pFlow

ES Ultrasonic Energy Meter



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About E5

E5 series ultrasonic energy meter is a state-of-the-art iniversal transit-time flowmeter designed using FPGA chip and low-voltage broadband pulse transmission. Comparing with other traditional flowmeter or ultrasonic flowmeter, it has distinctive features such as high precision, high reliability, high capability and low cost, the flowmeter features other advantages: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.

E5 series ultrasonic energy meter that can realize the bidirectional independent measurement function of "cold" and "heat". It adopts advanced modular all-in-one design, independent menu operation, LCD backlight display, and it is suitable for the continuous measurement of cooling and heating energy of central air-conditioning's chilled water and cooling water, meeting different measurement requirements.

The unique digital signal processing technology enhances the anti-interference ability. Combined with the precision clamp on/insertion flow sensor and clamp on PT1000 temperature sensor, E5 features more stable measurement signal, more accurate measurement, simpler installation way, easier maintenance mode.

E5 supports WiFi connected function of Gentos icloud service, we can check the measurement data on mobile phone and PC in real time by following WeChat public number---SMART METERS, making data reading and field maintenance more convenient.





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, E5 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.

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						

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.

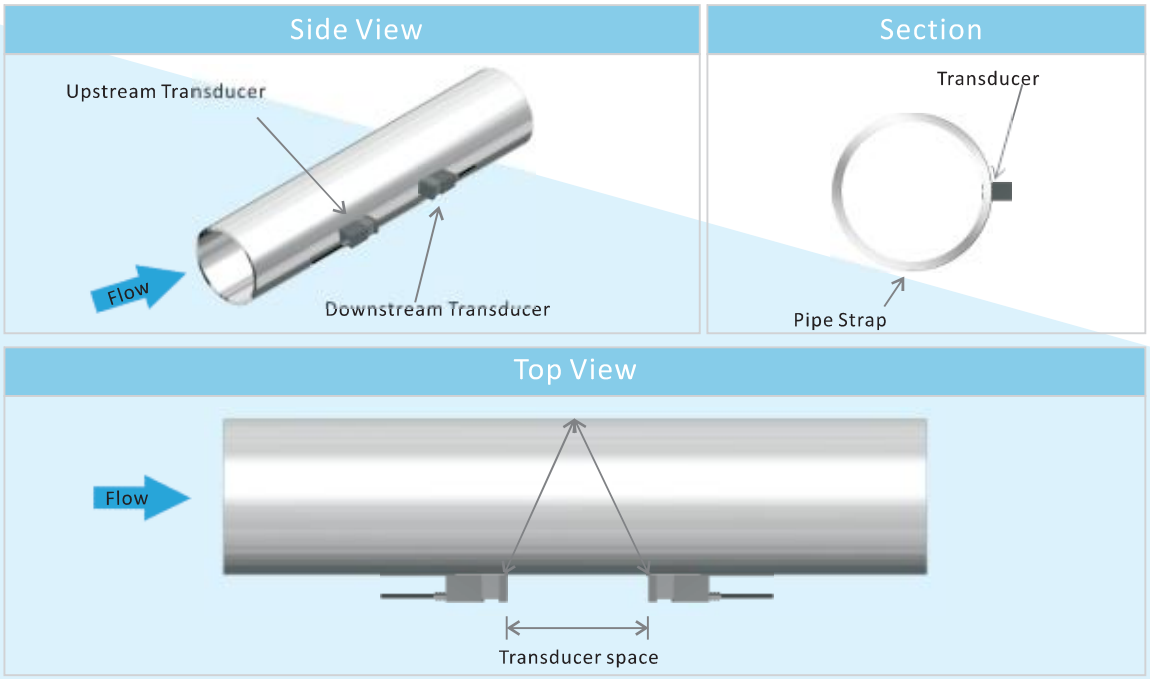


Specification

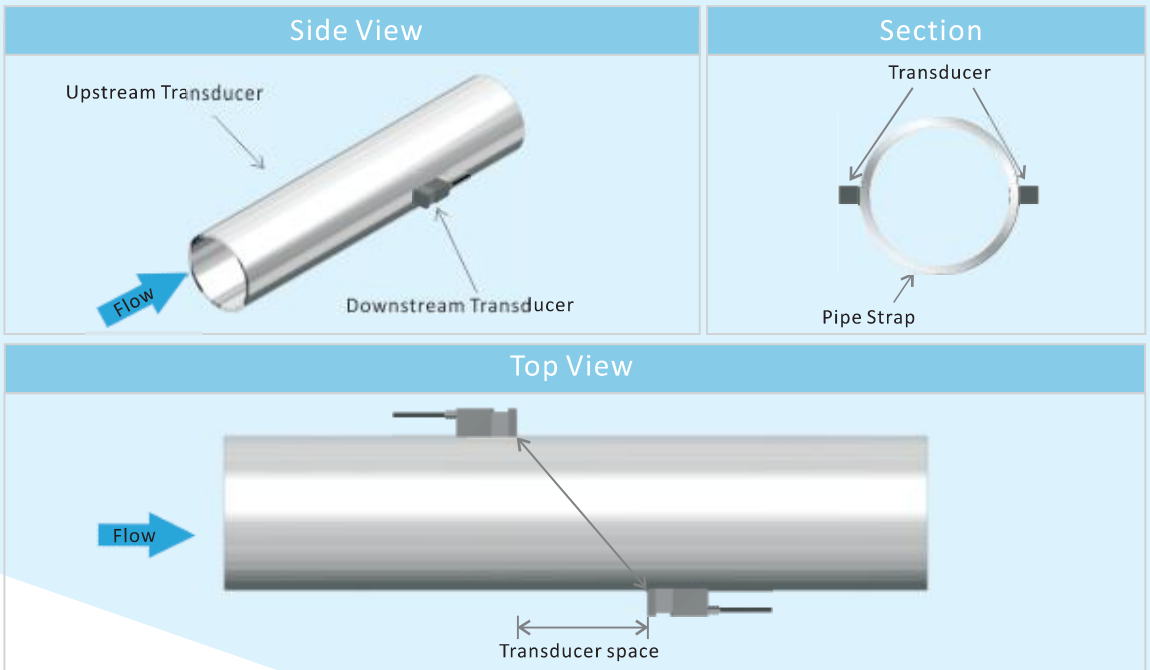
Performance specifications	
Flow range	±0.03ft/s ~ ±16ft/s (±0.01m/s ~ ±5m/s)
Accuracy	±1.0%(±1.6ft/s~±16ft/s) (±0.5m/s~±5m/s)
Pipe size	Clamp-on:1''~48''(25mm~1200mm)
Fluid	Water.
Pipe material	Carbon steel,stainless steel,PVC.
Function specifications	
Output	OCT Pulse output:0~5000Hz. Analog output:4~20mA, max load 750Ω.
Communication	WIFI, RS485 MODBUS
Power supply	10~36VDC/1A
Keypad	16(4×4)key with tactile action
Display	20×2 lattice alphanumeric, back lit LCD.
Temperature	Transmitter:14℉~122℉(-10℃~50℃) Transducer:32℉~176℉(0℃~80℃)
Humidity	Up to 99% RH,non-condensing
Physical specifications	
Transmitter	PC/ABS,IP65.
Transducer	Encapsulated design,IP68.
Transducer cable	Standard cable length:30ft(9m).
Weight	Transmitter:approximately 0.7kg; Transmitter:approximately 0.4kg
Type of Temperature sensor	
PT1000	PT1000 Temperature sensor

Transducer Installation Methods

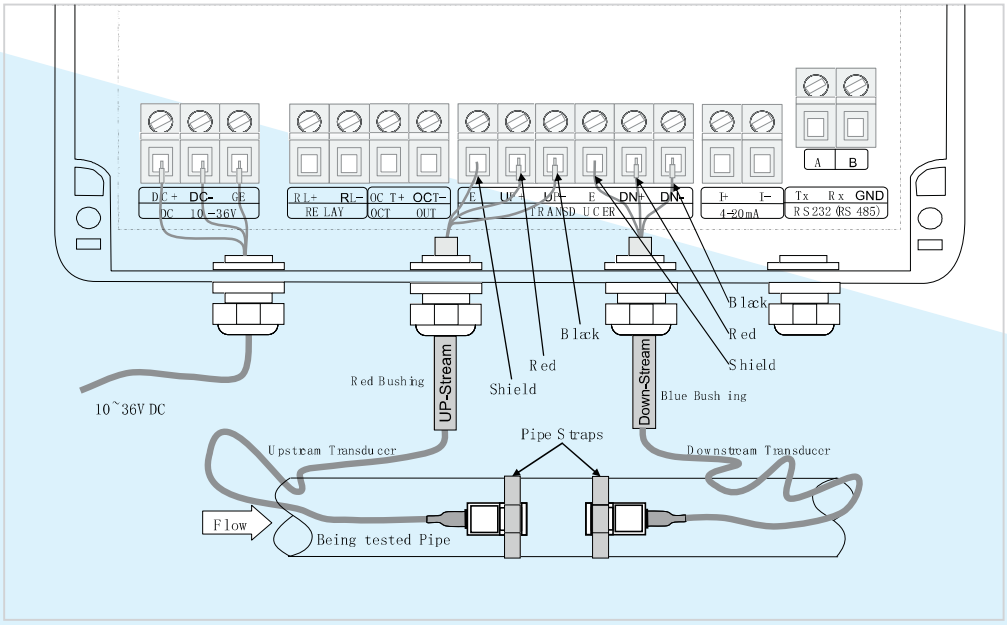
V method measuring pipe size : 25mm-400mm

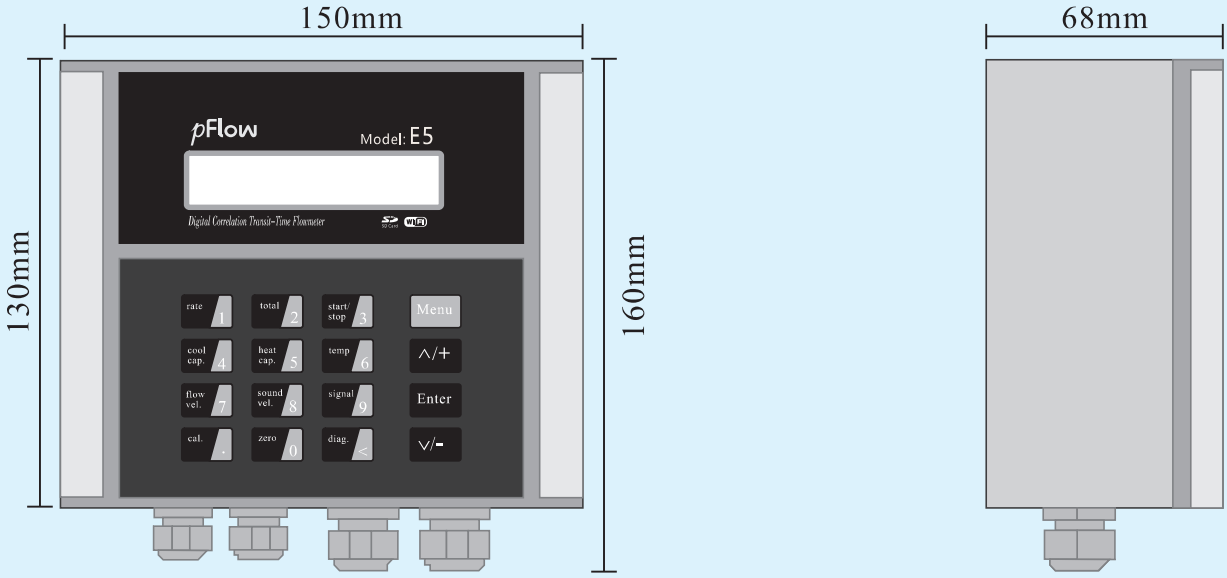


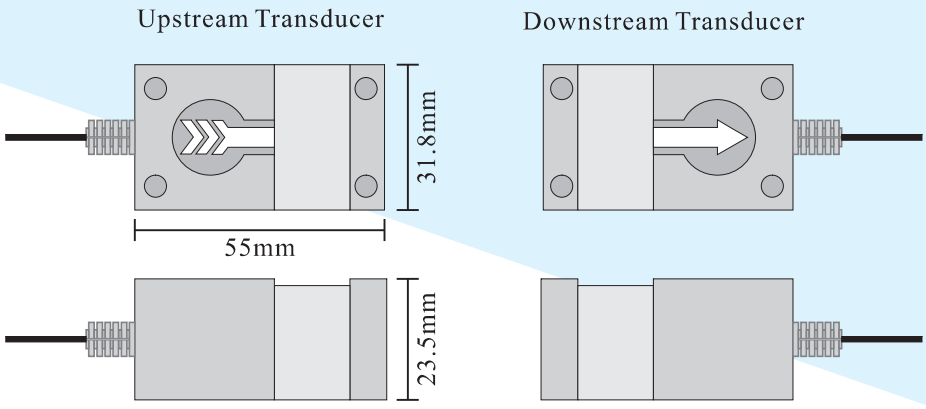
Z method measuring pipe size: 100mm-800mm



Wiring Diagram&Transmitter Dimensions







Ordering Information

Description	
E5	Digital Correlation Transit Time Flowmeter Installation method:wall mount Transmitter: Flow Range:±0.03ft/s ~ ±16ft/s (±0.01m/s ~ ±5m/s) Accuracy: ±1.0% (±1.6ft/s~±16ft/s) (±0.5m/s~±5m/s) Repeatability: 0.3% Pipe Size Range:1"~30" (25mm ~ 1200mm) Keyboard:16 (4×4) touch keys Display:20×2,alphanumeric,backlit LCD Power supply:10-36V DC@1Amax Transmitter enclosure:IP65,ABS/PC enclosure Ambient temperature:-20℃~50℃ Output: OCT pulse output 0-10KHz, Relay output, 4-20mA optional Communication: WIFI, RS485, Modbus Protocol Temperature: -40℉~+140℉ (-40℃~60℃)
Output mode	
1	OCT output, Relay output, WIFI, RS232, 4-20mA output, RTD input
2	OCT output, Relay output, WIFI, RS485, 4-20mA output, RTD input
Type of transducers	
CP	Clamp on transducer, Operating temperature:32℉~ +140℉(0℃~+60℃)
W	Insertion transducer, Operating temperature:-40℉~+176℉(-40℃~+80℃)
Transducer Cable Length	
030	Standard 30ft (9m)
xxx	Maximum lengthen to 305m(1000ft), per 5m is a lengthen unit.
Type of Temperature sensor	
PT1000	PT1000 Temperature sensor

Standard Model: E5-2-CP-030-PT1000
Description: Standard enclosure with Clamp-on transducers, OCT output,
Relay output, WIFI, RS485, 4-20mA output, RTD input, 9m cable.

Packaging


Transmitter


Transducer


Temp. sensor and Pipe strips


Coupling compound



SD card

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