

Grid Edge Power Quality Monitor

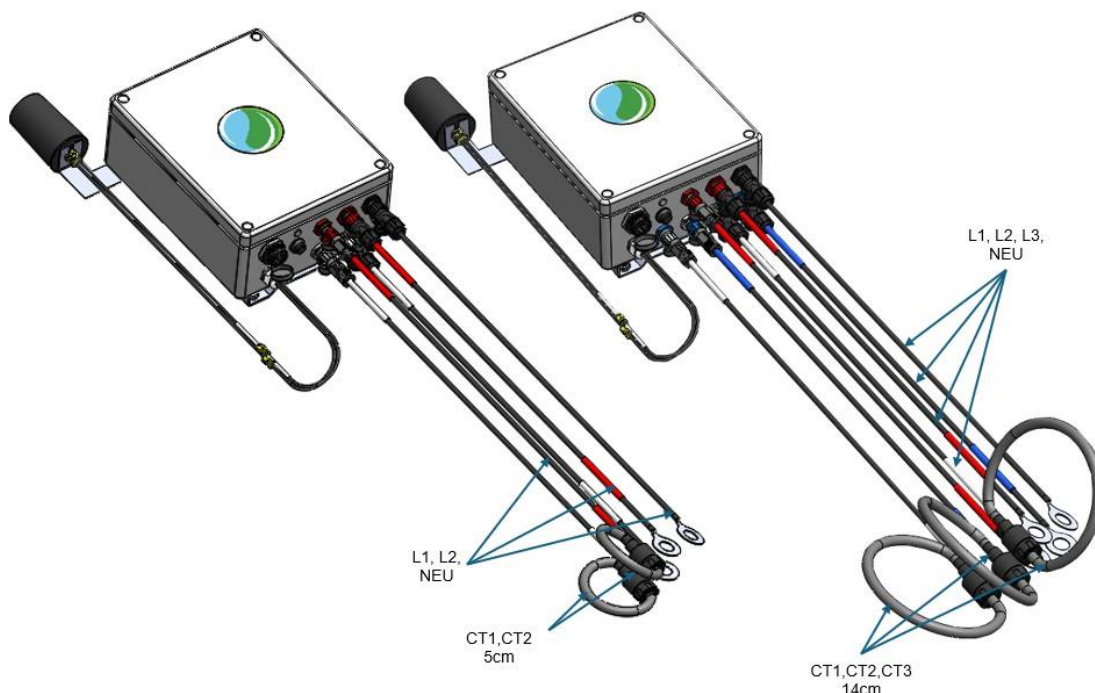
EdgeSensor (210 & 610 Series) - Grid and Transformer Monitoring Unit



FEATURES

Compact Smart EdgeSensor (210 & 610 Series)

- 210 Series – Single Phase Low Voltage Grid Logger
- 610 Series – Three Phase Low Voltage Grid Logger
- Active components all US brand – Microchip Technology, Atmel, Telit, Analog Devices, and SanDisk
- Monitors and Transmits Grid Full Power Quality Data. Grid or Transformer Status Monitoring Unit
- High Temperature Polycarbonate IP67 enclosure
- Monitors and Transmits Full Grid or Transformer Status including Full Power Quality Data.
- Full Alarms including - Power Outages and Recovery, Overloading, Overvoltage, Undervoltage, PF min., Reverse Current.
- Remote Firmware Upload to add upgrade Custom Options and modify Alarm Limits.
- Intelligent Software Control: Network compatible Unit that is Programmable over Internet.
- CoAP with DTLS security (AES128 encryption + SHA256 hashing) with option for private APN.
- Quick install Utility Grade Rogowski Current Transformers.
- Events Logging 90 days (4GB) – Store and Forward.
- EMI Electrical Noise Suppression Networks.
- Line Surge protected - IEC 61000-4-5 to 6KV / 3KA
- Data Comms – Cellular (4G Cat-1), *Wired LAN (Ethernet standard – IEEE 802.3)* and LoRa Mesh for redundancy.
- Unit Ingress Protection: IP67 / UL Type Rating 4
- IEC 61010-1, 61010-2-030
- Patents Pending



Grid Edge Power Quality Monitor

EdgeSensor (210 & 610 Series) - Grid and Transformer Monitoring Unit



DESCRIPTION

The EdgeSensor (210 & 610 Series) is a Compact Grid Edge Power Quality Monitor that incorporates Edge Electronics Power Quality Grid Edge Technology and using all American brand active chipset - Microchip Technology, Atmel, Telit, Analog Devices, and SanDisk. It is an intelligent, software-driven, full Power Quality Grid Monitoring Sensor, installed on Pole or Pad Transformers that monitors Status and Alarms. The EdgeSensor (210 & 610 Series) is specifically designed to be an Intelligent Network Device that monitors and transmits secure full Power Quality Data with additional Status Alarms for Grid Edge Applications and remote Software updates for additional Custom Features and setting Alarm Limits.

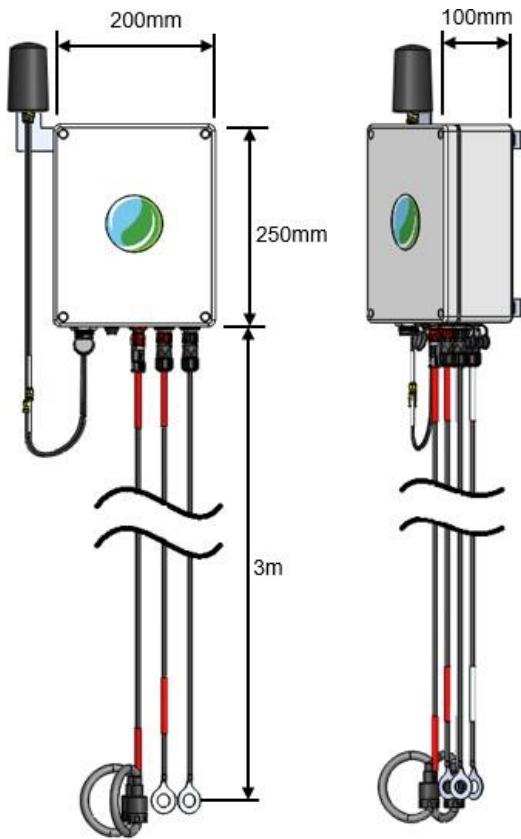
Electrical Specifications	
Available Configurations	210 Series - 1 Phase, 2 Wire configurations 610 Series - 3 Phase, 4 Wire configurations Can accommodate Single-Phase and Three-Phase (Wye and Delta)
Electrical Frequency	50/60Hz
Rated Voltage	100 – 277 Vac (L1-to-N, Supply Voltage) 170 - 480 Vac 4-Wire/3 Phase Network (Line-to-Line) Plus Neutral for power quality data
Absolute Maximum Voltage Rating	300 Vac (L1-to-N) 520 Vac (Line-to-Line)
Current Full Scale Range	210 Series - 800 Amps RMS 610 Series - 4000 Amps RMS
Lightning Strike	Power line surge protected - IEC61000-4-5
Voltage Accuracy	± 0.5% with Manufacturing Sensor Calibration
Power & Energy Accuracy	± 0.5% + 0.2% of Current Full Scale with Manufacturing Sensor Calibration
Power Factor Accuracy	± 1 degree
Power Quality Measurements	Voltage, Current, Power, Energy, vTHD, iTHD, individual harmonics
Reporting Interval	1min transmit time
Back Up Power/" Last Gasp" Hold-up Time	60 seconds
Alarms and Event Logging	
Grid Power Quality Alert	Power Outage, Power Restore, Current Imbalance, Maximum iTHD, Reverse Current Flow, Low Power Factor Voltage Imbalance, Maximum vTHD, Over-voltage, Under-voltage, Voltage Swell, Voltage Sag, Voltage Flicker Over-frequency, Under-frequency
Transformer Asset Management	Overload (Power), Peak demand Alert, Over-current, Fault Current Reading, No Current Reading No Voltage Reading
Measured Parameters	V, I, PF, kW, kVA, kVAr, Energy, vTHD, iTHD, up to 21 st harmonics
Connectivity	
Communications Options	Cellular Communications with embedded CAT-1 modem, Option for Private APN Wired LAN Ethernet standard – IEEE 802.3 LoRa Mesh for data communication redundancy.
Communications Architecture	Periodic reporting to a central IoT Cloud server On demand reporting to a DNP3 SCADA system
IoT Communications	Push notification on Alerts CoAP with DTLS security (AES128 encryption + SHA256 hashing)

Grid Edge Power Quality Monitor

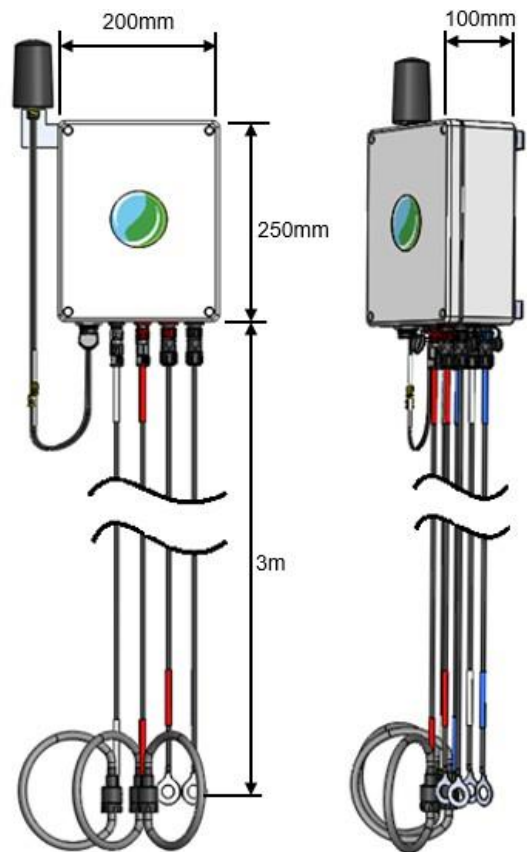
EdgeSensor (210 & 610 Series) - Grid and Transformer Monitoring Unit



Mechanical and Environmental	
Dimensions	L200 x W250 x D100 mm
Weight	2.6kg (TBA)
IP Rating	IP67 / UL Type Rating 4
Power Supply Button	Phase 1 Power Supply Button to initialize the unit
Operating Humidity	0-95% RH non-condensing
Operating Temperature	-20°C to 60°C
Short Time Maximum Temperature	70°C for 1 hour
Operating Temperature Tested by Design	-40°C to 60°C
Storage Temperature	-40°C to 80°C
Operating Altitude	2000m



EdgeSensor (210 Series)
CT 3.6cm, 3M Length



EdgeSensor (610 Series)
CT 14cm, 3M Length

EdgeSensor (210 & 610 Series) with Detachable Accessories Dimensions

Grid Edge Power Quality Monitor

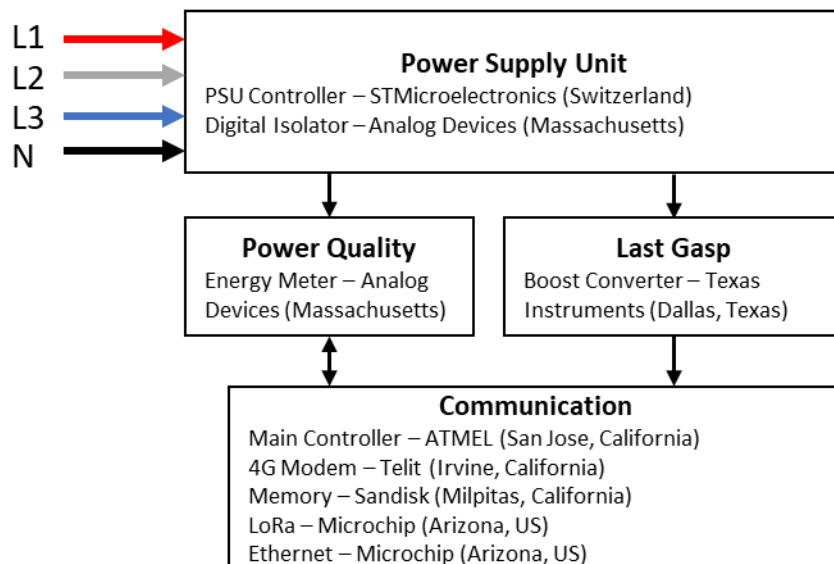
EdgeSensor (210 & 610 Series) - Grid and Transformer Monitoring Unit



EdgeSensor (210 & 610 Series) Parts List Options for Detachable Sensors

Parts/Accessories	Inclusions
Current Sensor	
Sensor Length	3m detachable
Internal Diameter (mm/in)	Single Phase 210 Series – \varnothing 50mm/1.97in Three Phase 610 Series - \varnothing 140mm/5.5in
Voltage Sensor	
Sensor Length	3m detachable
Termination	Ring terminal (16mm bolt diameter)
Sensor Wire Size	AWG 16
Communications	
Communications	4G CAT-1 With LoRa Mesh backup Ethernet standard – IEEE 802.3
Mounting	
Mounting Type	Pole mount belt & bracket Magnetic Pad mount

Architecture Block Diagram



Contact:

EDGEZERO PTY LTD

<https://edgezero.co/>