



wattwatchers
DIGITAL ENERGY

Auditor 6W Specifications

April 2017 - Version 1.1

Version control

This document contains technical and configuration specifications for all Auditor 3M and 6M options.

Version 1.0	Initial release - February 2017
Version 1.1	Updated document layout

- WiFi-connected real-time energy metering and control
- 6 channels of Class 1 (revenue-grade) measurement
- Ultra-compact 35mm DIN package
- Enterprise-class performance - suitable for domestic, commercial and industrial use
- Device Management System (DMS) for over-the-air (OTA) configuration & fleet management
- Simultaneous support for two hosting services
- Current and future options support load control and gateway functions
- Plug compatible with 3G/LTE, Ethernet and LoRa versions
- Onboarding application (2Q17)



AUDITOR 6W

Standard inclusions	Within enclosure: 6 meters, power supply, WiFi antenna Outside enclosure: Current Transformers or Rogowski coils, Antenna
Communication	Built in WiFi
Antenna	Internal
Power Supply	Built in (operates from phase 1) universal power supply
Meters	Auditor 6W supports six channels, each separately reported
Availability	May 2017
Hosting	GridAnalytics (SME energy management) SolarAnalytics (solar monitoring and diagnostics) Wattwatchers (API, applications)
Device Management	Wattwatchers supports a range of device management features including <ul style="list-style-type: none"> • Firmware updates • Remote network diagnostics • Configurable reporting • Tracking of manufacturing and calibration processes • Enrolment API (2Q2017) • Installation verification, OTA correction of CT “wrong phase” errors
Measurement interval	5 to 150 seconds
Energy logging	5 minute intervals; servers request logged data
Logged values	Real and reactive energy, min and max voltage and current, frequency
Logging period	30 days of 5 minute data for 6 channels 60 days of 5 minute data for 3 channels (i.e. installed with only 1 set of 3 CT's) The log is kept current, and used after an operational device has been offline.

Reporting interval	5 to 150 seconds, typically 30 seconds
Report contents	Configurable (real, reactive energy, voltage, current, frequency)
Data volume	200MB/month (5 second data)
Protocol	Wattwatchers (see WW-AN002)
Voltage connections	Four pin connector supports three phases and neutral Phase 1 and Neutral are required to power the device and operate channels connected to phase 1 Phase 2 and Phase 3 are for measurement only.
Current sensing	AUDITORs use Current Transformers and Rogowski coils: <ul style="list-style-type: none"> - Standard CTs 60A, 120A, 400A, 600A are field interchangeable - Rogowski coils require factory configuration
Configuration	WiFi Access Point and web page for setting SSID and Passcode
Networking	One or two hosting services Time server DMS (Device Management System)
Battery strategy	Auditor code can include an https server and API that supports a connection from a client, usually from within the LAN. "Discovery" is by MDNS. The client may be a battery management system.



Electrical characteristics

Measurement configuration	Voltage	1, 2 or 3 phase (Neutral required)
	Current	CT
	Mode	Fundamental only / all harmonics
Measurement accuracy	Current and voltage	Meter is 0.1%. CT's supplied reduce this to 0.5% = 1%
	Power	Real power: 1 % of reading from pf 0.8 leading to 0.5 lagging: Reactive power: 2% below 0.5 lagging
	Frequency	100 ppm
	Power factor	2 % from 0.8 leading to 0.5 lagging
	Active energy	Class 1 as defined by IEC 62053-21
	Reactive energy	Class 2 as defined by IEC 62053-23
Input-voltage characteristics	Measured voltage	85 to 265 V AC
	Permissible overload	1.15 Un, 1 minute
Input-current characteristics	Standard CT ratings	60A, 120A, 400A, 600A, Rogowski coils
	Internal burden	2.7 ohms (same value used for all standard CTs)
	Permissible overload	300 mA continuous
	CT Connections	Not isolated (Neutral referenced)
Internal Power		0.6 W Single Phase (P1)

Mechanical characteristics

Weight		0.3 kg
iIP degree of protection		IP50 (front display) (higher in cabinet)
Dimensions		90 x 66 x 35 mm (2 DIN pole)
Connection	Voltage	6 positions / 4 connection 5.08 mm pitch FCI part 20020007-H061B01LF
	Current - 6 meter version	8-way 3.81mm pitch FCI part 20020004-D061B01LF

Environmental conditions

Operating temperature		-30 °C to +85 °C
Installation / pollution category		III / 2
Electromagnetic immunity	Electrostatic discharge	Level III (IEC 61000-4-2)
	Immunity to radiated fields	Level III (IEC 61000-4-3)
	Immunity to fast transients	Level IV (IEC 61000-4-4)
	Immunity to impulse waves	Level IV (IEC 61000-4-5)

Safety

AS60950 Level III

Communication

WiFi	802.11b/g/n. +18dB transmit power -93dBm Rx
Antenna	Internal

Network

WLAN (production network)	Channel	Auto
	Security	WPA2-PSK (not WPA enterprise or WEP)
	Antenna	Auto diversity (internal, optional external - 2Q17)
Configuration Access Point	SSID	AuditorXXX (serial no digits) pw digitalenergy
	Configuration Page	auditorsetup.com

Servers

Hosting Management	2 DMS
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Power Quality

Frequency Measurement	45 to 65 Hz, 0.01 Hz resolution
Voltage	80-265V in 0.1V resolution

Compliance Certificates

RMC	Pending
Safety	AS/NZ60950.1:2015 (pending)
Conducted Emissions	AS/NZS CISPR 22:2009 ClassB (pending)
Radiated Spurious Emissions	AS/NZS 4268:2008 +A1:2010 C 8.2 & 9.1 (pending)
Certificate of Suitability	Pending

