

Description

Three conductor cable with stranded copper conductors, 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, cabled with fillers and grounding conductors, overall binder tape, foamed polymeric layer for superior mechanical protection, longitudinally applied aluminum tape, extruded oil and hydrocarbon resistant polymeric layer, and overall sun resistant PVC jacket. Suitable for Class I Division 2 locations.

Specifications

Ratings

ICEA	ICEA S-93-639/NEMA WC74	Type MV-105
UL	UL 1072	For CT USE Direct Buried Sunlight Resistant IEEE 383 Flame Test IEEE 1202 Flame Test CSA Cold Impact/Bend Test (-40C) CSA FT4 Flame Test ICEA T-29-520 at 210,000 BTU/hr
MSHA		Type MP

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



Design Parameters

Conductor

- Class B Compact concentric strand 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 with a minimum overlap of 15%. A Mylar ribbon is longitudinally applied under the copper tape shield for phase identification - 1C w/ Red, 1C w/ Blue, and 1C w/ Black.

Grounding Conductors

- Bare stranded copper conductor, one in each interstice, per UL, ICEA, and ASTM.

Assembly

- Phase identified shielded conductors cabled with fillers and grounding conductors (as specified), forming a firm and cylindrical cable core. A binder tape is applied to maintain core symmetry and mechanical stability.

Mechanical Protection

- High strength and high crush resistant Air Bag™ Layer extruded over the core assembly

Chemical Protection

- A layer of Drylam™ which consists of aluminum tape and a chemical resistant extruded polymer layer is applied.

Jacket

- Sunlight resistant polyvinyl chloride (PVC) jacket.

Options

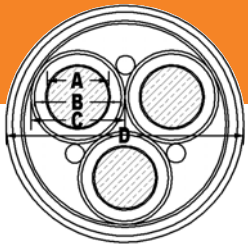
- Colored jackets
- Mine Power Type MP-GC
- Low Smoke Zero Halogen Jacket
- Manufactured to CSA
- 100% Insulation Level
- Aluminum Conductors

Installations

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

Applications and Benefits

Prysmian's patented AIRGUARD™ cable is a direct replacement for continuously corrugated and welded aluminum armored cables with 5X the impact performance and 2X-3X the sidewall bearing pressure limit (@ 3000lbs/rad-ft). This enables longer pulls than with CCW type cables. Please call in regards to product literature and performance testing and videos.



5-35kV 3/C AIRGUARD™ UL MV-105 (Replacement for CCW cables)

5-35kV

133%

Product Number	Conductor	Insulation Thickness (mils)		Ground Wires		Conductor Diameter (in.)		Insulation Diameter (in.)		Overall Shield Diameter (in.)		Cable Weight (lbs/100ft)		Minimum Bending Radius (in.)		† Ampacity (Amps)		†† Impedance (micro-ohms/foot)	
		No.	Size	(A)	(B)	(C)	(D)			±105°C In Duct	±105°C In Air	Pos/Neg Seq	Zero Seq						
5kV 133% 8kV 100% Copper Three Conductor																			
QK0580A	8 AWG CU	115	3	12 AWG	0.135	0.41	0.47	1.42	1274	10	64	66	853 + j53	2023 + j36					
QK1580A	6 AWG CU	115	3	10 AWG	0.170	0.45	0.50	1.49	1485	11	84	88	538 + j49	1631 + j33					
QK2580A	4 AWG CU	115	3	10 AWG	0.215	0.49	0.55	1.64	1679	12	110	115	338 + j45	1325 + j28					
QK4580A	2 AWG CU	115	3	10 AWG	0.266	0.54	0.60	1.79	2089	13	145	154	212 + j42	1134 + j26					
QK6580A	1 AWG CU	115	3	8 AWG	0.299	0.58	0.63	1.84	2588	13	165	180	169 + j40	1045 + j24					
QK8580A	1/0 AWG CU	115	3	8 AWG	0.341	0.62	0.68	2.02	2916	15	190	205	134 + j39	954 + j22					
QK9580A	2/0 AWG CU	115	3	8 AWG	0.376	0.65	0.71	2.09	3226	15	220	240	106 + j37	888 + j21					
QKB580A	4/0 MCM CU	115	3	7 AWG	0.479	0.76	0.81	2.30	4292	17	285	320	67 + j35	752 + j19					
QKC580A	250 MCM CU	115	3	6 AWG	0.522	0.81	0.86	2.42	4974	17	315	355	57 + j34	704 + j18					
QKD580A	350 MCM CU	115	3	6 AWG	0.622	0.91	0.96	2.63	6156	19	380	440	41 + j32	622 + j16					
QKE580A	500 MCM CU	115	3	5 AWG	0.742	1.03	1.08	2.95	8229	21	460	545	29 + j31	548 + j15					
QKF580A	750 MCM CU	115	3	4 AWG	0.917	1.21	1.27	3.38	11544	24	570	685	20 + j30	465 + j13					
QKG580A	1000 MCM CU	115	3	3 AWG	1.071	1.37	1.42	3.69	14988	26	645	790	16 + j29	413 + j13					
15kV 133% Copper Three Conductor																			
QN4580A	2 AWG CU	220	3	10 AWG	0.266	0.74	0.80	2.27	3003	16	160	185	212 + j49	898 + j33					
QN6580A	1 AWG CU	220	3	8 AWG	0.299	0.78	0.83	2.28	3539	16	185	210	169 + j46	827 + j30					
QN8580A	1/0 AWG CU	220	3	8 AWG	0.341	0.82	0.88	2.43	3712	18	210	240	134 + j44	763 + j28					
QN9580A	2/0 AWG CU	220	3	8 AWG	0.376	0.85	0.91	2.51	4127	18	235	275	107 + j43	710 + j27					
QNB580A	4/0 AWG CU	220	3	7 AWG	0.479	0.96	1.02	2.74	5313	20	305	360	67 + j40	612 + j24					
QNC580A	250 MCM CU	220	3	6 AWG	0.522	1.01	1.06	2.84	5932	20	335	400	57 + j39	577 + j23					
QND580A	350 MCM CU	220	3	6 AWG	0.622	1.11	1.16	3.16	7547	23	400	490	41 + j37	518 + j21					
QNE580A	500 MCM CU	220	3	5 AWG	0.742	1.23	1.28	3.42	9568	24	485	600	29 + j34	463 + j19					
QNF580A	750 MCM CU	220	3	4 AWG	0.917	1.41	1.47	3.81	12953	27	585	745	20 + j33	401 + j17					
QNG580A	1000 MCM CU	220	3	3 AWG	1.071	1.57	1.62	4.17	16233	30	660	860	16 + j32	361 + j16					

†Ampacities are based on the following:

Information Subject to Change without Notice.

PRODUCT NOTES:

▲ 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.

Three Phase Operation

In Duct: Cable in underground electrical ducts; one cable per duct; based on ambient temperature of 20°C; NEC Table 310-79
Air: Cable isolated in air and an ambient temperature of 40°C; per NEC Table 310-71

In Cable Tray: Per NEC Article 318-13, for multi-conductor cables installed in a single layer in an uncovered cable tray, with maintained spacing of not less than one cable diameter between cables, the ampacities shall not exceed the allowable ampacities stated in Table 310-71 (Copper), "Isolated in Air" values noted above.

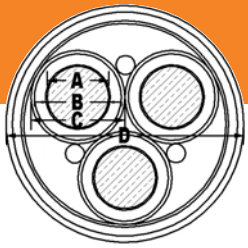
‡EPRONEX™ EPR-insulated cables are capable of operating at 105°C. However, the maximum operating temperature of the cable should be based on the maximum operating temperature of the cable accessories to be used.

††Impedance based on 105°C operating temperature, shields short-circuited with no return in earth. At 90°C, the resistive portion of the impedances can be estimated at 96% of the values at 105°C, the reactive portions remain unchanged.



1-800-845-8507 (US)
1-800-263-4405 (West-CAN)
1-800-361-1418 (East-CAN)

www.prysmianusa.com
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133%

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		No.	Size	(A)	(B)	(C)	(D)	±105°C In Duct	±105°C In Air	Pos/Neg Seq	Zero Seq							
25kV 133% Copper Three Conductor																		
QQ6580A	1 AWG CU	320	3	8 AWG	0.299	0.98	1.04	2.79	4440	20	185	210	169 + j51	690 + j35				
QQ8580A	1/0 AWG CU	320	3	8 AWG	0.341	1.03	1.08	2.88	4855	21	210	240	134 + j49	636 + j33				
QQ9580A	2/0 AWG CU	320	3	8 AWG	0.376	1.06	1.12	3.01	5410	22	235	275	107 + j48	594 + j32				
QQB580A	4/0 AWG CU	320	3	7 AWG	0.479	1.16	1.22	3.28	6811	23	305	360	68 + j44	516 + j28				
QQC580A	250 AWG CU	320	3	6 AWG	0.522	1.24	1.30	3.45	7667	25	335	400	57 + j43	489 + j27				
QQD580A	350 MCM CU	320	3	6 AWG	0.622	1.31	1.37	3.60	8962	26	400	490	41 + j40	443 + j24				
QQE580A	500 MCM CU	320	3	5 AWG	0.742	1.43	1.49	3.86	11097	28	485	600	29 + j38	400 + j22				
QQF580A	750 MCM CU	320	3	4 AWG	0.917	1.62	1.67	4.28	14730	30	585	745	20 + j36	352 + j20				
QQG580A	1000 MCM CU	320	3	3 AWG	1.071	1.77	1.83	4.65	18141	33	660	860	16 + j34	321 + j18				
35kV 133% Copper Three Conductor																		
QR8580A	1/0 AWG CU	420	3	8 AWG	0.341	1.22	1.27	3.39	6291	24	210	240	134 + j53	561 + j37				
QR9580A	2/0 AWG CU	420	3	8 AWG	0.376	1.24	1.31	3.50	7326	25	235	275	107 + j51	520 + j35				
QRB580A	4/0 AWG CU	420	3	7 AWG	0.479	1.35	1.41	3.69	8130	26	305	360	68 + j47	454 + j31				
QRC580A	250 MCM CU	420	3	6 AWG	0.522	1.40	1.46	3.78	9472	27	335	400	57 + j46	432 + j30				
QRD580A	350 MCM CU	420	3	6 AWG	0.622	1.50	1.56	4.02	11116	29	400	490	41 + j43	392 + j27				
QRE580A	500 MCM CU	420	3	5 AWG	0.742	1.62	1.68	4.30	12697	31	485	600	30 + j41	356 + j25				
QRF580A	750 MCM CU	420	3	4 AWG	0.917	1.81	1.86	4.73	16566	34	585	745	10 + j38	316 + j22				
QRG580A	1000 MCM CU	420	3	3 AWG	1.071	1.96	2.05	5.00	20786	35	660	860	16 + j37	290 + j21				

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