Technical Support
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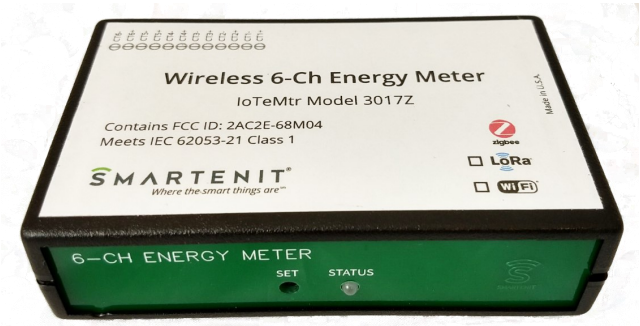
Product Brief

Wireless Smart Multi-Channel Energy Meter

IoTeMtr Model 3017Z (Zigbee), 3017W (WiFi) and 3017L (LoRa)

Applications

Use the IoTeMtr to wirelessly monitor the electrical parameters of any type of load including electrical distribution panels and heavy machinery. Whether single phase, split phase, or 3-phase 4-wire (3P4W), the IoTeMtr can be set up to address most common measuring scenarios cost-effectively and easily. Parameters that can be measured include voltage, frequency, current, power, plus forward or reverse energy measured as kWh or Kvarh. Wireless communication is via Zigbee and/or WiFi or LoRa.



The IoTeMtr can be configured for various current levels as its six current sampling channels are set up for current transformers (CTs) with a 333mV full range output. Smartenit offers a wide range of CTs to satisfy most needs.

Features and Benefits

- Communicates by default via Zigbee, a wireless RF protocol that has rapidly become the standard for energy management. Supported by Smartenit gateways, cloud services and apps, plus many other 3rd party hubs.
- Optional connectivity via WiFi through a router, or via LoRa for long range. Both options are fully supported by the Smartenit cloud services and apps including direct streaming to a Kafka broker WiFi version only)
- Active energy accuracy better than IEC 62053-21 Class 1
- Measures both imported (forward flow) and exported (reverse flow) energy
- Measures Current THD% on all phases
- Measures Line to Neutral voltage on 3 inputs for 3-phase measurements, on two channels for split-phase, or on a single channel for 1-phase setups
- Small size and convenient connectivity means simple and low cost installation at the point of use.

Electrical Specifications	
Operating Voltage	95-270 VAC
CT Input range	0-333 mV
Operating power:	< 0.25 Watts.
Surge protection:	MOVs rated for 300V
Connections:	Detachable screw terminal strip accepts 24AWG to 18AWG wire for CTs and 4pin Molex for AC input.
Accuracy:	V, A: 0.5%; F: 0.2%; PF: 1%; W, VA, Var, VARh: 1%; Wh: Class 1; THD: 1% up to 31st harmonic
Mechanical Specifications	
Size	3.825” L X 3” W X 1” H
Weight	3.5 Oz.
Mounting:	Indoor or in suitable outdoor enclosure
Environmental Specifications	
Temperature	-25—50 ^{0}C (-13—122 ^{0}F)
Humidity	5—80 %RH non-condensing

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OTHER SPECIFICATIONS	
Indicators	Dual color LED (Red/Green): Multi-function to indicate network join status, binding mode, fault conditions.
Pushbutton	Multifunction pushbutton. Used for joining network, permit joining, CT configuration, OTA request, etc.
Metering Accuracy	Metering circuitry supports IEC61036/60687 and IEC62053-22/-23. Contact Smartenit for special calibration needs.

ZIGBEE INFORMATION	
Edition	ZB3.0 Profile 0x0104
Manufacturer ID	0x1075 Compacta International, Ltd.
Model String	Model 3017Z: “IOTEMTR-Z”
Device ID	0x0501 (Metering)

ZigBee Device Details

End Point	Cluster ID	Cluster Name	Client/ Server	Cluster Description
1	0x0000	Basic	Server	Attributes for determining basic information and setting and enabling device
1	0x0003	Identify	Server	Attributes and commands for putting a device into Identification mode
1	0x0019	OTA Upgrade	Client	Provides a standard way to upgrade devices in the network via OTA messages.
1	0xFF04	Electrical Measurement	Server	Provides mechanism to retrieve electric power usage for channels 1-3
2	0xFF04	Electrical Measurement	Server	Provides mechanism to retrieve electric power usage for channels 4-6

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