



ALSONIC

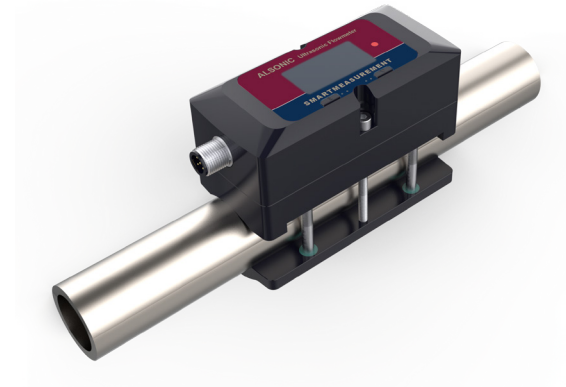
Ultrasonic Clamped-on Flowmeter

ALSONIC MN2

GENERAL

SMARTMEASUREMENT™'s ALSONIC MN2 is a special-purpose clamp-on ultrasonic meter designed for small line sizes and ultra-low flow rate applications where traditional clamp-on meters would not ordinarily be feasible. This device features a compact, easy-to-install design with transducers that are integrated with the display module. Installation may be performed without cutting the pipe or shutting down the process and there is no need to manually adjust the transducer spacing.

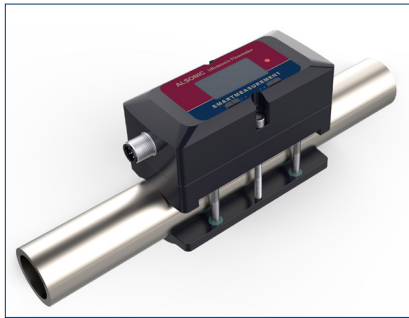
This meter can be used with virtually any clean liquid containing less than 2% total suspended solids and does not require the media to be electrically conductive. It can be used with both metallic and non-metallic pipes and tubes. Industries and applications where this device has been successfully deployed, include Food & Beverage, Automotive, Chemical processing, and dosing/mixing applications.



SPECIFICATIONS

- | | | | |
|-------------------------------|---|-----------------------------|--------------------------------|
| • Measuring Principle: | Transit time ultrasonic | • Accuracy: | Std: 3%FS Opt: 1.5%FS |
| • Pipe size: | Std: 3/8"~1 1/2" (DN10~DN40) Opt: 1/4" (DN8) | • Response time: | 0.5s~3s |
| • Enclosure material: | Polypropylene | • Velocity: | 0.08m/s~10m/s |
| • Enclosure protection class: | IP54 | • Power supply: | 20~28V _{DC} , 300mA |
| • Pipe material: | Metal, PVC, PP, PE or PVDF rigid plastic pipe
contact factory for others | • Power Consumption: | 1W |
| • Vibration resistance: | 10 to 55 Hz, double amplitude 1.5 mm,
2 hours in each XYZ axis | • Mounting screw: | SS# 304 |
| • Impact resistance: | 100 m/s ² 16 ms pulse, 1000 times each
for X, Y and Z axis | • Analog Output: | 4~20mA |
| • Ambient temperature: | -10°C~60°C | • Communication: | RS485 Modbus |
| • Media temperature: | Standard: -10°C~65°C (Non-frozen) Options: -10°C~105°C (Non-frozen) | • Display: | 1.5" OLED display |
| • Media: | Water, clean liquids w/<2% TSS. Contact Factory for unusual fluid media. | • Keyboard: | 2 button |
| | | • Power and I/O connection: | M12-A type plug,
(Five-pin) |

FLOW METER COMPOSITION



ALSONIC MN2



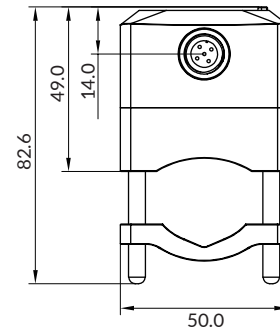
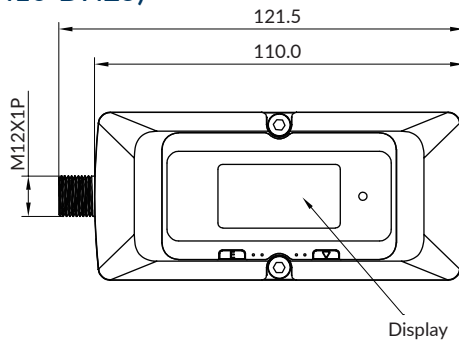
Clamp-on installation



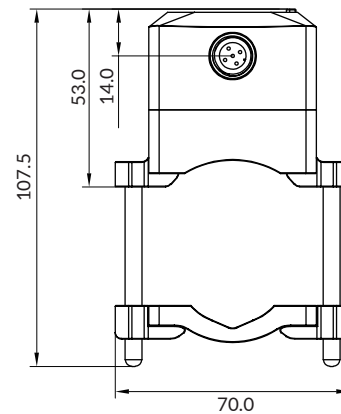
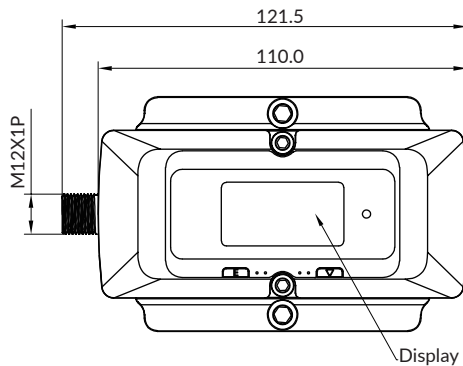
Interconnect Cables

▪ DIMENSIONS (mm)

3/8"~1" (DN10-DN25)



1 1/4"~1 1/2" (DN32-DN40)

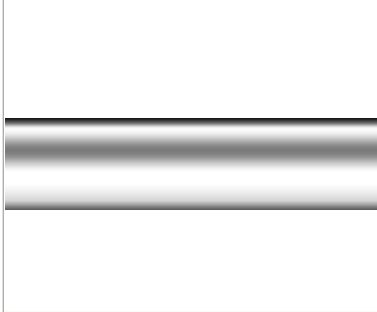


▪ FLOW RANGE

Pipe size	OD (mm)	Flow range
1/4" (DN8)	Please contact the factory for confirmation	
3/8" (DN10)	Ø12mm~Ø18mm	2~30 LPM
1/2" (DN15)	Ø18mm~Ø23mm	5~60 LPM
3/4" (DN20)	Ø23mm~Ø28mm	10~100 LPM
1" (DN25)	Ø28mm~Ø33mm	10~150 LPM
1 1/4" (DN32)	Ø33mm~Ø44mm	20~260 LPM
1 1/2" (DN40)	Ø44mm~Ø52mm	20~400 LPM

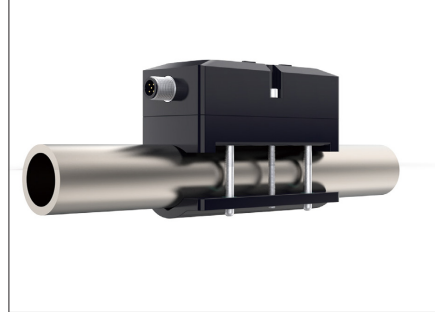
INSTALLATION/WIRING

- Clean the tube



Make sure there is no dirt, paint, or other contamination on the surface.

- Install the flow sensor



Install the bracket on clean tube, then secure the flow sensor to the bracket.

- Make electrical connections

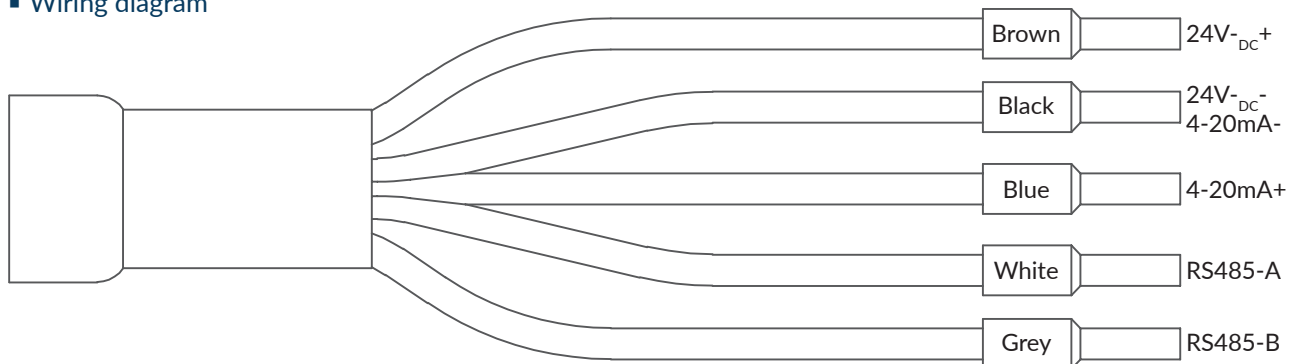


M12-A connector (Five-pin)

- Wiring color code/terminations

Color	Definition	Mark
Brown	24V _{DC} 300mA	Power in +
Black	Flow 4~20mA OUT	4~20mA OUT +
Blue	DC Common	Power in - / 4~20mA OUT -
White	A	RS485
Grey	B	

- Wiring diagram



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

TYPE OF FLUID
FULL-SCALE FLOW RATE
LINE SIZE

Please provide the name of your fluid, including operating temperature

Please provide the max and min flow rate, normal flow rate also

Please provide the pipe external diameter, pipe thickness and pipe material

ALSONIC-MN2 SERIES						
EXAMPLE: ALSONIC-MN2						
ALSONIC	**	**	**	**	DESCRIPTION	
Ultrasonic clamped-on mini type, display, DC power,4~20mA,RS485	MN2					Flowmeter type
3/8" (DN10) (Ø12mm~Ø18mm)	10					Pipe size
1/2" (DN15) (Ø18mm~Ø23mm)	15					
3/4" (DN20) (Ø23mm~Ø28mm)	20					
1" (DN25) (Ø28mm~Ø33mm)	25					
1 1/4" (DN32) (Ø33mm~Ø44mm)	32					
1 1/2" (DN40) (Ø44mm~Ø52mm)	40					
Contact factory to confirm application details	8					
Standard: 15 ~ 150°F (-10°C~+65°C)		NN				Process Temperature
High temperature fluid: 15 ~ 300°F (-10°C ~ +100°C)		C2U				
10~24V _{DC} /1A			DC			Power supply
None				NN		Output options
OCT (Frequency)				OT		
1 Relay				OR		
Standard ±3%FS accuracy flowmeter with 2m signal cable					NN	Options
±1.5%FS accuracy with multi-point calibrations					HA	
Vernier Caliper					VC	
Thickness gauge					TT	
Other options					**	

