




GENERAL

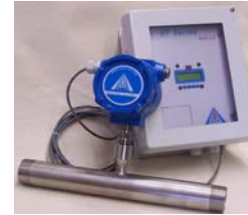
The Alia Inline mass Flowmeter assembly includes the flow sensing element, temperature sensing element, bridge amplifier and signal output board, transmitter enclosure, and flow section. Both integral and remote electronics configurations are available (see drawings below). The flow section is typically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

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
- Selectable engineering units, dynamically converts the flow rate and total flow
- A 2 line, 16 character display for rate, total, and relay status
- Data logger that can store flow, velocity, temperature, total, etc.
- 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
- Process temperature : 0 to +200°C
- Operating pressure : 40 bar
- Mass Flow rate : See model selection guide section
- Flow units : Kg/hr, Kg/mn, Kg/s Lb/hr, Lb/m Lb/s
NCMH, SCFM, NLPM, SLPM
Mt/s, F/mn, BTU/Hr, BTU/min
- Gas temperature effect : 0.01% /° C
- Accuracy (and linearity) : ±[1% of Reading + (.5% FS+ .02%/°C)]
± 0.2% of Full Scale
- Repeatability : ± 0.25% of Full Scale
- Turn down ratio : Over 100:1
- Response time : Less than one seconds
- Material : 316SS as per DIN 1.4571 (AISI 316 Ti)
- Data logger : Flow rate, Total, Relays, etc.
5800 data
- Linear signal output : 0-5 VDC & 4-20 mA
- Pulse output : scalable
- Relays : Two 1-amp, SPDT
User-selectable alarm functions
- Display units : Flow, Total flow, Switch settings
Temperature, Elapsed time
- RAM Back-up : Lithium Battery
- Data storage : EPROM storage up to 10 years
- Self diagnostics functions : ADC, DAC,
Alarm relay for EMI impulse noise
- Signal Interface : RS232 & RS485, HART, MODBUS, etc..
- Housing prot NEMA 4, Class 1, Div 1, Groups B, C, & D
- Ex-protect II 2 GD EEx d IIC T2 or T3 or T4

- Cable (remo 300 meters)
- Wetted mæ 316 SSS and Hastelloy (optional)
- weight (approximate) :
- Integral Type :
8636MP tc 1 to 4 Kg
8669MP tc 2-3 Kg
8710MP a 4-5 KG
8716MP a 6-7 KG
8724MP(flanges include) : 10 KG
8732MP(flanges included) : 11 KG
MPNH style : Reduce weight by 0.5 kg for each above
- Remote Type :
8036MP tc 3 to 6 Kg
8069MP tc 6-8 Kg
8110MP a 8-10 KG
8116MP a 12-14 KG
8124MP(flanges include) : 16 KG
8132MP(flanges included) : 18 KG
MPNH style : Reduce weight by 1 kg for each above
Notes:-weight +0.5 kg for 150# flanges + 1kg for 300#
- Power req 115VAC @, 1/8 A 230VAC @ 1/16 A
24 VDC @ 1/4A
- Power Cor 5 Watts or less
- NIST trace Standard for all calibration



SMC-ALIA LLC.

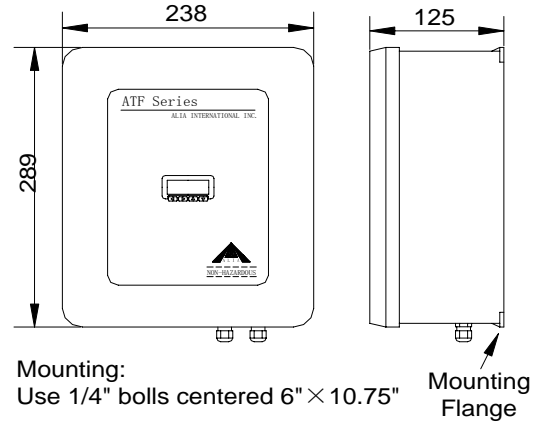
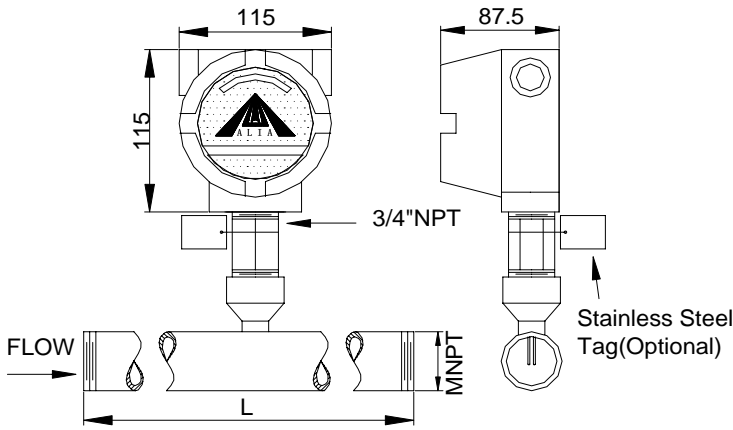
2960 Polk St. Suite 12, San Francisco, CA 94109 USA
TEL : +1- 415 - 673 - 0143 FAX : +1- 415 - 673 - 4416

URL : <http://www.smartmeasurement.com>
e-mail : thermal@smartmeasurement.com

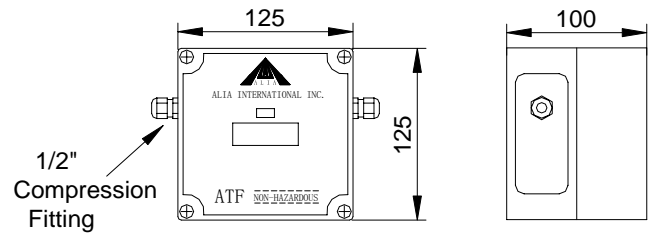
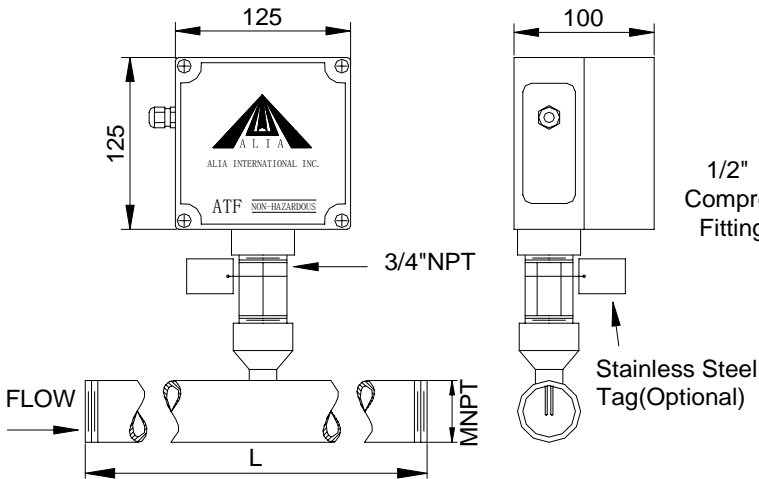
ATMF800L.V1.072806.xls

ATMF 8000 Inline Flowmeter - Remote Version

Hazardous Version



Non-hazardous Version



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

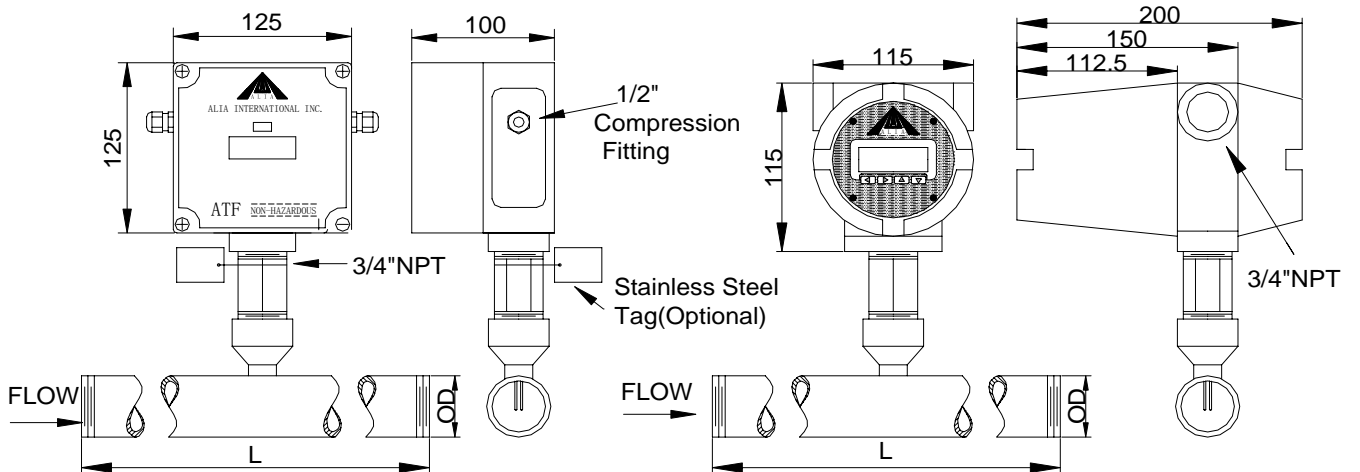
AWG Wire Length	AWG Wire Length
20 5.0m	14 20.0m
18 7.5m	12 31.5m
16 12.5m	

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 Flowmeter - Remote Version

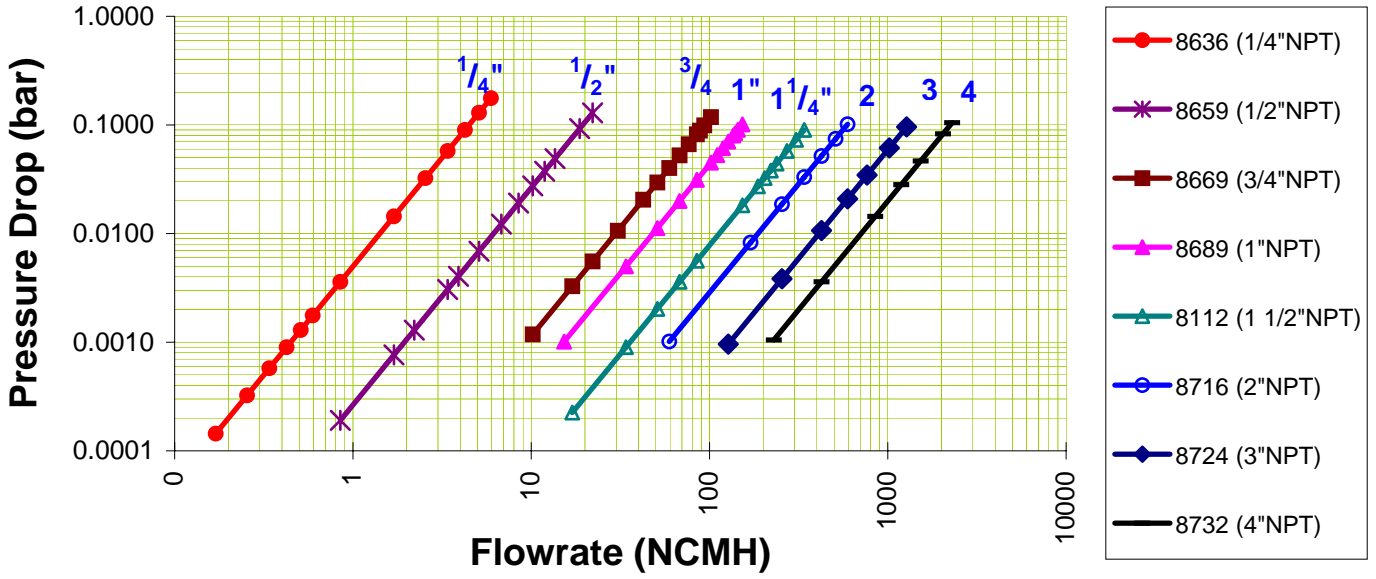


Model Number	O.D	Length
ATMF8636	1/4"(6.3mm)	6"(150mm)
ATMF8649	3/8"(9.5mm)	6"(150mm)
ATMF8659	1/2"(12.5mm)	7"(175mm)
ATMF8669	3/4"(19.0mm)	7"(175mm)
ATMF8689	1"(25.0mm)	8"(200mm)
ATMF8710	1 1/4"(32.0mm)	10"(250mm)

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

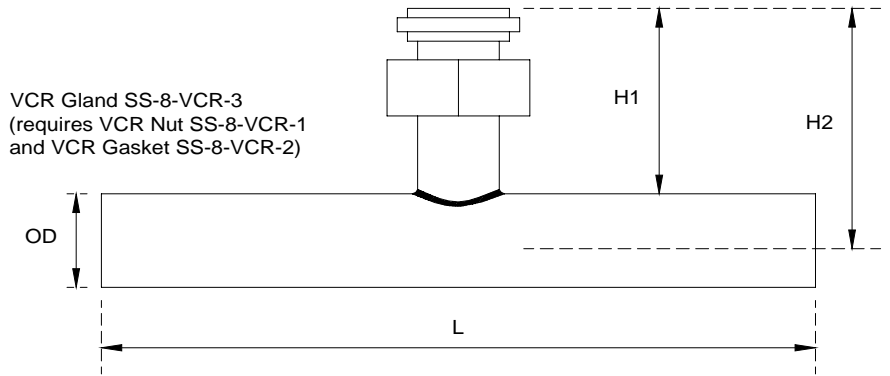
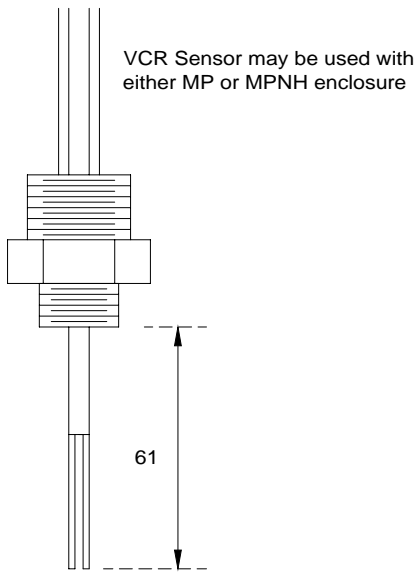
ATMF 8000 INLINE SERIES PRESSURE DROP



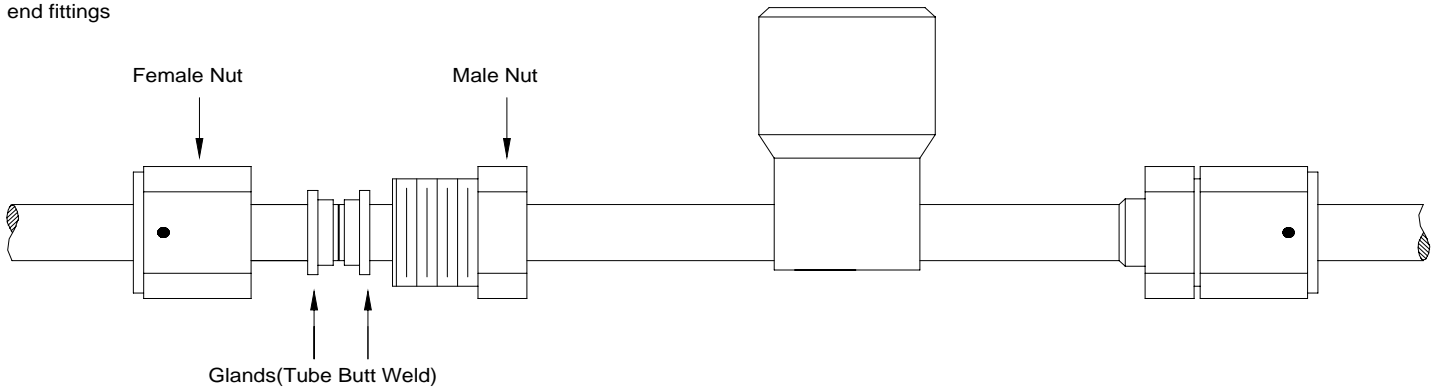
VCR Option

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



Inline style flowmeter with VCR end fittings



Please contact your local Alia application engineer

****You also need to provide the following information:**

Gas Composition	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 Requiremen	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 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									Flowbody size and Flow Ranges	
3/4"	8069								0-30 NCMH		
1"	8089								0-125 NCMH		
1.25"	8110								0-200 NCMH		
1.5"	8112								0-300 NCMH		
2"	8116								0-400 NCMH		
2.5"	8120								0-650 NCMH		
3"	8124								0-900 NCMH		
4"	8132								0-1500 NCMH		
Integral Style											
1/2"	8659									Flowbody size and Flow Ranges	
3/4"	8669								0-30 NCMH		
1"	8689								0-125 NCMH		
1.25"	8710								0-200 NCMH		
1.5"	8712								0-300 NCMH		
2"	8716								0-400 NCMH		
2.5"	8720								0-650 NCMH		
3"	8724								0-900 NCMH		
4"	8732								0-1500 NCMH		
Environment											
Explosion Proof	MP									Environment	
Non Hazardous	MPNH										
Operating temperature											
316 SSS < 70C		SSS									Operating temperature
316 SS (70-200C)		SSM									
Power Supply											
AC 115			AC115								Power Supply
AC 230			AC230								
DC 24			DC24								
Process connections											
NPT			NPT								Process connections
DIN			DNFL								
JIS			JIS								
ANSI 150#			FSW15XX								
ANSI 300#			FSW30XX								
ANSI 600#			FSW60XX								
No. of output curves											
One calibration curve			C1R								No. of output curves
Two calibration curves			C2R								
Three calibration curves			C3R								
Four calibration Curves			C4R								
Options											
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)										Process information	
Note: Options such bus outputs, HART, monel and hasteloy C material, etc. are available PLEASE contact Alia-inc.											