



Highlights

- LTE-M1 / NB-IoT resilient communications
- Certified for use in ATEX & UKEX Zone 0 hazardous areas
- Certified for use with hydrogen
- IP68 rated for below ground installation
- External battery pack with 5 years typical life
- Integrated pressure sensors
- Simple installation and low maintenance



Umonitor IoT

The Umonitor IoT device is a UtonomyOne component.

Umonitor provides pressure logging and alarms at network extremities (and other points of interest), and secure communications with the centralised Ucloud data management platform.

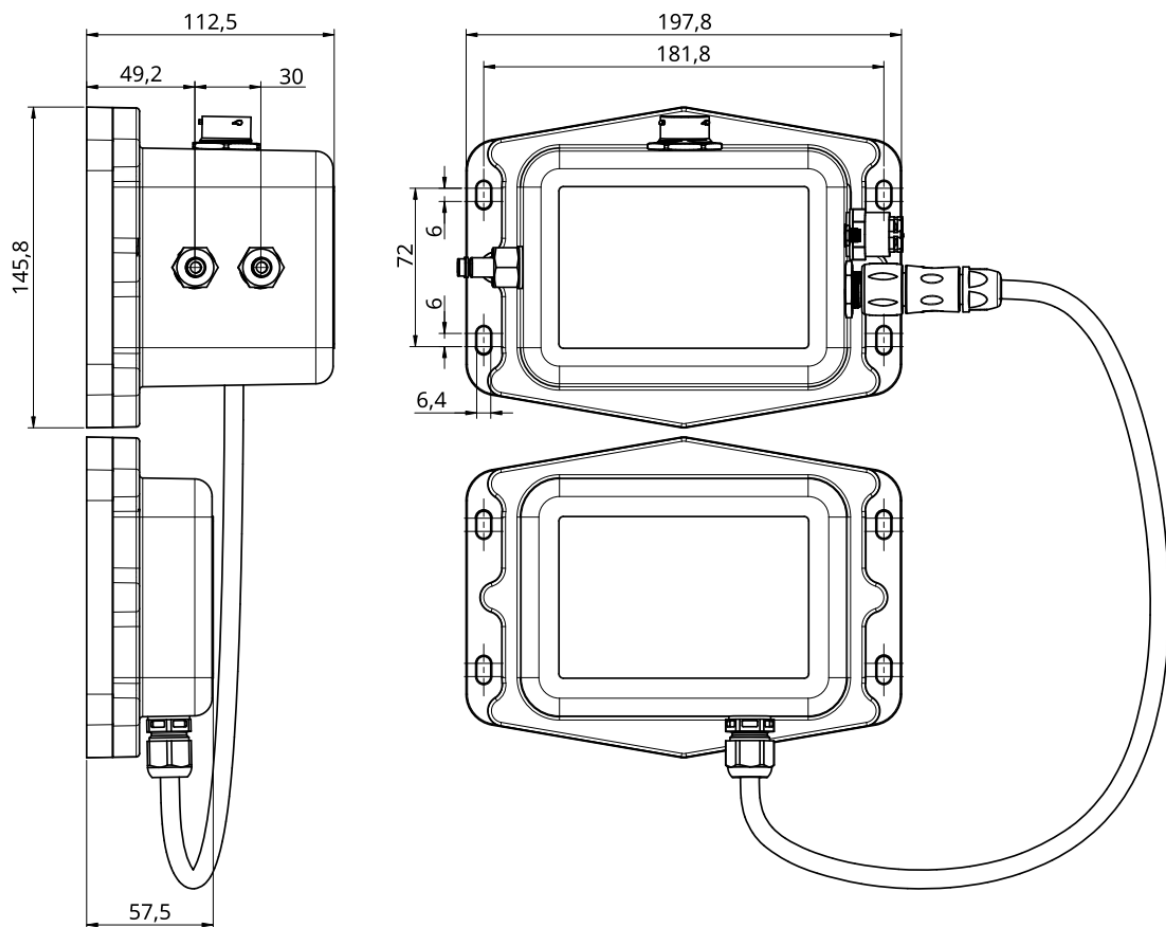
The Umonitor IoT device supports wireless cellular IoT (internet of things) connectivity using LTE-M1 and NB-IoT technologies across multiple frequency bands for resilient communications.

The Umonitor IoT device and the associated external battery pack are intrinsically safe, with ATEX & UKEX Zone 0 certification, for installation in hazardous gas environments, including hydrogen.

The device and battery pack enclosures are rated for submerged use at a depth of 1.5m for a duration of 30 days to allow installation into below ground environments.

Used in conjunction with ANR and Upredict, and the wider UtonomyOne system, the Umonitor IoT device facilitates integrated low point protection and autonomous set-point optimisation based on machine-learning-based predictive demand models.

Dimensions (mm)





Technical Specifications

Supply			
Approved Battery Packs	0800-000123-4T – IoT Battery Pack (Tadiran cells)		
Technology	Lithium Thionyl Chloride (Li-SOCl ₂)		
Battery Life	5 years based on typical operating environment and usage profile		
Communications			
		Frequency Bands	
Supported Cellular Types	LTE-M1	Cat-M1: B1, B2, B3, B4, B5, B8, B12, B13, B18, B19, B20, B25, B26, B28, B66	
	NB-IoT	Cat-NB1/NB2: B1, B2, B3, B4, B5, B8, B12, B13, B17, B19, B20, B25, B26, B28, B66	
Environmental			
Operating Temperature	-20 °C ≤ T _a ≤ 58 °C		
Storage Temperature	-20 °C ≤ T _a ≤ 60 °C		
Relative Humidity	10 ... 90% RH (non-condensing)		
Ingress Protection	IP68 (1.5 meters depth, 30 days duration) as per BS EN IEC 60529		
Mechanical			
Weight	1.0 kg (0800-000121-XX – Umonitor IoT) 1.1 kg (0800-000123-4T – IoT Battery Pack)		
Construction	Enclosure: ABS, Polycarbonate		
Pressure Connector(s)	Parker Rectus Series 21KA		
Antenna Connector	SMA female		
Approvals & Standards			
ATEX & UKEX	II 1 G, Ex ia IIC T4 Ga, -20 °C ≤ T _a ≤ 58 °C		
EMC Emissions	BS EN IEC 55011		
EMC Immunity Radio Equipment	BS EN IEC 61326-1, EN ETSI 301 489-1, EN ETSI 301 489-52		
Low Voltage	BS EN IEC 62368-1		
RoHS	BS EN IEC 63000, Compliant with exemptions 6 b, 6 c, 7 a, 7 c (I)		
Pressure Sensor Options	Low Pressure	Medium Pressure	Intermediate Pressure
Range	0 ... 300 mbarg	-1 ... 3 barg	-1 ... 10 barg
Accuracy	±0.15% FS	±0.15% FS	±0.15% FS
Total Error Band ⁽¹⁾⁽²⁾	±0.4% FS (0-100 mbar) ±1% FS (100-300 mbar)	±0.7% FS	±0.7% FS
Long Term Stability; typ. per year, non-cumulative	±0.1% FS	±0.1% FS	±0.1% FS
Resolution	0.01 mbar	0.12 mbar	0.34 mbar

⁽¹⁾ Requires zeroing at room temperature

⁽²⁾ Over compensated temperature range -20 ... 70 °C



Umonitor IoT

Ordering Information

Part Number	Description
0800-000121-XX	Umonitor IoT (300 mbar / 3 bar) Umonitor IoT (300 mbar) Umonitor IoT (3 bar) Umonitor IoT (10 bar)
0800-000123-4T	IoT Battery Pack (Tadiran cells)

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