



FCCE

Product Features · Use

- Pipe installation - No downtime / No pipe cut / No water leakage / No blocking
Maintenance at any time, greatly reducing installation and maintenance costs. No damage, no blockage, no leakage or pressure problems.
- Universal power adapter attached to the device can be directly connected to the general power supply, plug and play.
- Easy to install. For bidirectional flow measurement, no need to consider liquid flow during installation. Patented trigger technology increases ability of anti-interference. Optional water-resistant probes.
- Patented guide rails for probes provide quick install, precise positioning and long-term stable measurement.

Conveniently Attach Probe To Pipe

**No downtime · Avoid cutting pipes
No leaks · No blockages**

Installing our Ultrasonic flowmeter means that maintenance can be done at any time. It dramatically reduces installation and maintenance costs as the pipe can remain as it is. This means no damage to the tube and saves you from causing leakage and pressure problems.



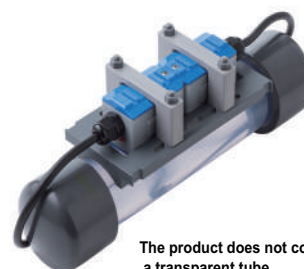
Patented Design Probe Buckle (Sell with FU-TX 310, do not sell separately.)

1. Plastic Guide Rails

- According to the size of probes, plastic buckle will be applicable for 2"~16" pipes.
- LORRIC plastic guide rails are designed to increase convenience and reliability of probes installation. It solves the problem of probe displacement caused by temperature and vibration, and prevents the probes from the impact of being installed inappropriately during maintenance.
- Patent guide rails help probes be perfectly installed onto pipes. As a result, the measurements are more stable and more accurate.
- The only all plastic guide rails in the market are suitable for measuring chemicals in electrics, chemical, semiconductor, and environmental industries.

2. Metal Guide Rails

- LORRIC redesigned the whole workflow of ultrasonic probe installation. The goal was to make it so easy, it can be installed even with only one worker. After countless effort and field test, LORRIC finally realized it with our patented guide rails. With it our users can easily install probes even in a confined space. In addition, users have more flexibility selecting an installation location.
- Patent metal guide rails are designed to work with our medium size probe TM1(2 to 8 inch pipe) and large size probe TL1(8 to 16 inch pipe). Just like our plastic guide rails, LORRIC's guide rails provide long-term stability, prevent long term wear and tear due to temperature and vibration.
- LORRIC guide rails are applicable for installing probes on the same or opposite sides.
- Please use 8mm wrench or hex socket nut driver to quickly tighten the hose clamp.



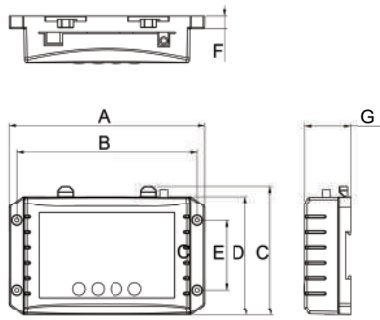
The product does not contain a transparent tube



Standard Specs

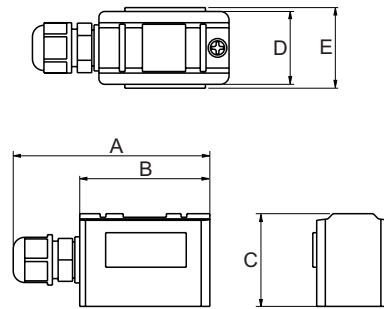
Installation method	Tube clamps	Power consumption	< 2W
Measurement principle	Time differential	Transient flow	Instantaneous flow, flow velocity, time differential display
Flow rate range	± 0.1 ~ 20 m / s	Cumulative flow	Positive and negative cumulative, net flow display
Measurement accuracy	<±2 %	Units	Metric or English units
Response time	<1 second	Display	128 x 64 LCD backlight display
Resolution	0.0001 m/s	Operation button	4 touch button
Wired communication	Analog output 4-20 mA Modbus RS485 Two-line NPN	Security	Keyboard lock, power-loss data protection
Probe-to-host distance	TM-1: 10 meters (Up to 20 meters) TS-2: 10 meters	Shell	ABS plastic, 145 x 90 x 45 mm
Temperature measurement	Two sets of external PT1000	Power	9~30VDC 100-240 50 / 60Hz AC transformer
Temperature range	-100 ~ 300 ° C with 0.1 ° C resolution	Applicable pipe material	Cast iron, carbon steel, stainless steel, PVC pipe and other
Device working temperature	-10~60°C	Applicable pipe diameter (mm)	TM-1 DN50-250 (2"-10") TS-2 DN20-50 (¾" to 2")
Applicable fluid	Clean water, oil or chemical with minor impurities	Probe waterproof rating	General probe IP61 Glue probe IP65 Waterproof resistance probe IP68
Wall temperature	Standard probe: 0~80°C High temperature probe: 0~150°C		

Size



A	B	C	D	E	F	G
149.5	137.8	98.3	90.5	52.4	9.5	34.9

Unit : mm



A	B	C	D	E
68.3	45.2	32.2	25.3	42.6

Unit : mm

Compare with other measurement principles on the market

	Variable area flowmeter	Paddle wheel flowmeters	LORRIC's Paddle wheel flowmeter	Electromagnetic flowmeter	Ultrasonic flowmeters
Pipeline loss	Low	Low	Low	No	No
Non-invasive install	No	No	No	No	Yes
Precision	Middle	Middle	Middle	High	High
Bidirectional flow detectable	No	No	Yes	Yes	Yes
Blockages	Possible	Possible	Possible	Not possible	Not possible
Applicable fluid	Air / Liquid	Liquid	Liquid	Conductive liquid	Liquid
Cost	Lowest-costs in small diameter pipe, cost increases with pipe diameter	Low-costs, cost increases with pipe diameter	Low-costs, cost increases with pipe diameter	High-costs, cost increases with pipe diameter	Middle-costs Cost does not increase with pipe diameter