

elecworks™ Tips & Tricks

Peer to Peer Cross Referencing

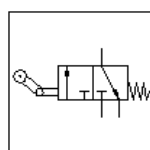
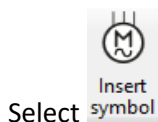
Many customers are not only responsible for producing the electrical drawings but also the instrument or pneumatic/hydraulic drawings as well. A job may have a mixed discipline design and could include pneumatic/hydraulic and electrical schematics.

In this type of situation, a component may be drawn in the pneumatic/hydraulic drawing such as a valve and have an associated solenoid defined in the electrical schematic. These types of components would be defined as “parent” devices. However because there is an international convention for numbering pneumatics and hydraulics (ISO1219 as an example), the component in the pneumatic/hydraulic circuit would have an entirely different component tag to the one in the schematic.

A valve in a pneumatic/hydraulic drawing may be numbered with a prefix of “V” whereas in the electrical schematic a solenoid may be numbered with a prefix of “K”.

Therefore, though each device is represented as a parent device, you can still set up a peer-to-peer relationship between them so that the electrical schematic’s tag name will automatically cross-reference to the pneumatic/hydraulic schematic and the pneumatic/hydraulic tag cross-reference to the electrical schematic.

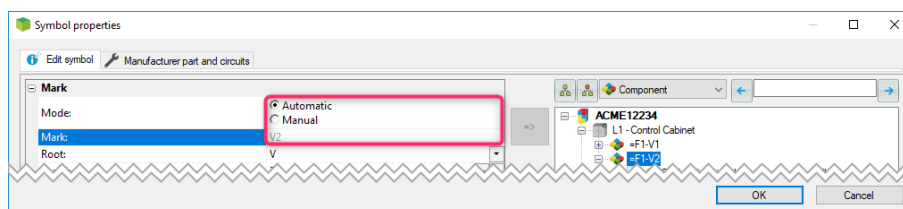
As an example, place the following down in a drawing:



3/2 directional control valve controlled by...

Select *Pneumatic, Hydraulic > Distributors >*

The symbol is automatically numbered:



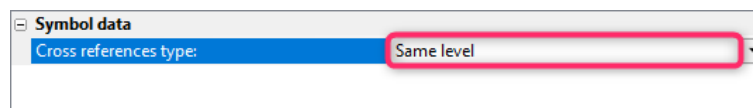
There are two methods of linking two parent devices together.

Method 1:

The component TAG in this method is identical on both the pneumatic/hydraulic and electrical component although the information can be split (described later).

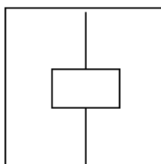
Right click over the valve > *Symbol Properties* >

Change the cross referncing type to *Same Level*



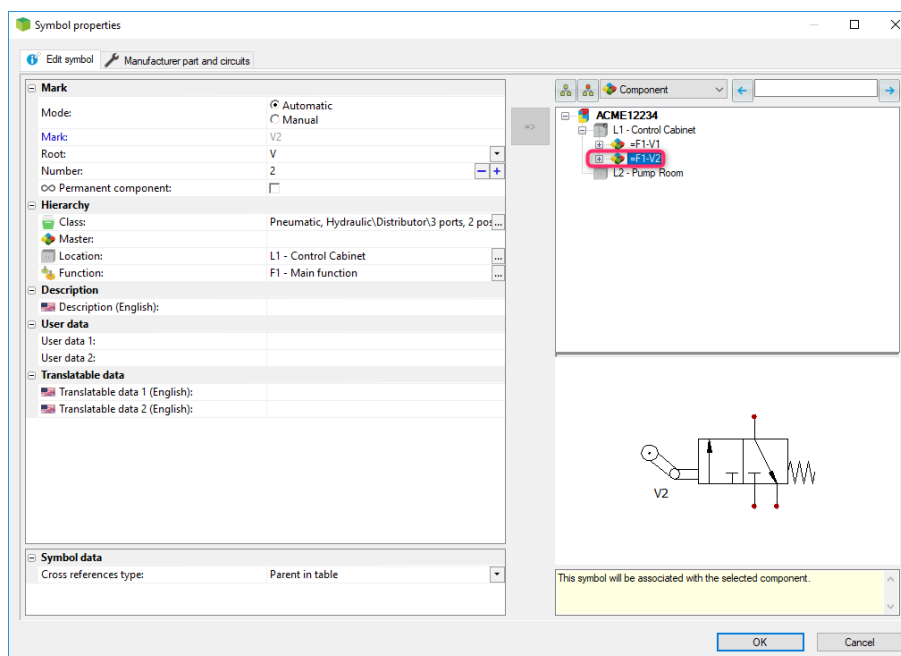
N.B. Both the pneumatic/hydraulic and electrical components should ideally have a #CROSS_REF attribute.

Now insert the electrical component.



Select *Coils* > *Instantaneous relay coil*

Highlight the pneumatic/hydraulic component you wish to link to:



The component tag of the pneumatic/hydraulic component will be used for the electrical component.

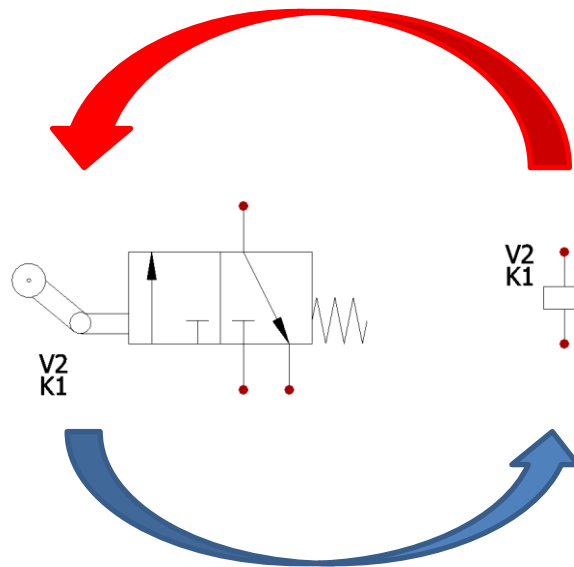
You can edit the *Component Properties* and change the tag from Automatic to Manual ee.g. “V2|K1”.

You can even split the tag text into 2 lines of information as long as your component symbols have 2 lines for the

TAG: #TAG{1}
#TAG{2}

The method for this is defined in the following document: [Multiline Attributes](#)

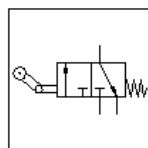
The pneumatic/hydraulic component will now be referencing the electrical component and vice-versa whilst appearing to be maintaining their own unique component tag.



Method 2:



Select



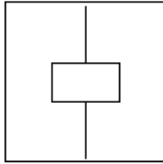
3/2 directional control valve controlled by...

Select *Pneumatic, Hydraulic* > *Distributors* >

The symbol is automatically numbered.



Now insert the electrical component.

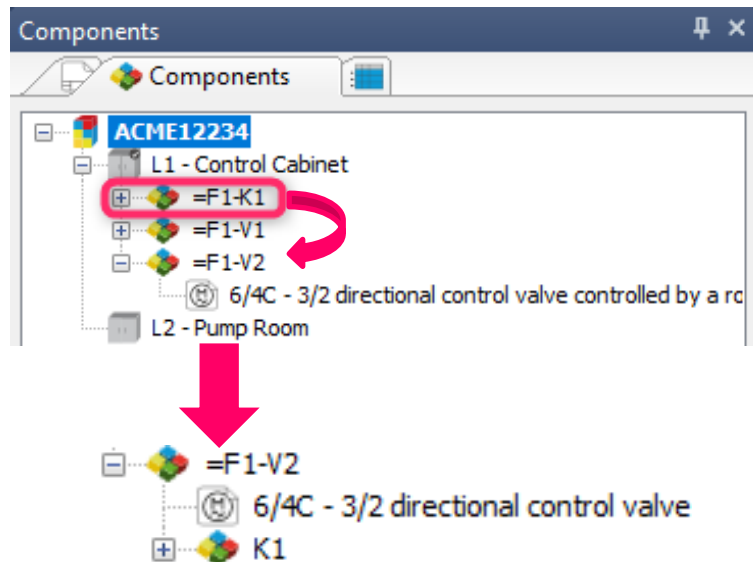


Select *Coils* > Instantaneous relay coil

The symbol is automatically numbered.

Select the **Components** browser palette.

Drag the electrical component, in this instance, onto the pneumatic/hydraulic component so that it becomes a sub-parent component.



The tag for the electrical component will then become:

