pFlow

F8 Ultrasonic Flow Meter



Gentos Measurement & Control Co., Ltd.
12/F, Block A5. Nanshan Ipark, No.1001 College Rd.
Nanshan District. Shenzhen CHINA
Tel: 86-755-26745561
Fax: 86-755-26745333
E-mail: business@gentos.com.cn

F8 series ultrasonic flowmeter is a state-of-the-art transit time ultrasonic flowmeter. Designed using the latest digital technology and low-voltage broadband pulse transmission. While principally designed for full-pipe clean liquid applications.The instrument is tolerant of liquids with small amounts of air bubbles or suspended solids found in most building automation system.
Comparing with other traditional flowmeter or ultrasonic flowmeter, it has distinctive features such as WIFI communication,high precision,high reliability, high capability and low cost. Other features :TVT technology designed.
Less hardware components, low voltage broadband pulse transmission, low consumption power.
Clear, user-friendly menu selections make flowmeter simple and convenient to use. Daily, monthly and yearly totalized flow.
Parallel operation of positive, negative and net flow totalizes with scale factor (span) and 7 digit display, while the output of totalize pulse and frequency output are transmitted via relay and open collector.



F8 series ultrasonic flowmete adopts advanced modular all-in-one design, independent menu operation, LCD backlight display, WIFI communication,it is suitable for the continuous measurement of building automation system, meeting different measurement requirements.
The unique digital signal processing technology enhances the anti-interference ability. Combined with the precision clamp on/insertion flow sensor F8 features more stable measurement signal, more accurate measurement, simpler installation way, easier maintenance mode.





1. Product Characteristics
The application range of the meter is very wide. The meter don't need to be set. After being installed, the meter can directly and singly meter cooling energy or heating energy(Heating and air-conditioning cooling can be measured).

2.Gentos icloud system service
WiFi connected icloud service. Users can inquire data on mobile terminal in real time and know each information at any time. Users can upgrade application by remote control(consult manufactures for details).

3.Energy efficiency monitoring
The meter has energy efficiency monitoring system. The measured data information can be monitored in real time and data curve can be observed in real time, generating data report.

4.Built in SD card data storage function
The meter has a built-in 8G big capacity SD card, with strong data acquisition and storage function. It collects the flow, flow rate, net accumulation, positive accumulation and negative accumulation corresponding to each time to ensure no data loss.

5.Easy installation
The meter supports wall mount installation and clamp on pipe installation. The clamp on pipe installation installs meter transmitter on measured pipe line, thus reducing the trouble of cable routing, which will save so much time and energy. And then the meter coordinates icloud service, every data will be great clear.

Applications

It can be widely used in saving-energy, air-conditioning, building automation system, data central, energy audit, HVAC, etc







The meter has Gentos icloud energy efficiency monitoring function. Users can log in the account and password that we offer to scan all data on WeChat public number------SMART METERS and website.
Users can inquire directly and clearly all data of each meter, and can observe its corresponding data curve and data report according to related data.
Also, F8 can add meter billing system, has independent background management page. It is easy to set cost unit price, cost data and consumption. It can generate monthly cost bill and cost report.

Central air-conditioning is widely applied in business comprehensive complex, whose energy consumption covers more than 50% of energy consumption of the whole building complex. Thus, China proposes to create green saving-energy building environment.
The actual energy consumption of air-conditioning is closely related to the interests and benefits of all users. According to the survey and statistics, because the air-conditioning fee is charged on the basis of accumulation, this phenomenon leads to a great waste of energy.
The difficult problem of central air-conditioning billing perplexes property companies all the time. They want to achieve accurate metering and reasonable billing like water meters, electricity meters and gas meters. We follow the law of market economy, and pay as much as you use, which makes all users satisfied, build saving-energy awareness, promoting building saving-energy.



Air_Conditioning_Expense_Report

House number	Device name	Last reading date	Last reading (kwh)	Now reading date	Now reading (kwh)	Usage amount (kwh)	unit price	cost £ ¨£ ©	Billing mode
1	A	Year-Month-Day	520118	Year-Month-Day	551992	31874	0.8	25499.2	Totalizer Cool
2	B	Year-Month-Day	1634	Year-Month-Day	1782	148	0.8	118.4	Totalizer Cool
3	C	Year-Month-Day	1867	Year-Month-Day	2128	261	0.8	208.8	Totalizer Cool
4	D	Year-Month-Day	3694	Year-Month-Day	4239	545	0.8	436	Totalizer Cool
5	E	Year-Month-Day	33978	Year-Month-Day	38788	4810	0.8	3848	Totalizer Cool
Total			30110.4						

Specification

Flow range	±0.03ft/s ~ ±40ft/s (±0.01m/s ~ ±12m/s)
Accuracy	±0.5% of measured value (for ±1.5ft/s~±40ft/s)
Fluid	Water, Sea Water, Diesel Oil, Kerosene, Gasoline , Fuel Oil, Gasoline, Propane (-45℃), Alcohol, Butane (0℃) ℃Water (125℃), Other
Pipe material	Carbon Steel, PVC, Stainless Steel, Asbestos, Cast Iron, Aluminum, Ductile Iron, Fiber Glass-Epoxy, Copper, Other
Pipe size	1 in to 200 in (25mm to 5000mm)

Function specifications

Outputs	Analog output: 4~20mA, max load 750Ω. Pulse output: 0~9999Hz, OCT, (min. and max. frequency is adjustable) Realy output: SPST, max 1Hz,(1A@125VAC or 2A@30VDC)
Communication	WIFI, RS232&RS485 terminal Modbus Protocol
SD Card	Standard SD card Max record:512days Record time interval
Power supply	90 to 245 VAC, 48 to 63 Hz. Or 10 to 36VDC
Keypad	22 keys with tactile action
Display	40 character, 2 line (20X2) lattice alphanumeric, back lit LCD.
Temperature	Transmitter:14℉~122℉(-40℃~60℃) Transducer:32℉~176℉(-40℃~80℃)
Humidity	Up to 99% RH,non-condensing

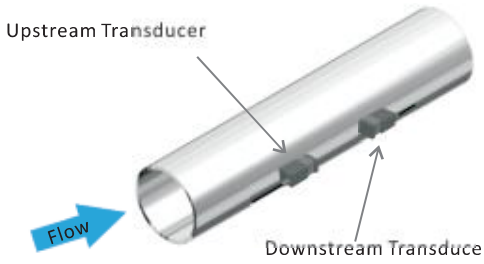
Physical specifications

Transmitter	NEMA 4X (IP65), Die-cast aluminum
Transducer	Encapsulated design double-shielded transducer cable Standard/maximum cable length:30ft/1000ft(9m/305m)
Weight	Transmitter:approximately 2.15kg; Transmitter:approximately 0.9kg.

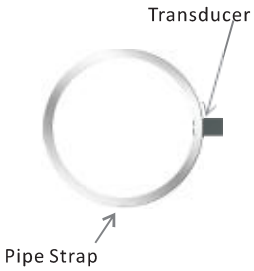
Transducer Installation Methods

V method measuring pipe size : 25mm-400mm

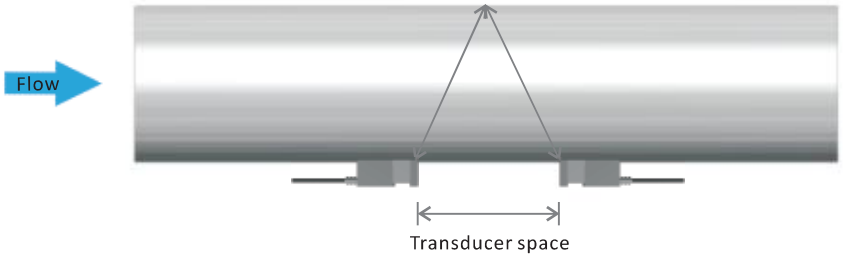
Side View



Section



Top View

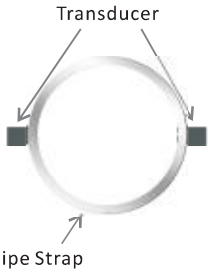


Z method measuring pipe size: 100mm-800mm

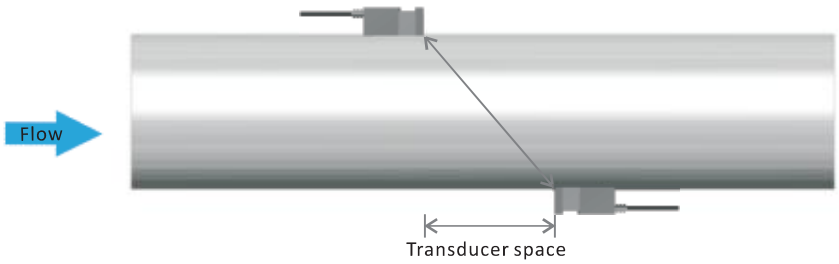
Side View



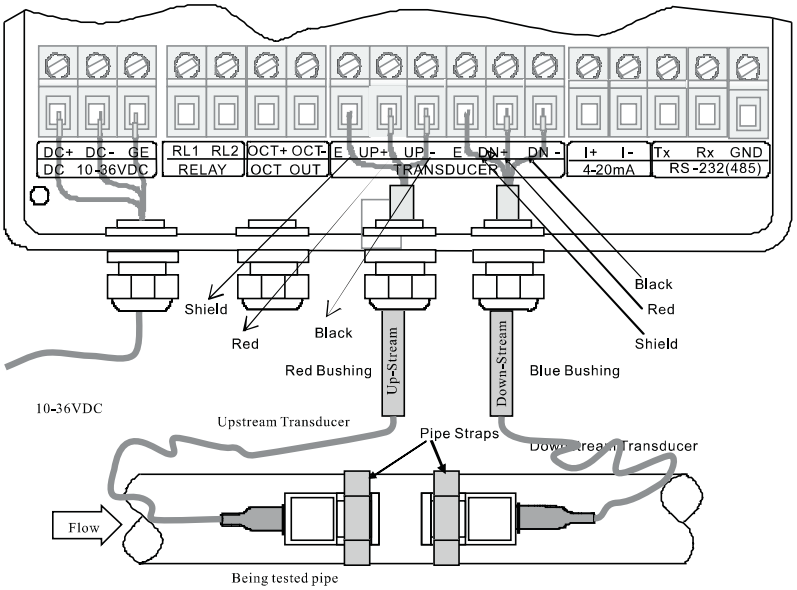
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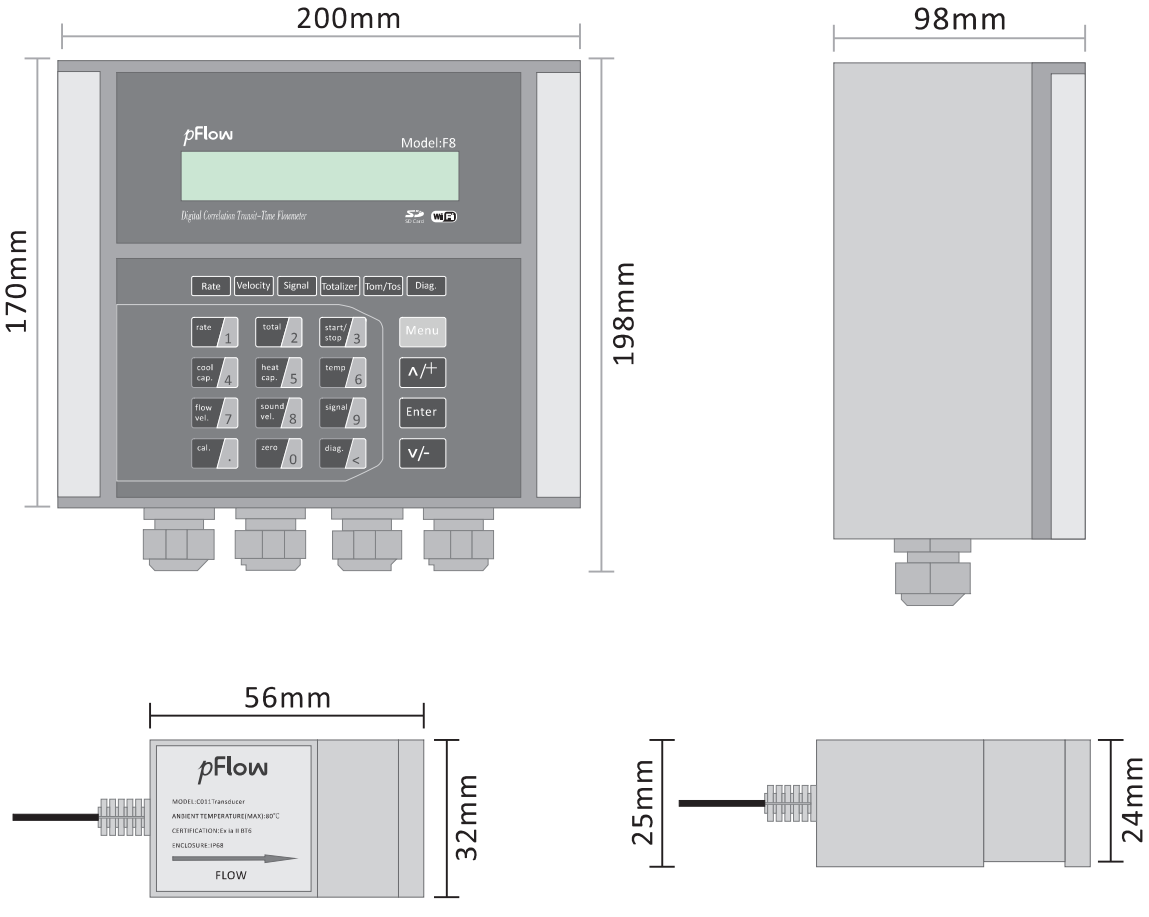
Top View



Wiring Diagram



Transmitter Dimensions



Description	
F8	Digital Correlation Transit Time Flowmeter Installation method: Wall mount 8G SD card high memory data logging, maximum memorize 512 days data. Flow Range: 0.03 ~ ±40ft/s (0.01~ ±12 m/s) Accuracy: ±0.5% (±1.6ft/s~±16ft/s) (±0.5m/s~±5m/s) Pipe Size Range: 1"~200"(25mm ~ 5000mm) Keyboard:16 (4×4) touch keys Display: 20*2, alphanumeric, backlit LCD Power supply: 90-250VAC, 48-63 Hz or 10-36V DC Transmitter enclosure: IP65, die-cast aluminum machined enclosure Output: 4~20mADC, OCT pulse output, relay output Communication: WIFI, RS-232 / RS-485 terminal Modbus Protocol
Output/Communication	
1	WIFI,4-20mA, OCT pulse output, relay output, RS-232 / RS-485
Transmitter enclosure area classification	
1	IP65, die-cast aluminum machined enclosure
2	Explosion-proof enclosure , Ex dia II BT4
Type of transducers	
C	Clamp on transducer, Operating temperature:-40℉ ~ +176℉(-40℃ ~ +80℃)
CH	High temperature Clamp on transducer:32℉ ~ +302℉(0℃ ~ +150℃)
W	Insertion transducer, Operating temperature:-40℉ ~ +176℉(-40℃ ~ +80℃)
WH	High temperature Insertion transducer:32℉ ~ +302℉(0℃ ~ +150℃)
Transducer Cable Length	
030	Standard 30ft (9m)
xxx	Maximum lengthen to 305m(1000ft), per 5m is a lengthen unit.
Type of Temperature sensor	
Standard Model: F8-1-1-C-030 Description: Standard enclosure with Clamp-on transducers, OCT output,Relay output, WIFI, RS232/RS485, 4-20mA output, 9m cable.	

Packaging

				
Transmitter	Transducer	Pipe strips	Coupling compound	SD card

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GT-SC057-A10530

The information provided is for reference only. Specific parameters are subject to the instruction manual.
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