KKS Wire Numbering Convention

AutoCAD Electrical 2019

A popular wire numbering system in the power generation industry is to adopt the KKS wire numbering convention. This basically means that a wire connecting from two components will have the wire number annotated with the FROM-pin/TO-pin details. Ideally the standard prefers the FROM-pin information to be displayed at the TO end and the TO-pin information to be displayed at the FROM end. This can be achieved for the actual physical wire numbers but on the drawing, you can have a variety of FROM-pin and TO-pin information combined.

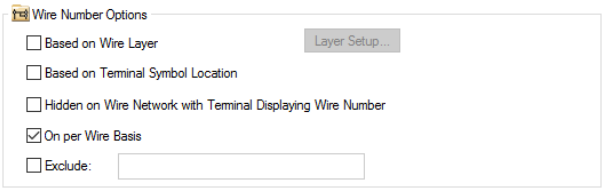
This is a feature of the Cadline Localiser available for AutoCAD Electrical customers who purchased through Cadline but NOT available in the default installation of AutoCAD Electrical.

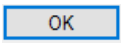
There are some changes to the *Project Parameters* that need to be done to allow AutoCAD Electrical to adopt a wire numbering convention on a per physical wire basis rather than the norm of a per equipotential basis.

To change the setup of the project, *right click* over the active project and select *Properties.*

Select *Wire Numbers* tab

Under the section *Wire Number Options*
Select ☑ *On A Per Wire Basis*



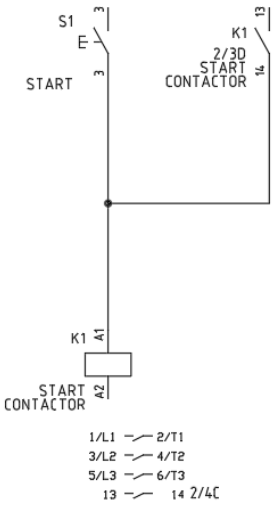
Select 

Create a new drawing copying the project settings when prompted.

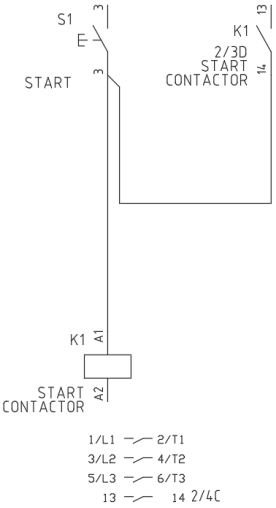
Normally a 3 device circuit would be drawn with “T” connections but this does not show how the 3 devices are actually wired and therefore connected (typical style).

Therefore, to get unique numbering on each physical wire, we need to draw the wire directly out of the connecting pin (new style).

Typical Style



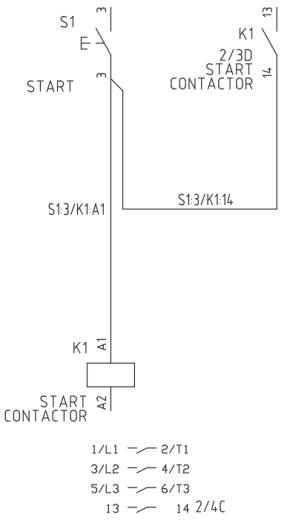
New Style



Select the *eXtras* ribbon tab > *Wires/Wire Numbers* panel

Select 

KKS Wire No

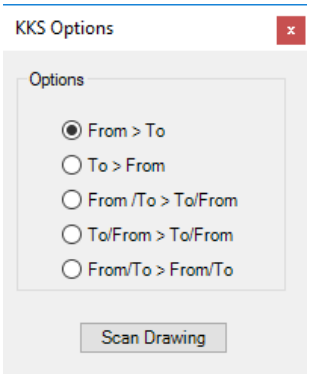


The command can be run on an individual wire, the entire drawing, multiple selected drawings or the entire project. More information can be found in the Cadline Localiser - Getting Started Guide.

If you wish the wire numbers to be in line with the wire rather than at 0º for the vertical wire numbers, then open the WD_WNV.dwg in the e.g. IEC2 library and change the properties of the attribute WIRENO.

KKS Options

The KKS Options command will look for wire numbers that have been numbered using the *KKS Wire No* or the *KKS Wire No – Drawing Wide* commands and provide the following options:



⊙ **From > To**

Get rid of text up to and including the delimiter and place value in W01USER
Get rid of text from the delimiter onwards and place value in W02USER

The W01USER & W02USER attributes will become visible and the WIRENO* attribute will become invisible

⊙ **To > From**

Get rid of text up to and including the delimiter and place value in W02USER
Get rid of text from the delimiter onwards and place value in W01USER

The W01USER & W02USER attributes will become visible and the WIRENO* attribute will become invisible

⊙ **From/To > To/From**

Copy the WIRENO* value to W01USER “as is”
Toggle the From/To information and place in W02USER

E.G. WIRENO* value is CMP1:1/CMP2:1
W01USER value is CMP1:1/CMP2:1
W02USER value is CMP2:1/CMP1:1

The W01USER & W02USER attributes will become visible and the WIRENO* attribute will become invisible.

⊙ **To/From > To/From**

Toggle the From/To information and place in W01USER
Toggle the From/To information and place in W02USER

E.G. WIRENO* value is CMP1:1/CMP2:1
W01USER value is CMP2:1/CMP1:1
W02USER value is CMP2:1/CMP1:1

The W01USER & W02USER attributes will become visible and the WIRENO* attribute will become invisible.

⊙ **From/To > From/To**

Copy the WIRENO* value to W01USER “as is”
Copy the WIRENO* value to W02USER “as is”

E.G. WIRENO* value is CMP1:1/CMP2:1
W01USER value is CMP1:1/CMP2:1
W02USER value is CMP1:1/CMP2:1

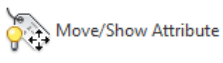
The W01USER & W02USER attributes will become visible and the WIRENO* attribute will become invisible

The command will not alter wire numbers that do not have a “/” as a separator

In each of the metric libraries installed e.g. IEC2, there are modified versions of the WD_WNV & WD_WNH symbols which are the vertical/horizontal wire numbers. These may be copied into the respective library overwriting the originals. These have repositioned/larger text size of the W01USER & W02USER attributes.

Using the modified wire markers:

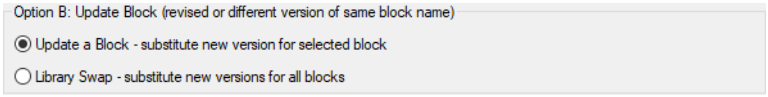
The position of the W01USER & W02USER attributes may be repositioned:

Select *Schematic* ribbon tab > *Edit Components* panel > 

Restoring The Wire Numbers Back To The Originals

- To revert your wire numbers back to normal state:

  Select *Schematic* ribbon tab > *Edit Components* panel >  *Swap/Update Block*

  Select 

  Select 

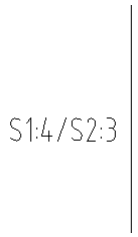
  Select the example of the block you wish to update: (Pick one of the wire numbers)

  Select 

  or 

  depending on what you wish to update

  The wire numbers will revert to the default style of:

- To revert your wire numbers back to the originals:

  If you have overwritten the original WD_WNH & WD_WNV wire number blocks with the KKS modified versions, you can always revert your library back to the originals by simply copying the contents of the:

  \<<library name>>\KKS\Defaults\

  Into

  \<<library name>>\