




GENERAL

The SMC Mass Flow Meter (AMF) and Controllers (AMFC) are a combination of our proven thermal mass flow technology and intelligent flow Controllers which provides user friendly control functions to ensure excellent performance and fast control even under varying process conditions. Supreme control settling time, no dead time and other features are the enhanced specifications ensure stable and continuous gas flow.

FEATURES

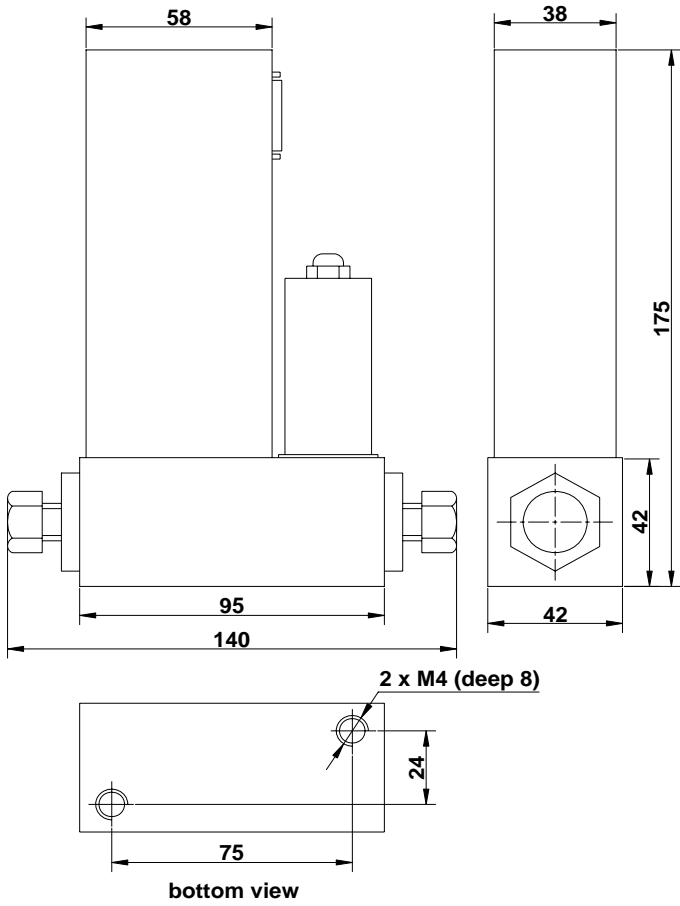
- ❑ Direct mass flow measurement of any gas or mixture
- ❑ Single and multi-valves group configuration make full range controlled from 5 sccm up to 200 slpm
- ❑ Tracking of gas flow rate over a turndown ratio of at least 20:1
- ❑ Options: controller with or without display
- ❑ Flow display : 4 digital characters
Total display : 6 digital characters
- ❑ Equivalent effective nitrogen or actual gas calibration
- ❑ low cost

SPECIFICATION

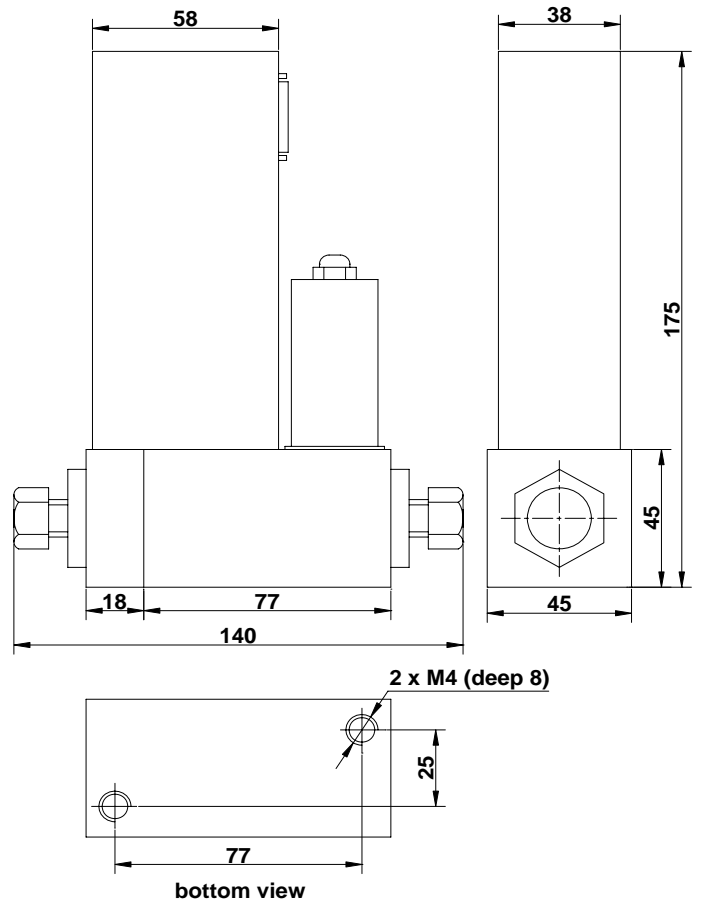
- Process Connection :
Options : Ø3,Ø6,Ø8 compression fitting
- Process temperature : 5 to +45°C
- Electronics temperature: 0~50°C
- Operating pressure : 10MPa
- Mass Flow rate : See model selection guide section
- Flow units : SLPM or SCCM
- Accuracy (and linearity) : $\pm 1\%$ of Reading + (0.5% FS)
- Repeatability : $\pm 0.5\%$ of Full Scale
- Turn down ratio : Over 20:1
- Command Signal response : One seconds
Options :
normal : $\approx 10s$
fast response : $< 1.5s$
soft start : $< 30s$
- Linear input(command) : 0~5VDC or 4~20mA
Linear output(measure): 0~5VDC to 1000 ohms or greater;
or 4~20mA to ≤ 250 ohms
3mV (RMS) maximum ripple
- Power requirement:
without Display : +15VDC / 0.6A , -15VDC / 0.3A
with Display : 220VAC / 20W
- Display Reading : Flow, Total flow
- Display function : Command / measuring signal
- Controller Function : turn off / operating
- Ex-protection :  GB3836.2-2000
eqv IEC60079-1:1990
- Cable (remote version) : 300 meters
- Wetted materials : 316 SSS
- Weights
AMFC 9312 : 1,715 grams
AMFC 9322 : 1,720 grams
2-Valves Group :3,170 grams



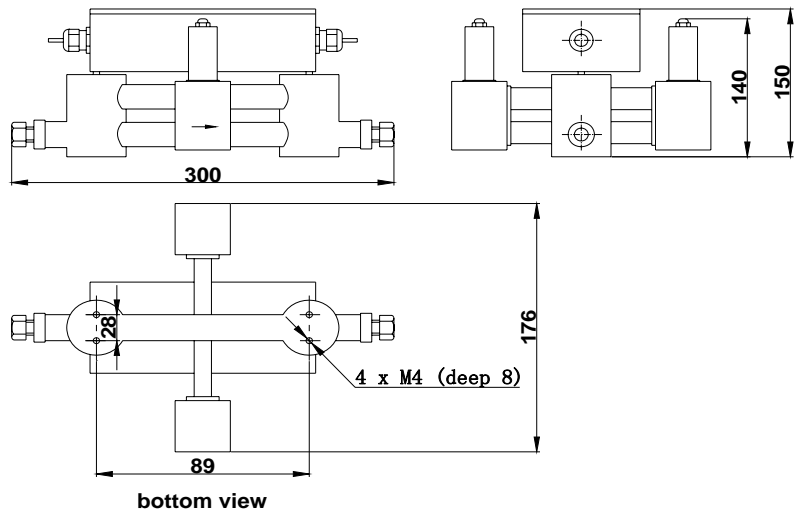
AMFC9312



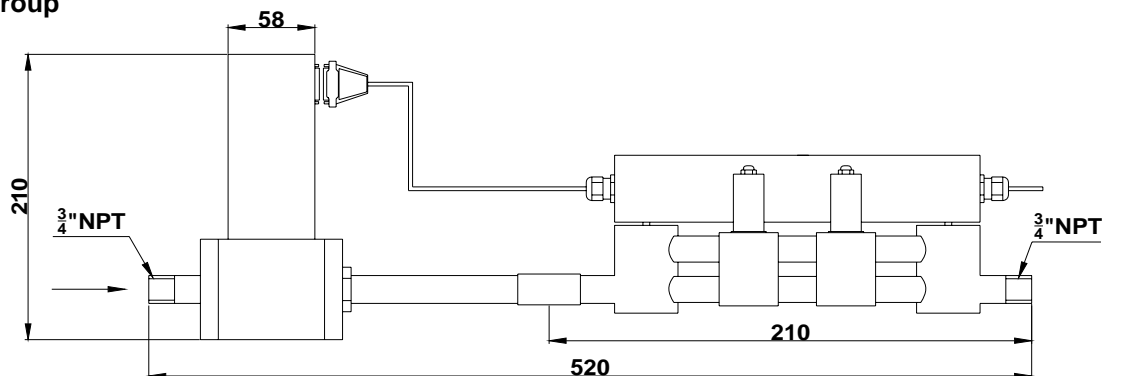
AMFC9322



AMFC9332 two vavle group



AMFC9332 four vavle group



Please contact your local SMC 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 SLPM.
Line Size	We need to know your pipe size as well connection type (2 vavles, 4 vavles, 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 15 VDC or 220 VAC
Configuration	We have various configurations such as Ex proof, Non-Ex proof, remote, integral. See below:

➤ **Model Selection Guide**

Alia Mass Flow Controller (AMFC) 9300 Series										
Example : AMFC-9312-Ø6-NX-02B-AC220-**										
AMFC-93	**	**	**	**	**	**	Gas type, Flow rate,P,T,Pipe size		Description	
	12	0.005-5 SLPM						Flow rate (Full scale)		
	22	5-100 SLPM								
	32	100-400 SLPM								
Connections System)	(Metric	Ø3	M 8 X 1 to Process line			M 14 X 1.5 to controllerbody		Flowline size (outside diameter)		
		Ø6	M 12 X 1.25 to Process line							
		Ø8	M 14 X 1.5 to Process line							
Non Hazardous			NX		Environment					
Explosion Proof			EX							
Display Rate				02B		Indication				
Display Rate & Total				03B						
AC 220 (with disply)					AC220		Power Supply			
±DC15 (without disply)					DC					
Standard of P.R.C						**		Process connections		
Process Gas (Please indicate, gas type, flow rate, line size, pressure and temperature)									Process information	

Alia Mass Flowmeter 9300 Series										
Example : AMF-9312-Ø6-NX-02B-AC220-**										
AMF-93	**	**	**	**	**	**	Gas type, Flow rate,P,T,Pipe size		Description	
	11	0.005-5 SLPM						Flow rate (Full scale)		
	21	5-100 SLPM								
	31	100-400 SLPM								
Connections System)	(Metric	Ø3	M 8 X 1 to Process line			M 14 X 1.5 to Flowmeterbody		Flowline size (outside diameter)		
		Ø6	M 12 X 1.25 to Process line							
		Ø8	M 14 X 1.5 to Process line							
Non Hazardous			NX		Environment					
Explosion Proof			EX							
Display Rate				02B		Indication				
Display Rate & Total				03B						
AC 220 (with disply)					AC 220		Power Supply			
±DC15 (without disply)					DC					
Standard of P.R.C						**		Process connections		
Process Gas (Please indicate, gas type, flow rate, line size, pressure and temperature)									Process information	