

Key Features and Applications

- Non-invasive tank installation (no drilling or contact with water, no penetration of wall, preserving tank integrity, water contamination and hygiene)
- Low maintenance as there are no moving parts or direct water contact, reducing wear and tear
- Proprietary and Advanced Ultrasonic Algorithm
- Tank materials: GRP, FRP, Plastic, Glass & Steel
- Detection Range: 50-5000 mm
- Measurement & Repeatability Accuracy: $\pm 1\%$ (mm)
- WAN communications: LTE 4G Cat1bis
- NFC communications: Bluetooth 5.0
- Reporting interval (configurable): Up to 1 min
- Compact design
- Residential, Municipal water utilities, Commercial and Industrial water level storage monitoring
- Water tank, Diesel/Fuel tank, Liquefied Petroleum Gas (LPG) cylinder level and temperature monitoring
- Retrofit solution for existing water tanks without water level monitoring capability

M-Level LTE 4G
Model: T4E0A1



M-Level Transmitter



M-Level Ultrasonic Sensor

Technical Specifications

M-Level Transmitter			
Communications/Network		Data Management/Alarm	
WAN Communication	Cellular LTE 4G Cat 1bis	Measured Data	Water Level & Temperature
Frequency Bands Supported	LTE-FDD: B1/B3/B5/B7/B8/B28	Data Reporting Interval	Up to 1min (Standard)
Communications Protocols	MQTT	Operating Environment	
SIM Type	eSIM	Operating Temperature	0°C to +55°C
Antenna Type/Gain	Built-in (Internal)/ $\leq 0.3\text{dBi}$	Operating Humidity	$\leq 95\%RH$
Antenna Transmit Power	20dBm (max)	Storage Temperature	0°C to +55°C
Power Class	Class 3	Ingress Protection	IP65
External Interface		Mechanical Specifications	
NFC	Bluetooth 5.0, 2.4GHz	Dimension (mm)	165 * 140* 41.5 (L*W*H)
	Transmit Power 10dBm (max)	Casing Material/Colour	ASA/White
Sensor Port	x2 Ultrasonic Sensor Ports	Ingress Protection	IP65
Power Supply			
DC Voltage (Nominal)	Input +24Vdc	Ripple & Noise (max.)	< 150mVp-p
Voltage Tolerance	$\leq \pm 5\%$	Line Regulation	< $\pm 1\%$
Power Consumption (max.)	7W	Load Regulation	< $\pm 2\%$
M-Level Ultrasonic Sensor			
Technical Specifications		Operating Environment	
Technology	Ultrasonic (Non-contact)	Compensation	Temperature
Level Range of Detection	50-5000 mm	Operating Temperature	0°C to +55°C
Measurement Accuracy	$\pm 1\%$ (mm)	Storage Temperature	0°C to +55°C
Repeatability Accuracy	$\pm 1\%$ (mm)	Ingress Protection	IP68
Blind Zone	$\leq 50\text{mm}$	Mechanical Specifications	
Startup Delay	< 2000ms	Dimensions (mm)	$\varnothing 33\text{mm} * 18\text{mm ht.}$
Transducer Frequency	0.8 – 1MHz	Material	Housing: Aluminium, PC+ABS
Material Thickness	< 10mm		
Material Penetration Type	FRP, GRP, Glass, Plastic, Steel		
Product Ordering Code:	METRIX M-LEVEL T4E0A1-0B13U-A10		
	METRIX M-LEVEL T4E0A1-1B13U-A10	M-Level Transmitter (LTE 4G), x1 sensor, BLE, DC Power Supply	
	METRIX M-LEVEL T4E0A1-2B13U-A10	M-Level Transmitter (LTE 4G), x2 sensors, BLE, DC Power Supply	