

# Basic Overview of Symbol Naming

## AutoCAD Electrical 2019

Components used in AutoCAD® Electrical are named specifically around family codes and these *Family Codes* correspond to the table names found in the default\_cat.mdb database file. When you select  to assign a part number, AutoCAD® Electrical looks at the 2nd and 3rd character in the symbol's file name and opens the associated catalogue database table. A contactor coil as an example has a symbol block name of VMS1 or HMS1 and therefore will look up the MS table when  is selected.

The default electrical family tables are as follows:

| FAMILY ↑ | DESC ↓                         |
|----------|--------------------------------|
| AM       | Ammeters                       |
| AN       | Buzzers, horns, bells          |
| CO       | Connectors/pins                |
| CA       | Capacitors                     |
| CB       | Circuit breakers               |
| CR       | Control relays                 |
| DI       | DIN rails                      |
| DN       | Device networks                |
| DR       | Drives                         |
| DS       | Disconnect switches            |
| DV       |                                |
| EN       | Enclosures/hardware            |
| FM       | Frequency meters               |
| FS       | Flow sensors                   |
| FU       | Fuses                          |
| LR       | Latching relays                |
| LS       | Limit switches                 |
| LT       | Lights, pilot lights           |
| MISC     | Miscellaneous                  |
| MO       | Motors                         |
| MS       | Motor starters/contactors      |
| NP       | Nameplates                     |
| OL       | Overloads                      |
| PB       | Push buttons                   |
| PE       | Photo switches                 |
| PLCIO    | Programmable logic controllers |
| PM       | Power meters                   |

|      |                                |
|------|--------------------------------|
| PS   | Pressure switches              |
| PW   | Power supplies                 |
| PX   | Proximity switches             |
| RE   | Resistors                      |
| SS   | Selector switches              |
| SU   | Surge suppressors              |
| SW   | Toggle switches                |
| TD   | Timer relays                   |
| TRMS | Terminals                      |
| TS   | Temperature switches           |
| VM   | Volt meters                    |
| WO   | Cables, multi-conductor cables |
| WW   | Wire ways                      |
| XF   | Transformers                   |

New tables can be added easily. Please see the following *Tips & Tricks*:

### [Adding a Table to the Catalogue Database](#)

The naming convention within AutoCAD Electrical is used to enable specific context sensitive features. As an example, the horizontal and vertical orientation of the symbol is specified by the first character and this




affects the orientation of the symbol when placed. The 4<sup>th</sup> character determines whether the software sees the symbol as being a parent or child.




- ① The first character is either H or V for horizontal or vertical wire insertion.
- ② The next two characters are reserved for family type (for example, PB for push buttons, CR for control relays, LS for limit switches).
- ③ The fourth character is 1 for a parent (parent or stand-alone components) & 2 for child components.
- ④ If the symbol is a contact, then the fifth character is a 1 for normally open, 2 for normally closed, 3 for changeover & 4 for undefined.
- ⑤ Any additional characters are not specified in the naming convention. They are used to keep names unique.

There are some notable exceptions to this rule such as cable symbols, PLC's etc. More information can be found in the *Help* or at:

### [About Symbol Naming Conventions](#)

 The fourth character of a block name has another special property. If the character is a 0 (zero), the wire number will not change as the wire passes through the component. i.e. a continuation of the equipotential. This is also true for any kind of component or electrical block name.

 When creating a new symbol, the “\_” character is an ideal separator from the name that AutoCAD Electrical is assigning to the “true” name you want therefore we would generally recommend that your unique name starts after the “\_”. The “\_” character is often the 5<sup>th</sup> character if the symbol is not a contact.