

IDC VERSUS TRADITIONAL

METHODS FOR BONDING ARMORED FIBER OPTIC CABLES

INTRODUCTION

The Insulation Displacement Contact (IDC) Bond Clamp was developed to facilitate ease of use in comparison to traditional method for bonding armored fiber optic cables. It builds on EMC's long-standing tradition of simplifying bonding and grounding jobs performed by field technicians. The IDC bond clamp offers the following benefits:

- Suitable for cable outside diameters of .48" - .79" (Medium) and .80" - 1.3" (Large)
- Can be used for aerial and direct-buried applications
- No opening of the cable sheath
- Simplicity of installation
- Does not attenuate fiber
- Available with a water blocking enclosure
- Meets Telcordia and UL requirements for "Cable Shield Bonding Clamps"

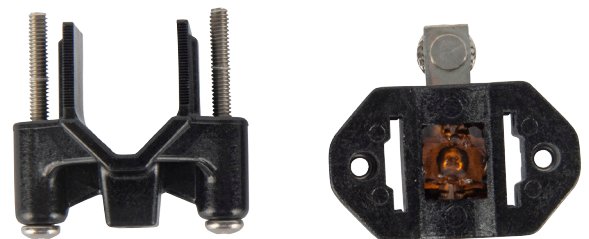


BACKGROUND

Armored fiber optic cables are commonly used in lashed aerial, direct-burial, and duct installations. The armor provides mechanical protection from outside factors, such as, rodents and ground obstacles. The benefits of armored cable come with the added expense of adding bonding points. The task of adding these points can be time consuming, increase the probability of harming the network, or injuring field technicians.

BENEFITS OF THE IDC BONDING CLAMP

The IDC bond clamp was created to greatly simplify installation of new bonding points along a cable route or building entry points. It eliminates the need to install or open splice closures to access armored cable to create a bonding point. The clamp is installed directly over the cable jacket wherever access is convenient, in many cases without disturbing slack coils or lashing. The clamp body is made from engineering-grade thermoplastic with an insulation-displacement contact, engulfed in a water blocking gel, that makes electrical contact to the cable armor without penetrating the shield or causing attenuation to the fiber.



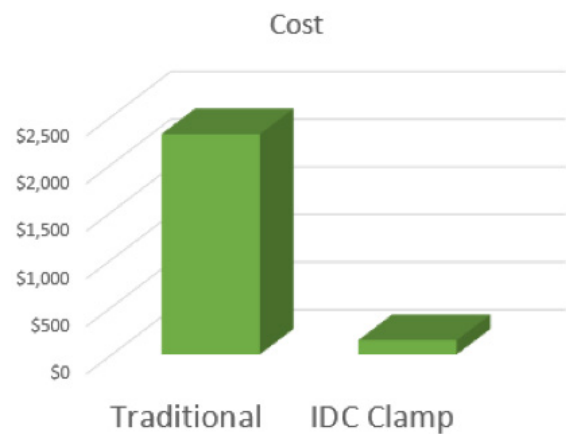
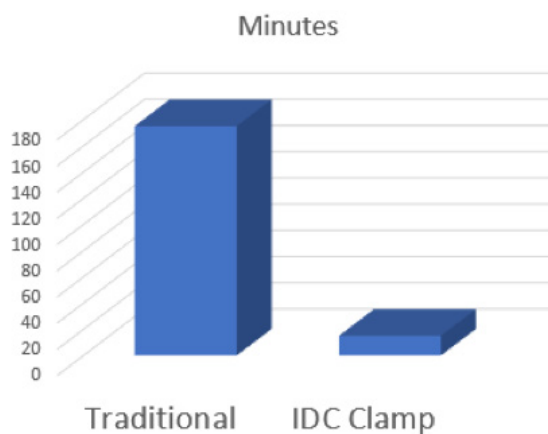
COST COMPARISON OF TRADITIONAL METHOD VS. EMC IDC BONDING CLAMP IN AN AERIAL APPLICATION

Below is a comparison of adding a bonding point to a lashed aerial span using the traditional new-closure method vs. using the IDC bonding clamp. This comparison is based on a 250ft span with 150ft slack loop using snow shoes. This will require delashing 400ft of cable and relashing 250ft of cable (dropping the slack loop and relashing the entire span). Traffic control costs are not taken into consideration but note the time savings of using the IDC bonding clamp and the associated reduction in potential traffic control costs and disruptions.

Traditional Method		
Step/Material	Minutes	Cost
Delash 400ft @ \$1.25/ft	30	\$500
Remove slack storage loop	30	\$45
Lower slack coil	10	\$75
New bonding closure	--	\$80
Closure installation	60	\$250
Ring cut adder	--	\$350
Hang new closure & bond	15	\$100
Night window adder*	--	\$600
Re-lash span and slack	30	\$312
TOTALS	175	\$2,312

IDC Bonding Clamp Method		
Step/Material	Minutes	Cost
IDC Clamp	--	\$75
Install IDC onto cable	10	\$50
Bond to messenger	5	\$25
TOTALS	15	\$150

*Cutting into active cables often requires that the work be completed overnight in case of network outage.



Note the significant difference in both time and cost for lashed aerial applications.

CONCLUSION

Based on the simplicity of installation of the IDC bond clamp installers can significantly reduce their materials and labor costs in comparison to incumbent bonding and locating solutions. The clamp provides a simple, cost-effective solution to meet electrical codes, reduce pinholing of cable jackets due to lightning strikes and power crosses.

ADDITIONAL INFORMATION

For additional information on IDC bond clamp or any other EMC products, please contact your Hubbell Power Systems sales representative.

