

Monitoring hardware

The enterprise-grade Auditor 6M by Wattwatchers is renowned for being one of the most compact, flexible and cost-effective electricity monitoring devices in the market.

6M - Real-time energy monitoring for six circuits with built-in 4G/3G connectivity

- Real-time monitoring of up to six electrical circuits (up to 600A per phase) with embedded cellular communications (4G/3G).
- Class 1 active energy (based on IEC 62053-21) measurements in instantaneous (every 5-30 seconds) and long-term (every 5 minutes) timeframes with 25-day on-device logging.
- Multi-carrier communications auto-selecting the strongest local network. Compact, DIN-rail mounted (2 poles, 35mm wide).
- RESTful API for easy access to monitoring data and switching functions. Over-the-air management for firmware updates and remote installation error correction.
- Suitable for residential, commercial, and industrial monitoring in various environments, including solar monitoring, home energy management, sub-metering, and energy utility services. Includes Wattwatchers software for streamlined installation and operation.
- Switching control (6M+3SW) and billing grade (6M+One) options are available



3RM - Real-time energy monitoring for large loads (up to 3000A per phase)



- The 3RM is similar to the 6M, providing real-time cellular electrical monitoring. Its key difference is it's built for higher amperage circuits, up to 3000A per phase.
- Best option for commercial or industrial use cases.

Datasheet

ELECTRICAL SPECIFICATIONS (6M, 6M+3SW, 6M-MB, 3RM)

POWER SUPPLY CHARACTERISTICS		
Input-voltage characteristics	Measured voltage	80-265V AC
	Permissible overload	1.15 nominal voltage for up to 1 minute
Power consumption		1.2W Single Phase (through P1/N terminals)
Power tails	Cabling	600V 18 AWG 7/0.25mm2 tinned annealed copper bunch. Complies with UL758, UL1015 105C and CSA C22.2 Number 127
Energy measurements	Short energy	Configurable from 5-295 seconds Push to server - best efforts delivery (QOS0) Standard setting is 30 seconds Short Energy contents: real energy, reactive energy, voltage, current, frequency, power factor.
	Long energy	5 minute interval data - QOS1 delivery under normal communications operation - logged on device; Long energy contents: real energy, reactive energy, min/max voltage, min/max current, power factor.
	Internal logging	Up to 25 days on-device logging for Long Energy of 6 channels (6M) or 3 channels (3RM); Data stored in non-volatile memory when communications are intermittent or unavailable for up to 4 hours and transmitted automatically when communications are restored. Data may not be stored when cellular communications are unavailable for 4 hours or more.
	Voltage	Single Phase Two Wire (1P2W), Two Phase Three Wire (2P3W) or Three Phase Four Wire (3P4W) systems. 80-265V, 0.1V resolution.
	Current	Split-core Current Transformers (6M)
		Rogowski coils (3RM)
Measurement accuracy	Active energy	Class 1 based on IEC 62053-21
	Reactive energy	Class 2 based on IEC 62053-23
	Frequency	45 to 65 Hz, 0.01 Hz resolution

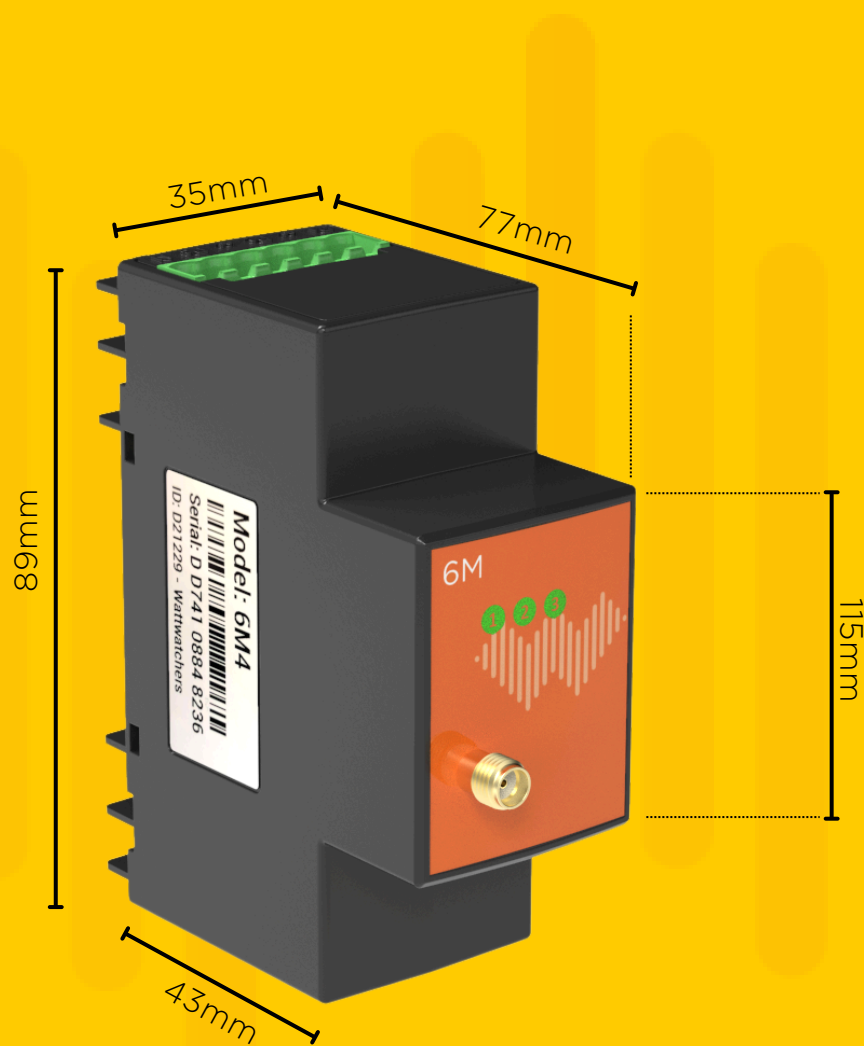
COMMUNICATIONS		
Cellular communications	Type	4G LTE, 3G - See regional variants table
	SIM	Factory-fitted internal micro-SIM (not replaceable in field)
	Auto-carrier selection	Automatically selects the best compatible network based on signal strength at the installation location.
	Global carrier support	Support for more than 130 countries. In Australia: Telstra, Optus networks.
	Antenna	SMA connector. Supplied with direct-connect multi-band antenna. Optional external antennas can be used to improve signal strength.

REGIONAL VARIANTS		
Australia	3G	Australia, NZ., Korea, Taiwan, Philippines
	4G	UMTS/HSPA+: Five band 800/850/900/1900/2100MHz LTE (AU): QuadBand 700/900/1800/2100MHz
EMEA	3G	E-REL2
	4G	Triple-Band 3G: 900, 2100MHz Penta-Band FDD-LTE: 700, 800, 900, 1800, 2100 MHz
USA		Currently not supported

MECHANICAL CHARACTERISTICS		
Weight		0.3kg
IP degree of protection		IP50 (front display) when installed in switchboard
Dimensions		89 x 77 x 35 mm (2 DIN poles)
Mounting		35mm DIN rail (TS35)
Connections	Voltage	6 position 4 connection screw terminal 1.0-2.5mm² (12-24 AWG)
	Current	6 position screw terminal 0.5-1.5mm² (16-26 AWG)

Dimensions

(6M, 6M-MB, 6M-3SW and 3RM have the same dimensions)



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Current sensors

Wattwatchers offers a wide range of current sensors from 100mA split core monitoring CTs, 5A split core billing CTs, and Rogowski coils.

100mA BLACK split core monitoring CTs for the Auditor 6M, 6M+3SW, and 6M+MB



RATING	Opening diameter (area)	L x W x H (mm)
60A	10mm (78mm ²)	26.5 x 23.5 x 39.5
120A	16mm (200mm ²)	32.0 x 31.5 x 46.0
200A	25mm (490mm ²)	34.4 x 45.5 x 65.5
400A	25mm (490mm ²)	18.5 x 63.5 x 65.5
600A	36mm (1017mm ²)	38.4 x 57.0 x 81.5
*6M and variants support up to six 100mA black CTs		



5A YELLOW split core billing CTs for the CT-connect PMC-340-BB, the NMI-approved hardware of the Auditor 6M+One



RATING	Opening diameter (area)	L x W x H (mm)
600A	36mm (1017mm ²)	38.4 x 57.0 x 81.5
1500A	80mm (5026mm ²)	28.0 x 140.0 x 180.4
*PMC-340-BB supports up to six 5A orange billing CTs		



3000A Rogowski coils for the Auditor 3RM



RATING	Internal diameter
3000A	90mm
	200mm
	290mm
*3RM supports up three 3000A Rogowski coils	



Datasheet

ELECTRICAL SPECIFICATIONS	100mA BLACK monitoring CTs					5A YELLOW billing CTs		Rogowski coil
Rating	60A	120A	200A	400A	600A	600A	1500A	3000A
Turn ratio	1:750	1:1200	1:2000	1:4000	1:6000	5:600	5:1500	N/A
Current ratio	60A/80mA	120A/100mA	200A/100mA	400A/100mA	600A/100mA	600A/5A	1500A/5A	N/A
Output level	N/A					N/A		100mV/1kA
Accuracy @RL≤1Ω	0.5%							
Dielectric withstanding voltage (Hi-pot)	2.5kV/1mA/1min, 5kVp			4kV/1mA/1min, 5kVp	2.5kV/1mA/1min, 5kVp	2.5kV/1mA/1min, 5kVp		2.5kV/1mA/1min, 5kVp
Ingress protection	IP67					IP67		IP67

MECHANICAL SPECIFICATIONS	100mA BLACK monitoring CTs					5A YELLOW billing CTs		Rogowski coil
Rating	60A	120A	200A	400A	600A	600A	1500A	3000A
CUP	PBT	PA66 (UL94-V0)	PA66	PC/ABS (UL94-V0)	PA66	PA66	PA66	
Cable type	UL21885 24 AWG*2C OD:3.6 grey jacket PVC wire					UL21885 16 AWG*2C OD:3.6 grey jacket PVC wire		22 AWG shielded
Cable length	1.8m					1.8m		3.0m
Weight	60g	100g	240g	185g	300g	300g	600g	500g
Rated temperature	-40° to 105°C					-40° to 105°C		-40° to 80°C
Ingress protection	IP67					IP67		IP67

CURRENT SENSORS	RELEVANT CERTIFICATIONS
100mA BLACK monitoring and 5A YELLOW billing split core CTs	EN61000-6-3:2007/A1:2011/AC:2012 EN61000-6-1:2007 EN61000-3-2:2014 EN61000-3-2:2013 EN61869-1:2009 EN61869-2:2012
3000A Rogowski coils	EN61010-1:2013 EN61010-2-032:2012 EN50581:2021 2015/863/EU 2011/65/EU Low voltage directive (LVD) (2014/35/EU)

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