A brand of the Prysmian Group

15kV & 25kV 1/C AIRGUARD® CSA (alternative to MV Teck & CCW Cables*)

Medium Voltage Commercial & Industrial Cables

Description

Single conductor cable with stranded copper conductor, extruded insulation system consisting of a thermosetting semiconducting conductor shield, high dielectric strength EPROTENAX® EPR insulation, thermosetting semiconducting insulation shield, helically applied bare copper tape shield, separator tape, foamed polymeric Air Bag™ layer for superior mechanical protection, a Drylam® layer consisting of a longitudinally applied aluminum tape and an extruded oil and hydrocarbon resistant polymer, and overall non-leaded sun resistant PVC jacket.

Specifications	Ratings
CSA -CSA C68.10	Cold Impact/Bend Test (-40°C) 105°C
CSA - C22.2 No.0.3	Sunlight Resistant FT4
CSA - C22.2 No. 230	TC (1/0 AWG and Larger)

For 105°C continuous, 140°C emergency, 250°C short-circuit.

Options

- Colored Jackets

Applications and Benefits
Prysmian's patented AIRGUARD® cable is a replacement for continuously corrugated and welded (CCW) armored cable with the benefit of improved impact performance (5X CCW) and improved sidewall bearing pressure (2X-3X CCW). This enables the customer to pull the cable longer distances than traditional metallic armored cable products. AIRGUARD cables are also suitable for installation in -30°C temperatures. Please call to inquire about product literature and cable testing performance videos or visit our website.

Design Parameters

CONDUCTOR: Class B Compact concentric strand aluminum alloy 1350 or soft drawn annealed copper per ASTM.

CONDUCTOR SHIELD: Extruded thermosetting semiconducting shield which is free stripping from the conductor and bonded to the insulation.

INSULATION: Natural high dielectric strength EPROTENAX® EPR-based insulation, combined with other materials and agents that enhance the electrical and mechanical characteristics assuring extended cable life.

INSULATION SHIELD: Extruded thermosetting semiconducting shield with controlled adhesion to the insulation providing the required balance between electrical integrity and ease of stripping.

METALLIC SHIELD: Helically applied non-magnetic copper tape(s) over the insulation shield followed by a separator tape.

MECHANICAL PROTECTION: High strength and high crush resistant Air Bag™ Layer extruded over the core.

CHEMICAL PROTECTION: A layer of Drylam® which consists of an aluminum tape & a chemical resistant extruded polymer layer is applied.

JACKET: Sunlight resistant polyvinyl chloride (PVC), non-leaded jacket.

*Mechanically stronger than TECK and CCW type cables.

Installation

- Conduit in Air
- Direct Buried
- Isolated in Air
- Underground Duct
- In Cable Tray
- Wet Locations
- Dry Locations
- With Messenger
- Industrial
- -30°C Installation

Prysmian Group
700 Industrial Drive | Lexington, SC 29072 | +1-800-845-8507 | www.prysmianusa.com
137 Commerce Drive | Johnstown, Ontario K0E 1T1 | www.prysmiancanada.com

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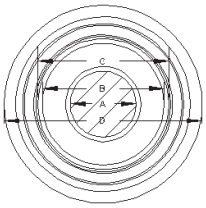

Product Number	Conductor	Insulation Thickness (mils)	Conductor Diameter (mm)	Insulation Diameter (mm)	Insulation Shield Diameter (mm)	Overall Jacket Diameter (mm)	Cable Weight (lkg/km)	Minimum Bending Radius (mm)	†Ampacity in Air and Cable Tray	††Impedance in Air and Cable Tray	
			(A)	(B)	(C)	(D)			‡105°C	Pos/Neg Seq	Zero Seq
15kV 133% Copper Single Conductor											
QXM221A	1/0 AWG CU	220	8.66	20.75	22.17	32.21	1403	387	290	450 + j242	2497 + j93
QXM222A	2/0 AWG CU	220	9.55	21.69	23.16	33.20	1579	399	335	360 + j236	2313 + j88
QXM223A	4/0 AWG CU	220	12.17	24.31	25.78	35.81	2040	430	445	232 + j224	2003 + j78
QXZ632A	250 MCM CU	220	13.26	25.60	27.03	37.31	2301	448	495	199 + j219	1887 + j74
QXJ244A	350 MCM CU	220	15.80	28.65	30.07	39.85	2862	479	610	147 + j211	1672 + j69
QXZ311A	500 MCM CU	220	18.85	31.19	32.61	43.31	3704	520	765	109 + j204	1521 + j62
QXJ524A	750 MCM CU	220	23.29	35.84	37.26	49.48	5258	594	990	81 + j197	1322 + j56
QXZ047A	1000 MCM CU	220	27.20	39.75	41.17	53.39	6551	641	1185	67 + j191	1193 + j51

†Ampacities are based on the following:

Three Phase Operation

PRODUCT NOTES:

[S] Items are Prysmian authorized stock.

The above dimensions are approximate and subject to normal manufacturing tolerances.

All metric (SI) dimensions are derived from a soft conversion.

Air: Cable isolated in air and an ambient temperature of 40°C; per NEC 2011 Table 310.60(C)(69)

In Cable Tray: Per NEC 2011 Article 392.80(B)(2)(b), Where single-conductor cables are installed in a single layer in uncovered cable trays, with a maintained space of not less than one cable diameter between individual conductors, the ampacity of 1/0 AWG and larger cables shall not exceed the allowable ampacities in Table 310.60(C) (69)

‡EPROTENAX™ EPR-insulated cables are capable of operating at 105°C. However, the maximum operating temperature of the cable should be based on the maximum operating temperature of the cable accessories to be used.

††Impedance based on 105°C operating temperature, shields short-circuited with no return in earth. Return ONLY in copper tape shield(s). For calculation purposes, cables in air and cable tray are horizontally spaced, two cable diameters apart, center-to-center.

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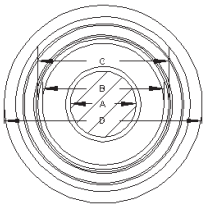

Product Number	Conductor	Insulation Thickness (mils)	Conductor Diameter (mm)	Insulation Diameter (mm)	Insulation Shield Diameter (mm)	Overall Jacket Diameter (mm)	Cable Weight (lkg/km)	Minimum Bending Radius (mm)	†Ampacity in Air and Cable Tray	††Impedance in Air and Cable Tray	
			(A)	(B)	(C)	(D)			‡105° C	Pos/Neg Seq	Zero Seq
15kV 133% Aluminum Single Conductor											
CODE DNE	1/0 AWG AL	220	8.66	20.75	22.17	32.21	1073	387	225	737 + j242	2783 + j93
CODE DNE	2/0 AWG AL	220	9.55	21.69	23.16	33.20	1161	399	260	586 + j236	2538 + j88
CODE DNE	4/0 AWG AL	220	12.17	24.31	25.78	35.81	1381	430	350	374 + j224	2143 + j78
CODE DNE	250 MCM AL	220	13.26	25.60	27.03	37.31	1524	448	385	319 + j219	2006 + j74
CODE DNE	350 MCM AL	220	15.80	28.65	30.07	39.85	1767	479	480	233 + j211	1756 + j69
CODE DNE	500 MCM AL	220	18.85	31.19	32.61	43.31	2143	520	600	169 + j204	1579 + j62
CODE DNE	750 MCM AL	220	23.29	35.84	37.26	49.48	2868	594	780	120 + j197	1359 + j56
CODE DNE	1000 MCM AL	220	27.20	39.75	41.17	53.39	3418	641	940	96 + j191	1220 + j51

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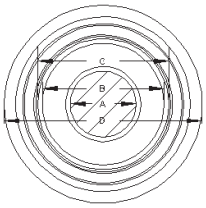

Product Number	Conductor	Insulation Thickness (mils)	Conductor Diameter (mm)	Insulation Diameter (mm)	Insulation Shield Diameter (mm)	Overall Jacket Diameter (mm)	Cable Weight (lkg/km)	Minimum Bending Radius (mm)	†Ampacity in Air and Cable Tray	††Impedance in Air and Cable Tray	
			(A)	(B)	(C)	(D)			‡105°C	Pos/Neg Seq	Zero Seq
25kV 133% Copper Single Conductor											
QXM241A	1/0 AWG CU	320	8.66	25.98	27.41	37.44	1746	450	290	452 + j253	2085 + j109
QXM242A	2/0 AWG CU	320	9.55	26.92	28.40	38.43	1924	462	330	362 + j247	1935 + j104
QXM243A	4/0 AWG CU	320	12.17	29.54	31.01	41.05	2411	493	445	234 + j234	1687 + j92
QXM244A	250 MCM CU	320	13.26	30.84	32.31	43.00	2713	516	490	201 + j229	1596 + j88
QXM245A	350 MCM CU	320	15.80	33.38	34.85	47.07	3456	565	605	150 + j223	1451 + j80
QXM246A	500 MCM CU	320	18.85	36.42	37.85	50.06	4308	601	755	112 + j214	1314 + j73
QXM247A	750 MCM CU	320	23.29	41.07	42.49	54.71	5759	657	970	83 + j204	1159 + j65
QXM248A	1000 MCM CU	320	27.20	44.98	46.41	58.62	7088	704	1160	67 + j190	1057 + j60

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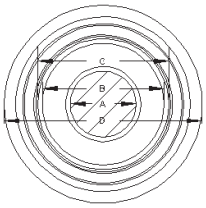

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25kV 133% Aluminum Single Conductor											
CODE DNE	1/0 AWG CU	320	8.66	25.98	27.41	37.44	1415	450	225	739 + j253	2372 + j109
CODE DNE	2/0 AWG CU	320	9.55	26.92	28.40	38.43	1506	462	260	588 + j247	2160 + j104
CODE DNE	4/0 AWG CU	320	12.17	29.54	31.01	41.05	1751	493	345	376 + j234	1828 + j92
CODE DNE	250 MCM CU	320	13.26	30.84	32.31	43.00	1936	516	380	321 + j229	1714 + j88
CODE DNE	350 MCM CU	320	15.80	33.38	34.85	47.07	2360	565	475	235 + j233	1535 + j80
CODE DNE	500 MCM CU	320	18.85	36.42	37.85	50.06	2747	601	590	171 + j214	1372 + j73
CODE DNE	750 MCM CU	320	23.29	41.07	42.49	54.71	3369	657	765	122 + j204	1196 + j65
CODE DNE	1000 MCM CU	320	27.20	44.98	46.41	58.62	3955	704	920	98 + j197	1084 + j60

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