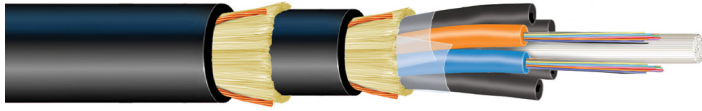


# AIRGUARD® XP Fiber Optic Cable

Oil & Gas | Chemical | Low Temp | High Crush | Harsh Environment | Tray



## OVERVIEW

AIRGUARD® XP combines world-class mechanical protection, chemical protection, and user friendliness into a family of robust industrial optical fiber cables. AIRGUARD® XP joins Prysmian's existing brands of AIRGUARD® low voltage and medium voltage cables.

In the industrial and harsh environment, the presence of aggressive chemicals such as hydrocarbons, solvents, acids, and bases can destroy a traditional fiber cable. AIRGUARD® XP resists those harsh elements. In fact, the AIRGUARD® XP family surpasses the rigorous UL 2556 requirements for Oil & Gasoline Resistance.

AIRGUARD® XP goes head to head with interlocking armor cables in the areas of impact and crush resistance. Because interlock armor contains metallic armoring, they are stiff, heavy, and require grounding. A severe impact or crush may cause permanent deformation to the metallic armor. The AIRGUARD® XP, all-dielectric versions, overcome these un-desirable factors and can be installed in trays/ladders along with copper communications or power conducting cables, thus providing greater flexibility & user friendliness.

AIRGUARD® XP cables meet or exceed key industry standards such as ANSI/ICEA 696, CSA 22.2, UL 1277, and Telcordia GR20.

The robust all-dielectric double jacket carries listings for sunlight resistance (SUN RES) and direct burial (DIR BUR). This cable is extremely versatile and may be utilized in low temperature applications down to -50°C (-58°F) and in properly engineered self-supporting aerial applications. The dual jacket, single corrugated steel tape option is also SUN RES and DIR BUR listed and provides optimal rodent protection in direct buried applications. The single jacket all-dielectric option is best suited for duct installations.

### Chemical Resistance Performance

| Compound                    | Test Criteria     |
|-----------------------------|-------------------|
| ASTM No. 2 Oil              | 96 hours at 100°C |
| Kerosene                    | 168 hours at 50°C |
| MIL-T-5624N JP-4 (jet fuel) | 168 hours at 50°C |
| MIL-H-5606 Hydraulic Fluid  | 168 hours at 50°C |
| Vegetation Killer           | 168 hours at 50°C |
| De-Icing Fluid              | 24 hours at 50°C  |
| Hydrogen Sulfide (H2S)      | 24 hours at 50°C  |

## SPECIFICATIONS / RATINGS

**Applications** AIRGUARD® XP cables are extremely rugged, indoor/outdoor loose tube cables providing unsurpassed performance in the most challenging applications where extreme exposures to chemicals, oils, temperature, or compressive and tensile loads are present

**Flame Ratings** **XPRLTM** = OFNG- LS/FT4 ST1 flame and low smoke rating  
**XPRLTMB** = OFN flame rating  
**XPRLTMD** = OFCG-LS FT4 ST1 flame and low smoke rating

**Fiber Count** 2 to 288

**Fiber Types** Single-mode (SMF, bend-insensitive) Multimode (62.5/125-OM1, 50/125-OM2, OM3, OM4 and OM5)

**Standards** ANSI/ICEA S-104-696, CSA C22.2 No 230/232, UL-1277, UL-2556 4.2.8.3 "Oil Resistance" PR11, UL-2556 4.2.8.4 "Gasoline Resistance" GR11, UL 1277 & CSA 22.2 230 Direct Buried Rated: DIR BUR, UL 1651 & CSA 22.2 230 UV Resistance Rated: SUN RES, Telcordia GR-20, CE RoHS Compliant

**Registered Supplier** TL 9000, ISO 9001, ISO 14001, and OHSAS 18001



## FEATURES AND BENEFITS

- Suitable for tray installations
- Hydrocarbon (kerosene, gasoline, lubricating oil) resistant
- Resists chemical degradation in industrial environments
- Resistant to jet fuel & de-icing chemicals for airport applications
- Flame-retardant, black UV-resistant outer jacket
- Smaller & lighter than comparable metallic armored designs
- Available with bend-insensitive single-mode & multimode fibers
- Proven stranded loose tube cable design for long term reliability



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## AirGuard® XP Dielectric Double Jacket (2J) XPRLTM Series | OFNG-LS / FT4 STI

| Fiber Count Range | Recommended Fiber Count | Recommended Part Number | # of Buffer Tubes | Diameter |      | Approx. Cable Weight |       | Bend Radius   Load |    | Bend Radius   No Load |    | Max. Reel Length |        |
|-------------------|-------------------------|-------------------------|-------------------|----------|------|----------------------|-------|--------------------|----|-----------------------|----|------------------|--------|
|                   |                         | Prysmian*               |                   | Inches   | mm   | lb/ft                | kg/km | Inches             | cm | inches                | cm | feet             | meters |
| 6 - 72            | 6                       | XPRLTM-12-AA-006-BB     | 6                 | 0.60     | 15.3 | 159                  | 237   | 12                 | 31 | 6                     | 15 | 41,010           | 12,500 |
|                   | 12                      | XPRLTM-12-AA-012-BB     |                   |          |      |                      |       |                    |    |                       |    |                  |        |
|                   | 24                      | XPRLTM-12-AA-024-BB     |                   |          |      |                      |       |                    |    |                       |    |                  |        |
|                   | 36                      | XPRLTM-12-AA-036-BB     |                   |          |      |                      |       |                    |    |                       |    |                  |        |
|                   | 48                      | XPRLTM-12-AA-048-BB     |                   |          |      |                      |       |                    |    |                       |    |                  |        |
|                   | 72                      | XPRLTM-12-AA-072-BB     |                   |          |      |                      |       |                    |    |                       |    |                  |        |
| 96                | 96                      | XPRLTM-12-AA-096-BB     | 8                 | 0.67     | 17.1 | 198                  | 294   | 13                 | 34 | 7                     | 17 | 41,010           | 12,500 |
| 120               | 120                     | XPRLTM-12-AA-120-BB     | 10                | 0.74     | 18.8 | 238                  | 354   | 15                 | 38 | 7                     | 19 | 35,673           | 10,873 |
| 144               | 144                     | XPRLTM-12-AA-144-BB     | 12                | 0.83     | 21.0 | 294                  | 438   | 17                 | 42 | 8                     | 21 | 29,534           | 9,002  |
| 216               | 216                     | XTRLTM-12-AA-216-BB     | 18                | 0.81     | 20.5 | 267                  | 398   | 16                 | 41 | 8                     | 21 | 21,978           | 6,699  |
| 288               | 288                     | XPRLTM-12-AA-288-BB     | 24                | 0.94     | 24.0 | 366                  | 545   | 19                 | 48 | 9                     | 24 | 21,978           | 6,699  |

\* Where AA equals glass type and BB equals attenuation

### Note:

Single layer, 12 position = OD 21 mm  
Dual layer, 12/6 position = OD 20.5 mm

### Temperature Range

Shipping and Storage: -58° F to +158° F (-50° C to +70° C)  
Installation: -22° F to +140° F (-30° C to +60° C)  
Operation: -58° F to +158° F (-50° C to +70° C)

### Mechanical Performance

Maximum installation load: 1000 lbf (4500 N)  
Maximum operation loads: 300 lbf (1335 N)  
Crush resistance: 4500 N  
Impact force resistance: 11.8 N\*M  
Cold impact load: 5.88 N\*M at -22° F (-30° C)

### Note:

Cable damage may occur if installation temperature limits are exceeded; therefore, Prysmian Group recommends storing I/O cables in appropriate temperature conditions ≥ 24 hours prior to placement.



# AIRGUARD® XP Fiber Optic Cable

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## AirGuard® XP Dielectric Single Jacket (1J) XPRLTMB Series | OFN

| Fiber Count Range | Recommended Fiber Count | Recommended Part Number | # of Buffer Tubes | Diameter |      | Approx. Cable Weight |       | Bend Radius   Load |    | Bend Radius   No Load |    | Max. Reel Length |        |
|-------------------|-------------------------|-------------------------|-------------------|----------|------|----------------------|-------|--------------------|----|-----------------------|----|------------------|--------|
|                   |                         | Prysmian*               |                   | Inches   | mm   | lb/ft                | kg/km | Inches             | cm | inches                | cm | feet             | meters |
| 6 - 48            | 6                       | XPRLTMB-12-AA-006-BB    | 5                 | 0.41     | 10.3 | 62                   | 93    | 8                  | 21 | 4                     | 10 | 41,010           | 12,500 |
|                   | 12                      | XPRLTMB-12-AA-012-BB    |                   |          |      |                      |       |                    |    |                       |    |                  |        |
|                   | 24                      | XPRLTMB-12-AA-024-BB    |                   |          |      |                      |       |                    |    |                       |    |                  |        |
|                   | 36                      | XPRLTMB-12-AA-036-BB    |                   |          |      |                      |       |                    |    |                       |    |                  |        |
|                   | 48                      | XPRLTMB-12-AA-048-BB    |                   |          |      |                      |       |                    |    |                       |    |                  |        |
| 72                | 72                      | XPRLTMB-12-AA-072-BB    | 6                 | 0.44     | 11.2 | 73                   | 109   | 9                  | 22 | 4                     | 11 | 41,010           | 12,500 |
| 96                | 96                      | XPRLTMB-12-AA-096-BB    | 8                 | 0.51     | 12.9 | 95                   | 142   | 10                 | 26 | 5                     | 13 | 41,010           | 12,500 |
| 120               | 120                     | XPRLTMB-12-AA-120-BB    | 10                | 0.58     | 14.8 | 125                  | 186   | 12                 | 30 | 6                     | 15 | 41,010           | 12,500 |
| 144               | 144                     | XPRLTMB-12-AA-144-BB    | 18                | 0.65     | 16.5 | 154                  | 229   | 13                 | 33 | 6                     | 17 | 41,010           | 12,500 |
| 216               | 216                     | XPRLTMB-12-AA-216-BB    | 18                | 0.65     | 16.5 | 154                  | 229   | 13                 | 33 | 6                     | 17 | 33,465           | 10,200 |

\* Where AA equals glass type and BB equals attenuation

### Temperature Range

Shipping and Storage: -40° F to +158° F (-40° C to +70° C)  
 Installation: +14° F to +140° F (-10° C to +60° C)  
 Operation: -40° F to +158° F (-40° C to +70° C)

### Mechanical Performance

Maximum installation load: 600 lbf (2670 N)  
 Maximum operation loads: 180 lbf (801 N)  
 Cold impact load: 5.88 N\*M at -22° F (-30° C)

## AirGuard® XP Corrugated Steel Tape Armor with Double Jacket (1A 2J) XPRLTMD Series | OFCG-LS / FT4 ST1

| Fiber Count Range | Recommended Fiber Count | Recommended Part Number | # of Buffer Tubes | Diameter |      | Approx. Cable Weight |       | Bend Radius   Load |    | Bend Radius   No Load |    | Max. Reel Length |        |
|-------------------|-------------------------|-------------------------|-------------------|----------|------|----------------------|-------|--------------------|----|-----------------------|----|------------------|--------|
|                   |                         | Prysmian*               |                   | Inches   | mm   | lb/ft                | kg/km | Inches             | cm | inches                | cm | feet             | meters |
| 6 - 72            | 6                       | XPRLTMD-12-AA-006-BB    | 6                 | 0.67     | 17.1 | 215                  | 320   | 13                 | 34 | 7                     | 17 | 41,010           | 12,500 |
|                   | 12                      | XPRLTMD-12-AA-012-BB    |                   |          |      |                      |       |                    |    |                       |    |                  |        |
|                   | 24                      | XPRLTMD-12-AA-024-BB    |                   |          |      |                      |       |                    |    |                       |    |                  |        |
|                   | 36                      | XPRLTMD-12-AA-036-BB    |                   |          |      |                      |       |                    |    |                       |    |                  |        |
|                   | 48                      | XPRLTMD-12-AA-048-BB    |                   |          |      |                      |       |                    |    |                       |    |                  |        |
|                   | 72                      | XPRLTMD-12-AA-072-BB    |                   |          |      |                      |       |                    |    |                       |    |                  |        |
| 96                | 96                      | XPRLTMD-12-AA-096-BB    | 8                 | 0.74     | 18.9 | 259                  | 386   | 15                 | 38 | 7                     | 19 | 32,808           | 10,000 |
| 120               | 120                     | XPRLTMD-12-AA-120-BB    | 10                | 0.81     | 20.7 | 308                  | 458   | 16                 | 41 | 8                     | 21 | 21,755           | 6,631  |
| 144               | 144                     | XPRLTMD-12-AA-144-BB    | 12                | 0.91     | 23.0 | 374                  | 556   | 18                 | 46 | 9                     | 23 | 21,755           | 6,631  |
| 216               | 216                     | XTRLTMD-12-AA-216-BB    | 18                | 0.89     | 22.5 | 153                  | 513   | 18                 | 45 | 9                     | 23 | 18,202           | 5,548  |
| 288               | 288                     | XPRLTMD-12-AA-288-BB    | 24                | 0.99     | 25.2 | 205                  | 645   | 20                 | 50 | 10                    | 25 | 18,202           | 5,548  |

\* Where AA equals glass type and BB equals attenuation

### Temperature Range

Shipping and Storage: -50° F to +158° F (-40° C to +70° C)  
 Installation: -22° F to +140° F (-30° C to +60° C)  
 Operation 12-72F: -58° F to +158° F (-50° C to +70° C)  
 Operation >72F: -40° F to +158° F (-40° C to +70° C)

### Mechanical Performance

Maximum installation load: 600 lbf (2670 N)  
 Maximum operation loads: 180 lbf (801 N)  
 Cold impact load: 5.88 N\*M at -22° F (-30° C)

### Note:

Cable damage may occur if installation temperature limits are exceeded; therefore, Prysmian Group recommends storing I/O cables in appropriate temperature conditions ≥ 24 hours prior to placement.



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## Ordering Guide

The Prysmian part number incorporates several significant attributes involving cable design and optical performance. The appropriate part number can be configured using the process described below

**Example:** Indoor/Outdoor Loose Tube | AIRGUARD® Series, Dielectric (double Jacket) | General Purpose rated | 12 fibers per buffer tube 48 62.5/125 multimode fibers total (printed in feet)

| 1 | LENGTH MARKINGS | 2 | PRODUCT FAMILY | 3 | CONSTRUCTION | 4 | FIBER GROUPING | 5 | FIBER TYPE | 6 | FIBER COUNT | 7 | FIBER GRADE |
|---|-----------------|---|----------------|---|--------------|---|----------------|---|------------|---|-------------|---|-------------|
|   | F               |   | XPRLTM         |   | BLANK        |   | 12             |   | G6         |   | 048         |   | M2          |

### PART NUMBER CONSTRUCTION

| 1 | LENGTH MARKINGS                                                    |
|---|--------------------------------------------------------------------|
|   | F = Feet or M = Meters                                             |
| 2 | PRODUCT FAMILY                                                     |
|   | XPRLTM = 2-288f AIRGUARD® XP (double jacket)                       |
|   | XPRLTMB = 2-216f AIRGUARD® XP (single jacket)                      |
|   | XPRLTMD = 2-288f AIRGUARD® XP (double jacket & steel tape armored) |
| 3 | CONSTRUCTION                                                       |
|   | (Blank) = Not available with interlock armor                       |
| 4 | FIBER GROUPING                                                     |
|   | 12 = 12f per unit or tube                                          |

### FIBER INFORMATION

| 5                                                                 | FIBER TYPE      |                 |                |                 |
|-------------------------------------------------------------------|-----------------|-----------------|----------------|-----------------|
| SINGLE-MODE                                                       |                 |                 |                |                 |
| B1 = Bend-Insensitive Single-Mode (ITU G.657.A1 & G.652.D)        |                 |                 |                |                 |
| B2 = Bend-Insensitive Single-Mode (ITU G.657.A2 & .B2, & G.652.D) |                 |                 |                |                 |
| MULTIMODE*                                                        | Wavelength (nm) | Bandwidth (MHz) | 1 GbE Dist (m) | 10 GbE Dist (m) |
| G6 = OM1 (62.5µm)                                                 | 850/1300        | 200/500         | 300/550        | 33/___          |
| G5 = OM2+ BIF (50µm)                                              | 850/1300        | 700/500         | 800            | 150/___         |
| G3 = OM3 BIF (50µm)                                               | 850/1300        | 1500/500        | 1000           | 300/___         |
| G4 = OM4 BIF (50µm)                                               | 850/1300        | 3500/500        | 1100           | 550/___         |
| GW = OM5 BIF (50µm)                                               | 850/1300        | 4700/2470       | 1100           | 550/___         |

\* For XPRLTMD with multimode, the maximum fiber count is 72.

| 6                   | FIBER COUNT     |                            |
|---------------------|-----------------|----------------------------|
| 002 to 288 fibers   |                 |                            |
| 7                   | FIBER GRADE     |                            |
| SINGLE-MODE         |                 |                            |
| Attenuation (dB/km) | Wavelength (nm) | Fiber Type                 |
| E1 = 0.40/0.40/0.30 | 1310/1383/1550  | B1 or B2                   |
| E3 = 0.35/0.35/0.25 | 1310/1383/1550  | B1 or B2                   |
| MULTIMODE           |                 |                            |
| Attenuation (dB/km) | Wavelength (nm) | Fiber Type                 |
| M2 = 3.5/1.0        | 850/1300        | OM1 (62.5µm)               |
| M3 = 3.0/1.0        | 850/1300        | OM2+, OM3, OM4, OM5 (50µm) |

Other cable constructions and fiber performance grades available on request.



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