



Intermixing Copper and Aluminum Conductors in CU-AL Connectors

Q When I have a two-conductor barrel crimp marked CU-AL on the connector, can I put an aluminum conductor in one barrel and a copper conductor in the other barrel?

A No, the connector would have to be marked “AL-CU (intermixed – dry locations).” Wire connectors are listed under the product category Wire Connectors and Soldering Lugs (ZMVV) located on pages 452 and 453 of the 2010 UL White Book. Under the heading of Product Markings and Ratings and the subheading Conductor Material it states: “Except as otherwise noted on or in the shipping carton, aluminum conductors are not intended to be used in direct physical contact with copper and copper-clad aluminum conductors in the same connector. A wire connector for securing an aluminum wire in combination with a copper or copper-clad aluminum conductor, where physical contact occurs between the wires of different metals, is limited to dry locations only and is marked “AL-CU (intermixed – dry locations).”

This information also appears online in UL Online Certification directory at www.ul.com/database and entering ZMVV at the Category Code search.

Q Is all Type PLTC cable sunlight-resistant or is it sunlight-resistant only if marked? Is it evaluated for use in wet locations?

A All listed power limited tray cable or Type PLTC is sunlight-resistant and may be marked “sun res” or “sunlight resistant” but is not required to be so marked. PLTC cable is listed under the product category Power Limited Circuit Cable (QPTZ) located on page 320 in the 2010 UL White Book. The Guide Information for (QPTZ) in the 2010 White Book doesn’t make it clear that the jacket is sunlight-resistant even if it isn’t marked. However, the Guide Information on the UL Online Certification Directory will be updated shortly to clarify this issue, and the clarification will appear in the 2011 White Book. You can access the guide information online at www.ul.com/database and enter QPTZ at the Category Code search field.

Type PLTC cable is not suitable for wet locations unless it is additionally marked “wet” or “wet locations.” This information as well as the sunlight-resistant rating can be found in the Wire and Cable Marking Guide in Table 2 on page 11 of the marking guide. The Wire and Cable Marking guide is located in Appendix A in the back of the UL White Book. Appendix A starts on page 545 of the White Book. You can also access the wire and cable marking guide on the Code Authorities page of UL.com at www.ul.com/markinguides.

Q When a Type 3R metal enclosure is penetrated with a conduit, can a sealing gasket be installed on the interior of the enclosure to maintain the rating?

A No, UL lists sealing gaskets under the product category “Outlet Bushings and Fittings, (QCRV).” Guide Information for this category can be found in UL’s Online Certifications Directory at www.ul.com/database and on page 296 in the 2010 UL White Book.

Sealing gaskets are intended for use with threaded rigid metal conduit and intermediate metal conduit with one sealing gasket on the outside and an ordinary locknut or sealing locknut on the opposite side of the enclosure for wet locations or liquid-tight applications. Sealing gaskets may also be used with listed wet location or liquid-tight fittings where so marked on the fitting carton.

Q I’ve heard UL has hired a new representative that covers the Northwestern Section of the IAEI. Who is it and how can we contact him for assistance?

A Yes, recently UL has added to its electrical expertise in the Northwestern Section. Jeff Fitzloff has joined UL’s Regulatory Services staff as a staff engineering associate to provide support for electrical stakeholders in the Northwestern Section of IAEI. Jeff has over thirty-four years experience in the electrical trade and is formerly the electrical bureau chief for the state of Idaho. Jeff is also presently the president of the Northwestern Section of IAEI. Jeff can be contacted at 800-595-9844 or by email Jeffrey.G.Fitzloff@us.ul.com.