



# Outlet Boxes for Use in Fire Rated Assemblies

*UL evaluates both metallic and nonmetallic outlet and switch boxes for use in fire-resistant rated assemblies, and provides guidance for proper installation in the associated product category guide information pages.*



## Controlling spread of fire or products of combustion

Section 300.21 of the National Electrical Code® (NEC®) covers electrical system penetrations through fire-resistant rated wall, partitions, floors, or ceilings. The main purpose of this requirement is to control the possible spread of fire or products of combustion. The Code also states, in an informational note, that qualified testing laboratories' directories contain listing installation restrictions necessary to maintain the fire-resistive rating of the assemblies where penetrations or openings are made.

## Metallic Outlet Boxes (QCIT) for use in fire-resistant rated assemblies

All UL Listed single- and double-gang metallic outlet and switch boxes with metallic or nonmetallic cover plates may be installed in bearing and nonbearing wood stud and steel stud walls

with fire rating not exceeding 2 hours. These metallic boxes are not required to be marked specifically as suitable for use in fire-resistant rated assemblies.

Metallic boxes located on opposite sides of walls or partitions are intended to be separated by a minimum horizontal distance of 24 in. This minimum separation distance between boxes may be reduced when Wall Opening Protective Materials (QCSN) (commonly known as putty pads) are installed according to the requirements of their Classification.

Putty pads other than those installed on the outer surfaces of a metallic box prior to installation of the wall are also available. UL Classified putty pads, also known in industry as box inserts, are for installation on the inside back surface of the box. There are also putty pads, known in industry as gaskets, available for application under the wiring device cover plate.



## Outlet Boxes for Use in Fire Rated Assemblies (continued)

### Outlet Boxes and Fittings Classified for Fire-Resistance (QBWY)

Unlike metallic boxes, all nonmetallic outlet and switch boxes intended for use in fire-resistant rated assemblies must be specifically investigated for use in such assemblies, and are required to be marked as follows:

- The UL in a circle located in the base of the box
- Class \* hr, where \* indicates the hourly rating (i.e. 1 hr or 2 hr)
- F, W, and/or C, where F = Floor, W = Wall, and C = Ceiling

These nonmetallic boxes are UL Classified for use in certain fire-resistive designs when installed in accordance with the details prescribed for each Classified product. The information for each Classification includes:

- The model numbers for the Classified products
- A description of the fire-resistant rated assemblies
- The spacing limitations for the boxes
- Installation details

Nonmetallic boxes are not intended to be installed on opposite sides of walls or partitions of staggered stud construction unless they are specifically Classified for use in such constructions. Any UL Listed metallic or nonmetallic cover plate is suitable for use with these nonmetallic boxes.

### Using the UL Code Correlation Database to locate product category guide information

UL has a powerful tool to help you locate certification information on products covered by NEC code applications. It is called the UL Code Correlation Database, and can be accessed via the UL website at the following link: [www.ul.com/regulators/codelink](http://www.ul.com/regulators/codelink).

From the UL Code Correlation Database main page, you should select the applicable National Electrical Code edition within the model code query drop-down menu, which also contains correlation data options for other codes, such as the International Building Code, the International Mechanical Code, and the International Fuel Gas Code. After you have chosen the applicable NEC edition, enter “300.21” in the field for code section number, and then submit your query.

A convenient link to the UL Guide Information for each related product category is provided. For information related to Outlet Boxes and Fittings Classified for Fire Resistance, you can click on the “Details” link following the UL Category Code QBWY. From there, you can view the UL Guide Information and also all Listings under this category.

UL Guide Information for Category Codes QBWY and QCIT are also available in the UL White Book.

