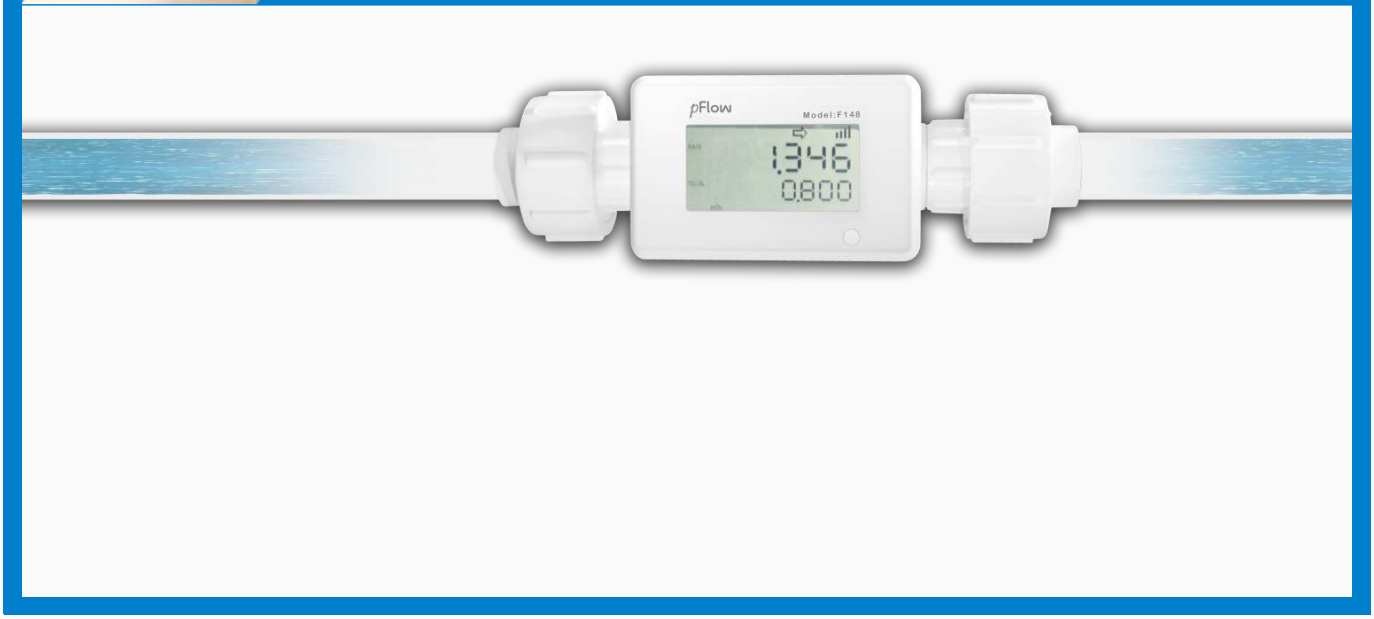
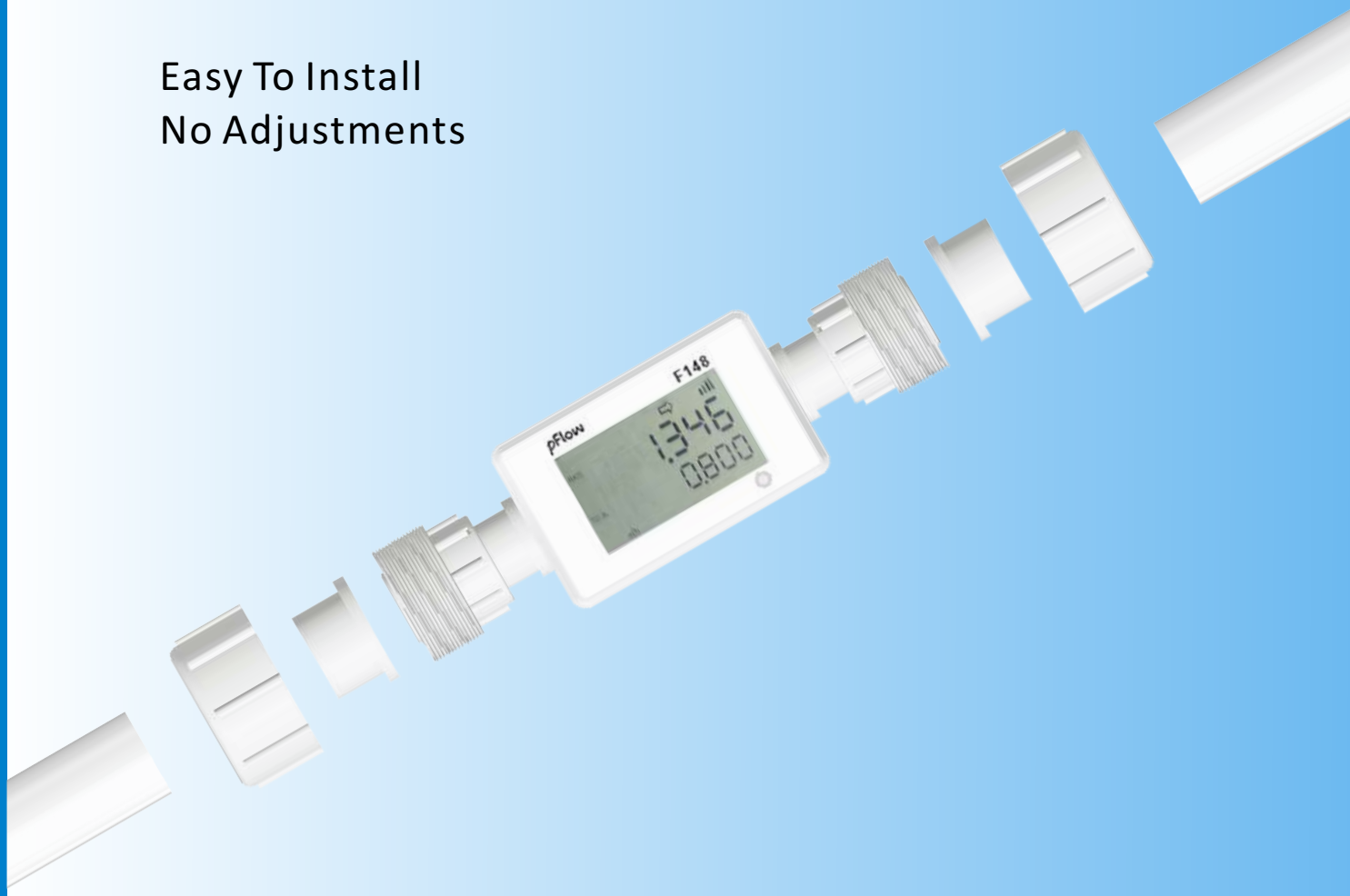
pFlow

Loss Free Meter F148

Straight-through structure

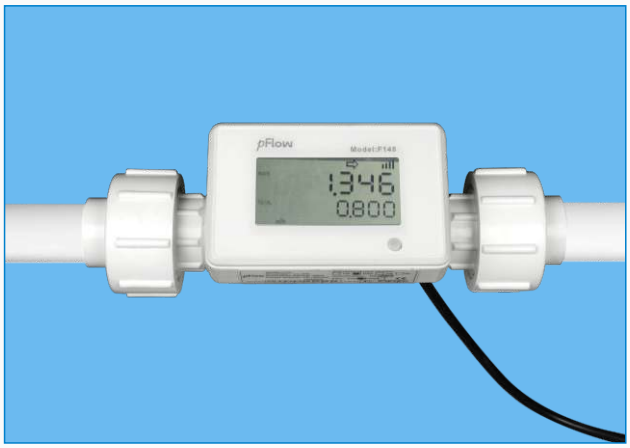


Easy To Install
No Adjustments



About F148

F148 is an industry-leading transit time Ultrasonic Flow Meter, which is the significant breakthrough for Flow Meter industry.

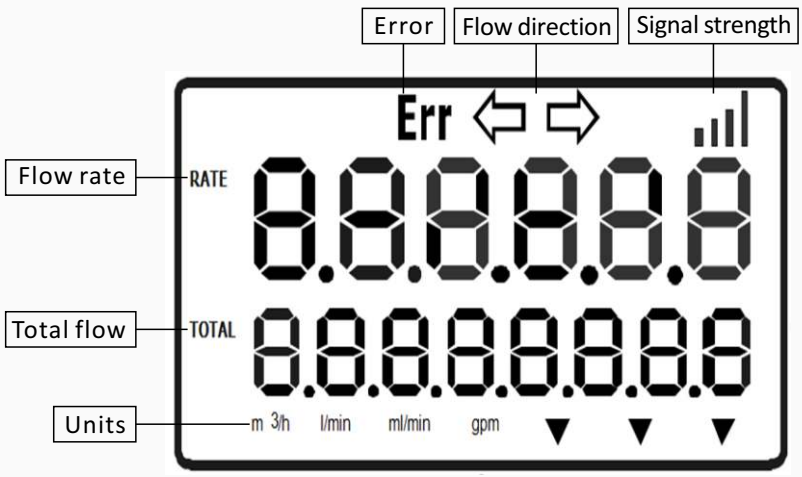


It has adopted the Gentos' self-innovation technology—"Picofly" to largely improve the accuracy of transit time measurement and obtain the high-response, high-dynamic and high- antijamming measurement, which far beyond the traditional technology. ("PicoFly" is the successful application of quantum theory in the time measurement.)

Main characters:
Straight-through structure and corrosion-resistant material fit for chemical environment and manufacturing process control.
Fast and cost-effective installation method.
Transducer does not contact the internal liquid. No moving parts to wear down –no repair kits or replacement parts.
With 4-20mA output current loop cable and RS485 cable (by the MODBUS/FUJI Communication Protocol) to retrieve and process the measured data.

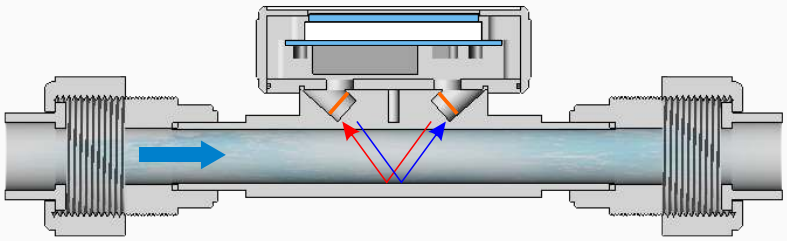
Menu Display

Every meter is being strictly tested before delivery. The meter can normally operate without setting.



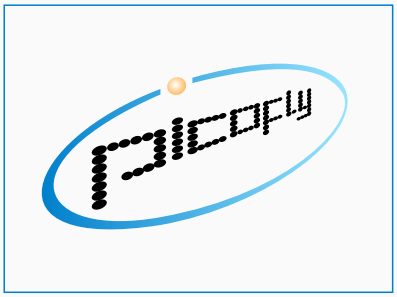
Working Principle

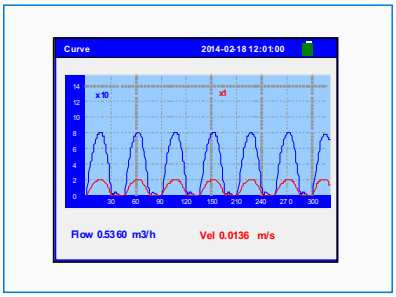
When the ultrasonic signal is transmitted and received through the moving liquid, there will be a difference between the upstream and downstream transit time, which can be used to calculate flow and velocity.

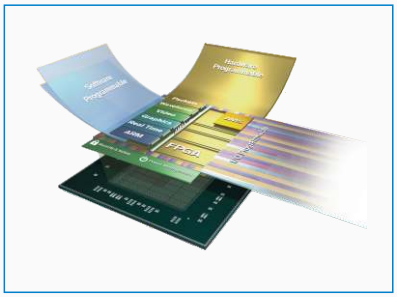


Picofly Technology

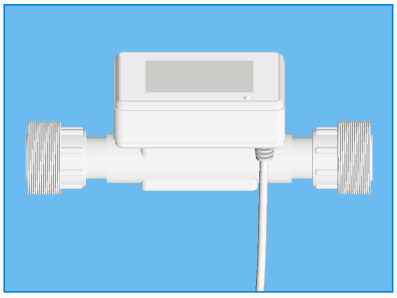
Unique technology for dynamic flow, innovated specially for China Aerospace Industry.
Picofly used in ultrasonic flowmeters can reach an ultra fine time resolution in picosecond grade.
Picofly Circuit uses 1.4 million gate array to construct a holographic signal process.
Picosecond time resolution greatly enhances the flow velocity sensitivity and tracts the real fluid dynamics.
Flowmeters with Picofly perform significantly in very fast response and very accurate flow measurement.



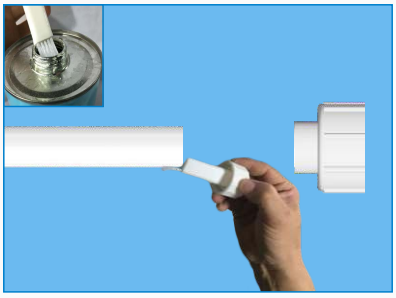




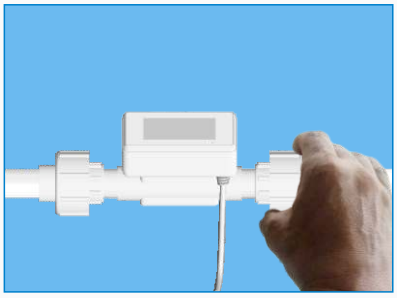
Installation Steps



A:
Selecting a stable and suitable site



B:
Gluing the pipe,and inserting the glued pipe to the joint

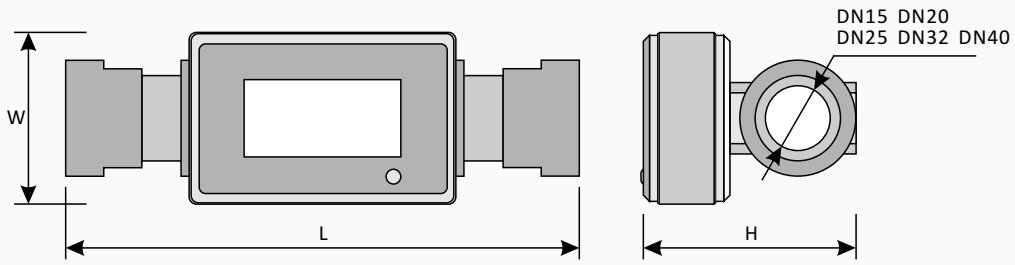


C:
Tightening the nuts, and linking the power

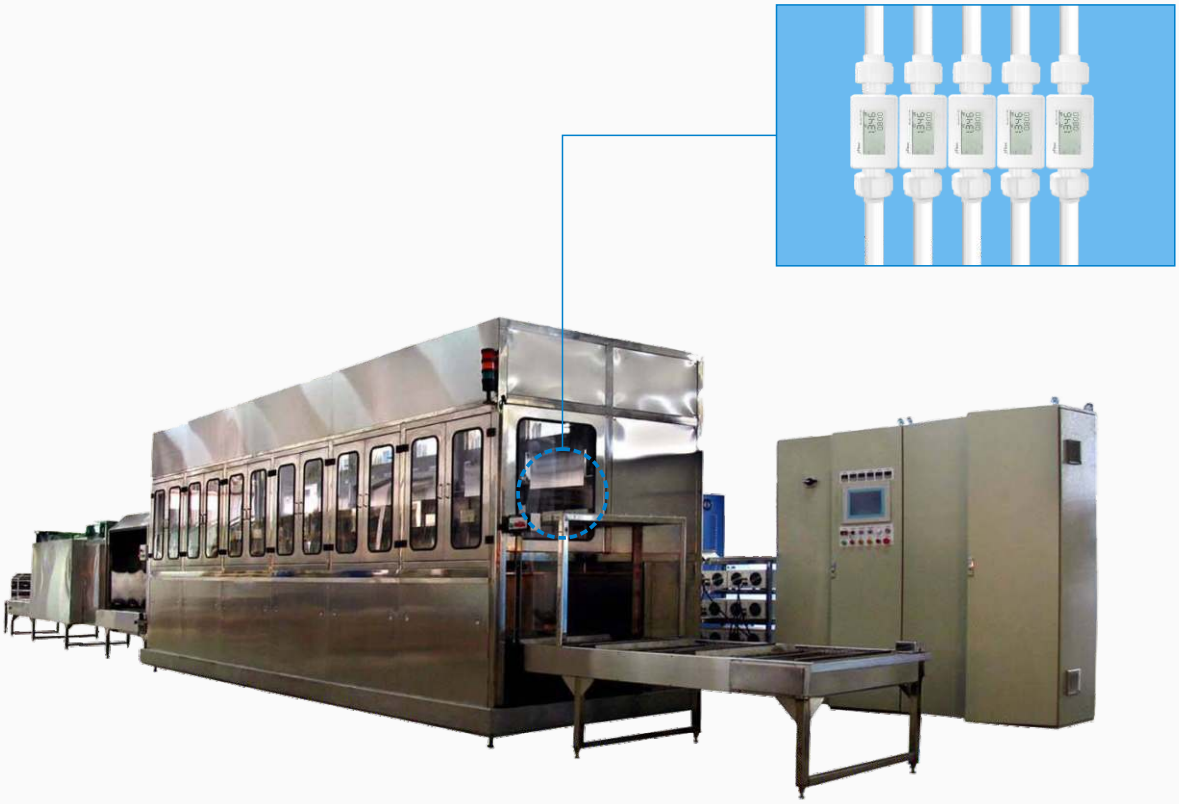
Specification

Performance specifications	
Accuracy	±1.0%
Repeatability	0.3%
Measuring Medium	Water
Pipe Material	PVC-U/white
Protection Rate	IP54
Function specifications	
Power Supply	10~36VDC, @500mAMax
Temperature	Transmitter: 0 ~ 50 ℃, Transducer: 0 ~ 50 ℃
Humidity	Up to 99% RH; Non-condensing
Physical specifications	
Transmitter	PVC-U/white
Power Supply Cable	3.0 m (standard)
Display	LCD Display
Weight	0.5 kg-0.8kg

Model	L (mm)	W (mm)	H (mm)	Flow Range				Weight(kg)
				Min(gal/min)	Min(m^3/h)	Max(gal/min)	Max(m^3/h)	
DN15	165	65	68	0.22	0.06	13.93	3.80	0.55
DN20	170	65	75	0.40	0.11	24.93	6.80	0.60
DN25	180	65	82	0.66	0.18	38.86	10.60	0.66
DN32	190	65	90	1.06	0.29	63.79	17.40	0.73
DN40	200	65	99	1.65	0.45	98.99	27.00	0.80



Semiconductor Industry Cleaning Equipment

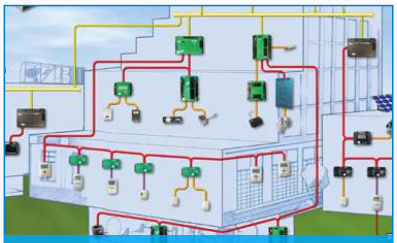


Applications

Widely used in industry , agriculture, construction industry, energy saving, etc.

Industrial Process Water

Irrigation



Building Automation System

Water Treatment

Drinks Plants

Textiles

Communication Protocol

MODBUS Protocol

The flow meter supports MODBUS-I protocol, its default slave address is 88, and its default baud rate is 9600bps, following are some function codes:

Function code	Performance data
0x03	Read Register
0x06	Single Write Register

MODBUS Protocol function code 0x03 usage

a) Read Register Address List (use 0x03 function code to read)

PDU Address	Register	Read	Write	Type	Illustration
$0000	40001	Flow - low word	32 bits real	2	m/s
$0001	40002	Flow - high word			
$0002	40003	Flow rate - low word	32 bits real	2	Unit:m^3/h
$0003	40004	Flow rate - high word			
$0004	40005	Flow total - low word	32 bits real	2	Unit:m^3
$0005	40006	Flow total - high word			
$0014	40021	Error code	16 bits int	1	"0"means normal; "1" means no signal.
$0016	40023	ESN- string 1,2	String	4	
$0017	40024	ESN - string 3,4			
$0018	40025	ESN - string 5,6			
$0019	40026	ESN - string 7,8			
$001E	40031	Flow rate integer - low word	32 bits int	4	Unit:m^3
$001F	40032	Flow rate integer - high word			
$0020	40033	Flow rate decimal - low word	32 bits real		
$0021	40034	Flow rate decimal - high word			

b) single write register Address List (use 0x06 function code to write).

Register Address	Register	Data Description	R/W	Data Type	Register Number
$1003	44100	ESN (1-247)	R/W	16 bits int	1
$1004	44101	Communication baud rate: 0 = 19200, 1 = 9600, 2 = 4800	R/W	16 bits int	1
$1005	44102	Flow rate unit: 0 = m3/h, 1 = l/min, 3 = gpm (EN).	R/W	16 bits int	1

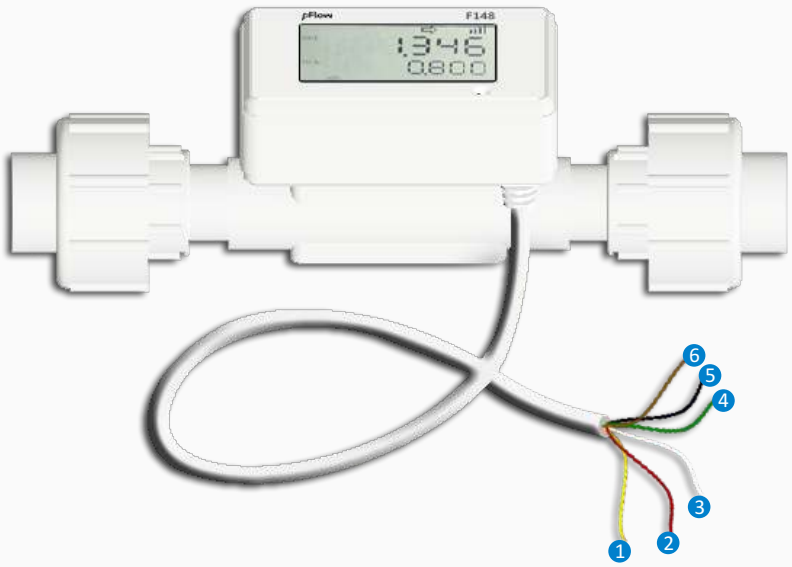
Note: FUJI communication protocol is optional.

Ordering Information

Shape	Model	Flow Range(m^3/h)	Price
	DN15	Min 0.06 Max 3.80	
	DN20	Min 0.11 Max 6.80	
	DN25	Min 0.18 Max 10.60	
	DN32	Min 0.29 Max 17.40	
	DN40	Min 0.45 Max 27.00	

Standard					
GB	ANSI	EN	DIN	JIS	CNS

The Wiring Diagram



1	Yellow	4 ~ 20 mA -
2	Red	4 ~ 20 mA +
3	White	RS485 B
4	Green	RS485 A
5	Black	-10V~36V DC
6	Brown	+10V~36V DC