# The Smart Monitoring Hardware

Clipsal Cortex Smart Monitor features

- Fast five step app-enabled install

- Robust real-time energy monitoring of major appliances across six circuits

- Suitable for energy monitoring in one, two and three-phase homes, with or without solar.

- Automatically-selects the strongest cellular network for the best performance.

- Reliable data with 27-day Internal data logging capacity and automatic recovery from communications outages.

- Compact 35mm wide (2 Poles) DIN-rail mount for space-constrained boards.

- No communications cabling. Supports homes without a permanent internet connection.

- 1% Accurate. 5 year Warranty
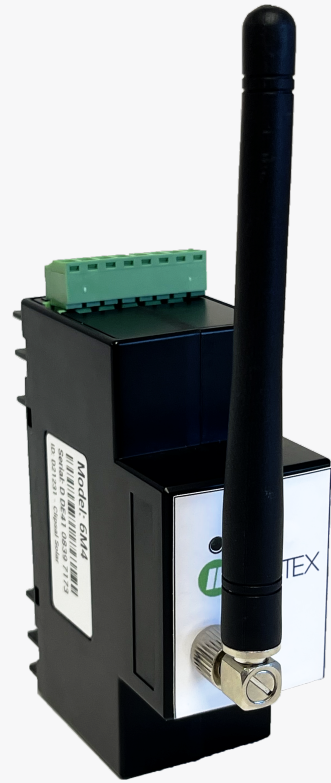
Why cellular communication is best

Fast installation

Transmits data once powered up. No wasted time with network passwords and configuration.

4G

Robust connectivity

Reliable 4G avoids unpredictable home WiFi and reduces your support load.

Best possible coverage

Multi-carrier SIMs auto-select the strongest signal available (Optus, Telstra and Vodafone)

Use Clipsal Cortex in

New solar PV systems   Solar PV repairs

Hotwater installation   Board upgrades

Air-conditioning installation

Australian made and supported

The Clipsal Cortex Applications and Smart Monitoring device are Australian made and designed. Technical support for installers is based in Australia.

Electrical specifications

Electrical Properties

Current Reading Capability	
Number of CTs	6 split-core CT's per meter
Standard CT Size	60A, 10mm internal diameter
Other compatible CTs (ordered separately)	120A, 400A, 600A

Energy Measurement	
Current and Voltage	<0.5% - Class 1
Active energy	<1%, Class 1 (IEC 62053-21)
Reactive Energy	<2%, Class 2 (IEC 62053-23)
Logging capacity	27 days internal logging of 5 minute interval data. Data stored in non-volatile memory and transmitted automatically when communications are restored.
Instantaneous measurements	real, reactive energy, voltage, current, frequency, power factor.
Five-minute interval data	real/reactive energy, min/max voltage, min/max current, frequency, power factor.
Reporting frequency	5 seconds

Compatible Grid Voltages	
Number of phases measured	1-3 phase plus neutral
Compatible Grid Voltages	50-280V AC
Compatible Grid Frequencies	45 to 65 Hz

Power Consumption and Protection	
Device Consumption	0.6W (Supplied by P1)
Protection	Internal Fuse
Circuit Breaker	Maximum Rating 16A

Communication

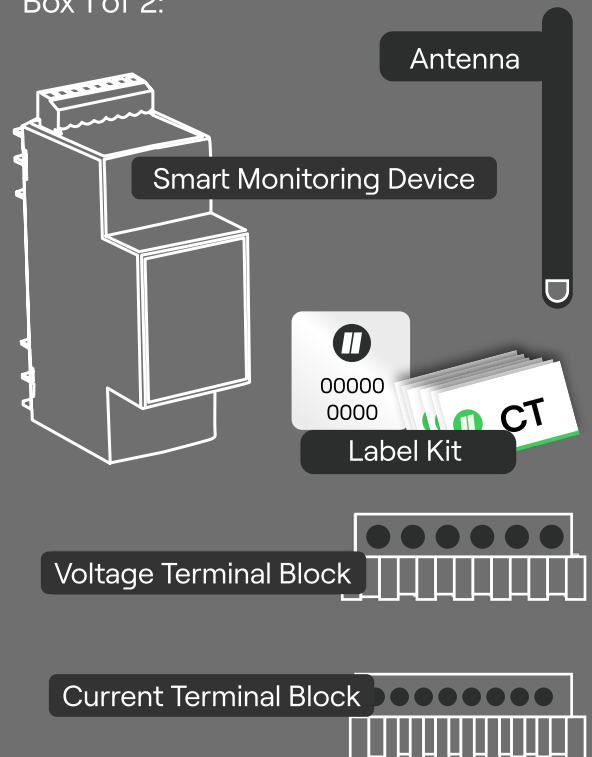| Communication	
Cellular	4G, 3G, Pentaband, LTE
Auto-carrier selection	Automatically selects the best compatible carrier based on signal strength (in AU: Telstra, Optus and Vodafone
Antenna	SMA connector. Supplied with direct-connect multi-band antenna. External antennas can be used to boost signal strength.

Certifications

Certifications	
Safety	AS/NZ 60950.1:2015
Emissions	AS/NZS CISPR 22 (2009+Amt1 2010)
Immunity	CISPR 24: 2010, CISPR 32:2015
Related Spurious emissions	AS/NZS 4268:2008 +A1:2010 C 8.2 and 9.1
ARPANSA RP3	AS/NZS 2772

What's in the boxes?

Box 1 of 2:

Antenna

Smart Monitoring Device

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CT

Label Kit

Voltage Terminal Block

Current Terminal Block
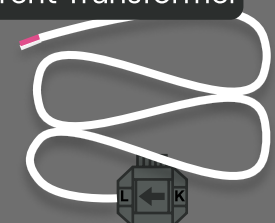
*Comes Plugged Into Meter

Box 2 of 2:

6x Current Transformer

*Second Box

Mechanical and Environmental Properties

Mechanical

Mechanical	
Mounting Method	DIN (2 poles)
Weight	<0.3kg
Dimensions	35 x 90 x 66mm
Length of CT Cable	1.8m (extendable) 2 x 24AWG – white or grey jacket PVC wire

Environmental	
IP Rating	IP 50
Operating temperature	–10 deg C to +55 deg C

Dimensions

Front   Side
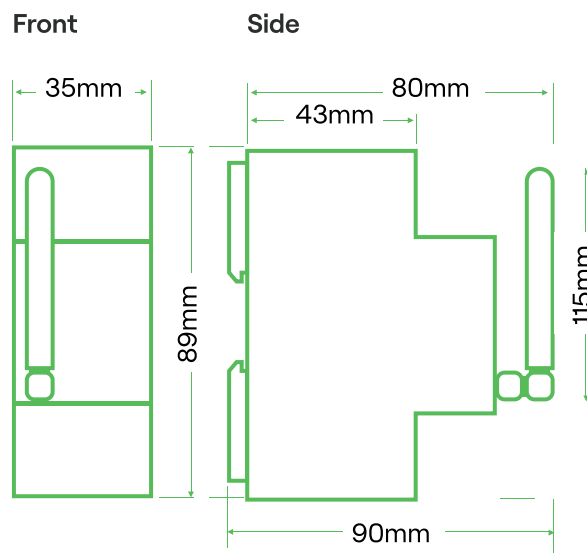
About Clipsal Cortex

Electricity has been complex for far too long. Australians are facing some of the highest energy prices in the world with no choice but to pay costly bills. That's where we step in to challenge the status quo. We're here to make energy simple and put you back in control to deliver great energy technologies and service to your customers, fuelled by insights from real-time data.

Schneider Electric Ventures

Clipsal Cortex is backed by Schneider Electric Ventures, who are committed to leading the digital transformation of energy management and automation, the company has invested in numerous start-ups challenging the energy status quo.

Support

- Knowledgebase online
- Request support online
- Priority support for issues encountered during installation

Technical Support
(02) 8310 9220

support.clipsalcortex.com