

Ultraflo UF500 Instruction Manual



Content

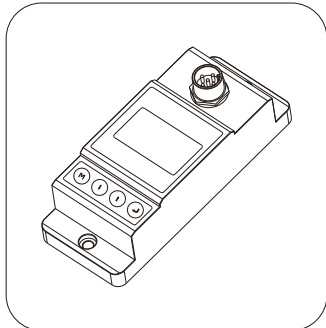
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Notice

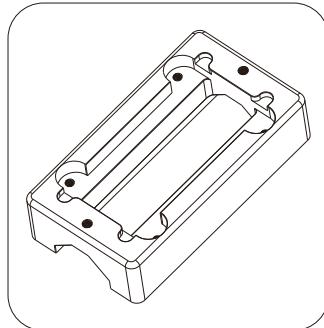
Thank you for choosing UF 500 Series Flow Meter. This instruction manual contains the important using and operation information of the flow meter. Please read carefully prior to operation.

Components

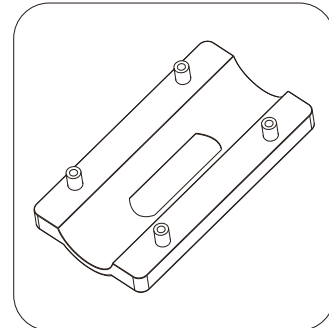
If you have any questions please contact your representative as soon as possible.



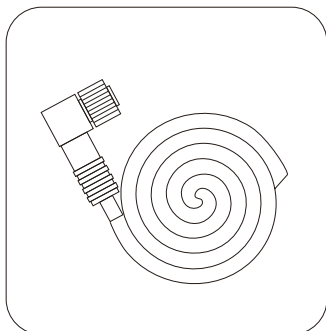
Display



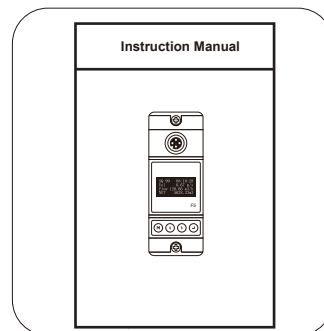
Upper Bracket



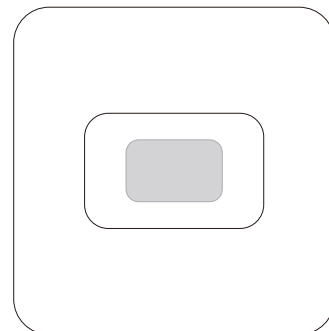
Base Bracket



Cable



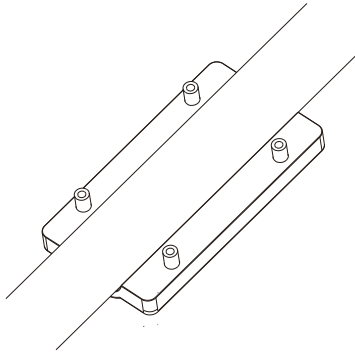
Instruction manual



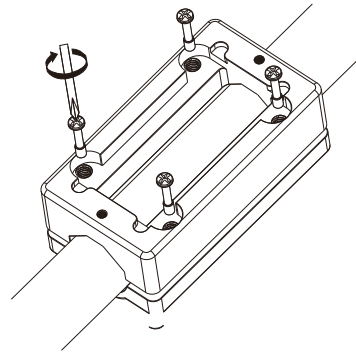
Coupling Agent

Installation and Connection

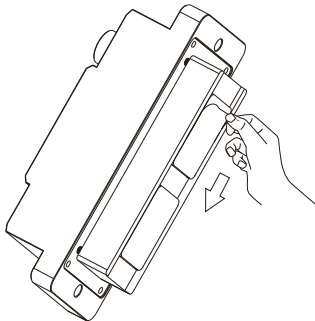
Step 1: Make sure no dirt, paint, or other stains on the surface of the tube. Then position on the underside of the pipe.



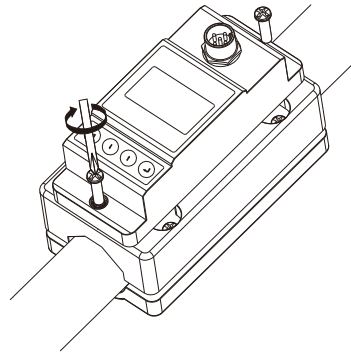
Step 2: Align the upper bracket to the pipe position. Using the mounting screws connect the upper and the lower brackets together. Ensure that the parts are snug, but DO NOT over-tighten.



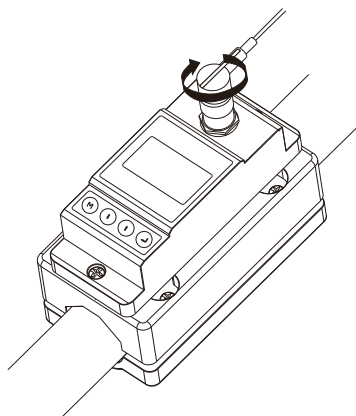
Step 3: Slowly remove the protective cover off the sensor.



Step 4: Position the display over the upper bracket and connect using the mounting screws. DO NOT over-tighten.

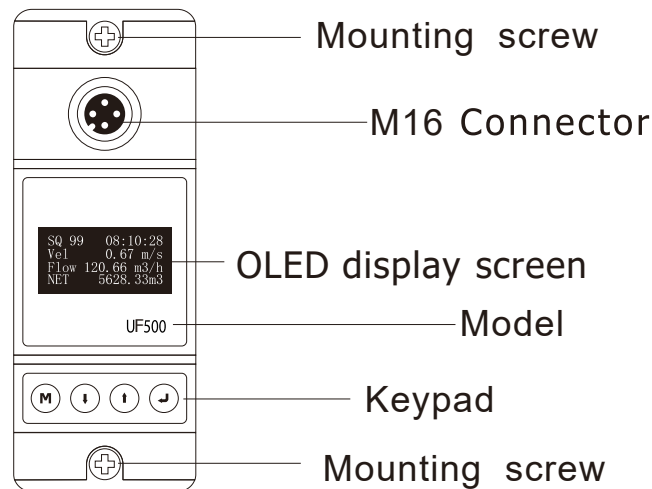


Step 5: Connect the M cable.



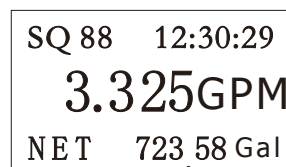
- Brown DC +
- Black DC - / 4-20mA
- Gray 4-20mA+
- Blue RS485 A
- White RS485 B

Panel



Powering On

When connected to a VDC power supply the Ultrapro 500 will begin to run self-diagnosis program




Signal Quality (SQ value)

Q value = Signal Quality. The Q indicates the strength level of the signal detected. The Q value is indicated by numbers from 0-99.

0 represents that no signal is being detected while 99 represents the maximum signal strength

Keypad functions

Follow these guide lines when using the Flow meter keypad:

Press  to enter the Programming Mode or to return to the previous menu during programming.

Press   to scroll up or down

Press  to move to the next digit

Press  to select digits (0-9)



Press  to confirm selection.

Display Descriptions

Display Menu

■ Power on display shows Flow Velocity and Flow Total

Date	: 19-06-22
Time	: 12 : 30
Velocity	: 1.035 ft/s
Flow Total Net	: 723.58 Gal



■ Press  to display Flow Rate/Net Total. Press  to return to previous menu.

Signal Quality	: 88
Time	: 12:30:29
	: 3.325 GPM
NET	: 723.58 Gal

■ Press  to display Flow Rate/ Velocity/Net Total. Press  to return to previous menu.

Signal Quality	: 88
Time	: 12:30:29
Vel	: 1.035 ft/s
Flow Rate	: 3.325 GPM
Flow total Net	: 723.58 GAL

Display signal quality. Time, velocity, flow rate and net totalize.

■ Press  to display Run time/Daily Total /Monthly Total /Yearly Total
Press  to return to previous menu.

Run Time	216h
Day	79.632 Gal
Mth.	2382.3 Gal
Year	28984 Gal

Display Run time, Date, Month and Year Net Total

Setup Menu



Press  to display Setup menu.

Setup menu
0. Pipe parameter
1. System setting
2. Calibration

The following options are available (using the  or  buttons)



1. Pipe parameter
2. System setting
3. Calibration
4. Output setting





Setup Menu – Pipe Parameter

Press , Select 0. Pipe parameter, then  to display:



```

Pipe parameter
0. Outer diameter
1. Wall thickness
2. Material
    
```

The following options are available (using the  or  buttons)

1. Outer diameter
2. Wall thickness
3. Material: Press  or  to choose between PVC, Carbon steel, Steel, Copper pipe.
3. Fluid type: Press  or  to choose between Water, Sea Water, Oil...etc.










Setup Menu – System setting

Press , Select 1. System setting, then  to display:

```

System setting
0. System unit
1. Flow rate unit
2. Total unit
    
```

The following options are available (using the  or  buttons)

0. **System Unit:** Press  or  to choose between Metric, English.
1. **Flow Rate Unit:** Press  or  to choose between m3/h, LPM, GPM.
2. **Total Unit:** Press  or  to choose between m3, L, GAL.
3. **Totalizer Reset:** Press  then press the  or  arrow to select 'YES' or 'NO'. If 'YES' is selected, parameters will be reset .
4. **Time Set**

```

yy-mm-dd hh:mm
19-06-20 12:30
    
```

Generally, it is unnecessary to modify date time as the system is provided with a highly reliable perpetual calendar chip.

5. System Lock

System lock System unlocked	System lock ENT to lock	ENT key word 0000	System lock System locked OK
System lock System locked	System lock ENT to unlock	ENT key word 0000	System lock System unlocked OK

Once the system is locked, any modifications to the system are prohibited, but the parameter is readable. “Unlock” using your designated password.

6. System INFO

System INFO
X3 Flowmeter
SN: X30005000
V1.00

Manual Totalizer
ENT To Start

Manual Totalizer
ENT To Stop
1.239 m3/h
SQ 88 1.056L

Manual Totalizer
ENT TO Restart
1.239 m3/h
SQ 88 1.056L

System INFO: Display serial number (SN) of the meter. This SN is the only one assigned to each flow meter.

Set zero: Press ; reset "Zero Point" which was set by the user.

Manual Totalizer: The manual totalizer is a separate totalizer.

Press to start, and press to stop. It is used for isolated flow measurement and calculation.

Setup Menu – Calibration

Press , Select 2. Calibration, and then to display:

Calibration
0. Scale factor
1. 4-20mA CAL
2. Set zero

Scale factor
1.000

1. Scale factor

Refers to the ratio between the "actual value" and "reading value". For example, when the measurement is 2.00, and it is indicated at 1.98 on the instrument, the scale factor reading is 2/1.98.

This means that the best scale factor constant is 1.01.

2. Calibrate 4 & 20mA

Press and to display 4mA set point.

Use and to set 4mA.

After 4mA is set, press to move to your 20mA set point.

Once 20mA is set, press to move to next screen.

4mA Calibrate
4200

20mA Calibrate
25800

2. Set Zero: Press ; reset "Zero Point" which was set by the user.

Set zero
Ent To set zero
Reset zero

Set zero
Waiting
SQ 88
Vel 0.035 ft/s



3. Low flow Cut: Flow rate below the low flow cutoff value.

Low flow cut
0.030 ft/s

If the flow is below the cut-off the flow indication on the display will be zero. (This function can prevent the flow meter from reading flow after a pump is shut down but there is still liquid movement in the pipe, which would result in a flow total error.)

Generally, 0.03ft/s is recommended to enter as the low flow cut off point. The low flow cutoff value has no relation to the results once the velocity increases over the low flow cutoff value.

Setup Menu – Output Setting

Press , Select 3.Output setting, and then  display:

0. RS 485 setup

```
Output setting
0. RS485 Setup
1. 4-20mA range
2. Alarm value
```

This window is used to set RS 485 serial port . It must match the equipment's connected parameters .

First select baud rate: 2400,4800,9600,19200 are selectable Then select : None . Data length :8 Stop bit is fixed length . Factory default value for serial port parameter is "9600,8,None,1"

1. 4-20mA Range

```
4mA Calibrate
4200
```

```
20mA Calibrate
25800
```

Set the Current Loop output value according to the flow value 4mA, and 20mA. The flow unit is GPM

2. Alarm Value(Optional)

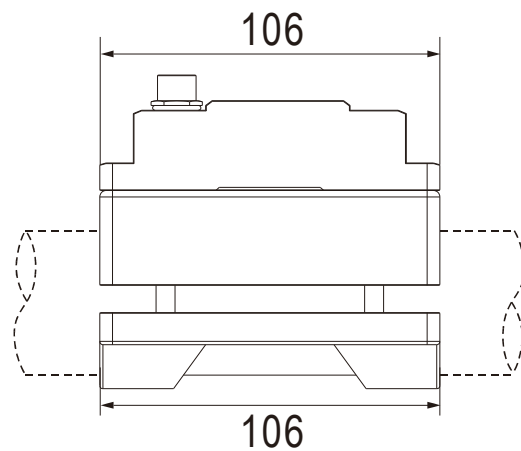
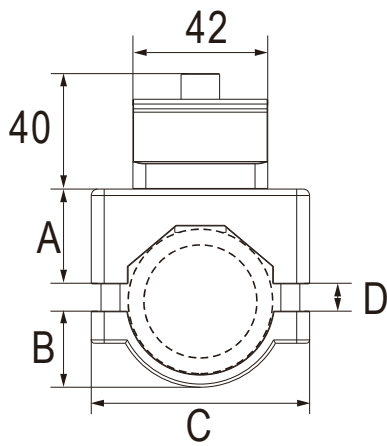
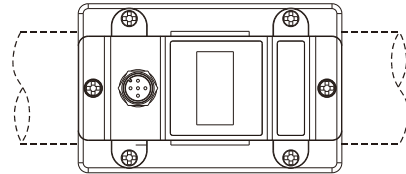
```
Alarm value
0. Low value
1. High value
```

Enter the low alarm value; (if the measured flow is lower than the low alarm value), the alarm relay will be activated.

Enter the high alarm value; (if the measured flow is higher than the high alarm value), the alarm relay will be activated.

Dimensions

Model	A (mm)	B (mm)	C (mm)	D (mm)	
				min	max
UF-20	25	8	58	1.5/Φ20	8/Φ23
UF-25	25	15	58	1.5/Φ25	4.5/Φ28
UF-32	28.5	18.5	58	1.5/Φ32	4.5/Φ35
UF-40	29.5	24	68	1.5/Φ38	8.5/Φ45
UF-50	36	27	78	1.5/Φ48	8.5/Φ54
UF-63	41	32	91	1.5/Φ58	8.5/Φ64



Corrosion-Free
Instrumentation Equipment

For Additional Support Please Contact US
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