

Multi-Path Ultrasonic Flowmeter A-D8



ABOUT A-D8

A-D8 is an ultrasonic flowmeter based on transit-time schematic design.

Designed using the digital technology and low-voltage integrated circuit, it have broadband pulse transmission.

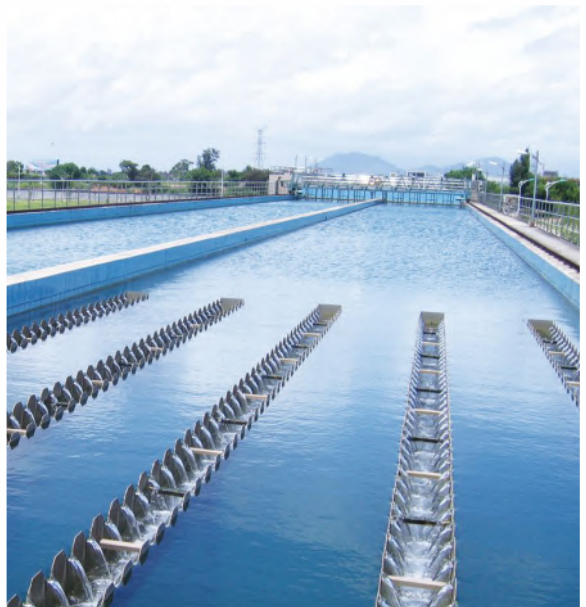
While principally designed for full-pipe and clean liquid applications. The instrument is tolerant of liquids with small amounts of air bubbles or suspended solids found in most industrial environments.

Integration design and high integration reduce the link between PCB boards, more reliable.

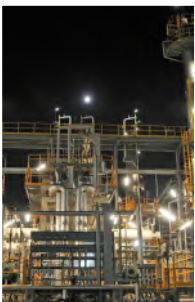
A-D8 have friendly menu selections make flow meter simple and convenient to use. It can easy to check Daily, monthly and yearly totalizer flow. Parallel operation of positive, negative and net flow totalizer.



APPLICATION



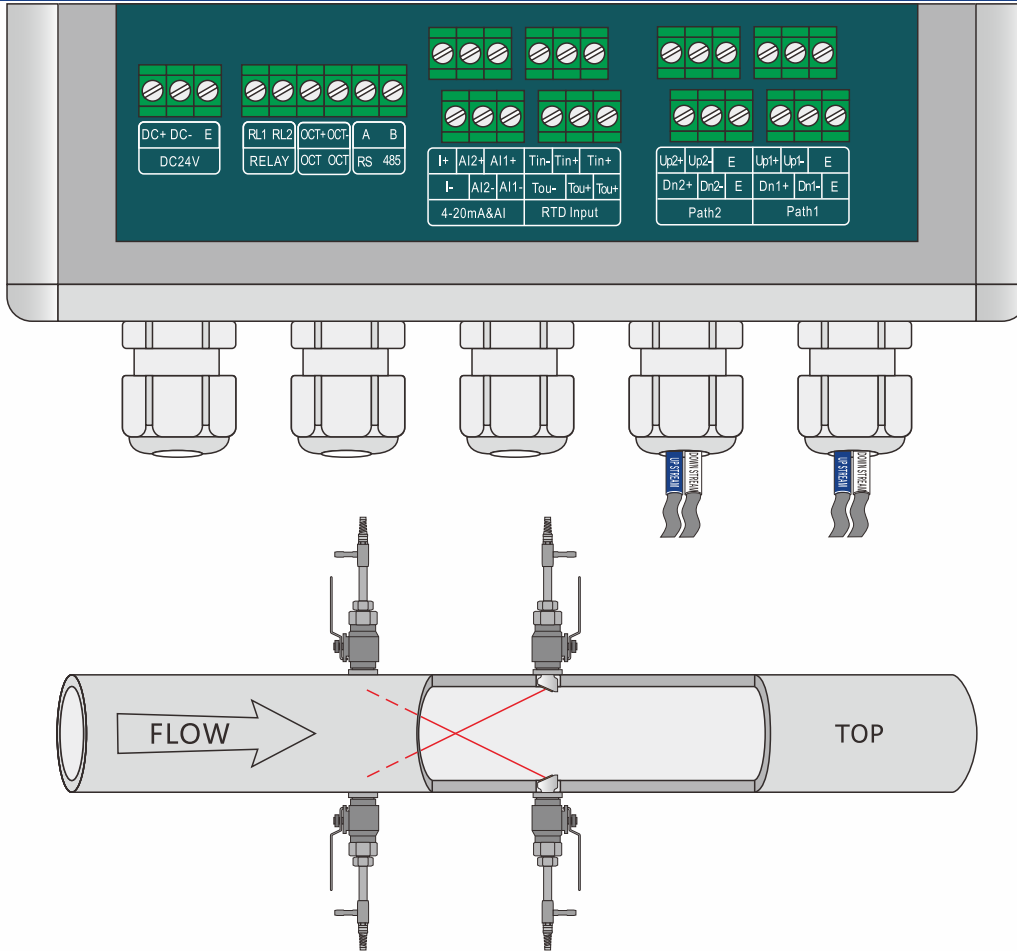
Widely used in chemicals, Irrigation, industrial process water, water supply, water treatment, boiler, etc.



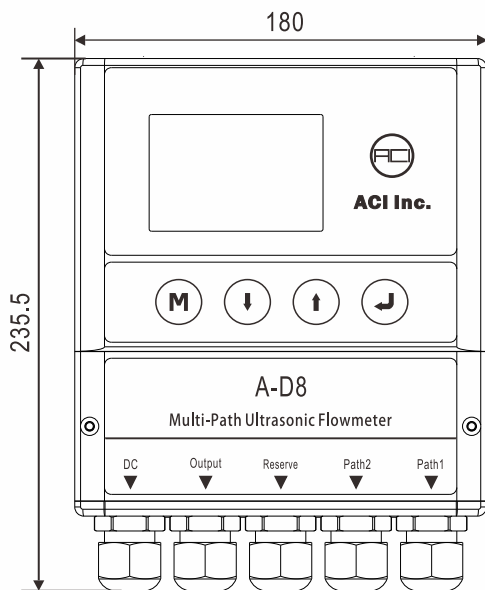
SPECIFICATION

Performance specifications	
Flow range	0~±40 ft/s (0~±12 m/s)
Accuracy	±2% of measured value (±0.01m/s ~12m/s);
Repeatability	0.4%
Linearity	2%
Pipe size	8" to 200" (200mm to 5000mm)
Function specifications	
Outputs	Analog output: 4~20mA (max load 750Ω) Pulse output: 0~9999Hz, OCT, (min. and max. frequency is adjustable) Relay output: SPST, max 1Hz, (1A@125VAC or 2A@30VDC)
Communication	RS485, support Modbus communication protocol
Power supply	24VDC, Option: 110/220 VAC Power
Keypad	Four Touch Key
Display	3.5" TFT LCD 480*320
Temperature	Transmitter: -40°C ~ 140°C(-40°C ~ 60°C) Transducer: -40°C ~ 176°C(-40°C ~ 80°C) (standard)
Humidity	UP to 95% RH, non-condensing
Language	English or Traditional Chinese for chosen
Apply to water quality	Turbidity range: 0~12000 NTU PH range: 6~9 Suitable for with bubbles and no bubbles
Self-diagnostic function and Error indications	Separately display: Flow Rate. Velocity. +/- Net Ttotalizer; Unit: m³/h. m³/d. etc; Number: 8digits, x1. x10. x100. etc.
Physical specifications	
Transmitter	Die-cast aluminum; Enclosure: IP67
Transducer	Encapsulated design, double-shielded transducer cable. Standard/maximum cable length: 33ft (10m);Enclosure: IP68; Pressure: 16Kgf/cm²
Weight	Transmitter: approximately 3.3 lb (1.5kg) Transducer: approximately 22 lb (10kg) (standard)

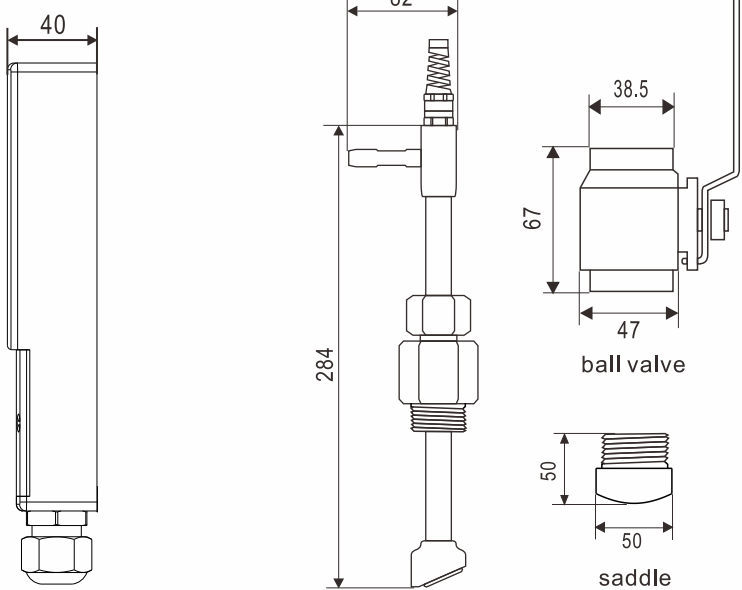
WIRING DIAGRAM



DIMENSIONS

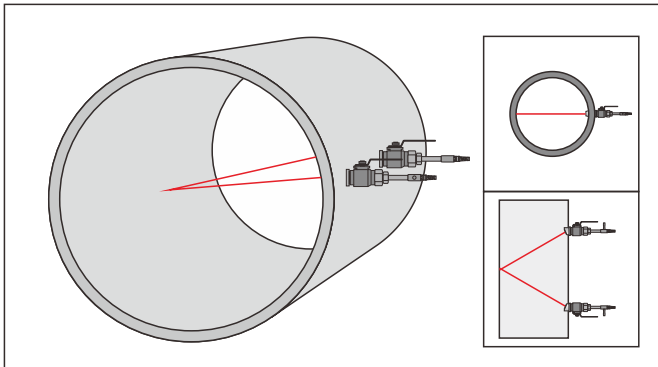


Transmitter dimensions(mm)



Transducer dimensions(mm)

INSTALLATION METHODS



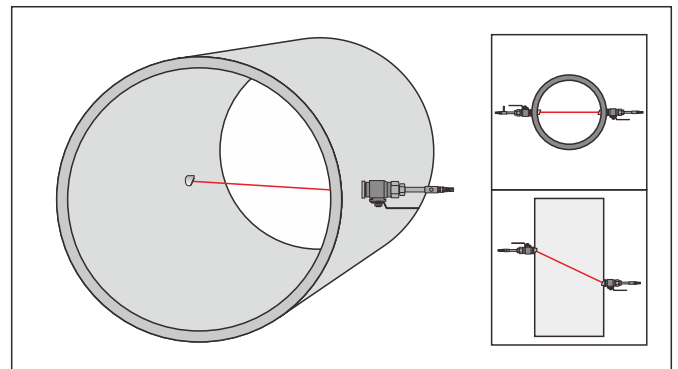
V Method

The V method is considered as the standard method. It usually gives a more accurate reading and is used on pipe diameters ranging from 200mm to 400mm (8"~16") approximately. Also, it is convenient to use, but still requires proper installation of the transducer, contact on the pipe at the pipe's centerline and equal spacing on either side of the centerline.

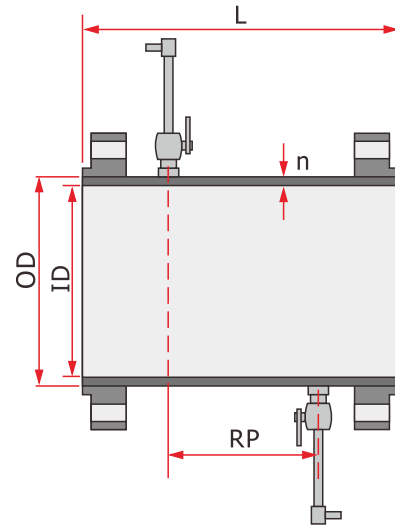
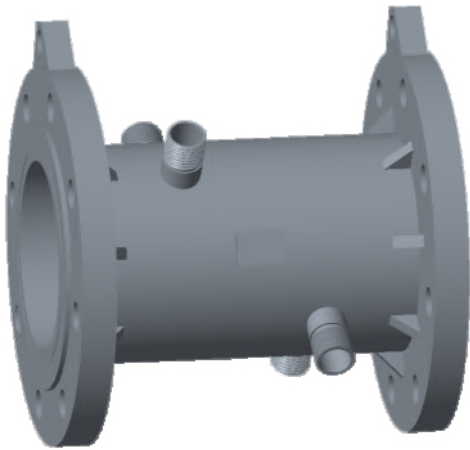
Z Method

The signal transmitted in a Z method installation has less attenuation than a signal transmitted with the V method. This is because the Z method utilizes a directly transmitted (rather than reflected) signal which transverses the liquid only once.

The Z method is able to measure on pipe diameters ranging from 400mm to 5000mm (16"~200").



FLANGED FITTING DIMENSIONS



(Unit:mm)

DN	Length (L)	OD	ID	Wall thickness(n)	Distance(RP)
DN500	600	524	504	10	220
DN600	600	609	589	10	265
DN700	700	708	688	10	308
DN800	700	817	797	10	353
DN900	800	908	888	10	397
DN1000	900	1021	1001	10	441
DN1100	1000	1122	1102	10	485
DN1200	1200	1222	1202	10	529
DN1350	1200	1375	1352	10	594
DN1500	1400	1522	1502	10	659
DN1600	1400	1610	1586	10	704
DN1800	1600	1810	1786	12	802
DN2000	1800	2030	2006	12	879
DN2200	1800	2241	2212	14.5	969
DN2400	2000	2418	2389	14.5	1057
DN2600	2200	2638	2609	14.5	1144
DN2800	2200	2824	2792	16	1232
DN3000	2400	3020	2988	16	1319

- Remark: 1. The tolerance value is 2mm for the above figures.
 2. Withstand hydrostatic pressure is 16kgf/m².
 3. If other standards are needed please contact us. Adjustment of the OD, ID and thickness can be made according to the site.

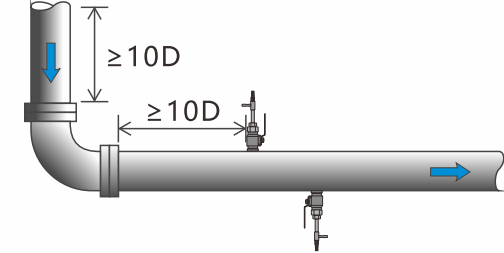
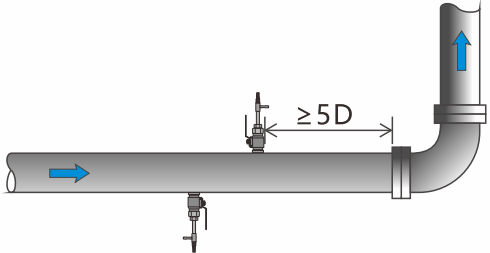
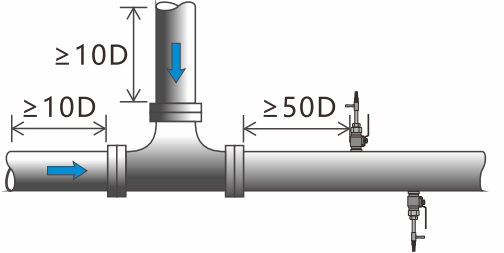
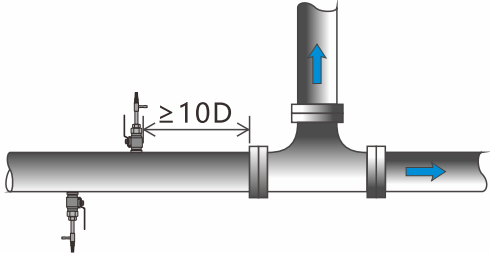
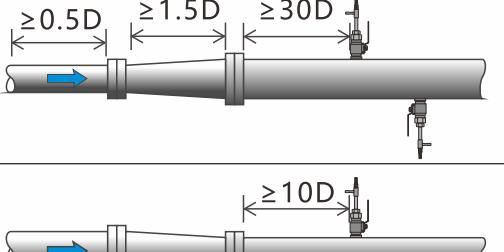
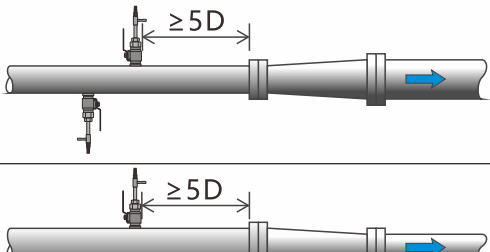
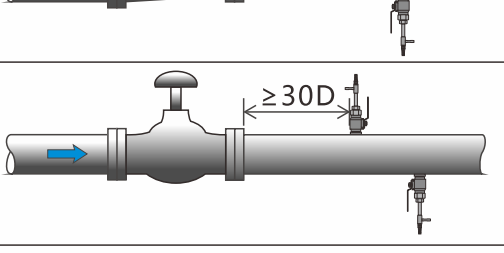
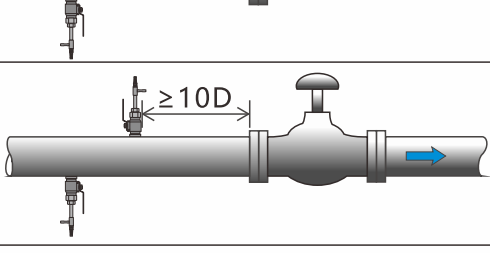
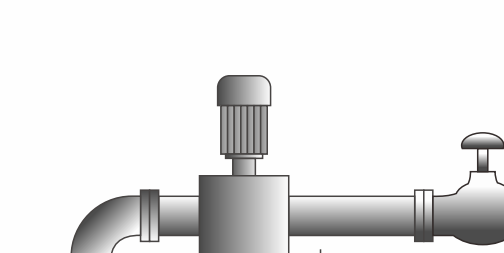
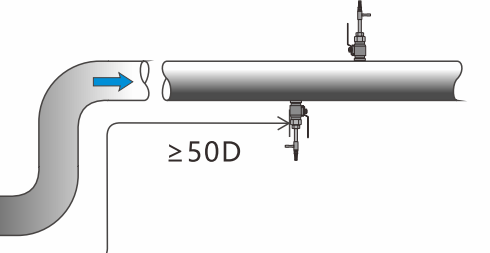

INSTALLATION SITE SELECTION

Choose a section of pipe, which is always full of liquid, such as a vertical pipe with flow in the upward direction or a full horizontal pipe.

Ensure that the pipe surface temperature at the measuring point is within the transducer temperature limits.

Consider the inside condition of the pipe carefully. If possible, select a section of pipe where the inside is free excessive corrosion or scaling. Choose a section of sound conducting pipe.

Examples acceptable measurement site selection is illustrated on the figure on the below.

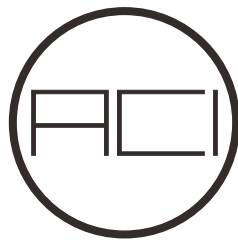
Site	Installation point front straight section	Straight pipe section after installation point
90° bend		
Tee		
Diffuser		
Reduce		
Valve		
Pump		

ORDERING INFORMATION

Code	Description
A-D8	<p>Multi-Path Ultrasonic Flowmeter A-D8 Installation method: Wall mount Flow range: 0~±40 ft/s (0~±12 m/s) Accuracy: ±2% of measured value (±0.01m/s~12m/s) Repeatability: 0.4% Linearity: 2% Pipe size: 8" to 200"(200mm to 5000mm) Keypad: Four Touch Key Display: 3.5" TFT LCD 480*320 Power supply: 24VDC, Option: 110/220 VAC Power Transmitter enclosure: IP67, die-cast aluminum machined enclosure Output: 4~20mA, OCT pulse output, relay output Communication: RS-485 terminal Modbus Protocol</p>
Code	Transmitter enclosure area classification
1	IP67, die-cast aluminum machined enclosure
2	Customer specific requirements
Code	Path Number
2	Dual Path
Code	Type of transducers
C8	Clamp on transducer. Operating temperature: -40°F~176°F (-40°C ~80°C);Enclosure:IP68
W8	Wetted transducer. Operating temperature: -40°F~176°F (-40°C ~80°C);Enclosure:IP68
Code	Transducer cable length
033	Cable length 33 feet (10m)
xxx	Extended length, up to 656 feet (200m), per 16 feet (5m) is a lengthen unit
Code	Flanged fitting material
1	<p>Carbon steel (S20C~S45C) With no dirt, water or other stains on the surface, and varnished with Epoxy on its surface. Inside thickness reaches more than 0.3mm, and outside thickness 0.5mm.</p>
2	Stainless steel (SUS304)
3	Customed

ORDERING INFORMATION

Code	Flange Standard
1	7.5K (JIS G5527)
2	10K (JIS G5527)
3	16K (JIS G5527)
4	Customed
Code	Spool Piece Length
DN500	length: 600mm
DN600	length: 600mm
DN700	length: 700mm
DN800	length: 700mm
DN900	length: 800mm
DN1000	length: 900mm
DN1100	length: 1000mm
DN1200	length: 1200mm
DN1350	length: 1200mm
DN1500	length: 1400mm
DN1600	length: 1400mm
DN1800	length: 1600mm
DN2000	length: 1800mm
DN2200	length: 1800mm
DN2400	length: 2000mm
DN2600	length: 2200mm
DN2800	length: 2200mm
DN3000	length: 2400mm



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