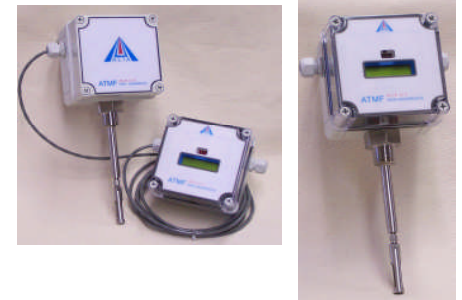




GENERAL

The Alia insertion 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. Input and output connections are accessible through the double-sided enclosure. Installation options include ball valve retractor assemblies, tube to pipe compression fittings, and probe mounted flanges.



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
- ❑ Can measure higher velocity than any other thermal mass meter - up to 203 m/s
- ❑ 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 +455°C	● Ex-protection:	II 2 GD EEx d IIC T2 or T3 or T4
● Operating pressure:	40 bar		
● Mass Velocity	Up to 203 normal meters per second	● Cable (remote version):	300 meters
● Flow units	Kg/hr, Kg/mn, Kg/s Lb/hr, Lb/m Lb/s NCMH, SCFM, NLPM, SLPM	● Wetted materials	316 SSS (Hastelloy and Monel optional)
	Mt/s, F/mn, BTU/Hr, BTU/min	● weight:	
● Gas pressure effect	Minor $\pm 20\%$ of calibration pressure	● Integral Ex proof	4.0 kg
● Gas temperature effect	0.01% /° C	● Remote Ex proof	7.0 kg
● Accuracy (and linearity)	$\pm [1\% \text{ of Reading} + (.5\% \text{ FS} + .02\% / ^\circ \text{C})]$	● Integral Non-Ex proof	1.5 kg
	$\pm 0.2\%$ of Full Scale	● Remote Non Ex proof	3.0 kg
● Repeatability	$\pm 0.25\%$ of Full Scale	● Linear signal output	0-5 VDC & 4-20 mA
● Turn down ratio	Over 100:1	● Pulse output	scalable
● Response time	Less than one seconds	● Relays	Two 1-amp, SPDT
● Material:	316SS as per DIN 1.4571 (AISI 316 Ti)		User-selectable alarm functions
● Data logger	Flow rate, Total, Relays, etc. 5800 data	● Signal Interface	RS232 & RS485, HART, MODBUS, etc..
		● Power requirements	115VAC @, 1/8 A 230VAC @ 1/16 A 24 VDC @ 1/4A
● Display units	Flow, Total flow, Switch settings Temperature, Elapsed time	● Power Consumption	5 Watts or less
● RAM Back-up	Lithium Battery	● NIST traceable calibration	Standard
● Data storage	EPROM storage up to 10 years	● Self diagnostics functions	ADC, DAC, Alarm relay for EMI impulse noise

ALIA LLC.

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ATMF082408 RV1

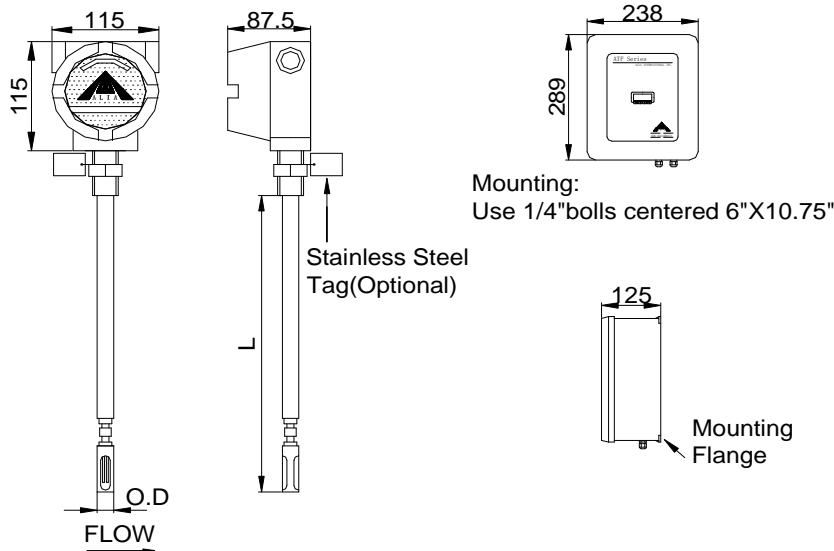
The Alia Insertion mass Flowmeter assembly includes the flow sensing element, temperature sensing element, bridge amplifier/signal output board, transmitter enclosure, and probe section. Both integral and remote electronics configurations are available (see drawings below).

The Alia Insertion style thermal mass Flowmeter assembly includes a sensor probe assembly which is inserted into the flow stream to allow the process gas to flow across the flow sensing assembly. It can be inserted in any flow direction, or up or down. Our insertion Flowmeters are available with 1/2", 3/4", or 1" OD probes and may be installed with pipe fitting connections or user-supplied fittings. Tube fittings and ball valve retractor assemblies, with or without a mounting flange, are also available. The Standard lengths range from a minimum of 6" to a maximum of 36". For other probe diameters and lengths, please consult the factory.

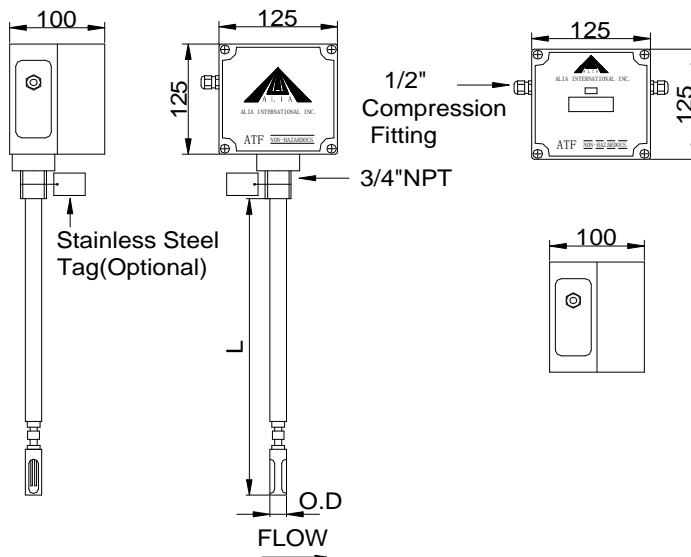
Instrument Drawings

ATMF 8000 insertion mass flow meters-Remote version

Hazardous version



Non-Hazardous version



Two-wire, twisted pair interconnect cable required between Remote Electronics and Flow Transmitter (max 5 ohm resistance)

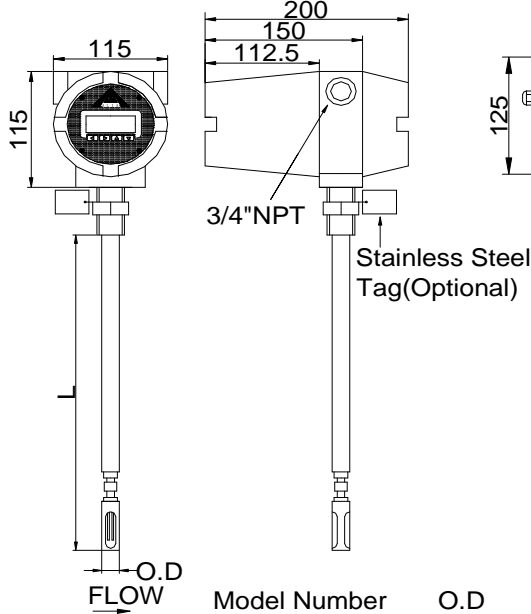
AWG	Wire Length
20	5.0m
18	7.5m
16	12.5m
14	20.0m
12	31.5m

Model Number	O.D	Length
ATMF8240	1/2"(12.5mm)	to 36"(900mm)
ATMF8260	3/4"(19.0mm)	to 60"(1500mm)
ATMF8280	1"(25.0mm)	to 84"(2100mm)

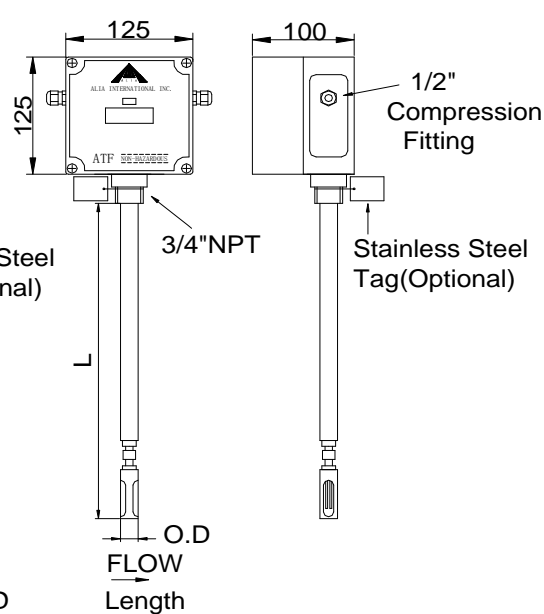
Note: all dimensions are mm unless stated

ATMF 8000 insertion mass Flowmeters-Integral version

Hazardous version



Non-Hazardous version



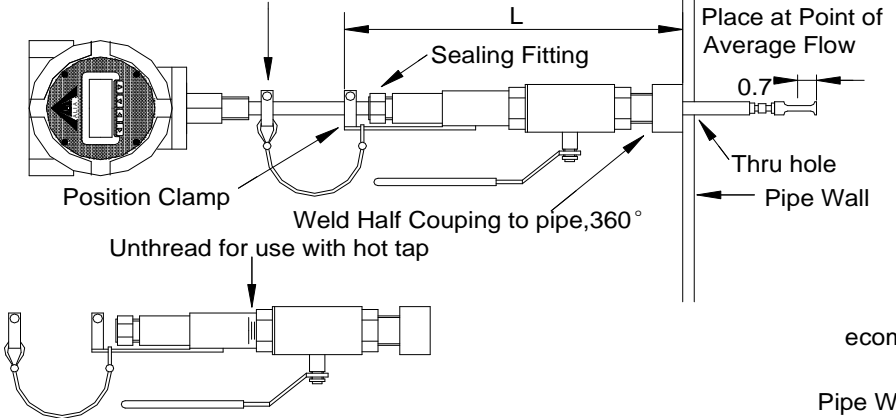
Model Number	O.D	O.D	Length
ATMF8840	1/2"(12.5mm)	to 36"(900mm)	
ATMF8860	3/4"(19.0mm)	to 60"(1500mm)	
ATMF8880	1"(25.0mm)	to 84"(2100mm)	

Note:all dimensions are mm unless stated

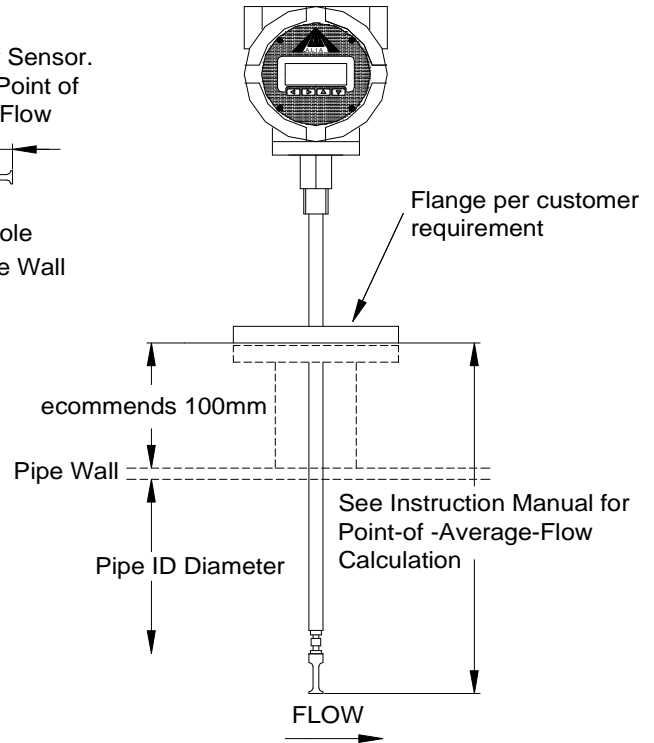
Mounting options

BALL VALVE (BVR) OPTION

Lock Collar and Cable Restraint. Adjust to prevent removal of probe while ball valve is open and fitting is loose.

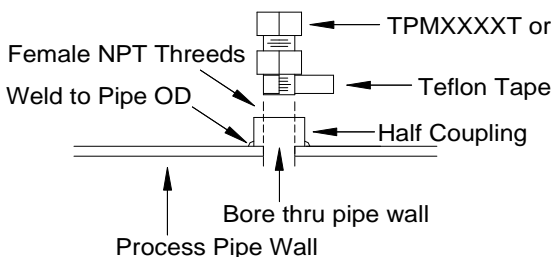


FLANGE OPTION



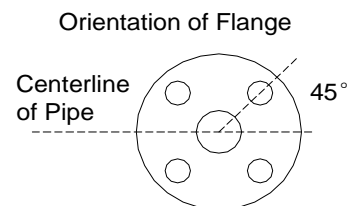
Model	Half Coupling	L	Thru hole	PSIG max	See ID
BVR0812	3/4"NPT	250	16	125	12.5
BVR0812	1"NPT	275	30	55	19
BVR0812	1 1/4"NPT	300	35	30	25

TPM OPTION



Model	Half Coupling	PSIG max
TPM0808T	1/2"NPT	25
TPM0808S	1/2"NPT	225
TPM1212T	3/4"NPT	25
TPM1212S	3/4"NPT	225
TPM1616T	1"NPT	25
TPM1616S	1"NPT	225

T=Teflon Ferrule
S=Stainless Steel Ferrule



Note:all dimensions are mm unless stated

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:

➔ Model Selection Guide

ATMF8000 Series Insertion meters												
Example ATMF8840MP-SSS-XX-133-12"-AC220-NPT-CR1-CONF-Natural Gas (10,000 NCMH,12"ID, 70C,7 Barg)												
AMF8-	X	XX	XXXX	XXX	133	XX"	XXXX	XXXXXXXX	XXX	XXXX		Description
Remote	2											Style
Integral	8											
1/2"	40											Probe-Diameter
3/4"	60											
1"	80											
Explosion Proof	MP											Environment
Non Hazardous	MPNH											
316 SS < 70C	SSS											Material
316 SS (70-200C)	SSM											
316 SS (200-325C)	SSI											
316 SS (325-450C)	SSH											
Display- Included	133											Display
Put insertion length in inches	##"											Insertion length
AC 115	AC115											Power Supply
AC 230	AC230											
DC 24	DC24											
NPT	NPT											Process connections
DIN	DNFL											
JIS	JIS											
1/2" ANSI 150#	FBL1502											
3/4"ANSI 150#	FBL1503											
1"ANSI 150#	FBL1504											
1 1/2"ANSI 150#	FBL1506											
2"ANSI 150#	FBL1508											
1/2"ANSI 300#	FBL3002											
3/4"ANSI 300#	FBL3003											
1"ANSI 300#	FBL3004											
1 1/2"ANSI 300#	FBL3006											
2"ANSI 300#	FBL3008											
1/2"tube X 3/4" male pipe (swegelock style)	TPM0808S				(For Models 8840)							
3/4"tube X 1" male pipe (swegelock style)	TPM1212S				(For Models 8860)							
3/4"tube X 1" male pipe (swegelock style)	TPM1216S				(For Models 8860)							
1" tube X 1" male pipe (swegelock style)	TPM1616S				(For Models 8880)							
Ball valve retractor-add 10" to overall insertion length	BVR0812				(For Models 8840)							
Ball valve retractor-add 11" to overall insertion length	BVR1260				(For Models 8860)							
Ball valve retractor -add 12" to overall insertion length	BVR1620				(For Models 8880)							
One calibration curve	C1R											No. of output curves
Two calibration curves	C2R											
Three calibration curves	C3R											
Four calibration Curves	C4R											
Extended temperature electronics (-40C to 85C)	ETEMP											OPTIONS
Calibration and test point report	CONF											
Process Gas (Please indicate, gas type, flow rate, line size, pressure and temperature)											Process Data	
For larger flanges sizes, other material of constructions (Hasteloy C, Monel), high pressure ball valve etc contact Alia												