AutoCAD MEP

Electrical Project Database

Applies to: AutoCAD MEP 2009 thru 2012

The AutoCAD MEP Electrical Project Database provides the ability to put panels in any drawing and circuit to devices in any drawing. Additionally, you can interconnect panels across drawings to build an electrical distribution system, and create panel schedules to report total connected and demand load information. However, there are certain things to be aware of to ensure that your circuit data maintains consistent.

Make Frequent Backups of the EPD

Whenever you add panels or circuits in a drawing, a copy of the circuit is added to the EPD. When this copy is created, the copy is assigned a unique identifier. If your EPD is somehow deleted or damaged, and you create a new one, re-saving your panel and circuit drawings will re-create the circuits in the EPD, but with new identifiers. Thus, any devices in other drawings circuited to these panels will be disconnected because the copy of the circuit it was originally connected to no longer exists.

You can avoid problems by making frequent backups of the EPD, such as after adding or modifying circuits to your project.

Note: If your EPD is lost, devices that are connected to panels in the same drawing as the device will remain connected.

Working Disconnected from the EPD

It is possible to work on drawings remote from the EPD. For example, taking a copy of the files home, and working on them. In such a scenario when you open the drawings, you will receive a message such as the following.
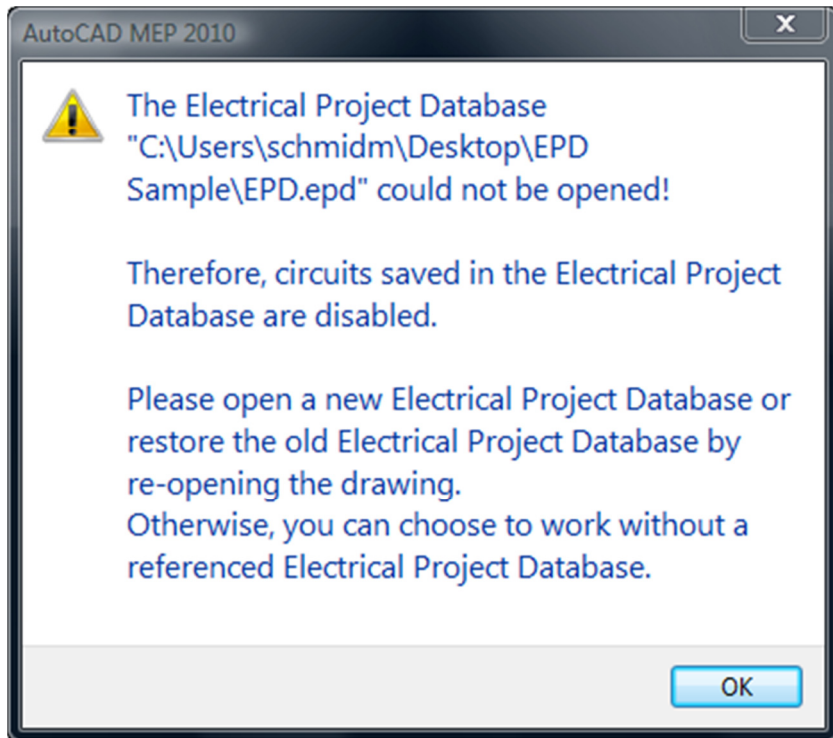
In this situation, you have the limitation that you can't use circuits to panels that reside in other drawings. You can, however, use circuits to panels that exist in the current drawing.

A user can work remote from the office with a copy of files, including the EPD, but only if using relative paths. For example, if using fixed paths, the Power drawing may be set to use an EPD located on a mapped drive on the server. A copy of the file on the local machine would have the same association, and a message similar to that above would appear when opening the file. However, using relative paths can be effective at helping a consistent relationship between file locations, whether originals on the server, or copies on a local machine.
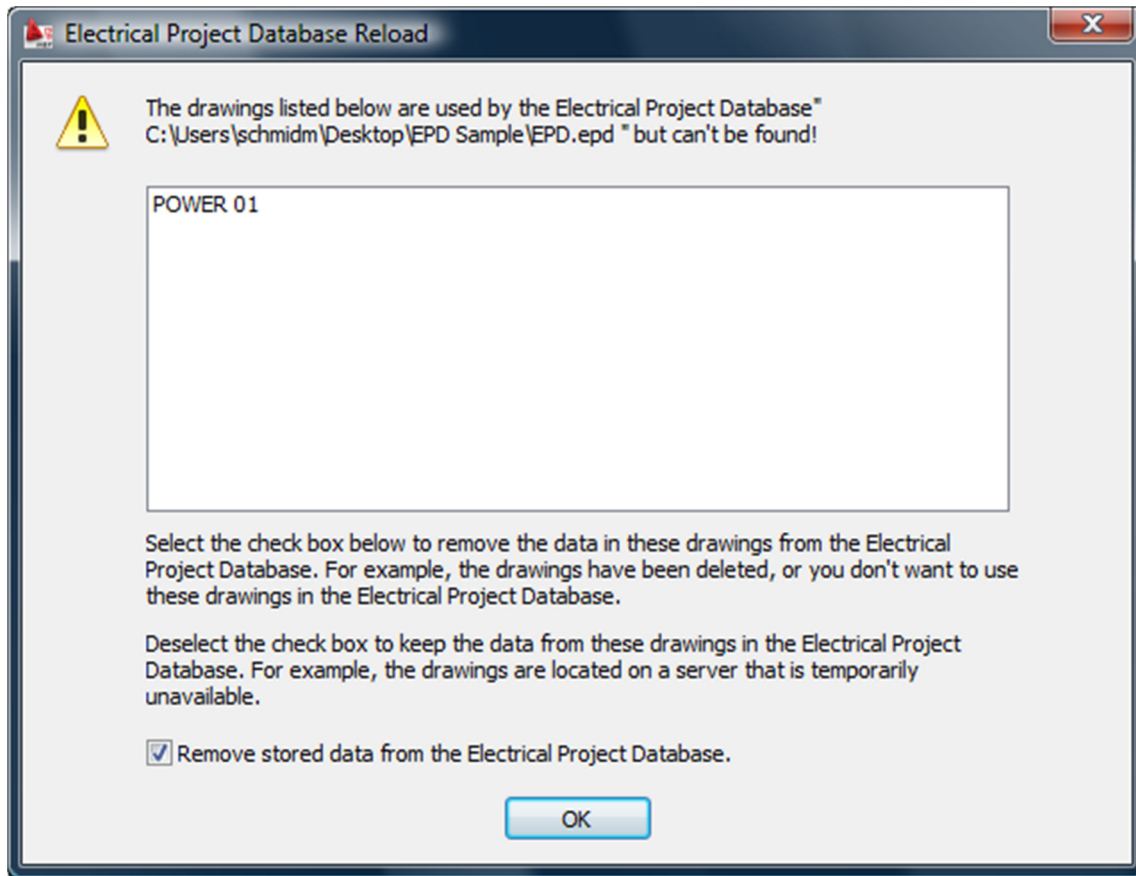
Note, however, if other users will continue to work in the office, and will be adding or modifying circuits to the original copy of the EPD, there is a conflict in which set of changes to the EPD will be retained if there are panels and circuits added or modified. In such a scenario, a better option to copying files would be to utilize a VPN connection to the server, or use a remote desktop/virtual machine technology.

If multiple users work on files while remote from the EPD, after copying the files back to the server location, you will receive a message such as the following, reminding you to resave the drawings so the load information is updated to the EPD.
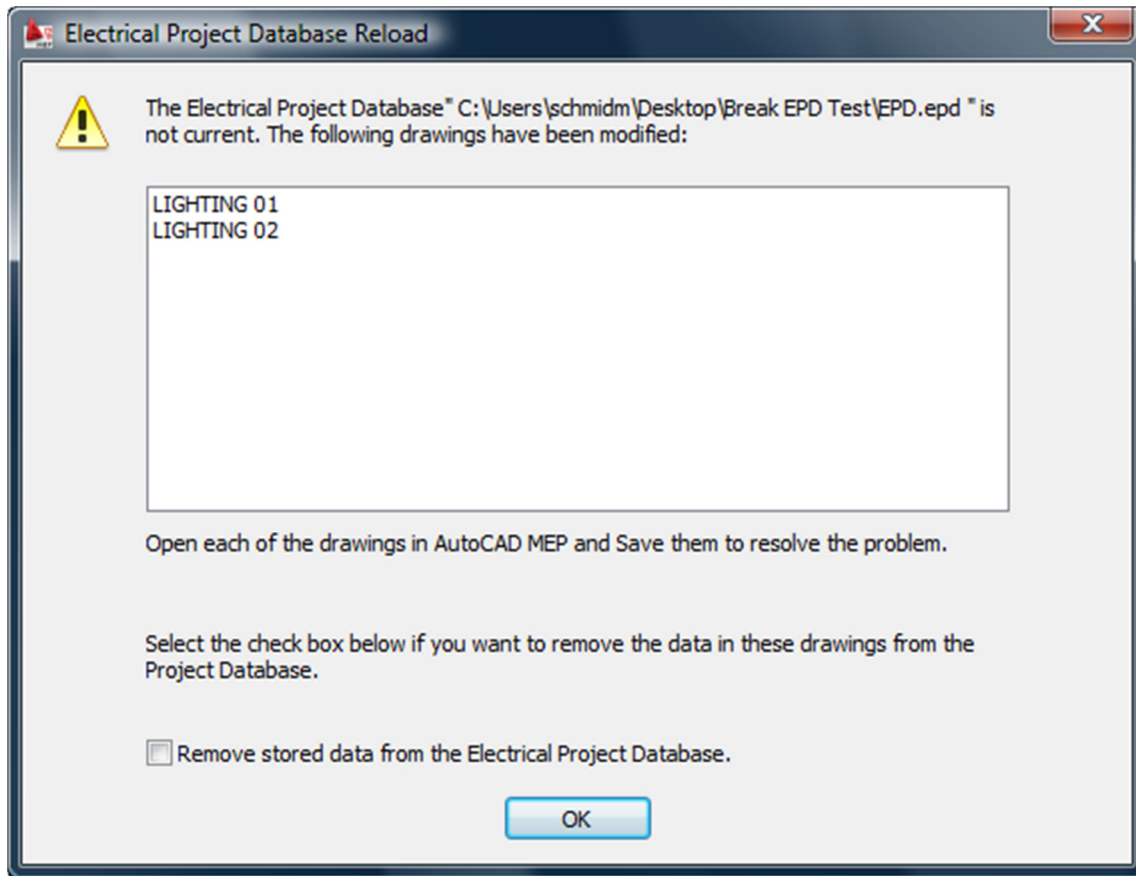
Don't rename drawing files

A rename of any drawing or EPD file, or folders in the file path, especially those with panels in them where circuits reside, will break the internal file paths and thus the link to circuits. Windows considers the full path to be part of the name, when "Full Path" is used. "Relative path" is just the ./File Name. The full name (including path) of the drawing file in which the panel for a set of circuits exists, is used to uniquely identify the circuits, along with the circuits' handle. (A handle is a unique identifier given to each object within a drawing file.) If you rename the drawing, AutoCAD MEP will interpret this as a new drawing file with a new set of panels and circuits. Any devices connected to the old drawing name will become uncircuited if you chose to 'Remove stored data from the Electrical Project Database'. Devices will appear to be uncircuited even if you don't select this remove option. ***Whether you select this option or not, your circuiting will be lost if you save your drawing.*** You can restore the circuiting by NOT saving the file, and renaming the files back to their original names. In some cases, AutoCAD MEP will be able to resolve a single renamed file, but if multiple files are renamed, it becomes much more complicated. Thus, it is generally advised to not rename files associated with an EPD.

Electrical Project Database Reload

The drawings listed below are used by the Electrical Project Database"
C:\Users\schmidm\Desktop\EPD Sample\EPD.epd "but can't be found!

POWER 01

Select the check box below to remove the data in these drawings from the Electrical Project Database. For example, the drawings have been deleted, or you don't want to use these drawings in the Electrical Project Database.

Deselect the check box to keep the data from these drawings in the Electrical Project Database. For example, the drawings are located on a server that is temporarily unavailable.

☑ Remove stored data from the Electrical Project Database.

OK

Don't rename the EPD

There is currently an issue that if you rename the EPD, and re-set a drawing's EPD to the renamed file, the devices in the drawing will become disconnected.

This does not appear to affect changing the *path* of the EPD from fixed to relative. Changing from a fixed path to a relative path works as expected.

Use relative paths

If you are not using relative paths, you run the risk of duplicating load information due to a couple of different scenarios. These are archiving procedures, as well as file access methods, which will be described below.
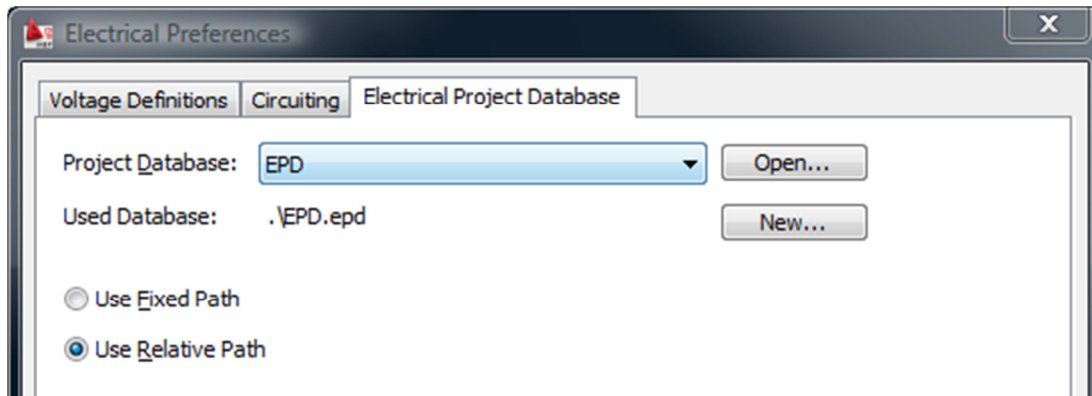
Archiving

When using a fixed path, if you Save As a drawing to a new folder for the purpose of archiving, the new copy will also be associated with the EPD, and as such, you will end up with two sets of the same loads. However, if you use a relative path, the new copy in the separate folder will not have the same relative path to the EPD, and thus such duplication can be avoided.

If you use some other means to copy the files to a separate folder for the purposes of archiving, with a fixed path you still run the risk of someone opening and saving the copy, creating duplicate data in the EPD.

In a similar vein, it is not advised that you Save As to the same folder as the original drawing for the purposes of archiving. Even if you use a relative path, the path to the EPD in this case will be the same, and as such, you will result in redundant loads.

File Access Methods

In some cases, we have seen users that have opened files using different methods, resulting in redundant data in the EPD since all the different paths result in valid paths. Ultimately, in the EPD, all the load data is stored with information as to what drawing the loads come from. Thus if you open from different paths to the same file, and save the file, the EPD will store load information for each of the path names used. When the EPD checks the validity of the data (i.e., in order to prompt to remove data for files that no longer exist), the paths are all valid, and thus nothing appears to need to be removed. For example, users may path to a file (or map a drive) using the IP address, the server name, the fully qualified domain name, distributed file system name, fully qualified domain file system name, or relative path. Each of these path methods can resolve to the same file, but will be seen as different files to the EPD.

- \\192.168.13.41\share\folder\project\POWER LEVEL 1.DWG
- \\SERVER\share\folder\project\POWER LEVEL 1.DWG
- \\SERVER.OURDOMAIN.COM\share\folder\project\POWER LEVEL 1.DWG
- \\DFSROOT\DFSNODE\folder\project\POWER LEVEL 1. dwg
- \\DFSROOT.OURDOMAIN.COM\DFSNODE\folder\project\POWER LEVEL 1. dwg

- .\POWER LEVEL 1.DWG

To avoid the potential of different path methods, specify the Electrical Project Database to use a Relative Path.

Don't copy circuited devices from one drawing to another.

In some cases, when you copy a circuited device from one drawing to another, a new circuit will be created in the destination drawing. This new circuit will have the same circuit number as the original circuit, and will show up under what appears to be a duplicate of the original panel. In the image below, taken from a drawing named "Power 1", you see the 'real' Panel represented by 'New Panel 1 (Current Drawing)'. The duplicated circuit shows up under 'New Panel 1 (Power 1)'. This circuit behaves as a copied circuit (i.e., as if you were using a circuit in "Power 2" that resides in a panel from "Power 1"), and as such, you cannot edit the properties of the circuit, or erase it.
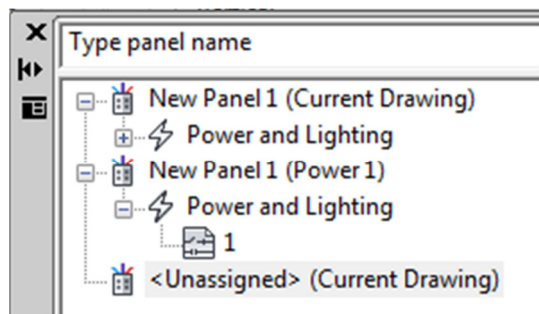
Removing Unneeded Circuit Data

If AutoCAD crashes, you may have to opportunity to create a recover file. This recover file is created in the same location as the working file, and will be associated with the EPD; it is essentially the same as a file created using Save As and saving in the same drawing folder. In such a situation, the load information will be duplicated in the EPD. However, by removing the unneeded file (whether you decide to rename and keep the recover file, or keep the original file), you will be prompted to remove the stored data from the EPD.
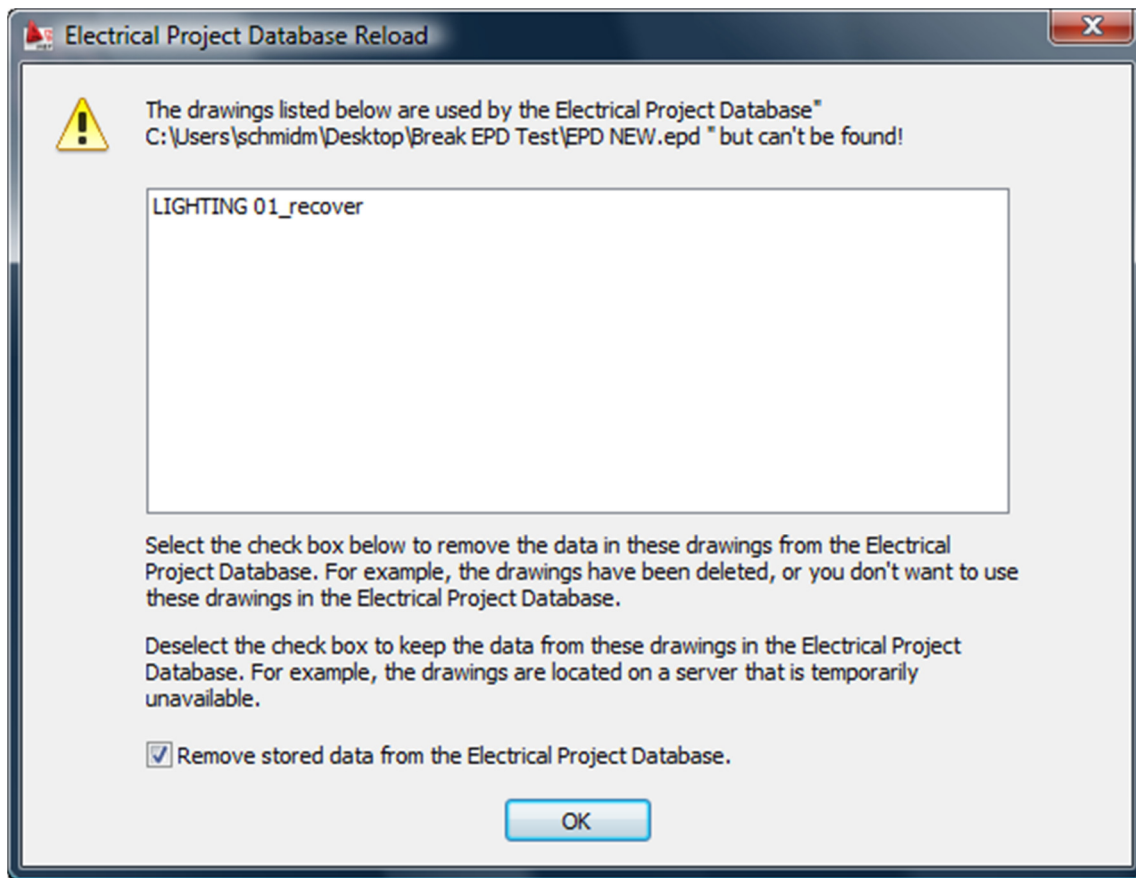
When prompted, simply click OK, and the duplicate load information will be removed.

You should always take care when this window appears to verify that you want the stored data removed for the files listed.