

Composite Cable FAQ's

What does CL3R-OF mean?

Article 725 of the National Electrical Code deals with remote-control, signaling, and power-limited circuits. Cables that are tested against these requirements can be categorized for use in Class 1, Class 2 or Class 3 systems. Class 3 is the most stringent. Cables that meet the requirements of Class 3 systems, per UL13, are identified as "CL3".

Cables are also subjected to flame tests. The "R" designates cables that have passed the UL1666 test and are classified as "Riser Rated".

The "-OF" indicates that the cable contains optical fibers. From a safety and code perspective, the copper elements are more critical. Therefore, the copper testing requirements (CL3) take precedence, but the optical fibers are an integral portion of the cable.

What conductor sizes are available?

Currently, gauge sizes from #18 to #12 are available.

How do I install the cable?

Although the cable has been tested to, and passes the UL13 requirements for direct burial and exposed run power cables, the fiber properties could be adversely affected by the worst case situations. Therefore, Berk-Tek recommends that the cable be installed in a similar fashion as other fiber optic cables.

How do I terminate the cable?

There are a number of termination methods that are possible.

In general terms, the fibers will be terminated just as any other fiber cable. For the HDRC cables, simplex connectors can be directly terminated onto the individual fibers. For the LTRC or OPRC cables, breakout kits can be installed prior to connector termination.

The copper conductors are TFFN or THWN rated, and can be terminated as such. A common method is crimping lugs onto the conductor ends.

Is grounding required?

The cable can be installed in Class 3 or Class 2 compliant systems. Unless there is an armor, the cable does not need to be independently grounded. The power supply will supply the ground. For interlock armored cables, the armor should be grounded.

How high a vertical run can I make without support?

The maximum vertical run is dependent on the individual cable construction. The two conductor versions can all support at least a 1000 foot vertical run. However, it is strongly recommended to provide supported service loops whenever possible.

Can I lash this cable?

Lashing is not recommended for the unarmored cables.

Can I direct bury the cable?

For direct buried installations, it is recommended that the cable be in an interlock armor.

How do I access the cable components?

A ripcord is provided under the outer jacket. In armored cables, the ripcord is only under the inner jacket. This is used to strip the outer jacket to the desired length. After cutting the aramid, the individual components are ready for termination.
