



Republic of the Philippines
ZAMBOANGA CITY WATER DISTRICT
 Zambaonga City

TECHNICAL SPECIFICATIONS

A. General

Type of Application		Fixed Type Non-Intrusive
Fluid	:	Potable Water
Measure Quantities	:	Volumetric Flowrate, Mass Flowrate, Flow Velocity
Measuring Principle	:	Transit time method using ultrasonic method. Can switch automatically to Doppler or Noise trek mode without changing the measuring setup
Pipe Sizes	:	250mm or lower - 2450 or higher
Process Interface		Modbus RTU
Transducer Coupling		Must be permanent solid and not Paste or Grease
Repeatability	:	±0.15 % of reading ± 0.01 m/s
Accuracy	:	±0.5 % of reading ± 0.01 m/s

B. Main Unit

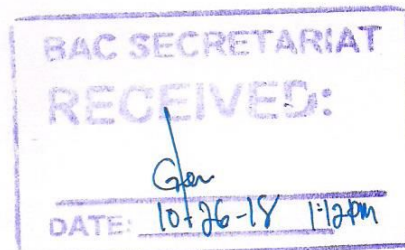
Measuring Input	:	1 or 2 Channels
Measurement		Bidirectional
Ingress Protection (Main Unit)	:	IP 65 or better
Ingress Protection (Transducer)	:	IP 68
Power Supply	:	AC 220-230 V
Communication Interface	:	RS 232 or USB
Display	:	LCD Display with backlight
Diagnostic Functions	:	sound speed , signal amplitude, Signal -Noise-Ratio(SNR),Signal-Coherent-Noise-Ratio(SCNR)

C. Software

Data transfer software must capable but not limited to the following functions:	:	Display measured data in table
	:	Display measured data in graph
	:	Export text file.
	:	Enter remarks.
	:	Compatible with Windows base platforms.

D. Special Features

Memory		Must have built-in data logger capable of storing data.
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E. Standard Accessories (compliance upon delivery)

F. Transducer Cover

supplied with Mounting Cover to avoid tampering and Vandalism

G. Transducer

The Transducer must have built-in temperature compensation.

H. Power Supply

220 - 230 Solar Powered

I. Additional Requirements (to be submitted during opening of bids)

1. The manufacturer should have ISO 17025 and 9001:2008 certificate.
2. The supplier must submit original or computer-generated company profile / brochure and ISO 9001:2015 certificate
3. Must submit certificate of calibration
4. Must submit warranty certificate
5. Supplier should submit an original or computer-generated copy of Operating and Maintenance Manual.

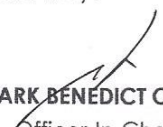
J. Other Requirements (compliance upon delivery)

1. Minimum manufacturer's warranty of one (1) year.


K. Testing (compliance upon delivery)

1. In the presence of the ZCWD personnel , the necessary field testing are conducted by a qualified technician of the supplier such as installation and operation of the flow meter before acceptance of goods.
2. Two (2) Days Training of 15 ZCWD Personnel
3. Five (5) Days Testing period
4. Package Includes One (1) unit High End Laptop for Monitoring and Data Downloading use. (See Attached Specs)

Prepared by:


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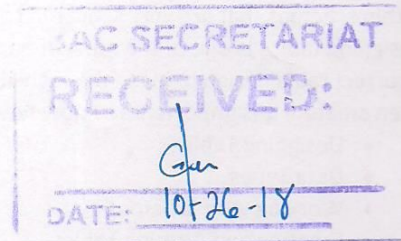
**SPECIALIZED LAPTOP
MINIMUM SPECIFICATIONS**

PARTICULARS	SPECIFICATIONS
PROCESSOR	
• Frequency	3.50GHz
• Cores	4 Cores
• Cache	6MB
RAM SIZE	8GB
STORAGE SIZE	1pc 120GB SSD and 1pc 1TB HDD
OPTICAL DRIVE	CD/DVD RW Multi
MONITOR SIZE	At least 15 inch LCD
GRAPHICS VIDEO RAM	4GB
PORTS & CONNECTIVITY	USB 2.0
	HDMI
	Audio Ports (Speaker & Microphone)
	WiFi
	Bluetooth
	Ethernet (RJ45)
	Card Reader (SD, SDHC, SDXC)
OPERATING SYSTEM	Bundled Licensed OS
OTHER ACCESSORIES INCLUDED	Carrying bag
	USB Optical mouse
	Laptop Charger

NOTE: Unit should come with one (1) year warranty and all other accessories that come with it.

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For: NRWD

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