

## Gardex<sup>®</sup> CC Armored Power Cable

XLPE Insulation  
Aluminum Armor  
PVC Outer Jacket  
UL Listed  
90°C\*, 600 Volt  
NEC Type MC-HL  
UL Type CWCMC  
UL1309/CSA C22.2 No.245  
Marine Shipboard Cable  
Spec. RSS-8-001

### Scope

Gardex<sup>®</sup> CC cable is a completely self-contained wiring system. It is designed for use in applications where resistance to mechanical and physical abuse is required. Gardex<sup>®</sup> CC is flexible and its impervious armor prevents the entrance of water, gas, and corrosive elements into the electrical core. Gardex<sup>®</sup> CC

cable with its continuously welded and corrugated aluminum armor/shield has been found to be the preferred cable for use with the new A.C. drive technology (IGBT). These same characteristics make Gardex<sup>®</sup> CC cable ideal for high voltage substation applications.

### Features

- Thermoset insulation
- Armor is impact and crush resistant
- Aluminum armor meets UL requirements as equipment grounding conductor
- Self-contained conduit and wiring system
- All jackets have printed sequential footage markers for improved inventory control

#### IGBT Drive and High Voltage Substation Applications

- The high dielectric strength insulation allows the cable to withstand the substantial voltage spikes (2-3x) which are caused by reflections
- The aluminum armor acts as an effective electrical shield which minimizes adjacent cross talk
- The aluminum armor is a low impedance path which prevents the generated high frequency noise from polluting the ground grid
- The outer jacket acts as an insulation to avoid circulating ground currents caused by multiple ground points

### Performance Standards

- UL listed, NEC Type MC-HL, UL 2225 for use in Class I, Division 1 hazardous locations
- Cables pass 70,000 BTU/hr vertical tray flame test, as per UL 1581 and is UL listed for CT use
- Cables pass the ICEA 210,000 BTU/hr and 70,000 BTU/hr vertical tray flame tests and the IEEE-383 70,000 BTU/hr vertical tray flame test
- UL approved and marked with the "FT-4" designation (flame test)
- UL approved and marked with the "-40°C" designation meeting the cold impact requirement of CSA-C22.2 No. 0.3
- UL listed as Type CWCMC to IEEE-45/IEEE 1580 (46 CFR Part 111.60-23) Marine Shipboard Cable.
- Listed in API-14F
- ABS Recognized
- Cross-linked polyethylene (XLPE) insulation is in accordance with ICEA S-95-658 and UL 44 for type XHHW-2
- Optional: Available as Factory Mutual Research Corp. Group 1 fire rated upon special request

### Construction

#### Conductor:

Annealed copper, Class "B" strand per ASTM B-3 & B-8

#### Insulation:

Crosslinked polyethylene (XLPE)

#### Circuit Identification:

Printed numbers per ICEA Method 4 (14-10 AWG Method 1, Table E-2)

#### Ground Wire(s):

Annealed copper, Class "B" strand, sizes per NEC requirements

#### Fillers:

(When required)

#### Binder Tape:

Helically applied

#### Armor:

Continuously welded and corrugated aluminum

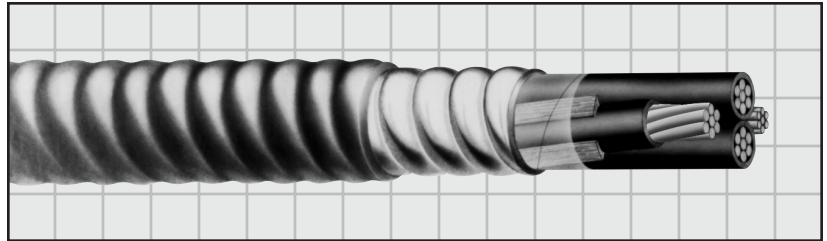
#### Jacket:

Flame retardant polyvinyl chloride (PVC) (also available with neoprene, CSPE or LSZH jackets)

\* Rated 90°C for normal operation in wet and dry locations, 130°C for emergency overload conditions, and 250°C for short circuit conditions.

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Aluminum Armor, PVC Outer Jacket  
UL Listed  
90°C\*, 600 Volt  
NEC Type MC-HL, UL Type CWCWC  
UL1309/CSA C22.2 No. 245  
Spec. RSS-8-001



## Three Conductor Gardex<sup>®</sup> CC Power Cables With Three Ground Wires Suitable for IGBT Drive Applications

Product Code*	Size (AWG/kcmil)	Number of Conductors	Insulation Thickness (Inch) (mm)	Ground Wires Qty-Size	Core Diameter (Inch)	Armor Thickness (Mils)	Armor Overall Diameter (Inch)	Jacket Thickness (Mils)	Nominal Overall Diameter (Inch) (mm)	Approximate Net Weight (Lbs/M')
S15-0031	14	3	.030 .76	3-18	.29	25	.48	50	.58 14.7	172
S15-1031	12	3	.030 .76	3-16	.34	25	.54	50	.64 16.3	220
S15-2031	10	3	.030 .76	3-14	.38	25	.58	50	.68 17.3	290
S15-5421	8	3	.045 1.14	3-14	.52	25	.74	50	.84 21.3	398
S15-0063	6	3	.045 1.14	3-12	.60	25	.84	50	.95 24.1	544
S15-5409	4	3	.045 1.14	3-12	.70	25	.97	50	1.07 27.2	732
S15-5410	2	3	.045 1.14	3-10	.83	25	1.13	50	1.23 31.2	1052
S16-3742	1/0	3	.055 1.40	3-10	1.05	25	1.33	50	1.44 36.6	1512
S16-3743	2/0	3	.055 1.40	3-10	1.14	25	1.46	50	1.57 39.9	1822
S16-3172	3/0	3	.055 1.40	3-8	1.25	25	1.56	60	1.69 42.9	2280
S16-3744	4/0	3	.055 1.40	3-8	1.37	25	1.71	60	1.84 46.7	2743
S16-3747	250	3	.065 1.65	3-8	1.53	32	1.87	60	2.00 50.8	3258
S16-3750	350	3	.065 1.65	3-6	1.75	32	2.12	60	2.25 57.2	4424
S16-3748	500	3	.065 1.65	3-6	2.02	32	2.47	75	2.63 66.8	6020
S16-3754	750	3	.080 2.03	3-4	2.48	32	3.03	85	3.21 81.5	8930

## Four Conductor Gardex<sup>®</sup> CC Power Cables

Product Code*	Size (AWG/kcmil)	Number of Conductors	Insulation Thickness (Inch) (mm)	Ground Wires Qty-Size	Core Diameter (Inch)	Armor Thickness (Mils)	Armor Overall Diameter (Inch)	Jacket Thickness (Mils)	Nominal Overall Diameter (Inch) (mm)	Approximate Net Weight (Lbs/M')
S15-0041	14	4	.030 .76	2-16	.33	25	.54	50	.64 16.3	203
S15-1041	12	4	.030 .76	3-16	.37	25	.58	50	.68 17.3	250
S15-2041	10	4	.030 .76	3-14	.43	25	.62	50	.72 18.3	335
S15-0085	8	4	.045 1.14	2-12	.58	25	.84	50	.95 24.1	488
S15-0065	6	4	.045 1.14	2-10	.67	25	.92	50	1.02 25.9	670
S15-0045	4	4	.045 1.14	2-10	.78	25	1.07	50	1.17 29.7	915
S16-0025	2	4	.045 1.14	2-8	.93	25	1.19	50	1.29 32.8	1436
S16-3163	1/0	4	.055 1.40	1-6	1.17	25	1.46	50	1.57 39.9	1902
S16-3164	2/0	4	.055 1.40	1-6	1.28	25	1.64	60	1.77 45.0	2410
S16-3165	3/0	4	.055 1.40	1-4	1.40	32	1.80	60	1.92 48.8	2970
S16-3166	4/0	4	.055 1.40	1-4	1.55	32	1.94	60	2.06 52.3	3541
S16-3167	250	4	.065 1.65	1-4	1.72	32	2.12	60	2.25 57.2	4153
S16-3168	350	4	.065 1.65	1-3	1.97	32	2.47	75	2.63 66.8	5657
S16-3169	500	4	.065 1.65	1-2	2.28	32	2.71	75	2.87 72.9	7780

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