

Metering installations

Electrical standards, rules and notes

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This advisory note outlines some common non-compliances found in electrical metering installations.

Advisory note

1/2018

For

Scope

Applies to all areas in New South Wales

On this page:

Common non-compliances found

General information

Common non-compliances found

Some of the common non-compliances found by Fair Trading's inspectors are:

1. Marking of service equipment

Service neutral link must be identified with complete wording. Abbreviations such as "Service N/L" and "Service N/Link" are not acceptable.

Rating of Service Protection Devices/Meter Protection Devices (SPD/MPD) must be marked on meter, preferably below the SPD/MPD.

2. Fixing of metering equipment

All fixing points of a meter are to be utilised.

Bolts are not allowed to protrude, at the back of the meter panel, more than 5mm past the fixing nut.

A non-conductive bolt must be used where the mounting bolt protrudes through the meter panel and can be contacted on the front of the panel.

3. Earthing

If the Multiple Earthed Neutral (MEN) connection is at the service neutral link it must be moved to the customers neutral link.

4. Sealing

Sealing of the meter terminal cover, service neutral link and escutcheon plate of the SPD/MPD is required to be carried out.

Fair Trading acknowledges that seals may be broken between the time the work is completed and the time the inspections are undertaken. Non-compliances are issued for metering equipment not being sealed for two purposes:

- 1 To ensure the metering equipment gets resealed
- 2 For the installer to provide information to the Metering Provider so that they may check that meter has not been tampered with.

General information

HRC fuse assemblies

Fair Trading has noticed a number of high rupturing capacity (HRC) fuse assemblies being used for meter and service protection devices which do not comply with the requirements of the SIR.

The SIR states:

"The maximum current rating of any fuse carrier and fuse base combination (the fuse assembly) used for the purposes of a service protection device and/or meter protection device shall always be equal to or greater than the fuse element rating, but in no case less than 100 amps."

For all installations where a meter has not been previously installed and for new or replacement SPD/MPD installations, the fuse assembly installed must not be rated less than 100 amps.

The Australian and IEC standards require that a fuse assembly be marked with its rated current, i.e. if marked as 100 amps, rated current is 100 amps.

Service protection device (SPD) and/or meter protection device (MPD)

Clause 1.12.11 of the SIR and Clause 1.3 of the Annexure to the SIRs has the requirements for alterations, additions and upgrades.

It is now a requirement that the SPD and/or MPD meet the requirement of an HRC fuse or circuit breaker as per clause 2.8 wherever an alteration, addition or upgrade to service lines, service equipment or metering is undertaken.

For metering works it is not a requirement, under clause 1.3, for the fuse assembly to be rated at 100 amp unless the fuse assembly requires replacement, therefore existing service fuses fitted with an 80 amp or less HRC cartridge will meet the requirements of this clause and will not require upgrading.

Reference: Service and installation rules July 2018

Issued by: Fair Trading Specialist Service, Electrical Meters Unit, Parramatta

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