



ALSONIC

Ultrasonic Building Automation Water Meter

ALSONIC MINI

GENERAL

SmartMeasurement's ALSONIC-MINI is a clamp-on transit time ultrasonic flowmeter designed for small pipe sizes and ultra-low flow rates. The unique design of the ALSONIC-MINI allows it to be installed directly onto the pipeline without the use of coupling gel or the need to manually adjust transducer spacing. The plug and play installation method makes use of a magnetic circular clamp to achieve & maintain contact in between the transducers and the pipe wall. Total installation time is less than three minutes, significantly reducing the amount of time needed to install a traditional clamp-on meter.

The ALSONIC-MINI is offered with individual fittings for pipe sizes ranging from ¼" through 3" (8~80 mm) and features an easy-to-read OLED display and industry standard outputs including 4-20 mA and modbus. The ALSONIC-MINI can accommodate a variety of pipe materials including stainless steel, carbon steel, copper, PVC, PVDF, polypropylene and HDPE. This combination of features make the ALSONIC-MINI an ideal choice for DI water, chemical injection, food & beverage and a variety of other applications where non-invasive low flow measurement is required.



SPECIFICATIONS

- | | | | |
|------------------------|--|-------------------------|---|
| • Measuring Principle: | Transit time ultrasonic | • Cable length: | 6' (1.8m) |
| • Flow range: | 0.3 ~ 16.5 ft (0.1 m/s~5.0 m/s) | • Keypad: | 4-key membrane type |
| • Accuracy: | ±2.0% reading | • Screen: | 128*64 OLED 64 display screen |
| • Repeatability: | 0.8% | • Units: | Metric and imperial units are available, Cubic Meters (m³), Liters (L), USA Gallons (GAL)/hour, /min; default unit setting: m³/hr |
| • Protection: | IP54 | • Totalizer: | Six bit digit |
| • Pipe size: | ¼-3" (8-80mm) | • Piper materials: | Stainless steel pipe, carbon steel pipe, copper pipe, plastic pipe |
| • Data storage: | Daily, monthly and annual | • Ambient temp: | (32°F~122°F) 0°C~50°C |
| • Analog output: | 4~20mA, Maximum load: 600Ω | • Media temp: | (32°F~122°F) 0°C~50°C |
| • Alarm output: | OCT, Upper and lower limit alarm function (optional) | • Environment humidity: | 0-95% relative humidity, non-condensing |
| • Communication: | RS485, Supports modbus communication protocol | | |
| • Power supply: | 12~26V _{DC} | | |
| • Case material: | Aluminum alloy | | |

ALSONIC COMPONENTS

MINI



Installed unit



Display module



Upper bracket



Base bracket



Cable assembly

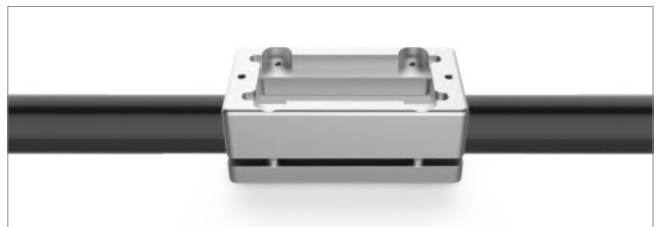
INSTALLATION STEPS

■ Clean the pipe surface



Make sure that the surface is free from paint, dirt, grease and other contaminants.

■ Install the bracket



Align the Base bracket and Upper bracket around the pipe outside diameter and then clamp the two pieces together. Secure the base and upper brackets to one another using the provided M4 screws.

■ Installation



Remove the cover from the display module and then secure the display onto Upper bracket, and tighten the two M4 screws.

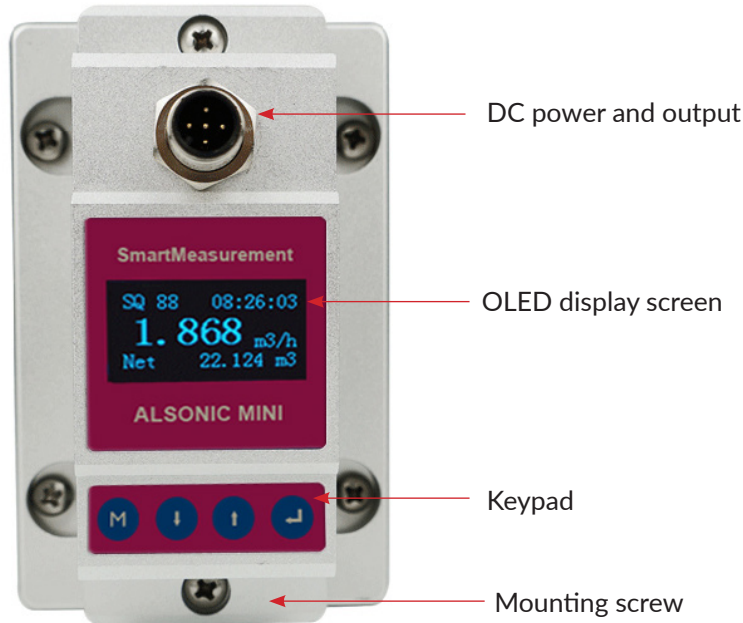
■ Connect the cable



Connect the provided cable assembly to the socket on the display module and secure by tightening the threaded collar onto the cable connector.

DISPLAY MODULE

■ DISPLAY



■ Dimensions:

Model	A Inch (mm)	B Inch (mm)	C Inch (mm)	D Inches (mm)	
				min	max
DN4	**Contact Factory**				
¼" (DN8)	1.0 (25)	0.4 (10)	2.3 (58)	0.06 w/ Φ0.3 pipe (1.5 w/ Φ9.53 pipe)	0.23 w/ Φ0.3 pipe (6 w/ Φ14.03 pipe)
⅜" (DN10)	1.0 (25)	0.4 (10)	2.3 (58)	0.04 w/ Φ0.5 pipe (1.0 w/ Φ12.7 pipe)	0.23 w/ Φ0.7 pipe (6 w/ Φ17.7 pipe)
½" (DN15)	1.0 (25)	0.4 (10)	2.3 (58)	0.04 w/ Φ0.5 pipe (1.0 w/ Φ12.7 pipe)	0.23 w/ Φ0.7 pipe (6w/ Φ17.7 pipe)
¾" (DN20)	1.0 (25)	0.4 (10)	2.3 (58)	0.04 w/ Φ0.6 pipe (1.0 w/ Φ16.5 pipe)	0.30 w/ Φ0.9 pipe (7.5 w/ Φ23 pipe)
1" (DN25)	1.0 (25)	0.4 (10)	2.3 (58)	0.04 w/ Φ1.0 pipe (1.0 w/ Φ25 pipe)	0.16 w/ Φ1.1 pipe (4 w/ Φ28 pipe)
1 ¼" (DN32)	1.1 (28.5)	0.7 (18.5)	2.3 (58)	0.04 w/ Φ1.3 pipe (1.0w/ Φ 32 pipe)	0.16 w/ Φ1.4 pipe (4 w/ Φ35 pipe)
1 ½" (DN40)	1.2 (29.5)	0.9 (24)	2.7 (68)	0.04 w/ Φ1.5 pipe (1.0w/ Φ38 pipe)	0.35 w/ Φ1.8 pipe (9 w/ Φ45 pipe)
2" (DN50)	1.4 (36)	1.1 (27)	3.1 (78)	0.04 w/ Φ1.9 pipe (1.0 w/ Φ48pipe)	0.28 w/ Φ2.1 pipe (7 w/ Φ54 pipe)
2 ½" (DN65)	1.6 (41)	1.3 (32)	3.6 (91)	0.06 w/ Φ2.3 pipe (1.5 w/ Φ58pipe)	0.35w/ Φ2.5 pipe (9 w/ Φ64 pipe)
3" (DN80)	**Contact Factory**				

The ALSONIC-MINI is designed to accommodate a variety of pipe sizes and materials with plug and play installation. The user's application details including pipe size & material, fluid media, and flow range are pre-programmed into the meter at the factory prior to shipment so that no programming or setup is required in the field.

Please contact your **SmartMeasurement** application engineer
 You also need to provide the following information:

TYPE OF FLUID	Please provide the name of your fluid, including operating density and viscosity
FULL-SCALE FLOW RATE	Please provide the max and min flow rate
LINE SIZE	Please provide the line size and pipe material
PRESSURE & TEMPERATURE	We will calibrate your flow meter as close to your operating conditions as possible

ALSONIC-MINI SERIES						
EXAMPLE: ALSONIC-MINI-EG-MINI						
ALSONIC-MINI	**	**	**	**		DESCRIPTION
Standard clamp on flow meter with display, DC power, IP54	Mini					Flowmeter type
Standard clamp on energy meter with display, DC power, IP54	EG-Mini					
Contact Factory		4				Transducers
For outer diameter Φ 0.3" ~ 0.55" (9.53~14.03)		8				
For outer diameter Φ 0.5" ~ 0.7" (12.7~17.7)		10				
For outer diameter Φ 0.6" ~ 0.9" (16.5~23.0)		15				
For outer diameter Φ 1.0" ~ 1.1" (25.0~28.0)		20				
For outer diameter Φ 1.3" ~ 1.4" (32.0~35.0)		25				
For outer diameter Φ 1.5" ~ 1.8" (38.0~45.0)		32				
For outer diameter Φ 1.9" ~ 2.1" (48.0~54.0)		40				
For outer diameter Φ 2.3" ~ 2.5" (58.0~64.0)		50				
For outer diameter Φ 2.8" ~ 3.0" (72.0~78.0)		65				
For outer diameter Φ 3.1" ~ 3.6" (80.0~92.0)		80				
Other pipe size		**				
No cable			NC			Signal Cable Length
70" (1.8m) Cables			C1			
m cables up to 122°F (+50°C)			C			
Standard 4~20mA and RS485				NN		Output
Standard 4~20mA and RS485 sp ,with OCT outputs				OT		
Other output				**		
Standard 2% RD meter for 32~122°F (0~50°C)					NN	Options
Remote style					RE	
Thickness gauge					TT	
Other options					**	

