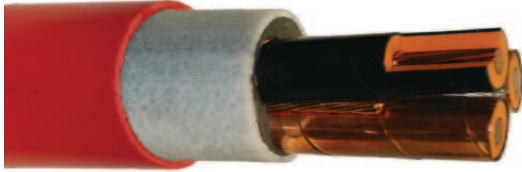


# 5-35kV 3/C UL MV-105 AIR BAG™ (Replacement for Type MC Cables)

## Medium Voltage Commercial & Industrial Cables



### 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, Air Bag™ foamed polymeric layer for superior mechanical protection and overall sun resistant PVC jacket. Suitable for Class I Division 2 locations.

### Specifications

**ICEA-** ICEA S-93-639/  
NEMA WC74

**UL-** UL 1072

### Ratings

Type MV-105

For CT USE  
Direct Buried  
Sunlight Resistant  
IEEE 383 Flame Test  
IEEE 1202 Flame Test  
CSA Cold Impact/Bend Test (-40C)

### MSHA

CSA FT4 Flame Test  
ICEA T-29-520 at 210,000 BTU/hr  
Type MP

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

### Options

- Type MP-GC
- Colored Jackets
- Low Smoke Zero Halogen Jacket
- Manufactured to CSA
- 100% Insulation Level

### Applications and Benefits

Prysmian's patented Air Bag™ cable is a direct replacement for aluminum inter-locked armor cable with the benefit of improved impact performance (2 times) and improved sidewall bearing pressure of 2400lbs/rad-ft. This enables longer pulls than with traditional metallic armored cable products. Please call to inquire with regards to product literature and cable testing.

### 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 with a minimum overlap of 25%. 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 per UL, ICEA, and ASTM.

**ASSEMBLY:** Phase identified conductors cabled with fillers and a grounding conductor, forming a firm and cylindrical cable core. A binder tape is applied to maintain core symmetry & mechanical stability.

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

**JACKET:** Sunlight and moisture resistant polyvinyl chloride (PVC) jacket.

### Installation



In Cable Tray



Direct Buried



Isolated in Air



Dry Locations



With Messenger



Conduit in Air



Underground Duct



Wet Locations



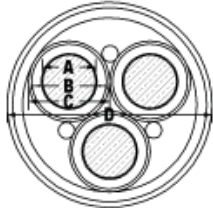
Industrial

### Prysmian Group

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# 5-35kV 3/C UL MV-105 AIR BAG™ (Replacement for Type MC Cables)

MEDIUM VOLTAGE COMMERCIAL & INDUSTRIAL CABLES



Product Number	Conductor	Insulation Thickness (mils)		Ground Wires	Conductor Diameter (in)		Insulation Diameter (in)	Insulation Shield Diameter (in)	Overall Jacket Diameter (in)	Cable Weight (lbs/1000ft)	Minimum Bending Radius (in)	† Ampacity (Amps)	†† Impedance (micro-ohms/foot)	
		No.	Size		(A)	(B)								(C)
<b>5kV 133% &amp; 8kV 100% Copper Three Conductor</b>														
QK0570A	8 AWG CU	115	3	12 AWG	0.135	0.41	0.47	1.36	1267	10	64	66	853 + j53	2023 + j36
QK1570A	6 AWG CU	115	3	10 AWG	0.170	0.45	0.50	1.43	1484	11	84	88	538 + j49	1631 + j33
QK2570A	4 AWG CU	115	2	10 AWG	0.215	0.49	0.55	1.53	1759	11	110	115	338 + j45	1325 + j28
QK4570A	2 AWG CU	115	3	10 AWG	0.266	0.54	0.60	1.75	2187	12	145	154	212 + j42	1134 + j26
QK6570A	1 AWG CU	115	3	8 AWG	0.299	0.58	0.63	1.78	2567	13	165	180	169 + j40	1045 + j24
QK8570A	1/0 AWG CU	115	3	8 AWG	0.341	0.62	0.68	1.89	2776	14	190	205	134 + j39	954 + j22
QK9570A	2/0 AWG CU	115	3	8 AWG	0.376	0.65	0.71	1.97	3104	14	220	240	106 + j37	888 + j21
QKB570A	4/0 AWG CU	115	3	7 AWG	0.479	0.76	0.82	2.19	4233	16	285	320	67 + j35	752 + j19
QKC570A	250 AWG CU	115	3	6 AWG	0.522	0.81	0.86	2.30	4869	17	315	355	57 + j34	704 + j18
QKD570A	350 AWG CU	115	3	6 AWG	0.622	0.91	0.96	2.52	6165	18	380	440	41 + j32	622 + j16
QKE570A	500 AWG CU	115	3	5 AWG	0.742	1.03	1.08	2.77	7945	20	460	545	29 + j31	548 + j15
QKF570A	750 AWG CU	115	3	4 AWG	0.917	1.21	1.27	3.25	11505	23	570	685	20 + j30	465 + j13
QKG570A	1000 MCM CU	115	3	3 AWG	1.071	1.37	1.42	3.61	14875	26	645	790	16 + j29	413 + j13
<b>15kV 133% Copper Three Conductor</b>														
QN4570A	2 AWG CU	220	3	10 AWG	0.266	0.74	0.80	2.16	2929	16	160	185	212 + j49	898 + j33
QN6570A	1 AWG CU	220	3	8 AWG	0.299	0.78	0.84	2.23	3263	16	185	210	169 + j46	827 + j30
QN8570A	1/0 AWG CU	220	3	8 AWG	0.341	0.82	0.88	2.32	3671	17	210	240	134 + j44	763 + j28
QN9570A	2/0 AWG CU	220	3	8 AWG	0.376	0.85	0.91	2.40	4031	17	235	275	107 + j43	710 + j27
QNB570A	4/0 AWG CU	220	3	7 AWG	0.479	0.96	1.02	2.62	5207	19	305	360	67 + j40	612 + j24
QNC570A	250 MCM CU	220	3	6 AWG	0.522	1.01	1.06	2.73	5821	20	335	400	57 + j39	577 + j23
QND570A	350 MCM CU	220	3	6 AWG	0.622	1.11	1.16	3.03	7511	22	400	490	41 + j37	518 + j21
QNE570A	500 MCM CU	220	3	5 AWG	0.742	1.23	1.28	3.29	9468	24	485	600	29 + j34	463 + j19
QNF570A	750 MCM CU	220	3	4 AWG	0.917	1.41	1.47	3.69	12955	26	585	745	20 + j33	401 + j17

† Ampacities are based on the following:

**PRODUCT NOTES:**

s Items are Prysmian authorized stock. The above dimensions are approximate and subject to normal manufacturing tolerances.

**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.

‡ 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. 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.

# 5-35kV 3/C UL MV-105AIR BAG™ (Replacement for Type MC Cables)

MEDIUM VOLTAGE COMMERCIAL & INDUSTRIAL CABLES



Product Number	Conductor	Insulation Thickness (mils)		Ground Wires		Conductor Diameter (in)		Insulation Diameter (in)		Insulation Shield Diameter (in)		Overall Jacket Diameter (in)		Cable Weight (lbs/100ft)		Minimum Bending Radius (in)		† Ampacity (Amps)		†† Impedance (micro-ohms/foot)	
		No.	Size	(A)	(B)	(C)	(D)							±105° In Duct	±105° In Air	Pos/Neg Seq	Zero Seq				
<b>25kV 133% Copper Three Conductor</b>																					
QP4570A	1 AWG CU	320	3	8 AWG	0.299	0.98	1.04	2.69	4693	19	185	210	169 + j51	690 + j35							
QP6570A	1/0 AWG CU	320	3	8 AWG	0.341	1.03	1.08	2.83	5394	20	210	240	134 + j49	636 + j33							
QP9570A	2/0 AWG CU	320	3	8 AWG	0.376	1.06	1.12	2.96	5979	21	235	275	107 + j48	594 + j32							
QPB570A	4/0 AWG CU	320	3	7 AWG	0.479	1.16	1.22	3.17	7330	23	305	360	68 + j44	516 + j28							
QPC570A	250 MCM CU	320	3	6 AWG	0.522	1.21	1.27	3.28	7961	23	335	400	57 + j43	489 + j27							
QPD570A	350 MCM CU	320	3	6 AWG	0.622	1.31	1.37	3.50	9512	25	400	490	41 + j40	443 + j24							
QPE570A	500 MCM CU	320	3	5 AWG	0.742	1.43	1.49	3.76	11748	27	485	600	29 + j38	400 + j22							
QPF570A	750 MCM CU	320	3	4 AWG	0.917	1.62	1.67	4.17	15401	30	585	745	20 + j36	352 + j20							
QPG570A	1000 MCM CU	320	3	3 AWG	1.071	1.77	1.83	4.51	18785	32	660	860	16 + j34	321 + j18							
<b>35kV 133% Copper Three Conductor</b>																					
QR8570A	1/0 AWG CU	420	3	8 AWG	0.341	1.22	1.27	3.28	6589	23	210	240	134 + j53	561 + j37							
QR9570A	2/0 AWG CU	420	3	8 AWG	0.376	1.25	1.31	3.37	7104	24	235	275	107 + j51	520 + j35							
QRB570A	4/0 AWG CU	420	3	7 AWG	0.479	1.35	1.41	3.59	8525	26	305	360	68 + j47	454 + j31							
QRC570A	250 AWG CU	420	3	6 AWG	0.522	1.40	1.46	3.75	9537	27	335	400	57 + j46	432 + j30							
QRD570A	350 MCM CU	420	3	6 AWG	0.622	1.50	1.56	3.93	10823	28	400	490	41 + j43	392 + j27							
QRE570A	500 MCM CU	420	3	5 AWG	0.742	1.62	1.68	4.19	12596	30	485	600	30 + j41	356 + j25							
QRF570A	750 MCM CU	420	3	4 AWG	0.917	1.81	1.86	4.59	16511	33	585	745	10 + j38	316 + j22							
QRG570A	1000 MCM CU	420	3	3 AWG	1.071	1.96	2.02	5.00	20547	35	660	860	16 + j37	290 + j21							

†Ampacities are based on the following:

Three Phase Operation

**PRODUCT NOTES:**

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