

# AUTOCAD ELECTRICAL QUICK REFERENCE GUIDE

## AutoCAD® Electrical File Descriptions & Directory Locations

Reference files should be located in a shared directory or folder when you want to share changes to files with all users for common projects.

### ENVIRONMENT FILE

#### Windows® 7/8/10 Location:

*C:\Users\{username}\Documents\Acade{version}\AeData\wd.env*

### SYMBOL BLOCK LIBRARIES

#### Windows® 7/8/10 Location:

*C:\Users\Public\Public Documents\Autodesk\AcadE {version}\Libs*

### INSERT COMPONENT ICON MENUS

#### Windows® 7/8/10 Location:

*C:\Users\{username}\AppData\Roaming\Autodesk\AutoCAD Electrical {version}\{release}\{country code}\Support*

**ALL .DAT Files (i.e. ACE\_NFPA\_MENU. DAT):** These are text files of all of the icon menus of all of the symbols per electrical standard that you can also customize to meet your needs.

### DATABASES

#### Windows® 7/8/10 Location:

*C:\Users\{username}\Documents\Acade{version}\AeData\{country code}\Catalogs*

**DEFAULT\_CAT.MDB:** This is the Part Catalog Database.

**FOOTPRINT\_LOOKUP.MDB:** This is the database for mapping the graphical footprint assignments to catalog part number assignments.

**SCHEMATIC\_LOOKUP.MDB:** This is the database for mapping panel footprints and terminal representations to the equivalent schematic component block names.

**WD\_LANG1.MDB:** This is the default language table.

**WD\_PICKLIST.MDB:** This is the user-defined pick list that schematic or panel symbols can be inserted from.

### PLCs

#### Windows® 7/8/10 Location:

*C:\Users\{username}\My Documents\Acade {version}\AeData\{country code}\ Plc*

**ACE\_PLC.MDB:** database for creating and modifying PLC modules.

#### Windows® 7/8/10 Location:

*C:\Users\{username}\AppData\Roaming\Autodesk\AutoCAD Electrical {version}\{release}\{country code}\Support\User*

**<custom name>.WDI (default settings in WDIO.LSP):** This is the PLC settings file for the Spreadsheet to PLC I/O Utility. (**Note:** If you do not create a WDI file, the default settings found in the WDIO.LSP file will be used.)

#### Windows® 7/8/10 Location:

*C:\Program Files\Autodesk\AutoCAD {version}\Acade\Support\en-US\Shared*

**WDIO.LSP:** The program file for the Spreadsheet to PLC I/O utility.

**WDIO.DCL:** The companion dialog definition file for the Spreadsheet to PLC I/O utility.

### CIRCUIT BUILDER

#### Windows® 7/8/10 Location:

*C:\Users\Public\Public Documents\Autodesk\AcadE {version}\Support\{country code}*

**ACE\_CIRCUIT\_BUILDER.XLS:** This is the reference file that the Circuit Builder tool uses.

### DIN RAILS

#### Windows® 7/8/10 Location:

*C:\Users\{username}\My Documents\Acade {version}\AeData\{country code}\Catalogs*

**WDDINRL.XLS:** This is the reference file that generates Din Rails.

### SHARED REFERENCE FILES

#### Windows® 7/8/10 Location:

*C:\Users\{username}\AppData\Roaming\Autodesk\AutoCAD Electrical {version}\{release}\{country code}\Support*

**DEFAULT.INST:** This file provides preset values for installation codes.\*

**DEFAULT.LOC:** This file provides preset values for location codes.\*

**DEFAULT.WDA:** This is the reference file for user-defined attributes on blocks.\*

**DEFAULT.WDT:** This is the attribute mapping support file for the Title Block Update tool.\*

**DEFAULT\_WDTITLE.WDL:** Customizes the generic LINEx labels in the various title block and project information dialog boxes.\*

**WD\_DESC.WDD:** This contains preset component descriptions, accessible by clicking Defaults on the Insert/Edit Component dialog box. Family-specific versions of the file can also be created, such as *pb.wdd*.

**WD\_RATINGS.WDR:** Generic Ratings file, accessible by clicking the Defaults button in the Show all Ratings subdialog box of the Insert/Edit Component db.

**WDSRCDST.WDD:** Generic list of descriptions for Source & Destination signals, accessible by clicking the Defaults button in the Insert Source/Destination dbs.

#### Windows® 7/8/10 Location:

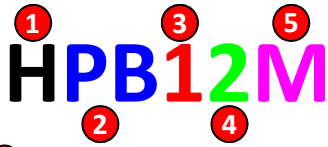
*C:\Users\{username}\AppData\Roaming\Autodesk\AutoCAD Electrical {version}\{release}\{country code}\Support\User*


**DEFAULT.WDU:** This file saves the settings in the Title Block Update dialog box when the "Save" button is selected in said dialog box.

**DEFAULT.WDW:** Maps color and gauge wire descriptions based on wire layers.

**NOTE:** You can always override the shared reference files with by locating a copy of the reference file in the same directory as the project (WDP) file. You can also make a project-specific reference file in the same directory as the project (WDP) file. Just rename the copied reference file to the same name as the project, for example *projectname.wdt*

*\*These files do not exist in these locations by default. These locations are where you would create them as txt files if you want them located in shared directories.*

AUTOCAD ELECTRICAL FAMILY CODES	SCHEMATIC ATTRIBUTES FOR PARENT AND CHILD COMPONENTS		
<b>AM:</b> Ammeters <b>AN:</b> Buzzers, horns, bells <b>CB:</b> Circuit breakers <b>CO:</b> Connectors/pins <b>CR:</b> Control relays <b>DI:</b> Din Rail <b>DN:</b> Device networks <b>DO:</b> Diodes <b>DR:</b> Drives <b>DS:</b> Disconnect switches <b>EN:</b> Enclosures/hardware <b>FM:</b> Frequency meters <b>FS:</b> Flow sensors <b>FT:</b> Foot switches <b>FU:</b> Fuses <b>LR:</b> Latching relays <b>LS:</b> Limit switches <b>LT:</b> Lights, pilot lights <b>MISC:</b> Miscellaneous <b>MO:</b> Motors <b>MS:</b> Motor starters/contactors <b>NP:</b> Nameplates <b>OL:</b> Overloads <b>PB:</b> Push buttons <b>PE:</b> Photo switches <b>PLCIO:</b> Programmable logic controllers <b>PM:</b> Power meters <b>PNEU-ACT:</b> Actuators <b>PNEU-ALU:</b> Lubricators <b>PNEU-CYL:</b> Cylinders <b>PNEU-FLC:</b> Flow Control <b>PNEU-FLT:</b> Filters <b>PNEU-MET:</b> Pressure Gauges <b>PNEU-MFL:</b> Silencers <b>PNEU-MNF:</b> Manifolds <b>PNEU-MOT:</b> Motors <b>PNEU-NOZ:</b> Nozzles <b>PNEU-OPR:</b> Push buttons <b>PNEU-PMP:</b> Pumps <b>PNEU-TNK:</b> Reservoirs <b>PNEU-VAC:</b> Suction <b>PNEU-VLV:</b> Valves <b>PS:</b> Pressure switches <b>PW:</b> Power supplies <b>PX:</b> Proximity switches <b>RE:</b> Resistors <b>SS:</b> Selector switches <b>SU:</b> Surge suppressors <b>SW:</b> Toggle switches <b>TD:</b> Timer relays <b>TRMS:</b> Terminal blocks <b>TS:</b> Temperature switches <b>VM:</b> Volt meters <b>WO:</b> Cables, multi-conductor cables <b>WW:</b> Wire ways <b>XF:</b> Transformers	<b>TAG1:</b> (Parent only) required component tag name (255 max) <b>TAG1_PART1, TAG1_PART2, and TAG1_PARTX:</b> Alternate to using a single TAG1 attribute in order to split the TAG into two pieces <b>TAG2:</b> (Child only) Copy of the parent component's tag <b>TAG2_PART1, TAG2_PART2:</b> same as above <b>COPYTAG:</b> a copy of the TAG value <b>MFG:</b> manufacturer name or code (24 characters max) <b>CAT:</b> catalog part number assignment (60 characters max) <b>ASSYCODE:</b> optional subassembly code (60 characters max) <b>ITEM:</b> the item or detail number for a component <b>FAMILY:</b> component's family type, used as a check at the time child components are linked to a parent <b>DESC1, DESC2, DESC3:</b> component's description (60 max) <b>INST:</b> component installation code (255 characters max) <b>LOC:</b> component location code (255 characters max) <b>XREFNO, XREFNC:</b> (Parent only) normally open and normally closed cross-reference annotation <b>XREF:</b> used to include non-NO/NC references <b>COMMON:</b> defines which TERMxx attribute receives the first PINLIST value		
	<b>POSn:</b> mark switch position text where "n" is the position number digit (POS1 - POS12; 36 characters max) <b>CONTACT:</b> only on contact symbols for NO or NC values <b>STATE:</b> Contact state text to denote relationship between switch positions and open/closed contact state <b>RATINGn:</b> Rating value where "n" is the rating number digit (RATING1 - RATING12; 60 characters max) <b>X?LINK:</b> allows you to tie in dashed link lines automatically between related components ("?"= 1,2,4, or 8) <b>PINLIST:</b> (Parent only) stores the contact pin list for the child contacts of the parent (no limit on characters) <b>WDTAGALT:</b> (Parent only) for a peer-to-peer relationship <b>WDTYPE:</b> Attribute used to define the component category <b>WD_WEBLINK:</b> (Parent Only) for Internet URL's, .pdf, .xls, or .doc links that can be surfed on <b>X?TERMn:</b> Wire connection attributes where an external wire connects to the origin point of the attribute <b>X?TERMDESCn:</b> Wire connection description attributes that match up with X?TERMn (128 characters max) <b>TERMn:</b> Terminal pin number (ten characters max) <b>WD_JUMPERS:</b> to internally jumper terminals together		
	SCHEMATIC SYMBOL NAMING CONVENTION QUICK REFERENCE		
	 <p><b>1</b> The first character is either H or V for horizontal or vertical wire insertion, respectively. <b>2</b> The next two characters are reserved for family type (for example, PB for push buttons, CR for control relays, LS for limit switches). <b>3</b> The fourth character is generally a 2 for child contacts or a 1 for everything else (parent or stand-alone components). <b>4</b> If the symbol is a contact, then the fifth character is a 1 for normally open or 2 for normally closed. <b>5</b> Any additional characters are not specified in the naming convention. They are used to keep names unique.</p> <p><b>NOTE:</b> Do not use "HH", "HV", "VH", or "VV" as the first two characters of a symbol block name.</p> <p><b>TERMINALS:</b></p> <p>The first two characters are "HT." The third character is "0" if the wire number does not change through the terminal, "1" if the terminal symbol should trigger a wire number change. The fourth character is an underscore ( _ ) if the terminal carries no attributes for AutoCAD Electrical to process (such as a dumb terminal symbol). Otherwise, the fourth through eighth character positions of the symbol file name are user-defined.</p>		
	AUTOCAD ELECTRICAL SUPPORT DIRECTORIES QUICK REFERENCE		
	<b>Windows 7/8/10 Location:</b> C:\Users\{username}\AppData\Roaming\Autodesk\AutoCAD Electrical {version}\{release}\{country code}\Support\ C:\Program Files\Autodesk\ AutoCAD {version}\Acade\Support\{country code} C:\Users\{username}\AppData\Roaming\Autodesk\AutoCAD Electrical {version}\{release}\{country code}\Support\ C:\Users\Public\Public Documents\Autodesk\AcadE {version}\Support\{country code}		
	INCLUDED SYMBOL LIBRARIES	REPLACEABLE PARAMETERS	
	<b>NFPA</b> (U.S./Inches) <b>IEEE</b> (U.S., International/Millimeters) <b>JIC</b> (U.S./Inches - Legacy library only) <b>IEC-60617</b> (Europe, International/Millimeters) <b>IEC Legacy</b> (Millimeters - Legacy library only) <b>JIS</b> (Japan/Millimeters) <b>GB</b> (China/Millimeters) <b>AS</b> (Australia/Millimeters) <b>PNEU</b> (Pneumatic/Inches & Millimeters) <b>HYD</b> (Hydraulic/Inches & Millimeters) <b>PID</b> (Piping & Instrumentation/Inches & Millimeters)	<b>%F:</b> Component family code string (for example, "PB," "SS," "CR," "FLT," "MTR") <b>%S:</b> Sheet number of the drawing (for example, "01") <b>%D:</b> Drawing number <b>%G:</b> Wire layer name <b>%N:</b> Sequential or Reference-based number applied to the component <b>%X:</b> Suffix character position for reference-based tagging (not present = end of tag) <b>%P:</b> IEC-style project code (default for drawing) <b>%I:</b> IEC-style installation code (default for drawing) <b>%L:</b> IEC-style location code (default for drawing) <b>%A:</b> Project drawing list's SEC value for active drawing <b>%B:</b> Project drawing list's SUB-SEC value for active drawing	



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