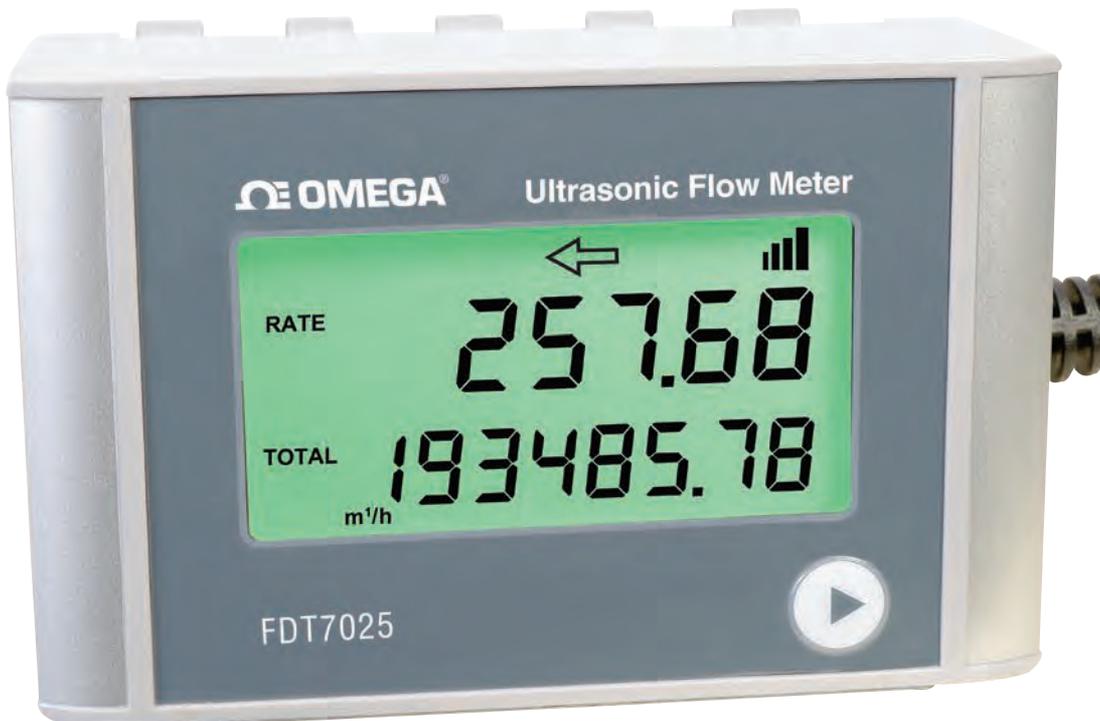


1 YEAR
WARRANTY

Ω OMEGA® User's Guide

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FDT7000 SERIES Ultrasonic Flow Meters



Warning
⚡ Wire with power-off.

Contents

1. Technical Specifications
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1. Technical Specifications

Performance Specifications

- Flow Range: 0.1~6m/s
- Accuracy: ±1.5 % FS
- Repeatability: 0.3 %
- Measuring Medium: Water
- Pipe Material: PVC-U/PP-R
- Protection Rate: IP54

Functional Specifications

- Power Supply: 10~36VDC, @500mA Max
- Temperature:
Transmitter: 0~50 °C Transducer: 0~50 °C
- Humidity: Up to 99% RH; Non-condensing

Physical Specifications

- Transmitter: ABS Plastic Enclosure
- Power Supply Cable: 3.0 m (standard)
- Display: LCD Display
- Weight: 0.5 kg

Standards and Certifications

- ï Immunity and Radiation: EN61326
- ï Quality Management System Certification: ISO9001 approved

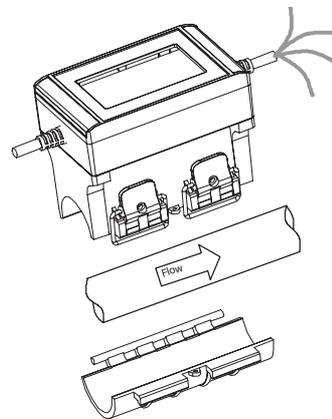
2. Installation and Wiring

Read Chapter 4. Selection of measuring point before installation.

Before installing the transducers, clean the pipe surface where the transducers are to be mounted. Choose a section of sound conducting pipe for installing the transducers. Apply a wide band of sonic coupling compound down the center of the face of each transducer as well as on the pipe surface.

Once the installation position is fixed, then you can install the flow meter. Refer to the right picture during the installation and make sure that the transducer mounting direction is parallel with the flow.

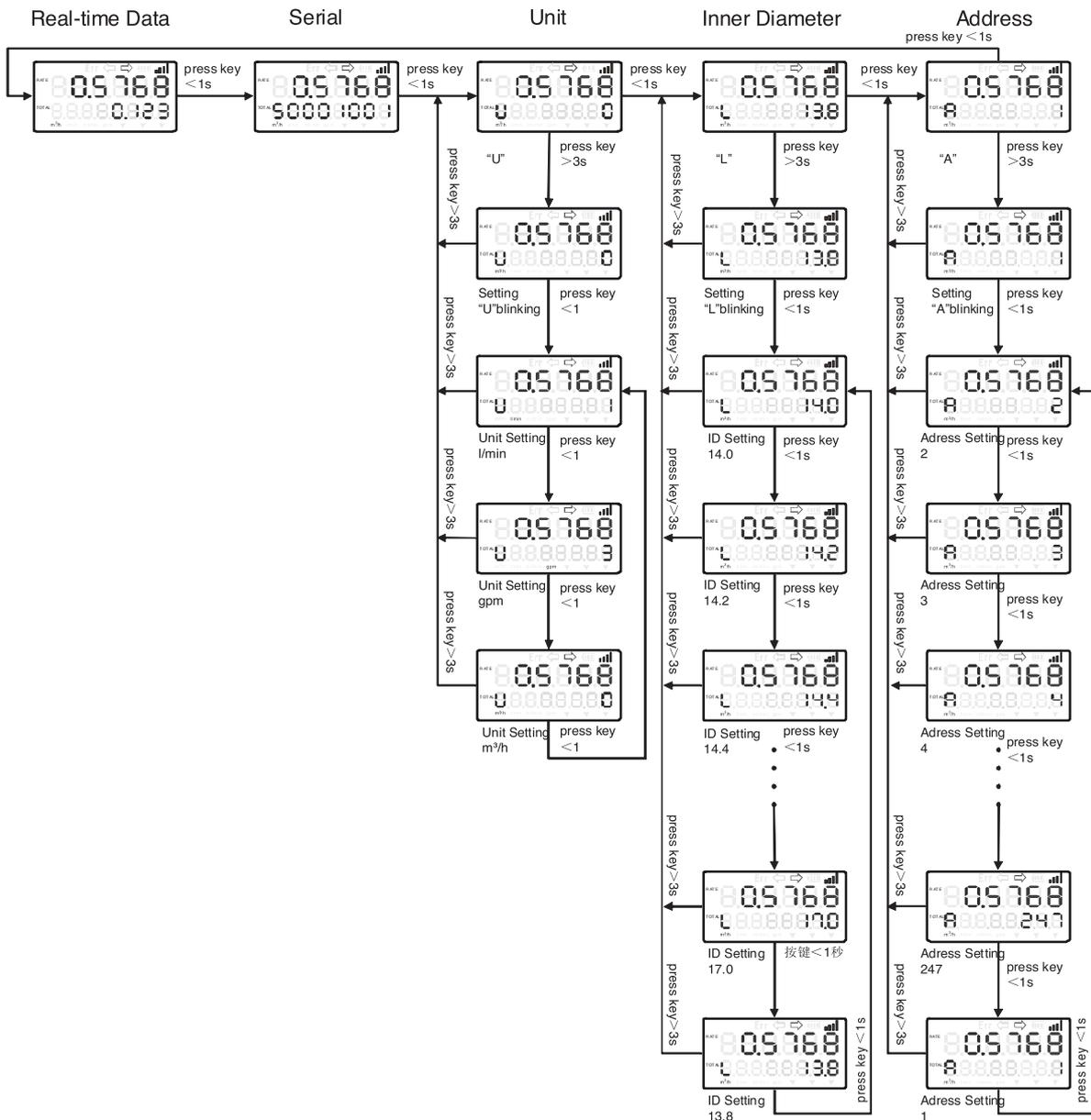
Function	Wire colour	
	Power (10~36VDC)	+
-		Black
RS485	A	Green/Blue
	B	White
4~20mA	+	Red
	-	Yellow



3. Menu Display

Every meter is being strictly tested before leaving the factory. The meter can normally operate without settings. Specified upper computer software or setting device is required when need to reset the flow meter. Please turn to the factory for detailed operation method.

Window Display Interface	Menu Display Explanation
	Display the factory software version number of the instrument. This display will last for 25 seconds.
	Data display.
	Error.
	Flow direction.
	Signal strength.
	Units.
	Extensions.



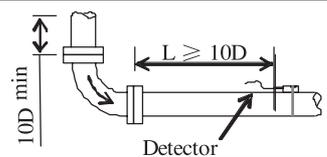
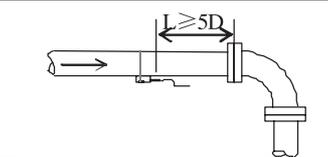
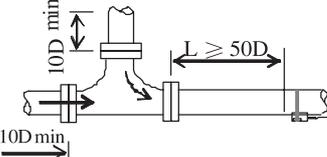
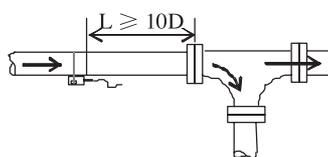
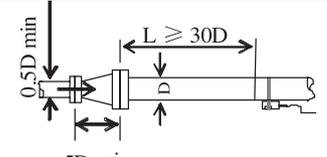
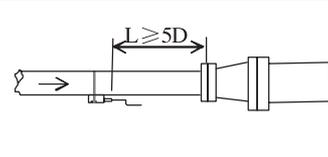
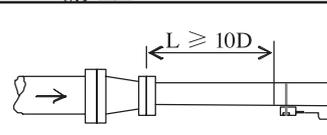
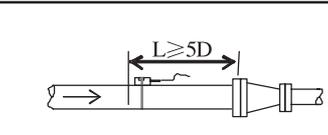
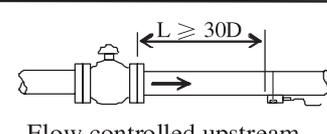
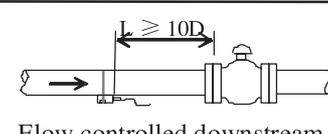
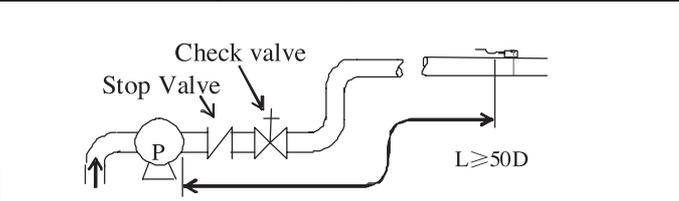
4. Measuring Site Selection

The installation of this ultrasonic flow meter is the simplest one of all kinds of flowmeters. Only one suitable measuring site needed, plug the transducers on the pipe and then start the measurement.

When selecting a measurement site, it is important to select an area where the fluid flow profile is fully developed to guarantee a highly accurate measurement. Use the following guidelines to select a proper installation site:

*Choose a section of pipe that is always full of liquid, such as a vertical pipe with flow in the upward direction or a full horizontal pipe.

*The site should have a straight pipe run length equal to at least 10 pipe diameters upstream and 5 pipe diameters downstream from any throttling valves or other flow disturbance producing elements, such as pipe reducers, elbows, tees, etc.

Name	Straight length of Upstream piping	Straight length of Downstream piping
90° bend		
Tee		
Diffuser		
Reducer		
Valve		
Pump		

*On the horizontal pipe, the transducer should be mounted on the 9 and 3 of the pipe, avoiding the position of 6 and 12, in case of the signal attenuation caused by pipe at the bottom sediment or bubble, cavitation on the pipe.

*Ensure that the measuring site temperature is under the transducer temperature limits.

*Consider the inside condition of the pipe carefully. If possible, select a section of pipe where the inside is free of excessive corrosion or scaling.

* Choose a section of sound conducting pipe.



omega.com info@omega.com

Servicing North America:

U.S.A.: Omega Engineering, Inc., One Omega Drive, P.O. Box 4047
Stamford, CT 06907-0047 USA
Toll-Free: 1-800-826-6342 (USA & Canada only)
Customer Service: 1-800-622-2378 (USA & Canada only)
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OMEGA ENGINEERING, INC. warrants this unit to be free of defects in materials and workmanship for a period of **13 months** from date of purchase. OMEGA's WARRANTY adds an additional one (1) month grace period to the normal **one (1) year product warranty** to cover handling and shipping time. This ensures that OMEGA's customers receive maximum coverage on each product.

If the unit malfunctions, it must be returned to the factory for evaluation. OMEGA's Customer Service Department will issue an Authorized Return (AR) number immediately upon phone or written request. Upon examination by OMEGA, if the unit is found to be defective, it will be repaired or replaced at no charge. OMEGA's WARRANTY does not apply to defects resulting from any action of the purchaser, including but not limited to mishandling, improper interfacing, operation outside of design limits, improper repair, or unauthorized modification. This WARRANTY is VOID if the unit shows evidence of having been tampered with or shows evidence of having been damaged as a result of excessive corrosion; or current, heat, moisture or vibration; improper specification; misapplication; misuse or other operating conditions outside of OMEGA's control. Components in which wear is not warranted, include but are not limited to contact points, fuses, and triacs.

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RETURN REQUESTS / INQUIRIES

Direct all warranty and repair requests/inquiries to the OMEGA Customer Service Department. BEFORE RETURNING ANY PRODUCT(S) TO OMEGA, PURCHASER MUST OBTAIN AN AUTHORIZED RETURN (AR) NUMBER FROM OMEGA'S CUSTOMER SERVICE DEPARTMENT (IN ORDER TO AVOID PROCESSING DELAYS). The assigned AR number should then be marked on the outside of the return package and on any correspondence.

The purchaser is responsible for shipping charges, freight, insurance and proper packaging to prevent breakage in transit.

FOR **WARRANTY** RETURNS, please have the following information available BEFORE contacting OMEGA:

1. Purchase Order number under which the product was PURCHASED,
2. Model and serial number of the product under warranty, and
3. Repair instructions and/or specific problems relative to the product.

FOR **NON-WARRANTY** REPAIRS, consult OMEGA for current repair charges. Have the following information available BEFORE contacting OMEGA:

1. Purchase Order number to cover the COST of the repair,
2. Model and serial number of the product, and
3. Repair instructions and/or specific problems relative to the product.

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