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we call him -

Wire Wizard.SM

Alben Roland – Wire WizardSM. When it comes to solving your problems, he makes magic happen.

Alben's highest and most challenging form of wire wizardry is new product development, followed closely by solving tough, often one-of-a-kind technical problems. His powers are also evident in quality control and in laboratory testing. We call on Alben to perform his wizardry all the time. And so do our customers. Alben, Manager, Product Engineering, Carol[®] Brand Electronic Products, and the entire team of General Cable Wire Wizards are ready to perform magic. "Whether it's providing a prototype, solving an applications problem, or answering a technical question, we try to make magic happen," explains Alben. Magic or not, our Wizards always seem to find the answer and serve the customer. And there's no smoke or mirrors about that.

CAROL[®] BRAND

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Interlock Armored Cable: Saving You Time and Money

BY ALBEN ROLAND, MANAGER, PRODUCT ENGINEERING — CAROL® BRAND ELECTRONIC PRODUCTS — GENERAL CABLE

While safety and accuracy are the primary concerns on any electrical installation, the speed and cost of the build are a very close second. Traditionally, when pulling cables in harsh environments or in locations with tight security measures, conduit is used to meet Plenum requirements as mandated by the NEC. Unfortunately, this type of installation is time-consuming and requires a relatively large amount of set-up space, which consequently extends deadlines and raises costs. But there is an alternative — requiring significantly less time and materials, interlock armored cable can be used anywhere cable is pulled in conduit, making it a practical alternative that offers equivalent protection and reliability with an overall lower installed cost.

Typically, conduit is used in severe environments that require heavy-duty cable protection or in locations where security is critical. Examples of these markets include:

- Commercial buildings
- Schools, colleges and universities
- Hospitals
- Prisons
- Banks
- Government and Homeland Security buildings
- Entertainment venues
- Casinos

However, a wide variety of electronics cables can now be interlock armored, including sound and security, computer and data cable, and communication and control cables. For example, Carol's C8001 twinaxial cable is approved for Rockwell Allen Bradley PLCs. Other types of cables, such as Tight Buffer fiber, can also be interlock armored.

To identify which cable construction — armored or unarmored — is appropriate for a specific installation environment, the best place to begin is with a thorough review of the National Electric Code (NEC), which will help identify the correct cable for each precise application. Developed to provide direction for both trained professionals and end users, these codes establish the foundation for the design and inspection of electrical installations. For instance, General Cable's NextGen® Tight Buffer Distribution Interlock Armored Cable is rated Type OFCR/OFCP for any premises location when installed in accordance with NEC article 770 (b) and 770-53 (b) — which describe the guidelines for the installation of optical fiber cable inside a building.

With that being said, it is also imperative for installers to make certain the cable selected for their project meets all local and national building codes required for their jurisdiction. Where uncertain, please consult with your local inspection authorities.

If appropriate for your application, using interlock armored cables in place of conduit offers numerous benefits, both practical and economical. By eliminating the need for conduit and fittings, contractors purchase less material and only make one pull during installation, cutting project time and expense. Additionally, interlock armored cable eliminates bend restrictions seen with conduit and requires less space, as the outer diameter of the cable is nearly an inch smaller than standard innerduct. The cable can be used in open-tray applications, and its aluminum armor provides outstanding mechanical protection in harsh industrial environments, offering increased crush resistance over plastic conduit. Furthermore, interlock armored cable can be jacketed to provide identification, while materials and fittings are standard and readily available.

Interlocked Armored versus Innerduct Installation			
Cable Type	General Cable Part Number	Total Cost	Savings
16/2 Multi-Conductor Interlock Armored Unshielded Riser	E1042S.99.10A	\$1,556	44%
16/2 Multi-Conductor Unshielded Riser	E1042S.99.10	\$2,793	

Using 1,000' of 16/2 multi-conductor and 1¼" 370' innerduct.
E1042S.99.10A pricing includes riser 16/2 multi-conductor cost and cable installation cost.
E1042S.99.10 pricing includes riser 16/2 multi-conductor cost, innerduct cost and innerduct installation cost.

Simply put, if you want to improve your installation efficiency while simultaneously offering proven safety and security, interlock armored cable may be just what you've been looking for. By eliminating the problems normally associated with pulling cable in conduit — such as time constrictions, protection requirements, bend limitations and space constraints — armored cables enable you to install with confidence and integrity.

Still need help? Carol's Wire Wizards are ready with first-class customer support, printed catalog materials and detailed product specifications. Please give us a call at 1.800.295.5896, send us an email at info@generalcable.com or visit www.generalcable.com.



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