

3M Introduces Online Field Installation Guide For 3M™ ACCR High-Capacity Conductor

Interactive Guide Is Richly Functional and Accessible, Even Where the Internet Is Not

3M has launched an online interactive field guide for use by utilities when installing 3M ACCR (Aluminum Conductor Composite Reinforced) high-capacity, low-sag transmission conductor. The interactive features are usable, even in remote locations where no Internet or cell phone service is available, by downloading the desktop version to a laptop or the Apple or Android apps to electronic devices prior to entering such areas.

3M ACCR, in use by utilities around the world, is a lightweight conductor capable of providing up to twice the capacity of conventional steel core conductors of the same diameter, without requiring larger towers or expanded rights of way. It is widely employed for line upgrades where construction poses economic and logistical challenges, such as highly populated neighborhoods, environmentally sensitive areas, and river crossings. 3M ACCR also is a solution of choice in circumstances where line clearance is an issue.

The 3M ACCR Interactive Field Installation Guide is designed as a supplement to the thorough training and support that 3M provides to utility crews stringing ACCR lines.

“In the field, there is always the possibility that questions arise or some minor details are forgotten, and our goal is to make answers conveniently available to resolve any issue, even when communications are difficult,” says Fred Schiller, director of 3M’s High-Capacity Conductor program.

The installation guide’s table of contents is live, allowing the user to simply click on any topic. Alternatively, the user may enter the topic in the search box to see all of the places where that subject appears in the guide. Rich with tables, photos and even video, the guide offers single- and double-page views, multiple zoom levels, and the ability to insert electronic Post-It Notes with comments any place in the document.

“While the guide doesn’t replace the usual crew training or our support during a project, it’s an extra resource to help utilities achieve a safe and effective installation. It helps us maintain our record of 100 percent successful installations established over more than a decade of field experience,” Schiller adds.

3M ACCR was developed with the support of the U.S. Department of Energy, which tested the conductor at its Oak Ridge National Laboratory (ORNL) in Tennessee, and with early contributions by the Defense Advanced Research Projects Agency. The ORNL tests demonstrated that the conductor retains its integrity after exposure to temperatures even higher than the rated continuous operating temperature of 210 degrees Celsius and the emergency operating temperature of 240 degrees Celsius. It has the durability and longevity of traditional steel core conductors, even when operated continuously at high temperatures.

The conductor’s strength and durability result from its core, composed of aluminum oxide (alumina) fibers infused with a high-purity aluminum, utilizing a highly specialized and proprietary process. The constituent materials can withstand high temperatures without appreciable loss in strength. Also, since 3M’s ACCR is based on aluminum, it has the corrosion resistance typically associated with all-aluminum conductors.

3M holds several patents on its ACCR technology, which has been recognized by *R&D Magazine* with an R&D 100 Award as one of the most technologically significant products introduced into the marketplace and by the Minnesota High Tech Association with a Tekne Award for innovative development.

The [3M Electrical Markets Division](#), based in Austin, Texas, designs, manufactures and markets products for

electrical construction, industrial maintenance, utility and industrial power, and electrical and electronic components. EMD has more than 60 years of experience serving customers with highly reliable products, including electrical and electronic insulating tapes and papers; electromagnetic compatible products; power cable splices and terminations; high-temperature, low-sag transmission conductors; heat shrinkable tubing and molded shapes; electrical wire connectors, terminals, tools and lugs; wire marking products; cable ties; and electrical diagnostic and detection products.

More information about the 3M high capacity conductor is available at www.3M.com/accr.

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