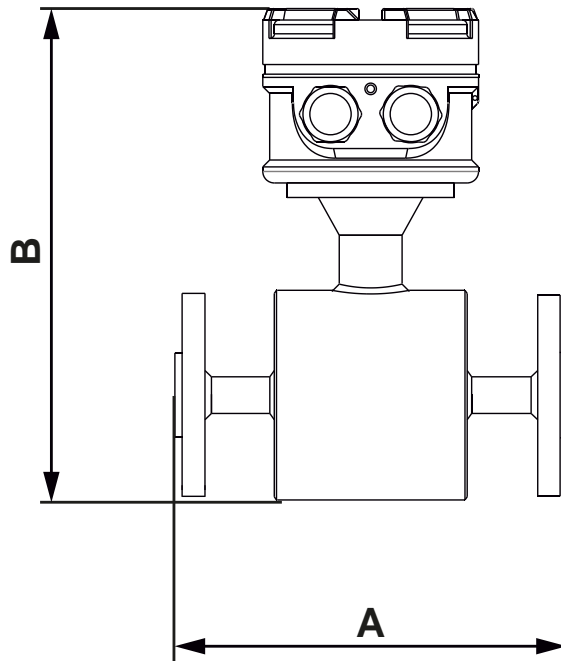
DN (mm)	A (mm)	PN 16 - PN 40	
		B (mm)	ØD (mm)
10	200	295	90
15		295	95
20		300	105
25		300	115
32		315	140
40		335	150
50		344	165
65		360	185
80		375	200

4.4 COMPACT VERSION DN100 ~ DN1000 PN10 - PN16 - PN40



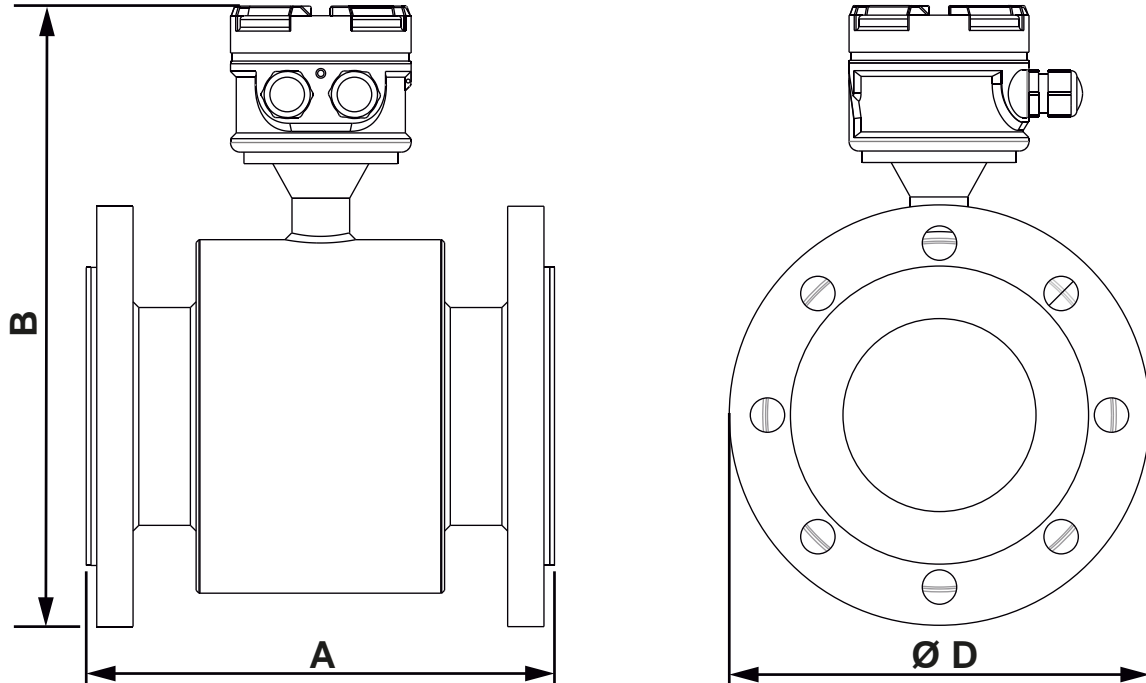
DN (mm)	A (mm)	PN 10		PN 16		PN 40	
		B (mm)	ØD (mm)	B (mm)	ØD (mm)	B (mm)	ØD (mm)
100	250	-	-	400	220	410	235
125	250	-	-	420	250	435	270
150	300	-	-	460	285	468	300
200	450	520	340	520	340	-	-
250	450	570	395	575	405	-	-
300	500	620	445	620	460	-	-
350	550	670	505	678	520	-	-
400	600	730	565	738	580	-	-
450	600	780	615	793	640	-	-
500	600	830	670	850	715	-	-
600	600	930	780	-	-	-	-
700	700	930	780	-	-	-	-
800	800	1165	1015	-	-	-	-
900	900	1270	1115	-	-	-	-
1000	1000	1360	1230	-	-	-	-

4.5 REMOTE VERSION DN10 ~ DN25 PN16 - PN40



DN (mm)	A (mm)	PN 16 - PN 40	
		B (mm)	ØD (mm)
10	200	235	90
15		235	95
20		240	105
25		240	115


4.6 REMOTE VERSION DN32 ~ DN1000 PN10 - PN16 - PN40



DN (mm)	A (mm)	PN 10		PN 16		PN 40	
		B (mm)	ØD (mm)	B (mm)	ØD (mm)	B (mm)	ØD (mm)
32	200	-	-	251	165	254	165
40	200	-	-	270	170	270	170
50	200	-	-	280	177	280	177
65	200	-	-	298	187	298	187
80	200	-	-	315	200	315	200
100	250	-	-	333	220	343	235
125	250	-	-	358	250	368	270
150	300	-	-	393	285	400	300
200	350	450	340	450	340	-	-
250	450	505	395	510	405	-	-
300	500	550	445	558	460	-	-
350	550	605	505	613	520	-	-
400	600	665	565	673	580	-	-
450	600	715	615	728	640	-	-
500	600	765	670	785	715	-	-
600	600	870	780	-	-	-	-
700	700	987	895	-	-	-	-
800	800	1100	1015	-	-	-	-
900	900	1202	1115	-	-	-	-
1000	1000	1293	1230	-	-	-	-

RF3300 Ordering Table

RF3300 Magnetic flowmeter Ordering Table	
Code 1	Line Size
DN8 - DN2000	
Code 2	Installation
Y	Compact
F	Remote
Code 3	Working pressure
A	PN40(DN8-DN50)
B	PN16(DN65-DN150)
C	PN10(DN200-DN1000)
D	PN6(DN1200-DN2000)
E	ANSI150LB
F	ANSI300LB
G	JIS10K
H	JIS20K
9	Special
Code 4	Flange standard
0	GB
1	HG
2	JB
3	JIS
4	ANSI
9	Special
Code 5	Lining material
A	Neoprene
B	Hard rubber
C	PTFE
D	Polyurethane
E	F46
F	PFA
9	Special
Code 6	Electrode material
1	316L
2	HC
3	HB
4	Ti
5	Ta
6	Pt
Code 7	Medium temperature
A	≤80degree C
B	≤130degree C
C	≤150degree C
D	Low temperature ≥-25degree C
9	Special
Code 8	Sensor IP Rate
1	IP65
2	IP67
3	IP68
Code 9	Power supply
1	85-260VAC 50/60HZ
2	24VDC
3	12VDC
4	Battery power supply
Code 10	Output
1	4-20mA / Frequency pulse
2	Frequency pulse (battery power supply)
Code 11	Protocol
1	RS485
2	MODBUS
3	HART
Code 12	Flange & Body material
C	Carbon Steel
S	SS304
Z	SS316



Rocksensor (RKS), headquartered in Switzerland, is specialised in the Research & Development and Manufacturing of Industrial Automation equipment, especially High Accuracy Pressure Sensors and Transmitters. RKS also designs and manufactures various flowmeters such as Coriolis, Magnetic and other types, Temperature Transmitters and Level Transmitters.

These Field Instruments are suitable for measurement & control of various parameters in the industrial process conditions such as Pressure, Flow, Density, Level & Temperature and gas & liquid analysis. These products find widespread applications in Oil & Gas, Petrochemical, Power, Cement, Metal & Mining, Water, Food & Beverages, Pharmaceuticals, Glass, Engineering and various other industries.

As a responsible and an industry key player, RKS is committed to provide excellent & reliable products, technical services and support in the field of automation to the Customers all over the world.

Rocksensor Sàrl

Parc Technologique du Neode Avenue du Mail 59
2002 Nauchatel Switzerland
Web: www.rocksensor.com
Email: info@rocksensor.com
Tel: +41 78 776 2218

Rocksensor India

#205, Tower A, Ithum, Plot A-40, Block A, Industrial Area, Sector 62, NOIDA, U.P., 201301, India
Web: www.rocksensor.in
Email: info@rocksensor.in
Tel: +91 97 7289 5329

www.rocksensor.in

