

GENERAL

ALIAMASS The ACF6010HM Series uses the Coriolis effect as a technique for mass flow measurement of the fluid. It can also directly measure the density and temperature.

The ACF6010HM can be used for liquids and gases; the infrared keypad makes it easy for you to set parameters & change the display data in hazardous environments. The Double-V tube and Double-U tube design make it possible for the meter to be used in most fluid applications.

FEATURES

- ❑ Can be programmed by the infrared keypad without opening the cover
- ❑ High turndown ratio of flow rate
- ❑ Multiple flange types are available, such as ANSI, DIN, JIS, etc.
- ❑ Excellent for high-pressure applications
- ❑ Simple for installation, commission and maintenance
- ❑ Self-diagnostic capabilities, cable faults, pipe vibration
- ❑ High accuracy of +/-0.2% of reading (or +/-0.1% of reading)
- ❑ With forward / reverse flow rate measurement function
- ❑ Large-screen LCD display for easy viewing and operation on-site

STANDARD SPECIFICATION

- Sensor Type : U tube (2-40 mm) / V tube (50-150 mm)
- Size : 2-150 mm (1/12"-6")
- Flow Range : 0-160 kg/hr~0-580000 kg/hr
- Accuracy : +/-0.2% +/-ZS of reading (Standard)
: +/-0.1% +/-ZS of reading (Option)
- Repeatability : +/-0.03% +/-ZS of reading
- Density Range : 200-3000 kgf/m³ (0.2-3.0 g/cm³)
Accuracy : +/-0.002 g/cm³
- Temperature Range : -50~125 °C (Standard)
: -50~350 °C (Option, Remote Only)
- Ambient Temperature : -40~60 °C
- Max. Pressure : 100 kgf/cm²
- Material
Wetted Parts & Flange : S.S. 316L, Hastelloy C22
Sensor Housing : Stainless Steel 304
Junction Box : Aluminum Alloy (Epoxy Paint)
- Process Connection : Flange
- Flange Type : JIS 10K / JIS 20K / JIS 40K
: ANSI 150# / ANSI 300# / ANSI 600#
: DIN PN10 / PN16 / PN25 / PN40
- Protection Class : IP67
: Explosion Proof, Ex d eb [ib] IIC T6 (Option)
- Signal Cable Length : 10-150 m



- Display : 4 lines LCD with illumination
Flow Rate Unit : g/s, kg/m, kg/hr, t/hr, lb/m, gal/m... (8 Digits)
Density Unit : kg/m³, g/cm³, lb/Us gal (5 Digits)
Totalizer Unit : g, kg, T, L, m³, Nm³, lb, gal, lb, ft³... (11 Digits)
Temperature : °C, °F (6 Digits)
- Keypad : Infrared light sensor, can be programmed without opening the cover
- Turndown Ratio : 40:1
- Damping : 0.0-1.0 Seconds
- Low Flow Cutoff : 0.0-3600 t/hr and 0.0-3,600,000 m³/hr
- Communication : RS485 (Modbus Protocol) (Standard)
: HART Signal (Option)
- Current Output : 4-20 mA(Isolated), Max. 2 channels(Option)
Load : Max. 550 Ω
Output Unit : Mass / Volume / Density / Temperature
- Pulse Output : Active Pulse (Open Collector)
Rating : 24 VDC, 50 mA Max.
- Display Orientation : 0° or 180° (Parameter Setting)
- Power Supply : 90-260 VAC, 50/60 Hz or 24 VDC +/-10%
- Power Consumption : 7-13 W
- Cable Entry : Sensor to Converter-3/4" G
: Signal Output / Power Supply-M20
- Installation : Compact or Remote



FLOW RANGE

Unit : kg/hr

Normal Size		Flow Rate & Accuracy Table (Liquid)					
Model Code	Inch	Minimum 0.2% (0.1%)	Normal	Maximum	Zero Stability	Temperature Effect %Flow Rate / °C	Pressure Effect %Flow Rate / kgf/cm ²
0002	1/12"	4 (12)	80	160	0.005	+/-0.0002	/
0003	1/8"	12 (36)	240	480	0.0180		
015S	1/4"	50 (150)	1,000	2,000	0.0750	+/-0.0001	
0015	3/8"	90 (270)	1,800	3,600	0.0135		
015L	1/2"	150 (450)	3,000	6,000	0.2250		
0020	3/4"	150 (450)	3,000	6,000	0.2250		
0025	1"	400 (1200)	8,000	16,000	0.5		
025L	1" (L)	650 (1950)	13,000	26,000	1.3		
0040	1-1/2"	650 (1,950)	13,000	26,000	1.3		-0.003
040L	1-1/2" (L)	1,350 (4,050)	27,000	54,000	2.1		-0.005
050S	2"	1,350 (4,050)	27,000	54,000	2.1		
0050	2" (L)	2,650 (7,950)	53,000	106,000	4.5		
0065	2-1/2"	2,650 (7,950)	53,000	106,000	4.5		
0080	3"	6,600 (19,800)	132,000	264,000	12.0		-0.009
0100	4"	6,600 (19,800)	132,000	264,000	12.0		
100L	4" (L)	14,500 (43,500)	290,000	580,000	27.0		-0.012
0125	5"	14,500 (43,500)	290,000	580,000	27.0		
0150	6"	14,500 (43,500)	290,000	580,000	27.0		
Accuracy Between Minimum - Maximum is +/-0.2% (+/-0.1%) of Reading							

Normal Size		Flow Rate & Accuracy Table (Gas)	
Model Code	Inch	Accuracy	Repeatability
0002-0150	1/12"-6"	+/-1.0% ~ +/-0.5%	+/-0.5% ~ +/-0.2%
When the flowmeter measures the maximum flow rate, the pressure drop should be lower than 1.27 bar, and the velocity in the sensor tube should not exceed then 170 m/s.			

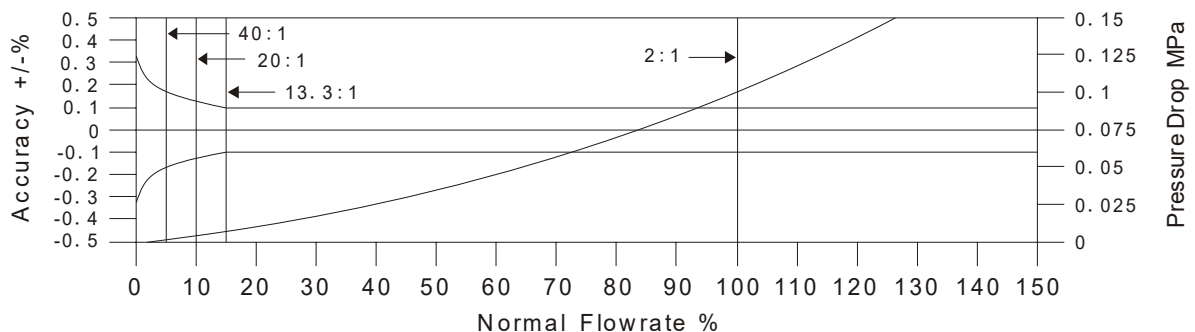
DENSITY (LIQUID)

Range	Accuracy	Repeatability	Temperature Effect kg/m ³ / °C	Pressure Effect kg/m ³ / kgf/cm ²
200-3000 kgf/m ³	+/-2.0 kg/m ³	+/-1.0 kg/m ³	+/-0.015	+/-0.0029 ~ +/-0.145

Note 1: The maximum pressure during calibration is 4 bar, and the pressure effect can be corrected.

Note 2: Temperature accuracy: +/-1 °C, repeatability: +/-0.2 °C.

FLOWRATE & ACCURACY & PRESSURE DROP

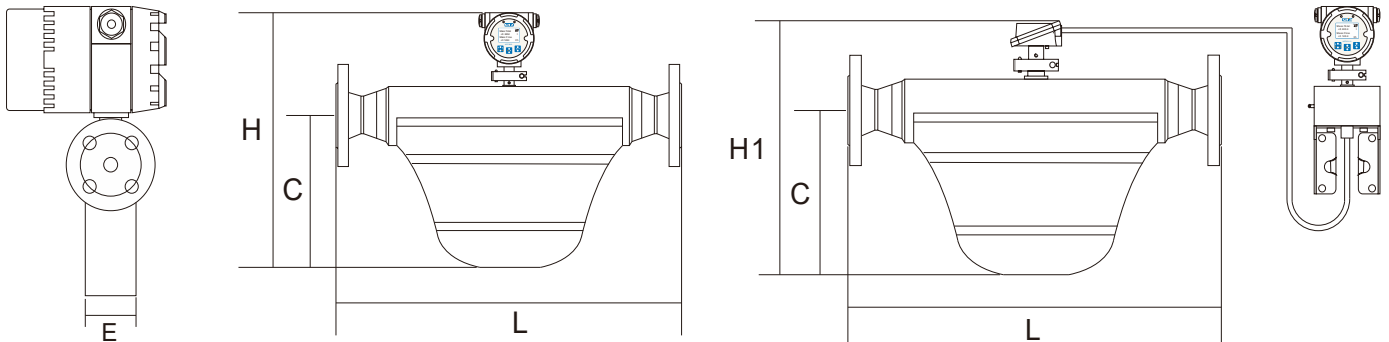


Turndown Ratio	40 : 1	20 : 1	13.3 : 1	2 : 1	1 : 1
Accuracy +/- %	0.2	0.15	0.1	0.1	0.1
Pressure Drop MPa	0.0001	0.002	0.015	0.1	0.3

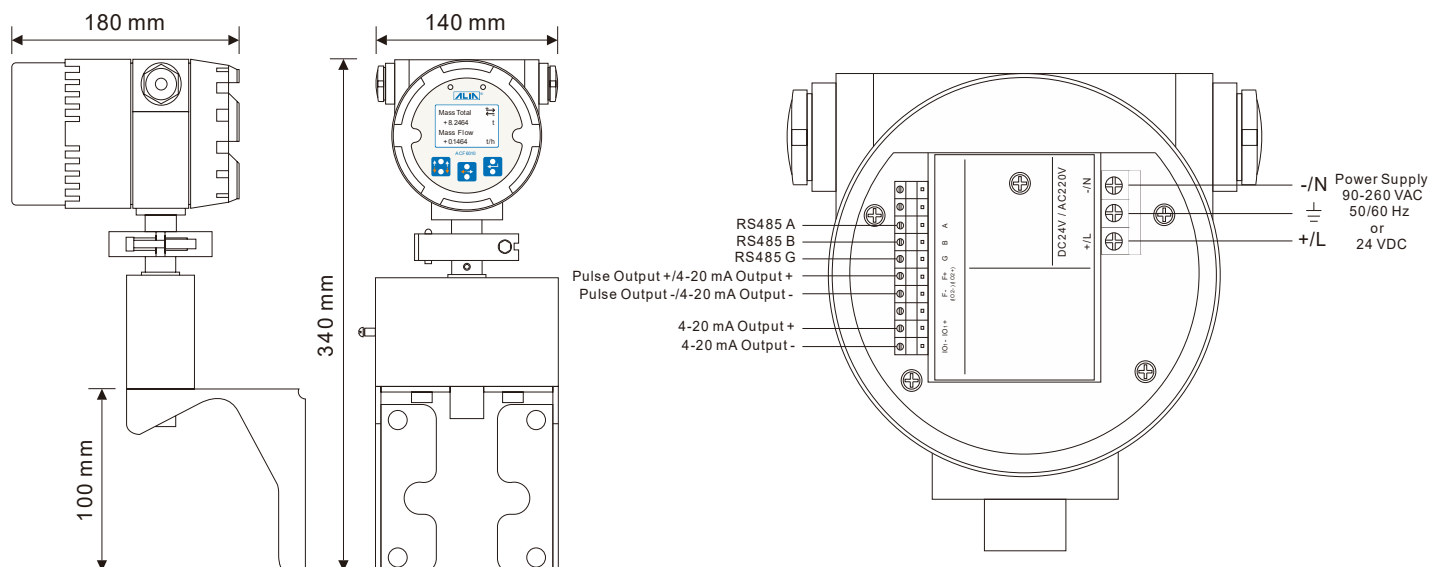
7 DIMENSIONS

Normal Size		Standard Pressure	Dimensions (mm)					Sensor Weight Remote Type
mm	Inch	kgf/cm ²	L	C	H	H1	E	kg
0002	1/12"	40	305	116	322	246	40	7.5
0003	1/8"		305	116	322	246	40	7.5
015S	1/4"		442	164	373	297	50	10.0
0015	3/8"		442	164	373	297	50	10.0
015L / 0020	1/2" / 3/4"		468 / 472	189	386	309	65	14.0
0025	1"		534	214	415	339	72	15.0
025L / 0040	1" / 1-1/2"		560 / 570	239	447	371	86	20.0
040L / 050S	1-1/2" / 2"		560 / 566	259	437	397	101	26.0
0050 / 0065	2" / 2-1/2"		817 / 825	282	508	432	120	41.0
0080 / 0100	3" / 4"		1030 / 965	361	605	529	154	73.0
100L	4"		1170	418	677	601	186	112.0
0125	5"		1078	418	677	601	186	115
0150	6"		1091	418	677	601	186	122

Note: The standard dimension L is designed for DIN flanges.



7 WIRING DIAGRAM



MODEL SELECTION GUIDE

ACF6010HM Series										
Example: ACF6010HM-0080-AH-020-H-AD-HT/EX/PT										
ACF6010HM-	XXXX	-X	X-	XXX	-X	-XX	-XX	Description		
Size	0002-0150							0002 / 0003 / 015S / 0015 / 015L / 0020 / 0025 / 025L / 0040 / 040L mm		
								050S / 0050 / 0065 / 0080 / 0100 / 100L / 0125 / 0150 mm		
Process Connection		-1						PN10		
		-2						PN16		
		-3						PN25		
		-4						PN40		
		-A						ANSI 150#		
		-B						ANSI 300#		
		-C						ANSI 600#		
		-J						JIS 10K		
		-K						JIS 20K		
		-L						JIS 40K		
		-Z						Other		
Max. Temperature			N-					-50~125 °C		
			H-					-50~200 °C (Remote Type Only)		
			Y-					-50~350 °C (Remote Type Only) (Size ≥ 25 mm)		
Installation & Cable Length				NNN				Compact Version		
				010-150				Remote Version, Cable 10-150 m (If choose Explosion Proof, Max. 20 m)		
Accuracy					-N			+/-0.2% of Reading		
					-H			+/-0.1% of Reading		
Power Supply						-AD			90-260 VAC, 50/60 Hz / 24 VDC +/-10%	
Option							-NN	None		
							-HT	HART Signal		
							-EX	Explosion Proof, Ex d eb [ib] IIC T6		
							-HJ	Heating Jacket		
							-PT	Cable Entry 1/2" NPTF		
							-HC	Wetted Parts Material Hastelloy C22		
							-2A	4-20 mA Output * 2 Channels without Pulse Output		

WORKING PRINCIPLE

