Handheld Ultrasonic Flow Meter TUF-2000H

GENERAL

TUF-2000H series is a protable transit-time ultrasonic flowmeter with clamp-on transducers for non-invasive liquid measurement. Our microprocessor based, user friendly, field programmable flow measurement technique allows no interruption of the process flow and has low installation costs.

7 FEATURES

- □ 4 line LCD display with flowrete, totalizer & signal condition.
- □ The flowmeter is designed for high accuracy +/-1.0%.
- □ Small sized (210 * 90 * 30mm) and light weight (500 g)
- Uvide range, Velocities (0.01 ~ +/- 32 m/s).
- □ Ni-MH Battery life for up to 12 hours continuous opeartion.
- Transducers for pipe sizes of 15 to 6000 mm.
- □ High accuracy of +/-0.5% of reading (or +/-0.2% of reading)
- Transducers include magnet devise, which can install on Metal pipe without mounting belt.
- Data logger which records flowrate, date, total flow, signal condition..Etc.
- Response time less than 1 second

7 SPECIFICATION

| Measuring Principle | : | Transit time | Ultrasonics |
|---------------------|---|--------------|-------------|
|---------------------|---|--------------|-------------|

| Measuring Princip | ble : Transit time Ultrasonics | Keypad | : 18 Key with tactile action |
|---------------------------------|---|----------------------------|--|
| Transducers | : TS-2 : 15 mm ~ 100 mm (1/2" ~ 4") | Response Time | : Less than 1 second |
| | : TM-1 : 50 mm ~ 700 mm (2" ~ 28") | Flow velocity | : 0.01 ~ +/- 32 m/s |
| | : TL-1 : 300 mm ~ 6000 mm (12" ~ 240") | Resolution | : 0.0001 m/s |
| | : TS-2-HT : 15 mm ~ 100 mm (1/2" ~ 4") | Ambient Temperature | : -20 ~ +50 °C |
| | : TM-1-HT : 50 mm ~ 1000 mm (2" ~ 40") | Ambient Humidity | : 90% RH or Less |
| Pipe Material | : Cast Iron, Stainless Steel, Ductle Iron | Built-in battery | : Ni-MH Battery |
| | Coppor, PVC, Aluminum, Asbestos | | |
| | Fiberglass etc. | Charger | : 90 ~ 260Vac 50/60 Hz, 8-12 Hr charging |
| Liner Material | : Tar Epoxy, Rubber, Mortar, Polypropylene, | Data Storage | : Operation parameters and totalization |
| | Polystryal, Ploystryene, Polyester, Ebonite, | | data are stored by EEPROM for more |
| | Polyethylene, Teflon etc. | | than 10 years |
| Display | : 4 Line LCD with illumination. | Operation Time | : > 10 Hours |
| Flowra | ate: 5 digit with decimal point | Charger | : 90 ~ 260Vac 50/60 Hz, 8-12 Hour charging |
| Totali | zer : 8 digit, Forward, Reverse & Net values. | Data Logger | : 24 KB data include flowrate, totalizer, |
| Engineer U | Init : M3, Liter, US Gallon, Imperial Gallon, | | time, date. |
| | Million Gallon, Cubic Feet, US Barrels, | Alarm | : High/Low with buzzer |
| | Imperial Barrels, Oil Barrel. | Power consumption | : Less than 2W |
| Time U | Init:Second, Minute, Hour, Day. | Dimension | :210 * 90 * 30 mm |
| Oth | ner : Velocity, Date, Time, Signal condition. | Weight | : 0.50 Kg |
| Accuracy | : +/- 1% ~ +/- 2% of reading(0.5 ~ 30 m/s) | Enclosure | |
| | : +/- 0.5% of reading (online calibration) | Converte | er : IP65 |
| Repeatability | : +/-0.2% of reading | Senso | or: IP68 (Submersible) |



7 TRANSDUCER SPECIFICATION

• Standard-Transducers

Fluid Temperature : -30 ~ +90 °C

| Model | TS-2 (Small Size) | TM-1 (Medium Size) | TL-1 (Large Size) |
|-----------|-------------------|--------------------|-------------------|
| Pipe Size | DN15-100mm | DN50-700mm | DN300-6000mm |
| A*B*C | 45mm*23mm*25mm | 64mm*32mm*35mm | 98mm*45mm*49mm |



• High Temperature Transducers

Fluid Temperature : -30 ~ +160 $^{\circ}$ C

| Model | TS-2-HT (Small) | TM-1-HT (Medium) |
|-----------|-----------------|------------------|
| Pipe Size | DN 15-100mm | DN 50-1000mm |



ACCESSORY (standard package)



Aluminum Case

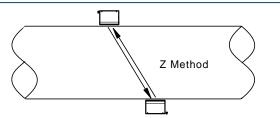
Cable 5M

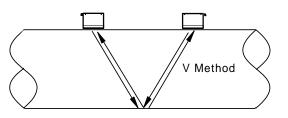
Silicone grease

Mounting Belt

Measuring Tape

7 INSTALLATION





7 STRAIGHT RUN PIPING REQUIREMENT

