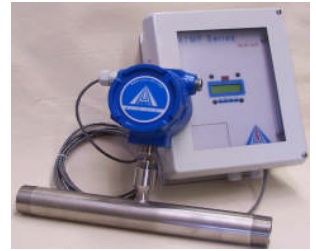




GENERAL

The Alia inline mass Flowmeters features either local or remote transmitters. Local units includes a 2-line, 16-character display and Light WIRE™ infrared communication and remote transmitters with display units have two wires between it and local enclosure. Flow sections for pipes ¾" and larger have flow conditioners installed as standard. Flow sections up to 2½" have threaded ends as standard; flow sections for pipes 3" and up have ANSI 150lb. Depending on the line size, a variety of alternatives are available including ANSI 300lb. and DN flanges, butt ends, tri-clover fittings, VCR sensors etc. All electrical connections are accessible through the double-sided enclosure.



FEATURES

- ❑ Direct mass flow measurement of any gas with actual gas calibration
- ❑ Up to four in-dependent switch able flow curves
- ❑ Tracking of overall gas consumption over a turndown ratio of at least 100:1
- ❑ Data logger that can store flow, velocity, temperature, total, etc.
- ❑ A 2 line, 16 character display for rate, total, and relay status
- ❑ Selectable engineering units, dynamically converts the flow rate and total flow
- ❑ Available with Infrared communicator for remote access of data
- ❑ Standard software available multi-curve fit programs
- ❑ Up to 20 instant flow adjustments



SPECIFICATION

● Process Connection	Threaded, Flanged, Ball valve	● Housing protection:	NEMA 4, Class 1, Div 1, Groups B, C, & D
● Process temperature:	0 to +200°C	● Ex-protection:	II 2 GD EE _x d IIC T2 or T3 or T4
● Operating pressure:	40 bar	●	Ex ^o IIC ^o CE
● Mass Flow rate	See model selection guide section	● Cable (remote version):	300 meters
● Flow units	Kg/hr, Kg/mn, Kg/s Lb/hr, Lb/m Lb/s	● Wetted materials	316 SSS (Hastelloy and Monel optional)
●	NCMH, SCFM, NLPM, SLPM	● weight (approximate):	
●	Mt/s, F/mn, BTU/Hr, BTU/min	● Integral Type	
● Gas temperature effect	0.01% /° C	8636MP to 8659MP	1 to 4 Kg
● Accuracy (and linearity)	± [1% of Reading + (.5% FS+ .02%/°C)]	8669MP to 8689MP	2-3 Kg
●	± 0.2% of Full Scale	8710MP and 8712MP	4-5 KG
● Repeatability	± 0.25% of Full Scale	8716MP and 8720MP	6-7 KG
● Turn down ratio	Over 100:1	8724MP(flanges include)	10 KG
● Response time	Less than one seconds	8732MP(flanges included)	11 KG
● Material:	316SS as per DIN 1.4571 (AISI 316 Ti)	● MPNH style	Reduce weight by 0.5 kg for each above
● Data logger	Flow rate, Total, Relays, etc.	Remote Type	
●	5800 data	8036MP to 8059MP	3 to 6 Kg
● Linear signal output	0-5 VDC & 4-20 mA	8069MP to 8089MP	6-8 Kg
● Pulse output	scalable	8110MP and 8112MP	8-10 KG
● Relays	Two 1-amp, SPDT	8116MP and 8120MP	12-14 KG
●	User-selectable alarm functions	8124MP(flanges include)	16 KG
● Display units	Flow, Total flow, Switch settings	8132MP(flanges included)	18 KG
	Temperature, Elapsed time	MPNH style	Reduce weight by 1 kg for each above
● RAM Back-up	Lithium Battery	Notes:-weight	+0.5 kg for 150# flanges + 1kg for 300#
● Data storage	EPROM storage up to 10 years	● Power requirements	115VAC @, 1/8 A 230VAC @ 1/16 A
● Self diagnostics functions	ADC, DAC,	24 VDC @ 1/4A	
	Alarm relay for EMI impulse noise	● Power Consumption	5 Watts or less
● Signal Interface	RS232 & RS485, HART, MODBUS, etc..	● NIST traceable	Standard for all calibration



The Alia Inline mass Flowmeter assembly includes the flow sensing element, temperature sensing element, bridge amplifier and signal output board, transmitter enclosure, and flow section. Both integral and remote electronics configurations are available (see drawings below). The flow section is typically specified to match our customer's pipe configuration and is installed directly in the flow line. This design has the sensing elements mounted directly in the flow section for exposure to the process gas. Our Inline style thermal mass Flowmeters are available in sizes from 1/4" pipe through 4" pipe and are provided with threaded male NPT ends as the standard mounting style. Optional end mounting styles may be specified, such as tube ends, tube end fittings, VCR mountings butt weld ends, flanged end configurations (see diagrams), etc. as required. Pipe sizes in excess of 4" (100mm) require insertion style thermal mass flow meters

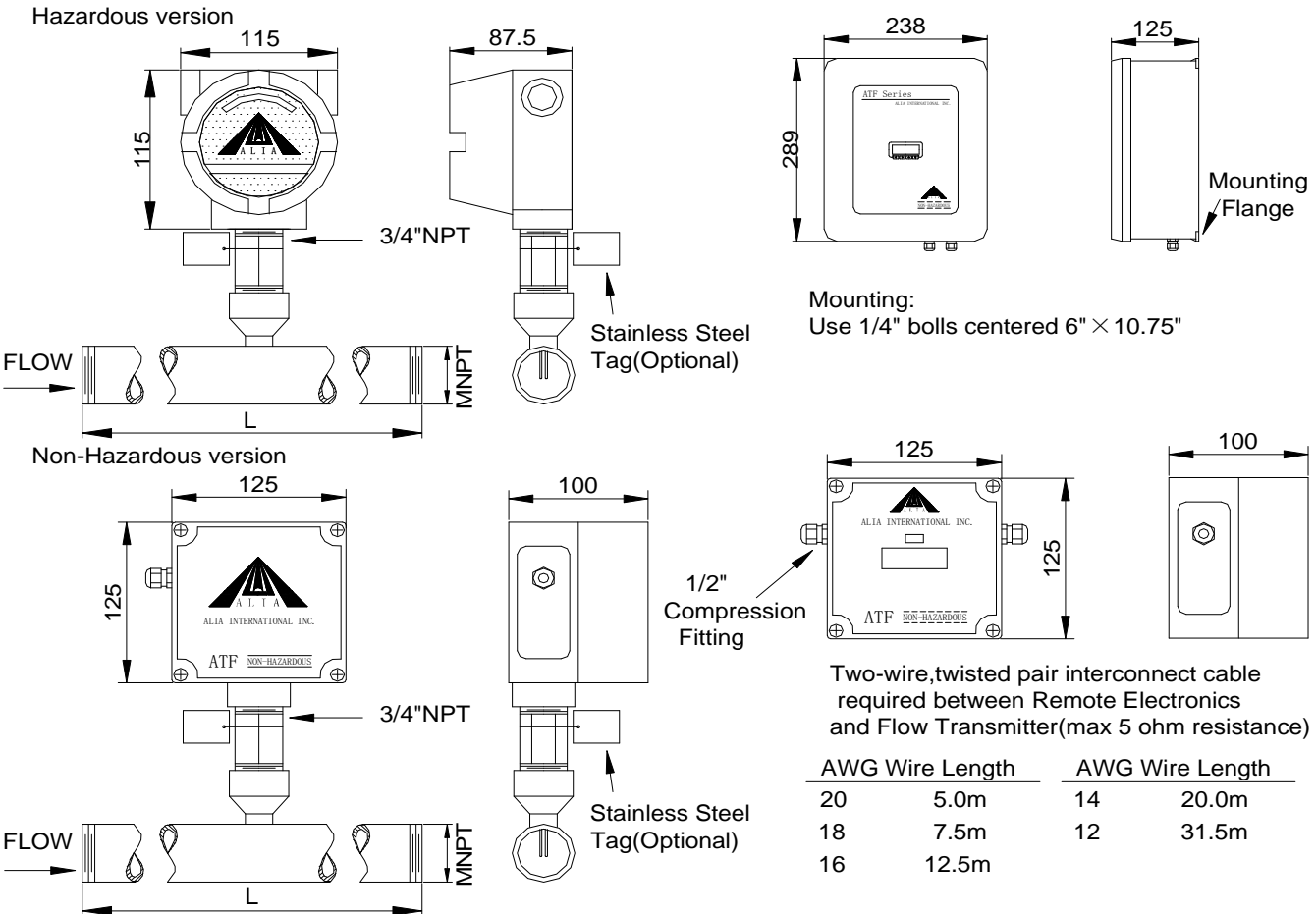
Procedures to specify our inline mass meters

**** Please contact your local Alia application engineer****

You also need to provide the following information:

Gas Composition	Since we calibrate our mass Flowmeters to NIST standards with actual gas or a mixture that reflects the customers process. Exact gas name or mixtures listed as a percent of the total, with the sum equaling 100%.
Full Scale Flow	We need your maximum and minimum flow rates (Full Scale), units must be Kg/hr, Lb/hr, NCMH or SCFM.
Line Size	we need to know your pipe size as well connection type (flange, threaded, etc..)
Gas Pressure and Temperature	We calibrate under conditions as close to your process environment as possible
Electronics Temperature	Temperature of the environment surrounding the Flowmeters electronics.
Power Requirements	Please specify your power requirements such as 24 VDC or 115 VAC or 230 VAC
Configuration	We have various configurations such as Ex proof, Non-Ex proof, remote, integral. See below:

ATMF 8000 inline mass Flowmeters — Remote version

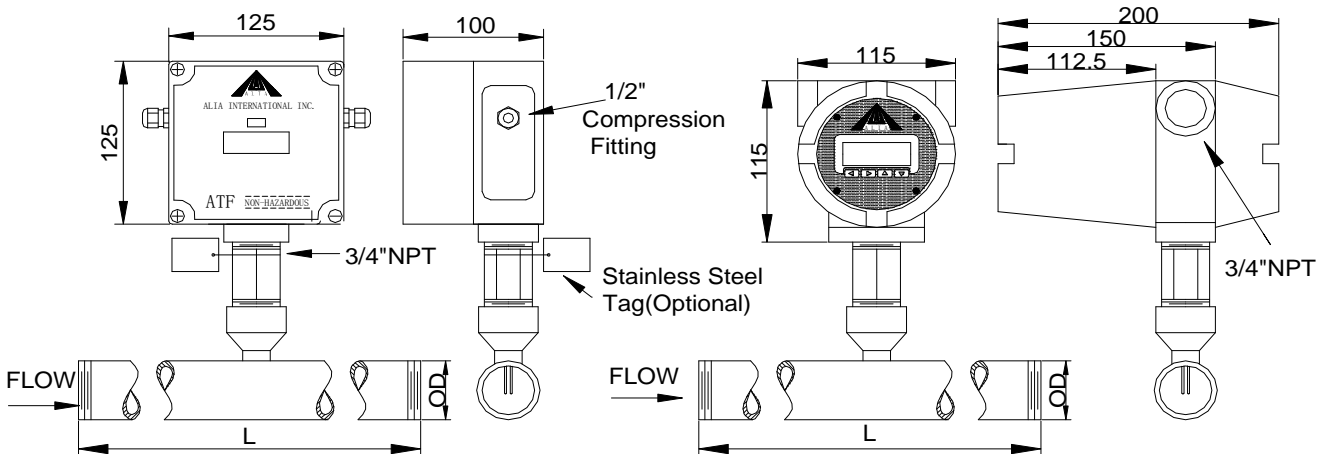


Model Number	MNPT	Length
ATMF8036	1/4"(6.3mm)	6"(150mm)
ATMF8049	3/8"(9.5mm)	6"(150mm)
ATMF8059	1/2"(12.5mm)	7"(175mm)
ATMF8069	3/4"(19.0mm)	7"(175mm)
ATMF8089	1"(25.0mm)	8"(200mm)
ATMF8110	1 1/4"(32.0mm)	10"(250mm)

Model Number	MNPT	Length
ATMF8112	1 1/2"(37.5mm)	15"(375mm)
ATMF8116	2"(50.0mm)	20"(500mm)
ATMF8120	2 1/2"(62.5mm)	25"(625mm)
ATMF8124	3"(75.0mm)	30"(750mm)
ATMF8132	4"(100mm)	40"(1000mm)

Note:all dimensions are mm unless stated

ATMF 8000 inline mass Flowmeters - integral version



Model Number	O.D	Length
ATMF8636	1/4"(6.3mm)	6"(150mm)
ATMF8649	3/8"(9.5mm)	6"(150mm)
ATMF8659	1/2"(12.5mm)	7"(175mm)
ATMF8669	3/4"(19.0mm)	7"(175mm)
ATMF8689	1"(25.0mm)	8"(200mm)
ATMF8710	1 1/4"(32.0mm)	10"(250mm)

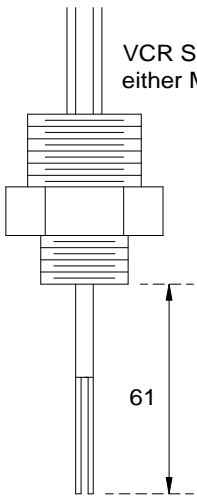
Model Number	O.D	Length
ATMF8712	1 1/2"(37.5mm)	15"(375mm)
ATMF8716	2"(50.0mm)	20"(500mm)
ATMF8720	2 1/2"(62.5mm)	25"(625mm)
ATMF8724	3"(75.0mm)	30"(750mm)
ATMF8732	4"(100mm)	40"(1000mm)

Note: all dimensions are mm unless stated

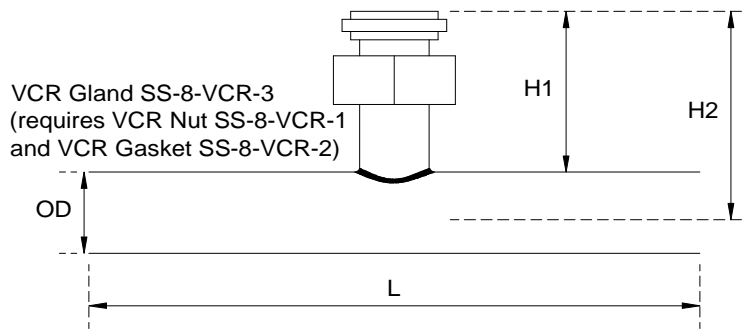
Options for ATMF 8000 inline series

Flow Section Dimensions for Tube flow section and VCR Sensor

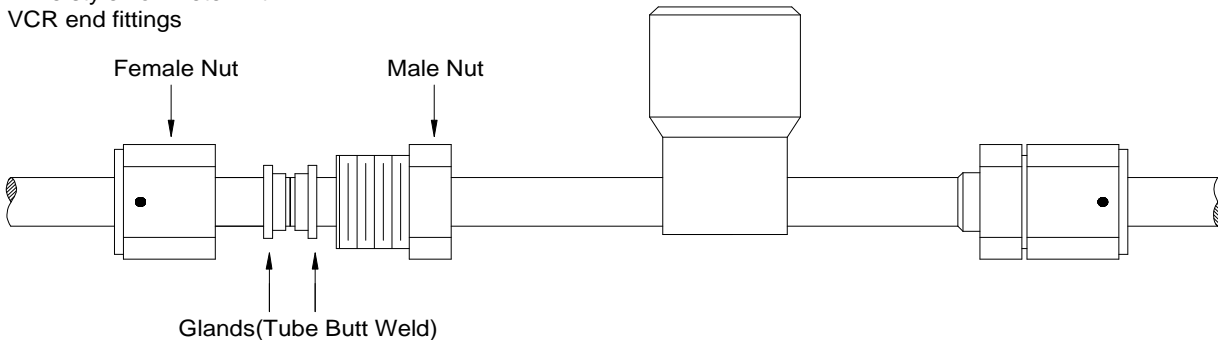
OD	L	H1	H2	OD	L	H1	H2
12.5	175	53.5	29.0	50.0	500	23.5	47.0
19.0	175	46.5	56.0	62.5	625	23.5	53.5
25.0	200	40.0	53.5	75.0	750	23.5	59.5
31.5	250	34.0	50.0	100	1000	23.5	72.0
37.5	375	28.0	46.5	150	1500	23.5	47.0



VCR Sensor may be used with either MP or MPNH enclosure



Inline style flowmeter with VCR end fittings



➤ Model Selection Guide

ATMF8000 Inline Series										
Example ATMF8716-SSS-133--AC220-JIS-BTW-VCR-10Ra-O2CLN-CR1-CONF-O2 (600 NCMH, 70C,7 Barg)										
AMF-		XXXX	XXX	133	XXXX	XXXXXXXX	XXX	XXXX	Gas type, Flow rate,P,T,Pipe size	Description
Remote Style										
1/2"	8059								0-30 NCMH	Flowbody size and Flow Ranges
3/4"	8069								0-125 NCMH	
1"	8089								0-200 NCMH	
1.25"	8110								0-300 NCMH	
1.5"	8112								0-400 NCMH	
2"	8116								0-650 NCMH	
2.5"	8120								0-900 NCMH	
3"	8124								0-1500 NCMH	
4"	8132								0-2500 NCMH	
Integral Style										
1/2"	8659								0-30 NCMH	Flowbody size and Flow Ranges
3/4"	8669								0-125 NCMH	
1"	8689								0-200 NCMH	
1.25"	8710								0-300 NCMH	
1.5"	8712								0-400 NCMH	
2"	8716								0-650 NCMH	
2.5"	8720								0-900 NCMH	
3"	8724								0-1500 NCMH	
4"	8732								0-2500 NCMH	
Explosion Proof	MP									Environment
Non Hazardous	MPNH									
316 SSS < 70C	SSS									Operating temperature
316 SS (70-200C)	SSM									
AC 115	AC115									Power Supply
AC 230	AC230									
DC 24	DC24									
NPT	NPT									Process connections
DIN	DNFL									
JIS	JIS									
ANSI 150#	FSW15XX									
ANSI 300#	FSW30XX									
ANSI 600#	FSW60XX									
One calibration curve	C1R									No. of output curves
Two calibration curves	C2R									
Three calibration curves	C3R									
Four calibration Curves	C4R									
Oxygen Cleaning	O2CLN									Options
Butt Welded	BTW									
Ra Finish (7-10Ra)	Ra10									
VCR Sensors	VCR									
Extended temperature electronics (-40C to 85C)	ETEMP									
Calibration and test point report	CONF									
Process Gas (Please indicate, gas type, flow rate, line size, pressure and temperature)										
Note: Options such bus outputs, HART, monel and hasteloy C material, etc.are available PLEASE contact Alia-inc.										