



# Ultrasonic Flowmeter ECC-2000H Datasheet

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## Introduction

Our Ultrasonic flow meter has been upgraded based on the old version, retains most of the excellent features and functions of the previous versions: the pulse measurement technology, the ultrasonic igniting and the small signal receiving circuits etc. The main improvements are made on the battery supply circuit and on the transmitting circuits. All other circuits are simply integrated into this new version without major modifications, due to the fact that we have already applied the most advanced measurement technologies and attained a more reliable model of ultrasonic flow meter.

Our Ultrasonic Flow Meter is using latest ICs the famous semiconductor manufacturers like Philips, Maxim, TI, Win-bond, and Xilinx. The hardware features the ease of operation, high accuracy and outstanding reliability, while the software provides a very user friendly interface and much more functions. It employs a patent balanced lower voltage multi-pulse igniting circuit which increases the anti-interference ability magnificently so that the flow meter will work properly even in demanding industrial environments such as those with power frequency transvector working nearby.

Other outstanding features:

- The signal receiving circuits feature self-adapting performance so as to ensure that the user can easily operate the instrument without any adjustment.
- The built-in rechargeable Ni-H battery can work continuously for more than 12 hours without recharge.

The advanced circuit design, the integration of the latest semiconductors, the user-friendly software interface both in English and Chinese languages and small-sized PCB board, all these features combine to make the ultrasonic flow meter. Moreover, it is gaining more and more recognition on the international flow meter market

## Features

- 4 flow totalizers
- 0.5% of linearity
- Built-in data logger
- 0.2% of repeatability
- Built-in data totalizers
- 0.5 second totalizing period
- Work properly near transvectors
- Bilingual interface in Chinese and English
- 100 Pico-second resolution of time measurement
- Patent balanced lower-voltage multi-pulse ultrasonic igniting

## Specifications

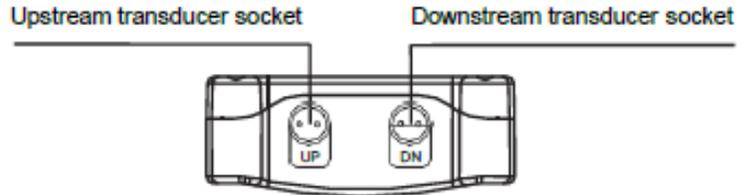
<b>Linearity</b>	0.5%
<b>Repeatability</b>	0.2%
<b>Accuracy</b>	±1% of reading at rates > 0.2 mps
<b>Response Time</b>	0 to 999 seconds, user-configurable
<b>Velocity</b>	±10 m/s
<b>Pipe Size</b>	20mm to 6000 mm
<b>Rate Units</b>	Meter, Feet, Cubic Meter, Liter, Cubic Feet, USA Gallon, Imperial Gallon, Oil Barrel, USA Liquid Barrel, Imperial Liquid Barrel, Million USA Gallons. User Configurable
<b>Totalizer</b>	7 digit totals for net, positive and negative flow respectively
<b>Liquid Types</b>	Virtually all liquids

<b>Security</b>	Setup values modification lockup. Access code needs unlocking
<b>Display</b>	4x8 Chinese modification characters or 4x16 English letters
<b>Communication Interface</b>	RS-232C, baud-rate: from 75 to 57600. Protocol made by the manufacturer and compatible with that of the FUJI ultrasonic flow meter. User protocols can be made on enquiry
<b>Transducers</b>	Model M1 for standard, other 3 models for optional
<b>Transducer Cord Length</b>	Standard 2x10 meters, optional 2x500 meters
<b>Power Supply</b>	3AAA Ni-H built-in batteries. When fully charged it will last over 10 hours of operation
<b>Data Logger</b>	Built-in data logger can store over 2000 lines of data
<b>Manual Totalizer</b>	7 digit press keys to go totalizer for calibration
<b>Housing Material</b>	ABS
<b>Case Size</b>	180x145x40mm
<b>Handset Weight</b>	514g (1.2 lbs) with batteries

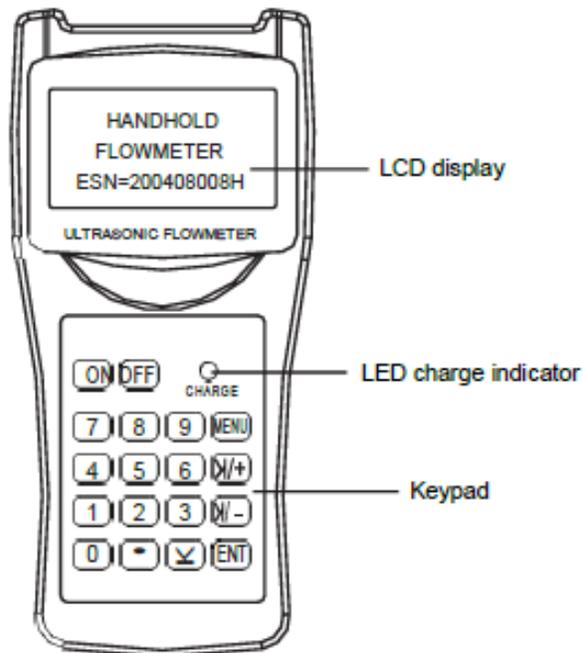
## Function Diagram

### Converter

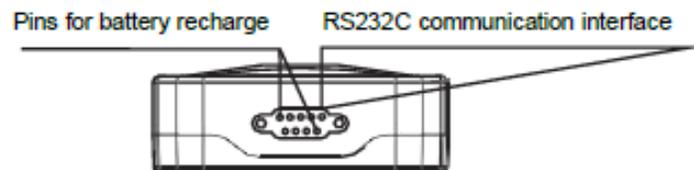
Top view



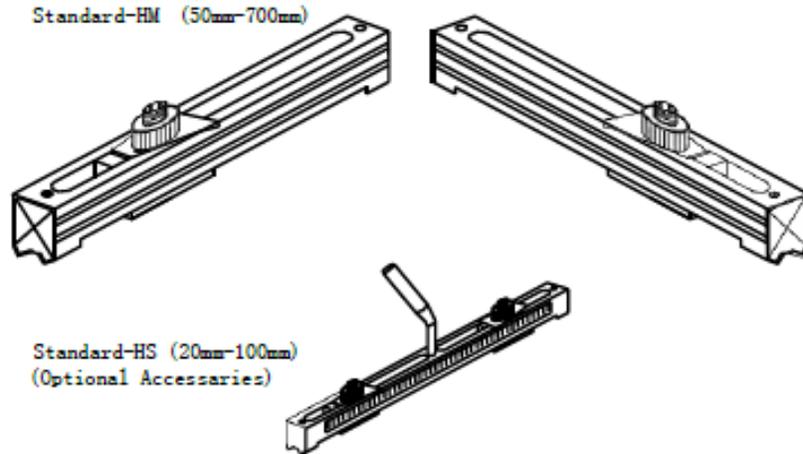
Front view



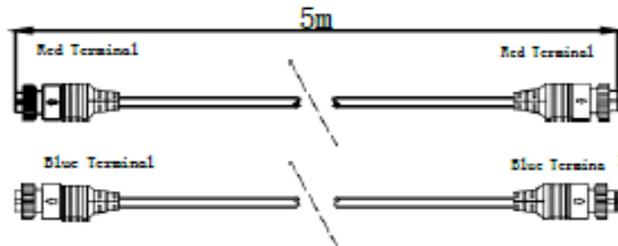
Bottom view



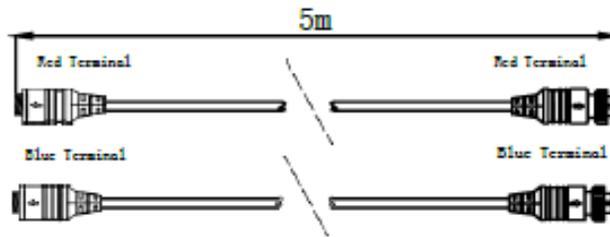
## Electrode



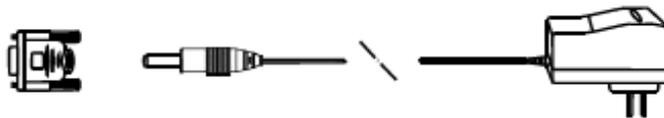
Cable 5m x2



Extended Cable 5m x2 (Optional Accessories)



Converted Terminal and AC/DC Adapter



Cable of RS-232C interface

