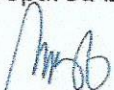


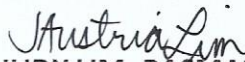
## TECHNICAL SPECIFICATIONS OF ULTRASONIC CLAMP-ON FLOWMETER (FIXED TYPE)

SPECIFICATIONS	
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
Flow Velocity	: 0.01 – 25m/s
Pipe Sizes	: 250mm or lower – 2450 or higher
Process Interface	: Modbus RTU
Transducer Coupling	: Must be permanent solid and not Paste or Grease
Repeatability	: $\pm 0.15\%$ of reading $\pm 0.005\text{m/s}$
Accuracy	: $\pm 1\%$ of reading $\pm 0.005\text{m/s}$
Measuring Input	: 2 Channels
Measurement	: Bidirectional
Multi-Layer Pipes	: Up to three (3) materials taken into consideration
Ingress Protection (Main unit)	: IP 66
Ingress Protection (Transducer)	: IP 68
Operating Temperature	: -10 to 60°C
Power Supply	: AC 220-230 V
Communication Interface	: LAN and USB
Display	: 128 x 64 dots with backlight
Diagnostic Functions	: sound speed, signal amplitude, signal-noise ratio (SNR), signal-coherent-Noise-Ratio (SCNR)
Output	: 2 analogue 4-20mA, and 2 Digital pulse
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
Memory	: Must have built in data logger capable of storing data. 800,000 measured values
Temperature compensation	: corresponding to the recommendation in ANSI/ASME MFC-5.1-2011
Software Installer and USB for downloading stored data	
Supplied with mounting cover SS316 to avoid tampering and Vandalism	
220-230 Vac (with Uninterruptible Power supply – max 2 hours)	
a. The manufacturer should have ISO 17025 and 9001:2008 Certificate or its latest.	
b. The supplier must submit original or computer-generated company profile/ brochure and ISO 9001:2015 certificate	
c. Must submit Certificate of Calibration, it shall not be included as additional requirement.	

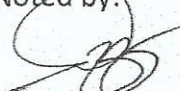
e. Supplier should submit an original or computer-generated copy of Operating and Maintenance manual.
f. Supplier must have Manufacturer's Authorization Certificate specific to this project. (compliance during opening of bids)
Minimum manufacturer's warranty of one (1) year from date of commissioning.
In the presence of the owner, 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.

Prepared by:

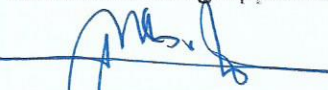
  
**JOHN REY M. CAWIT**  
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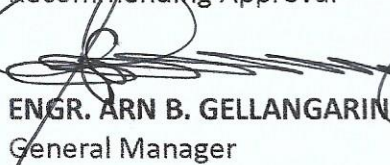
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