

New Metering Tests & Check List

Site: Suburb Section Block Unit

This document is designed to ensure only **Safe** and **Compliant** electrical installations are authorised for connection to the distributors electricity network. Below is a list of **Mandatory** inspection tasks that are required to be checked before an electrical inspector can authorise a domestic electrical installation for connection to the electricity network. Although this document is designed for domestic installations the principles can transfer to multiple residential and commercial installations

Instructions

Tick the box at each applicable step to confirm the task is complete and compliant.

Cross the box at each applicable step that fails and/or requires rectification.

Where the task has options, please circle the compliant option. Fuse? Circuit Breaker? – Other?

Where a step is Not Applicable, please put N/A in the box.

This is a NEW installation, or

This is a Repair / Replacement Meter.

(Note: Network neutral link, SPD and MPD may not be required).

It must be confirmed that;

1. The installation safe to inspect.

- a. Use proximity voltage tester to ensure board is not live.
- b. Use low impedance voltage meter to detect live components.
- c. General site safety; approaches to board to be clear.

2. The Service Protection Device (SPD) is installed.

- a. Fuses (base / holder) are installed, wiring is terminated.

3. There is a network neutral link installed.

- a. Neutral to be check to earth to ensure correct polarity. (IE It has not been connected to the network active)
- b. Every **new** installation is have a network neutral link next to the Service Protection Device (SPD). Note: For new installations the network neutral cannot be directly connected to the meter, it must be terminated on a neutral link.
- c. Where the POA is at the rear of the house,
 - i. the network boundary is at the POA
 - ii. the services fuses no longer act as the meter isolator, and a metering isolator is required in the meter box next to the meter,
 - iii. at the meter box, a separate metering neutral link will be required. The MEN link can also serve this function but is not the preferred method.
- d. Existing installations that had a like for like meter change only and no MB upgrade, the network neutral link maybe omitted. See examples for more detail.

4. There is an installed neutral wire to give continuity from the network neutral to the installation MEN bar/link.
5. The Actives are wired / pre-wired from the service fuse to the interval meter location.
a. The switch board installing electrician is responsible for this.
6. The meter neutral size is correct to AS/NZS3008. (Min is 6mm² for referenced neutral meters on an 80A service fuse).
a. The switch board installing electrician is responsible for this.
7. Meter Box enclosure is earthed and continuity is confirmed to earth electrode.
a. Minimum earth size is 6mm²
b. On a Repair you may need an independent earth to confirm
8. Any exposed wires on the front panel are not single insulated / unsheathed.
a. The switch board installing electrician is responsible for this.
9. The Actives are wired / pre-wired from the meter to the load centre / Switch Board.
a. The switch board installing electrician is responsible for this.
10. Where there is no meter installed, the polarity is correct in the pre-wiring.
a. The switch board installing electrician is responsible for this.
11. Where there is a meter installed, the polarity for the installation is tested and confirmed as correct.
a. The metering installer is responsible for this.
12. There is a Meter Protection Device (MPD) installed. Fuse? – Circuit Breaker? – Other?
a. The SPD & MPD can be the same device.
b. The SPD in a remote POA does not meet this requirement.
c. The switch board installing electrician is responsible for this.
13. There is a meter isolator installed. Fuse? – Circuit Breaker? – Isolator?
a. The SPD, MPD and meter isolator can be the same device that performs all functions.
b. Where the SPD is used for isolation, it must be adjacent to the meter, so a SPD in a remote POA does not meet this requirement.
c. The switch board installing electrician is responsible for this.
14. All labelling is correct and complete
15. Asbestos panel boards have a warning label, they are cleaned and sealed.
a. Where an asbestos meter panel board is in place, it is to be noted on the CES form in the comments section.
b. *This would be considered a serious work place safety breach if it is not correctly labelled and on the CES form.*
c. See examples for required warning label.
16. All link covers are installed correctly.

- 17. The meter panel is installed correctly
 - a. All bolts through meter panel are cut back. (No long protruding bolts or screws)
 - b. All unused holes are filled to prevent access to rear.
 - c. Panel door retaining bolt/screw in place to prevent access to rear


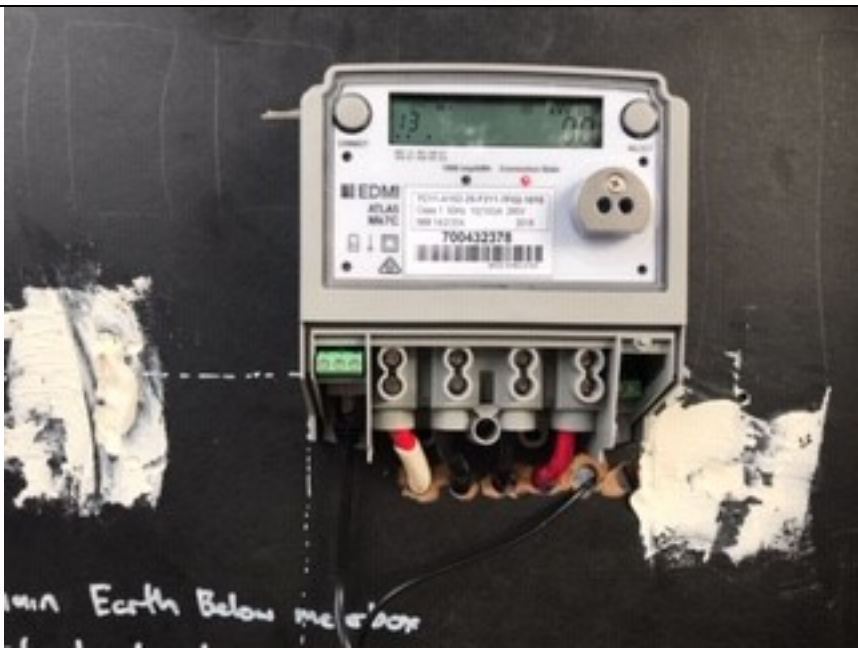
- 18. Connection authorisation sticker placed in Meter Box for new connections.
 - a. Repairs or MB upgrade this is not required.

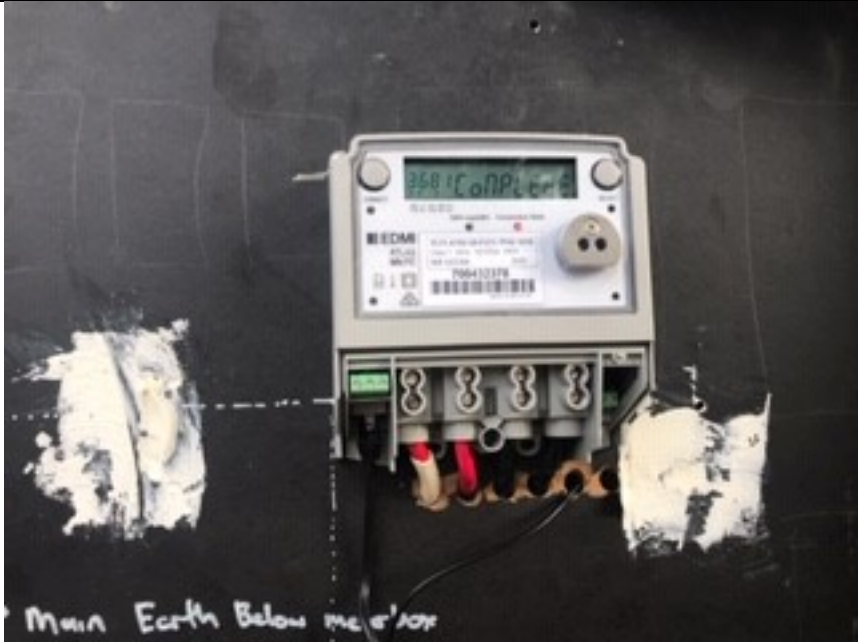

- 19. Installation has been left safe.
 - a. Use proximity voltage tester to ensure Meter Box is not left live.

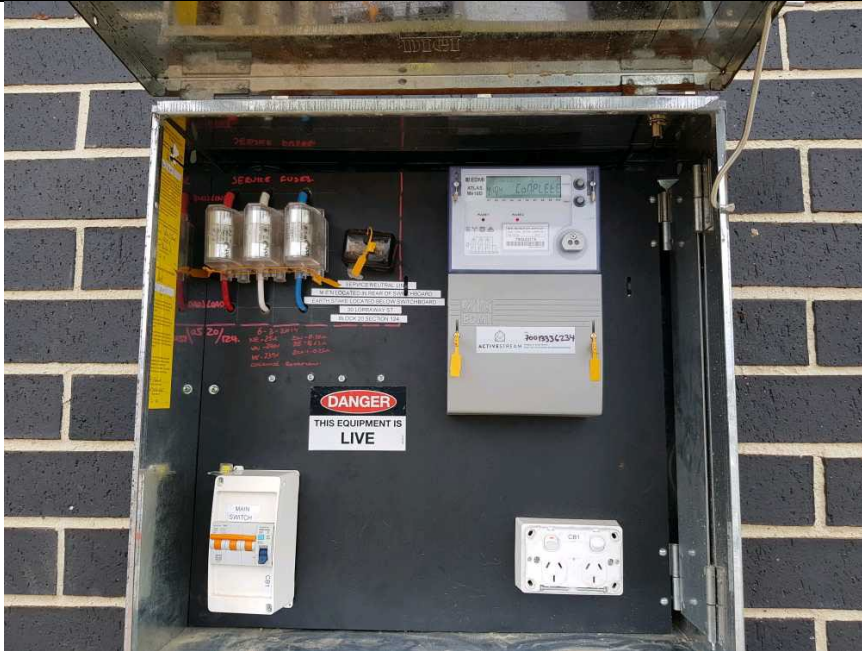
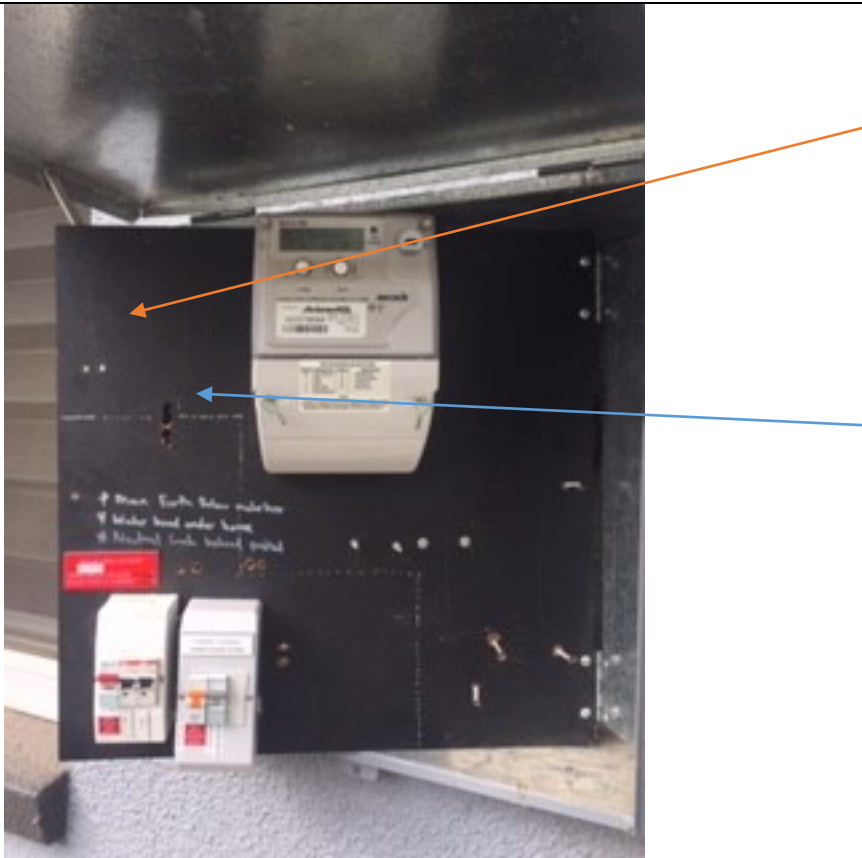
Name:


Signed

Date: / / 20....

Examples of common installation methods.	Notes
	<p>Example of POA box with 3x Service fuses, and neutral connection.</p> <p>Note: The network boundary is on the load side of the service fuses and neutral link.</p>
	<p>Example of correct polarity at a meter with full load neutrals</p> <p>Active Neutral Neutral Active</p>

Examples of common installation methods.	Notes
	<p>Example of incorrect polarity at meter with full load neutrals.</p> <p>This configuration would make the installation neutral live</p> <p>Note: The result of this configuration will cause the installation neutral and earth to raise in voltage and cause electric shocks to people when they touch earthed equipment</p>
	<p>Example of installation with remote POA and meter board with a metering neutral link on the back panel.</p> <p>Note: In this case it is a shared MEN and Metering neutral link</p>

Examples of common installation methods.	Notes
	<p>Example of meter panel with surface mounted service fuses and network neutral link on the front panel;</p> <p>Note: Single insulated wires at the bottom of the fuses are not compliant with AS/NZS3000:2018 Clause 3.10.1.</p> <p>Note: Service fuses can act as Metering Protection Device (MPD) and isolation in this case.</p>
	<p>Example of meter with remote POA,</p> <p>There would be no service fuses in the Meter Box (MB) so a Metering Protection Device (MPD) and Isolator will be required.</p> <p>Note: In this case a metering isolator adjacent to the meter is required. AS/NZS 3000:2018 Clause 2.3.1</p>

Examples of common installation methods.	Notes
 <p>The image shows three examples of asbestos warning signs. The top-left sign is red with a white arch at the top containing a white lowercase 'a'. Below the arch, it reads 'WARNING CONTAINS ASBESTOS' in white, followed by 'Breathing asbestos dust is dangerous to health' and 'Follow safety instructions' in white. The top-right sign is yellow with a black border and black text: 'WARNING ASBESTOS CONTAINING MATERIAL EXISTING IN THIS BUILDING CONSULT ASBESTOS REGISTER PRIOR TO COMMENCING WORK'. The bottom sign is black and white with a red oval at the top containing the word 'DANGER' in white, and 'ASBESTOS' in large black letters below.</p>	<p>Example of asbestos warning signs that should be on the meter box and meter panel, should the meter panel contain asbestos.</p> <p>Note: ACM meter panels that are not identified on CES form and with sticker to be reported to WorkSafe ACT.</p>

Omitting Network Neutral Link

Existing installations that had a like for like meter change only and no Meter Box (MB) upgrade, or configuration change in the wiring, the network neutral link maybe omitted. This would typically be for old analogue meter changed to new smart meter, this is a like for like change and is a repair.

Existing installation that had a meter change for the addition of a Solar tariff. Where the meter is changed from single element to two element but retains the same rating and wiring configuration, this is a like for like change and is a repair.

Existing Installations Requiring A Network Neutral Link

Any installation that had had a Meter Box (MB) upgrade. Typically from the Canberra style 300x300mm to the NSW style 600x600mm, regardless if metering is changed or not.

Existing installation has new meter installed and its wiring configuration is changed. Typically from full load neutral to reference neutral. This is an alteration, so needs to comply with current requirements.