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Wire Connection Order

AutoCAD Electrical

Whilst AutoCAD[®] Electrical automatically produces wire from/to information, the sort criteria for the connection order may not be how you physically want to wire the components up. This month's tips and tricks explains how the user can predetermine the connection order for the purposes of wire from-to lists.

A schematic is a representation of a series of connections, but the IEC "T" style connection does not advise how to physically define the wire connection order. If you don't define a specific connection order, the order is determined by your project settings.

| Project Propertie | es | | | | | × | |
|--|----------------|------------------|--|-------------------------|------------------|------|--|
| Project Settings | Components | Wire Numbers | Cross-References | Styles [| Drawing Format | | |
| Project: C:\Training\WIRING DIAGRAM\WIRING DIAGRAM.wdp | | | | | | | |
| O Use MIS | SC_CAT table o | nly if component | specific table does r) / Wire Number / W | iot exist ire Sequen | ice Sort Order: | | |
| Real time error checking | | | | for vertical ladders | cal ladders) 🗸 🗸 | | |
| | | Elec | ctrical Code Standard | l: | | ~ | |
| | | | | ОК | Cancel | Help | |

However, you can also explicitly define the wire connection sequence of any wire networks consisting of three or more interconnected devices. You can control how AutoCAD[®] Electrical analyses the circuits and how from-to connection information is output to various reports.



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The above circuit as an example has a wire 4 connected between several components. Effectively this could be wired up in four different ways.

Right click over the wire and select Wire Sequence > $\frac{12}{2}$ Edit Wire Sequence

The current connection order and available connections are detailed:

| wire | onnect | on sequence | | | |
|--------------------------|---------|---------------------------------|-----------------------|------------------------------|--|
| New | Current | Tag:Pin | Installation,Location | Sheet,Reference | |
| 001 002 003 004 | | 52:4 Q4:A1 Q4:14 H1:X1 | | 3.3D 3.3E 3.4D 3.4E | Pick Mode Sort Locatio Move Up Move Dow |
| reshen | | | | | |
| | All | | OK annu Canad | 1 | 11-1 |

The connection order is set as a default by the *Project Properties* mentioned earlier. By highlighting a row in the above dialogue, you can then Move Up or Move Down its connectivity.

| Ec | it Wire (| Connect | ion Sequence | | | | | × |
|----|--------------------------|---------|---------------------------------|----|-----------------|--------|------------------------------|--|
| | New | Current | Tag:Pin | Ir | nstallation,Loc | ation | Sheet,Reference | |
| | 001 002 003 004 | | Q4:A1 Q4:14 S2:4 H1:X1 | | | | 3.3E 3.4D 3.3D 3.4E | Pick Mode Sort Location Move Up Move Down |
| | Freshen Remove | All | | | OK-new | Cancel | | Help |

Select OK-new

to accept any changes made

N.B. It is recommended to save the drawing prior to running a wire from/to report.

You can also show the connectivity and its order by selecting the command High Show Wire Sequence

Select any part of the equipotential you wish to review, and you will see green arrows representing the connectivity order. Pressing the space bar will toggle through the connectivity and the order of the components.









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When producing a wire from/to list, ensure that the Sort criteria has SEQ1 and SEQ2 defined. These are the wire sequencing database fields.



This will then give a wire from-to report like the example below:

| Report Ger | nerator | | | | × |
|----------------|------------------------|------------------------|----------------------------|-------------------|----------------------------|
| Drawing Fro | m/To extrac | t (3 records) |) | | |
| WIRENO | FROM | TO | WIRE TYPE | COLOUR | SIZE |
| 6 6 6 | Q4:A1 Q4:14 S2:4 | Q4:14 S2:4 H1:X1 | 110VAC 110VAC 110VAC | RED RED RED | 1. Omn 1. Omn 1. Omn |
| $\sim\sim\sim$ | ~~~ | ~~~ | ~~~~ | ~~~ | ~~~~~~~~~~~~~~~~~~ |
| Edit Mode | • | Put on [| Drawing Sa | ve to File | Print Close Help Wide> |

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