

Ultrasonic Open Channel Flow Meter

Sondar 5000

The Sondar 5000 is a high-end ultrasonic flow & level measurement system which provides non-contact flow measurement of various weirs and flumes. It measures water level, calculates flow and displays accurate instant/total flow rate, based on the principle that the water level is specifically related to flow rate in the standardized flumes and weirs. With built-in data logging system, the Sondar 5000 enables the user to save data (level, flow rate, total flow, etc) for the maximum period of 6 months. The relays and analog outputs may be preset or programmed to activate alarms and operate remote monitoring equipment and process control equipment.



Features

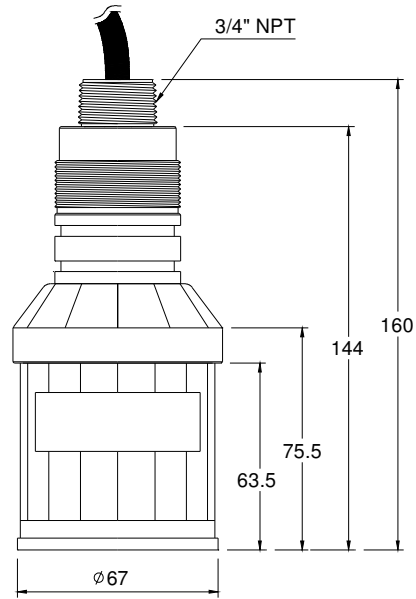
- Applicable to various flumes and weirs
- 2 programmable SPDT relays
- Graphic LCD display
- Flow rate setting at 4mA~20mA
- Compatible with flow switch
- Do-It-Yourself curve, flow equation compensation

Technical Specifications

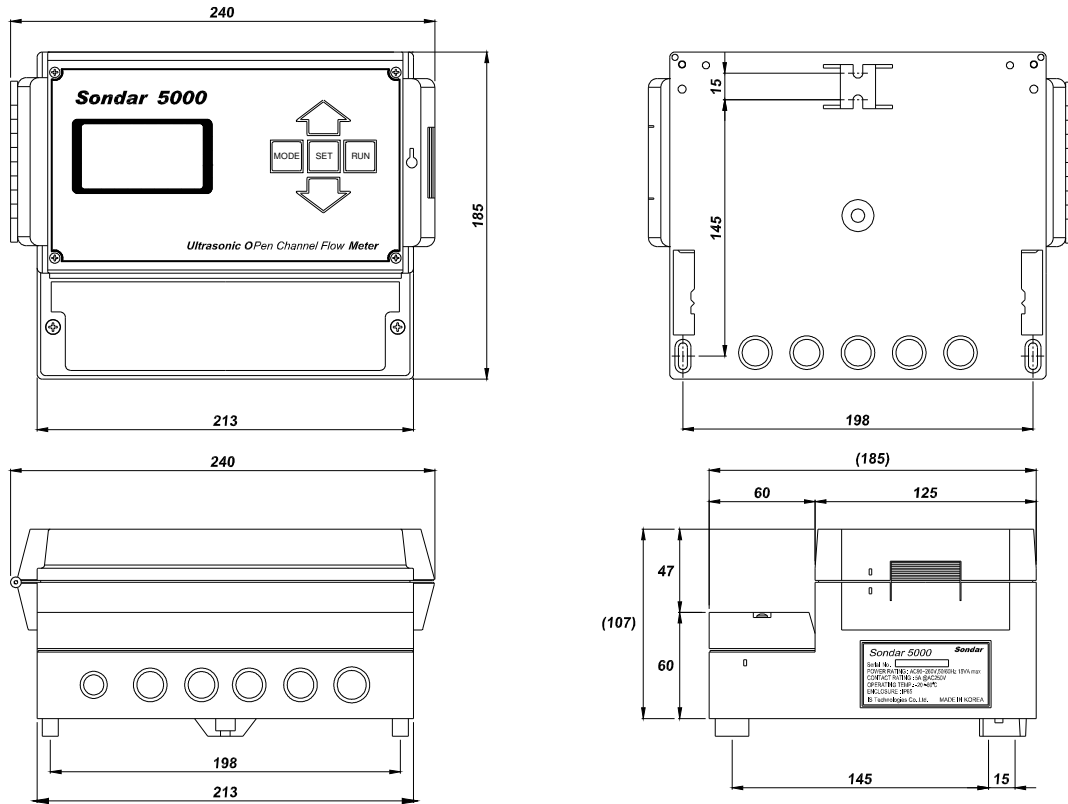
<u>Physical</u>		<u>Performance</u>	
Dimension	Overall 240(W)x185(H)x107(D) mm	Accuracy	0.25 %
	Sensor 67(D)x160(H) mm	Resolution	1 mm
	Mounting 3/4"NPT	Measuring range	0.35 ~ 8.0 m
Weight	3 Kg		0.20~200,0000.00 m/h
Sensor Material	Polypropylene		999999999.99 m ³ /h
Case Material	Polycarbonate	Beam Angle	± 5 ° (-3 dB)
		Damping Rate	0.1 m/min ~ 100 m/min
		Temp. Compensation	fully compensated
<u>Environmental</u>		<u>Outputs</u>	
IP Rating	IP68;Sensor, IP65;Controller	Analog Output	4~20 mA (max 600Ω)
Temperature	-20°C~70°C; Sensor	Display	Graphic LCD
	-20°C~60°C; Controller	Com Port	RS232/RS485 (Option)
Pressure	Up to 2 Bar	Relay	2 SPDT Relay (5A/250V)
<u>Certification</u>		<u>Supply</u>	
CE		Power Supply	AC90~260V, 24V DC
		Power Consumption	15 W

Dimensions

Sensor

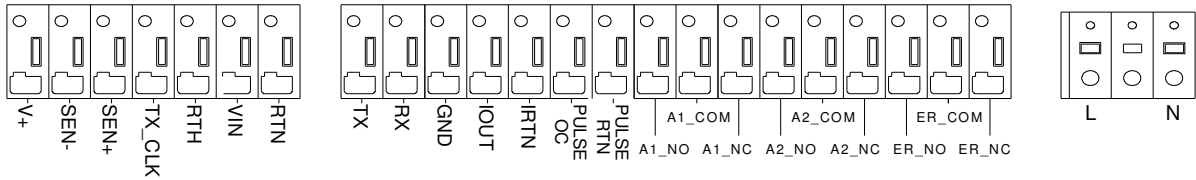


Controller



Terminal Connections

Input & Output Terminal



Function

Terminal	Function	Note
V+	DC +12V output	
SEN-	Connect to shield cable of sensor of RTX	Black
SEN+	Connect to +cable of sensor of RTX	Red
TX_CLK	Output of pulse form of the ultrasonic transmitting signal	Option
RTN	Connect to inner temperature sensor	
VIN	Analog input terminal	
TX	Connect to the transmitter of RS232C or Connect to Y terminal of RS485	
RX	Connect to the receiver of RS232C or Connect to Z terminal of RS485	
GND	Digital communication GND	
IOU	Current output terminal of IRTN, 4 ~ 20mA output in proportion to flow rate	Max. 600Ω
IRTN	Returns the current from IOU	
PULSE OC	Pulse output terminal proportional to flow	
PULSE RTN	Returns the pulse from PULSE OC	
A1_NO	Alarm1 relay NO contact point, OFF with A1_COM together when relay operates	
A1_COM	Alarm1 relay COM contact point, OFF with A1_CO together when relay operates. OFF with A1_NC together when relay doesn't operate	
A1_NC	Alarm1 relay NC contact point, OFF with A1_COM together when relay operates	
A2_NO	Alarm2 relay NO contact point, OFF with A2_COM together when relay operates	
A2_COM	Alarm2 relay COM contact point, OFF with A2_CO together when relay operates. OFF with A2_NC together when relay doesn't operate	
A2_NC	Alarm1 relay NC contact point, OFF with A1_COM together when relay operates	
ER_NO	Error relay NO contact point, OFF with ER_COM together when relay doesn't operate	
ER_COM	Error relay ER-COM contact point, OFF with ER_NO together when relay operates. OFF with ER_NC when relay doesn't operate	
ER_NC	Error relay NC contact point, OFF with ER_COM together when relay doesn't operate	
L	Connect to line of AC power	
N	Connect to neutral of AC power	

* The below points are useful when test the Sondar5000 in field.

THR	Output of standard voltage, which determines the volume of the ultrasonic signal. Users can check the most suitable installation location.	Test Point
DET	Output voltage of the detected ultrasonic signal	Test Point
TVG	Output of amplified voltage of the ultrasonic signal. Trigger source of DET signal	Test Point

Order Code

S5- * * * -

				\$ 1400
Cable Length				
Standard (10m)	S10			N/C
Extension (meter)	***			\$25/meter
Power Supply				
24V DC		B		N/C
90~260V AC		F		N/C
Communication Port				
None			N	N/C
RS232			A	100
RS485			B	100

Ex) S5-025B-A (25m Cable, 24V DC, RS232)

S5-S10F-B (10m Cable, 90~260V AC, RS485)



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