



# AIRGUARD®

## SOLAR COLLECTOR SYSTEM CABLE

Performance

Innovation

Reliability

### Renewable Energy

Today's renewable energy alternatives all have at least one thing in common, they rely on power cable to distribute the generation source's output. Power cable may be a small part of the overall project's cost; however, it should not be overlooked in its importance to the successful and reliable operation of these renewable alternatives.

Depending on size, a solar power plant may require many miles of power cable. The cable's cost, installation capabilities, performance, and reliability all need to be evaluated when choosing the appropriate solution. Prysmian has developed AIRGUARD® cable as the one cable solution to use for all solar collector systems.

The two conductor (2/C) AIRGUARD® cable option for solar power plants incorporates all the necessary requirements in one package:

- Installation flexibility
- Cable system cost reductions
- Robust, reliable design
- Proven performance

AIRGUARD® cables are manufactured with an extruded filler, polymeric armor, and chemical plus hydrocarbon resistant layer. The extruded filler provides a round, solid cable core. The polymeric armor provides the mechanical protection required for today's rugged installation environments while the chemical plus hydrocarbon resistant layer prevents contaminants from attacking and degrading the core components.



### Installation Flexibility

AIRGUARD® cables are the one solution for any installation type: from direct buried to a viable alternative for cable and conduit as well as concrete encased duct banks.

Direct buried installations have simply used an off-the-shelf low voltage cable between the combiner boxes and the inverters. This simple installation philosophy does not take into account the downtime cost associated with a cable failure, which could be easily prevented. AIRGUARD® cables' polymeric armor and chemical plus hydrocarbon resistant layers provide the necessary protection required for an installation designed to operate continuously for 40 years.

Cable and conduit installations provide reliable service, but at a cost. Once a trench is opened, cable and conduit installations require additional steps such as piecing the conduit together, cleaning the conduit, inserting pull strings, handling multiple, individual cables, and finally pulling the cables through the conduit. All these steps add to the overall cost of a project. Whereas, AIRGUARD® cables' 2/C with a ground design provides a complete package that can be directly buried...replacing the cable and conduit installation and reducing cost. Additionally, AIRGUARD® cables can withstand 2500psi of compressive force.

This capability in an armored design that also incorporates chemical plus hydrocarbon resistance makes AIRGUARD® cable a viable alternative to concrete encased duct banks as well as cable and conduit installations.

## Cable System Costs

**AIRGUARD**<sup>®</sup> cables can reduce the overall cable system costs. Today's wide disparity in copper and aluminum costs provide a sound basis for choosing aluminum; however, that aluminum conductor must be properly protected. Through dig-ins, cuts, and/or nicks, aluminum can be exposed to the surrounding elements which will degrade the metal and can quickly lead to an open circuit condition. When relying on a generation source, disconnecting it due to the wrong choice in cable is a costly option. **AIRGUARD**<sup>®</sup> cables are the right option.

Installation experience has proven that **AIRGUARD**<sup>®</sup> cables reduce the overall cable system costs. Some reports have been as high as \$9/ft in savings when using **AIRGUARD**<sup>®</sup> cables instead of cable and conduit.

## Proven Performance

**AIRGUARD**<sup>®</sup> cables have been manufactured in Abbeville, South Carolina since 2007. Rigorous testing programs including, but not limited to, crush and impact resistance, sidewall bearing pressure (SWBP), as well as chemical and hydrocarbon resistance testing have undeniably proven **AIRGUARD**<sup>®</sup> cables are the best choice for many installations.

Testimonials from customers, contractors, and engineers all re-affirm the proof that **AIRGUARD**<sup>®</sup> cables are the premier choice for installations ranging from solar collector systems to the most technologically and physically demanding projects.

## Cable Sizes

2/C Low Voltage **AIRGUARD**<sup>®</sup> Cables  
#1 AWG through 750 kcmil

**The KEY is choosing the right cable  
for the right application**

## Ratings

**AIRGUARD**<sup>®</sup> cables have successfully passed various industry standard tests. A list representing some of the ratings available for low voltage **AIRGUARD**<sup>®</sup> cables is provided below:

UL Type TC  
UL CT Test  
UL Type XHHW & XHHW-2  
UL Exposed Run (ER)  
UL Sunlight Resistant  
IEEE 383 & 1202 Flame Test  
ICEA T-29-520 at 210,000 BTU/hr  
Oil I & II Resistance  
Direct Buried  
CSA FT4 Flame Test  
CSA Cold Bend (-40°C)  
NEC Class I Division II

## Key Design Features

Aluminum or Copper Conductors  
Crosslinked Polyethylene Insulation (LV)  
Polymeric Armor  
Chemical Plus Hydrocarbon Resistant Layer  
PVC Jacket

Low voltage **AIRGUARD**<sup>®</sup> cables are manufactured to the latest versions of the following industry standards:

UL 44  
UL 1277  
ICEA S-93-658  
NEMA WC-70

Optional manufacturing capabilities include:

- 2kV Rating
- Various PVC jacket colors:  
Black, Blue, Red, Yellow
- Compressed stranded conductors
- Low smoke zero halogen jacket
- Non-Leaded PVC

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