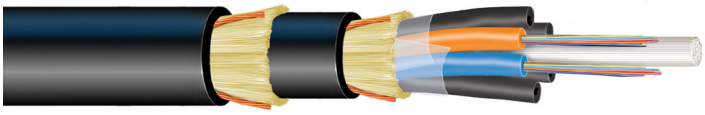
AIRGUARD® XP Fiber Optic Cable

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 version, overcomes these undesirable 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.

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 **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)
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

CE
RoHS Compliant

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 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/kft	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)

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/kft	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)

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

HB = Single-Mode (ITU G.652 C & D) Low Water Peak

ES = Enhanced Single-Mode (ITU G.652 C & D)

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/___

* 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	
E3 = 0.35/0.35/0.25	1310/1383/1550	HB, ES, 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 (50µm)

Other cable constructions and fiber performance grades available on request.

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