Urgent advice to electrical contractors - Effective immediately:

Important changes to single phase and polyphase metering

Power and Water has been notified by its supplier that plug-in single phase induction disc meters will no longer be manufactured.

The majority of the Australian metering market uses the bottom connect single phase and three phase meters and increasingly the electronic meter is replacing the induction disc meter.

The only exception to this will be the plug-in prepayment meter in remote communities. Plug-in prepayment meters are a bottom-connect meter modified in Australia to plug-in. At this stage Power and Water shall continue with this meter but only in remote communities.

Power and Water will need to amend the Meter Manual to include information to contractors on the installation of bottom-connect meters instead of plug-in meters. This process will take time so Power and Water is issuing this information package to contractors to provide drawings for the most common installations that contractors will encounter. This information will also be available on our internet at powerwater.com.au.

Panel layout

The main change that contractors will need to note is the panel layout of meters and fuses for the majority of Power and Water customers. Power and Water will be adopting a policy of locating the fuse(s) under each meter to minimise identification confusion when disconnecting and reconnecting customers. The spacing of meters is based on the maximum sizes for single and polyphase meters in AS1284. This allows space for Power and Water to change or upgrade meters in the future without the need to move adjacent meters.

Polyphase direct connect (whole current) metering

A three phase customer shall now have one polyphase meter instead of three plug-in meters. The fuses shall be mounted under the meter red, white, blue phase left to right. Top of the fuse shall be line (Power and Water supply). Polyphase meter terminals are typically from left to right red (line), red (load), white (line), white (load), blue (line), blue (load), neutral (line), neutral (load). This information is also on the inside of the meter terminal cover.

Multi-metering

Multi-metering panels shall have a main switch connected before the service fuses and meters. The attached drawings (also listed under More information) are for typical layouts of fuses and meters.

Unmetered active and neutral links shall be sealable. Multi-metering installations shall have sealable metering neutral link used for providing a smaller cable to the meter neutral terminal. The minimum size meter neutral shall be 4 mm^2.

It is strongly recommended that during the change over period from plug-in to bottom connect metering that contractors provide a drawing for approval. This may save delays in the field if there has been any confusion of the drawings provided by Power and Water.

Fitting of bottom connect meters

Contractors shall provide metering conductor minimum tails of 150 mm of cable extending through the meter panel for connection of meters.

The maximum cable size shall be 25 mm^2. If larger cable is required for voltage drop reasons then the meter tails will be reduced to 25 mm^2. Hard drawn conductors shall not be used for meter tails.

Conductors that have more than 19 strands shall have ferrules provided by the contractor.

In general Power and Water staff shall install the meters and seal as required. Switchboard manufacturers may install meters in multi-metering panels by arrangement through the Power and Water Customer Connections Officers. This will be on a case by case basis.

More information

Refer to the following amended standard drawings for more information:

- S11-2-7-1 (sheet 2)
- S11-2-7-2 (sheet 2)
- S11-2-7-4 (sheet 2)
- S11-2-7-45
- S11-2-7-46
- S11-2-7-23 (sheet 2)
- S11-2-7-23 (sheet 3)

The standard drawings listed above are available for download from Power and Water's internet site at powerwater.com.au under the heading Vol 11 - Metering Manual (Drawings Only) - Section 1 - Metering Manual Drawings.

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