



ALIAMASS

Coriolis Mass Flowmeter

Model ACF6000 Series

GENERAL

ALIAMASS The ACF6000 Series uses the Coriolis effect as a technique for liquid mass flow measurement.

The ACF6000 can measure most of the liquids; the infrared light sensor makes it easy for you to set parameters & change the display data. The Double-C tube & Double-D Tube make it possible for the meter to be used in most liquid applications.

FEATURES

- ❑ Can be programmed by infrared light sensor without opening cover
- ❑ High turndown ratio of flow rate
- ❑ It comes any flanges such as ANSI, DIN, JIS etc.
- ❑ Excellent for high pressure application
- ❑ Simple for installation, commission and maintenance
- ❑ Self-diagnostic capabilities, cable faults, pipe vibration
- ❑ High accuracy of $\pm 0.2\%$ of reading (or $\pm 0.1\%$ of reading)
- ❑ With forward / reverse flow rate measurement function

STANDARD SPECIFICATION

- | | | | |
|-----------------------|--|------------------------|--|
| ● Sensor Type | : C tube (15-40 mm) / U tube (40L-250 mm) | ● Display | : 2 lines LCD with illumination |
| ● Size | : 15-250 mm (1/2"-10") | Flow Rate Unit | : g/s, kg/m, kg/hr, t/hr, lb/m, USgal/m (6 Digit) |
| ● Flow Range | : 0-240 kg/hr~0-2200 t/hr | Density Unit | : kg/m^3 , g/cm^3 (6 Digit) |
| ● Accuracy | : $\pm 0.2\%$ $\pm$ ZS of reading (Standard) | Totalizer Unit | : g, kg, Ton, L, m^3 , Nm^3 , lb, USgal (7 Digit) |
| | : $\pm 0.1\%$ $\pm$ ZS of reading (Optional) | Temperature | : $^{\circ}\text{C}$, $^{\circ}\text{F}$ (4 Digit) |
| ● Repeatability | : $\pm 0.03\%$ $\pm$ ZS of reading | ● Keypad | : Infrared light Sensor, can be programmed without opening the cover |
| ● Density Range | : 200-2300 kgf/m^3 (0.2-2.3 g/cm^3) | ● Turndown Ratio | : 20:1 |
| | Accuracy : $\pm 0.002 \text{ g/cm}^3$ | ● Damping | : 0.01-1.0 Seconds |
| ● Temperature Range | : -40~125 $^{\circ}\text{C}$ (Standard) | ● Low Flow Cutoff | : 0.0-9.0% |
| | : -40~350 $^{\circ}\text{C}$ (Optional, Remote Only) | ● Communication | : RS485 (Modbus Protocol) (Standard) |
| ● Material | | | : HART Signal (Optional) |
| | Wetted Parts : Stainless Steel 316L | ● Current Output | : 4-20 mA (Isolated) |
| | Flange : Stainless Steel 316L | | Load : Max. 750 Ω |
| | Sensor Housing : Stainless Steel 304 | | Output Unit : Mass / Volume / Density / Temperature |
| | Junction Box : Aluminum Alloy (Epoxy Paint) | ● Pulse (Alarm) Output | : Open Collector |
| ● Process Connection | : Flange | | Rating : 3-30 VDC, 50 mA Max. |
| ● Flange Type | : JIS 10K / JIS 20K / JIS 40K | ● Power Supply | : 90-260 VAC, 50/60 Hz or 24 VDC $\pm 10\%$ |
| | : ANSI 150# / ANSI 300# / ANSI 600# | ● Power Consumption | : 30-40 W (Depend on sensor size) |
| | : DIN PN10 / PN16 / PN25 / PN40 | ● Cable Entry | : Sensor to Converter-3/4" G |
| ● Protection Class | : IP67 | | : Signal output / Power supply-M20 |
| | : Explosion Proof, Ex d e [ib] IIC T6 (Optional) | ● Ambient Temperature | : -40~60 $^{\circ}\text{C}$ |
| ● Installation | : Compact or Remote | ● Max. Pressure | : 63 kgf/cm^2 |
| ● Signal Cable Length | : 10-100 m | | |



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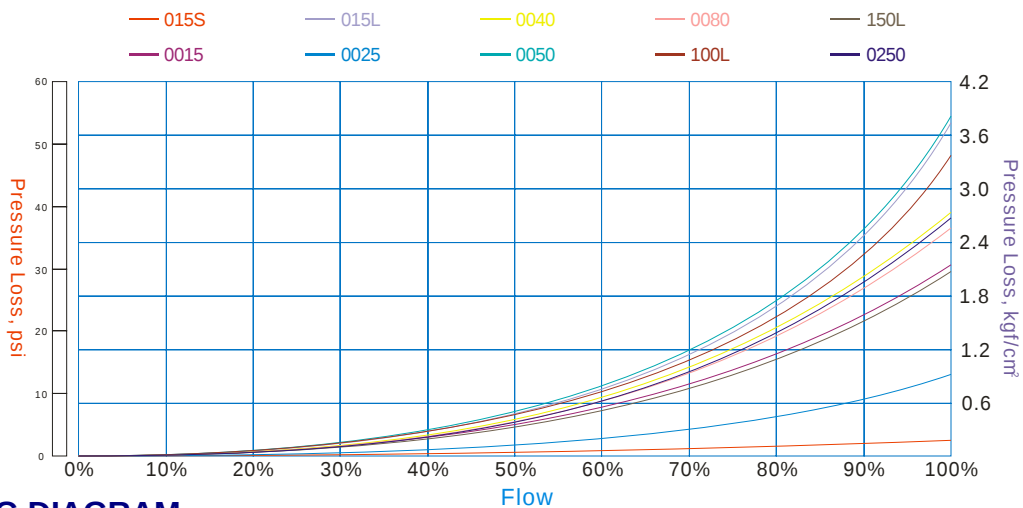
FLOW RANGE

Unit : kg/hr

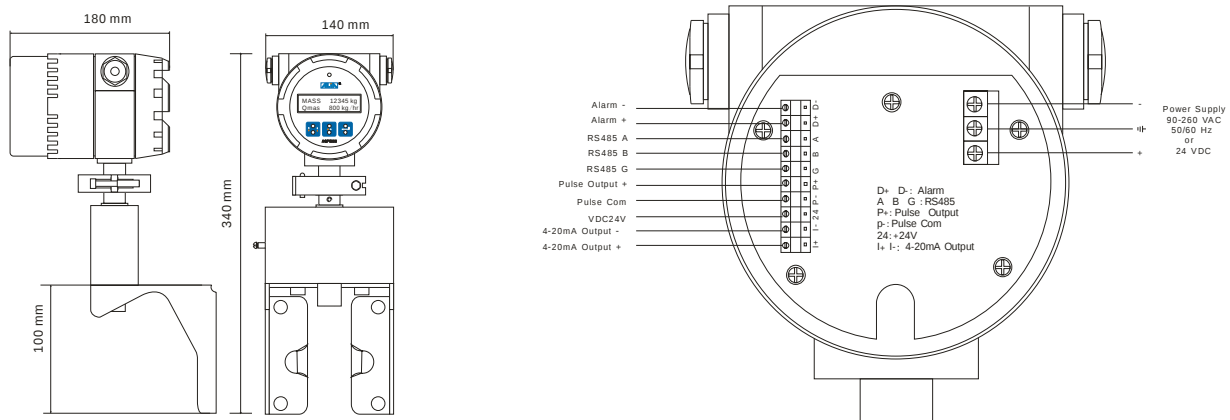
Normal Size		Flow Rate & Accuracy Table					
Model Code	Inch	Minimum	Normal	Maximum	Zero Stability	Temperature Effect %Flow Rate / °C	Pressure Effect %Flow Rate / kgf/cm ²
015S	1/2" (S)	24	240	480	0.045	+/-0.0002	-0.001
0015	1/2"	100	1,000	2,000	0.17	+/-0.000125	
015L	1/2" (L)	300	3,000	6,000	0.40		
0020	3/4"	300	3,000	6,000	0.40		
0025	1"	630	6,300	12,600	0.90		
0040	1-1/2"	1,710	17,100	34,200	2.40		-0.003
040L	1-1/2" (L)	2,700	27,000	54,000	4.05	+/-0.0005	
0050	2"	6,330	63,300	126,600	8.30		-0.011
0065	2-1/2"	6,330	63,300	126,600	8.30		
0080	3"	16,100	161,000	322,000	19.0		
0100	4"	16,100	161,000	322,000	19.0		
100L	4" (L)	36,200	362,000	724,000	48.0	+/-0.001	-0.058
0125	5"	36,200	362,000	724,000	48.0		
0150	6"	36,200	362,000	724,000	48.0		
150L	6" (L)	55,300	553,000	1,106,000	78.0	+/-0.0025	-0.035
0200	8"	55,300	553,000	1,106,000	78.0		
200L	8" (L)	110,000	1,100,000	2,200,000	156.0	+/-0.0025	-0.020
0250	10"	110,000	1,100,000	2,200,000	156.0		
Accuracy Between Minimum - Maximum is +/-0.2% (+/-0.1%) of Reading							

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PRESSURE LOSS



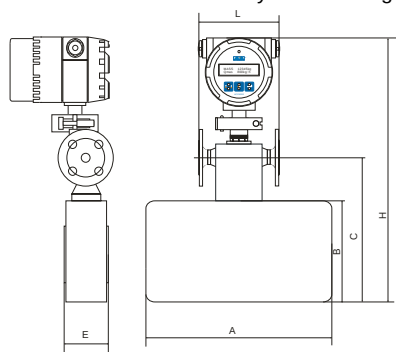
WIRING DIAGRAM



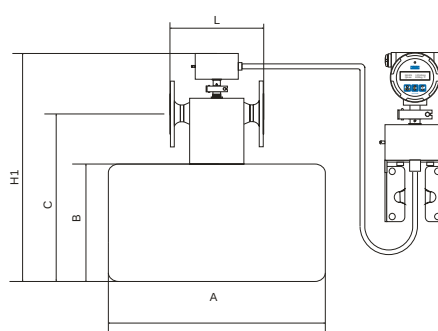
DIMENSIONS

Normal Size		Standard Pressure	Dimensions (mm)							Sensor Weight Remote Type
mm	Inch	kgf/cm ²	L	A	B	C	H	H1	E	kg
15S	1/2"	40	310	170	168	123	347	273	55	6.3
15	1/2"		162	320	170	233	455	380	110	6.5
15L	1/2"		162	370	190	252	477	400	124	7.5
25	1"		202	480	265	337	555	477	134	11
40	1-1/2"		274	615	295	383	593	516	146	21.5
40L	1-1/2"		519	389		605	850	155	129	27.5
50 / 65	2" - 2.5"		562 / 570	496		726	971	204	140	42
80 / 100	3" - 4"		850 / 864	774		941	313		214	89
100L / 150	4" - 6"		890 / 910	805		1082	373		245	172
150L / 200	6" - 8"		1090 / 1116	950		1174	287		290	248
200L / 250	8" - 10"		1206 / 1240	1000		1407	287		380	365

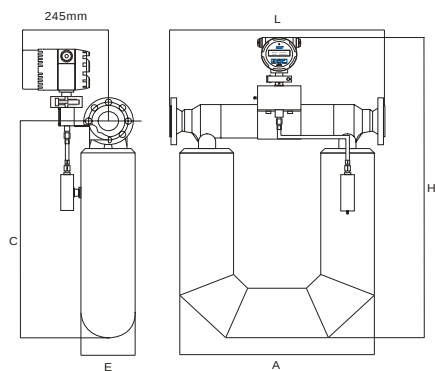
Note: Standard Dimension L only for DIN flange



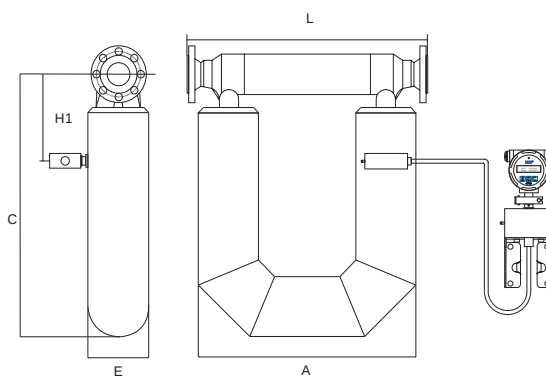
DN15-DN40



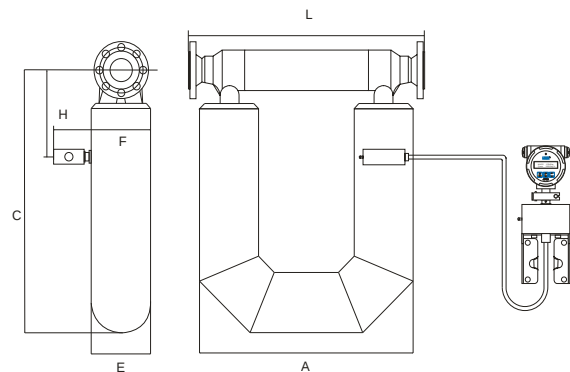
DN15-DN40



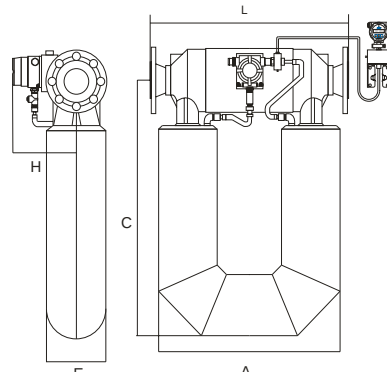
DN40L-DN65



DN40L-DN65



DN80

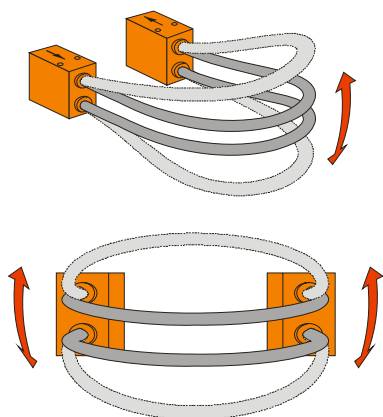


DN100-DN250

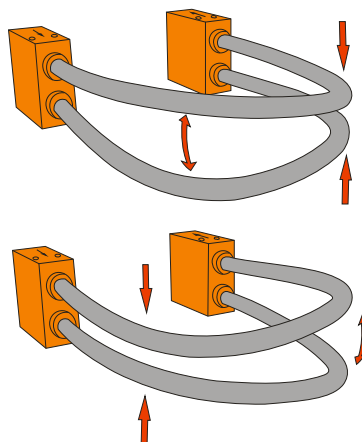
MODEL SELECTION GUIDE

ACF6000 Series										
Example: ACF6000-0080-AH-020-H-AC-HT/EX/PT										
ACF6000-	XXXX	-X	X-	XXX	-X	-XX	-XX	Description		
Size	015S-0250							015S / 0015 / 015L / 0020 / 0025 / 0040 / 040L / 0050 / 0065 mm		
								0080 / 0100 / 100L / 0125 / 0150 / 150L / 0200 / 200L / 0250 mm		
Process Connection		-1						PN10		
		-2						PN16		
		-3						PN25		
		-4						PN40		
		-A						ANSI 150#		
		-B						ANSI 300#		
		-C						ANSI 600# (Max. Pressure 63 kgf/cm ²)		
		-J						JIS 10K		
		-K						JIS 20K		
		-L						JIS 40K		
		-Z						Other		
Max. Temperature			N-					-40~125 °C		
			H-					-40~200 °C (Remote Type Only)		
			Y-					-40~350 °C (Remote Type Only) (Except for 15S / 15 / 40L)		
Installation & Cable Length				NNN				Compact Version (Size 15 / 20 / 25 / 40 / 50 / 65 mm only)		
				010-100				Remote Version, Cable 10-100 m, 2" Mounting Bracket		
Accuracy					-N			+/-0.2% of reading		
					-H			+/-0.1% of reading		
Power Supply						-AC			90-260 VAC, 50/60 Hz	
						-DC			24 VDC +/-10%	
Option							-NN	None		
							-HT	HART Signal		
							-EX	Explosion Proof, Ex d e [ib] IIC T6		
							-HJ	Heating Jacket		
							-PT	Cable Entry 1/2" NPTF		

WORKING PRINCIPLE



Vibration Under No Flow



Vibration Under Flow