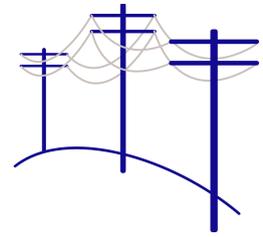# Using old conductors

There is a lot of old cabling on the overhead network and power utilities often only make conductor parameters available for current equipment. So if you need to model an old conductor in Poles 'n' Wires you may need to source the data to be inserted into the conductor database yourself. If you can't find exact data you'll need to make a reasonable approximation.

Here are some suggestions of how to do this (PowerMation cannot verify data that is found on the internet so the user needs to verify the data to their own satisfaction).

Convert imperial to metric

A cable may have an imperial size such as 7/.044 so you will need to convert this to an equivalent metric size. We found[1] a table at gvk.com.au/pdf/heatshrink/cable_sizes.pdf that indicates for 7/.044 an equivalent metric size of 7/1.04.

Find a matching conductor

You may find the metric equivalent conductor in the database already. If not you'll need to do more work.

You could use Google to search for a cable with the same size and material. We found a copper cable with a size of 7/1.04 at generalcable.com.au/getattachment/14e59a39-4c74-4439-b4d4-e9d860392dbe

Get the required parameters

As a minimum you need to enter these values into the database:

- Code (unique in the database), Name1 (an alternative description)

- Material

- Mass (kg/m)

- Nominal outside diameter (mm)

- Modulus of elasticity and coefficient of linear expansion. There are properties of the material so you can use the same values as for other conductors of the same material and number of strands.

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1   Links valid at the date of issue of this document

- CSA (cross-sectional area) (mm²)

- CBL (conductor breaking load) (kN). If you can't find this value use the CBL for a similarly sized conductor of the same material.

The relevant Australian Standard or equivalent may provide further information.

Revision history

Rev No.	Date	Details
A	25 July 2016	Initial issue

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