SHD-GC
Portable Power Cable Extra Heavy Duty EPR / NEO 90°C MHSA
Mining Grade

Construction

Conductors:	Flexible Stranded Tinned copper, ASTM B 172 and ICEA S-75-381, table 3-22
Separator:	Polyester tape between conductor and insulation ICEA S-75-381
Insulation:	Ethylene-propylene rubber (EPR) ICEA S-75 381, table 3-22
Ground Conductor:	Tinned copper ICEA S-75-381 Tab. 3-25
Grounding Conductor:	Yellow polypropylene-insulated tinned copper
Cable assembly:	3 power conductors, ground check and 2 non-insulated grounding conductors cabled together to form a round core
Jacket:	Black extra heavy duty, high torsion-resistant, integral-filled, reinforced Neoprene thermoset jacket, S-75-381 Tab. 3-3, 3-22, Sec. 3.21
Color code:	Polyamide braid color code - Black, White, Red

Features

-Excellent flexibility
-Highly ozone, sun, weather, water and flame resistant
-Rated and flexible at -40°C
-Excellent impact and abrasion resistant
-Oil and heat resistant
- Maximum continuous conductor temperature 90°C

Approvals

-MSHA

Specification and Standards

-ICEA S-75/NEMA WC58, ASTM B172, and B33

Application

For use as trailing mining cables. Use on AC off track equipment such as longwall & continuous miners, loaders, blast hole drillers, conveyors, pumps and mobile equipment requiring grounding conductors and ground check and metallic shielding overall. For use in applications where ground check conductor is required for added safety.

2000 V

Insulation shield: Non-conductor bedding tape and composite tinned copper/polyamide braid 60% minimum coverage
Separator: Nylon open braid applied overall
Bend radius: 6 x OD

Part Number	Conductor Size AWG	Conductor Stranding	Ground Check Conductor Size AWG	Grounding Conductor Size AWG (Stranding)	Insulation Thickness Inch (mm)	Jacket Thickness Inch (mm)	OD Inch (mm)	Cable Wt lbs/Mft (kg/km)
X-SHDGC-2KV-12-03	12	49 7x7	10	12 (49 7x7)	0.07 (1.778)	0.125 (3.175)	0.92 (23.4)	557 (829)
X-SHDGC-2KV-10-03	10	49 7x7	10	12 (49 7x7)	0.07 (1.778)	0.125 (3.175)	0.95 (24.1)	623 (927)
X-SHDGC-2KV-8-03	8	133 7x19	10	10 (49 7x7)	0.07 (1.778)	0.155 (3.937)	1.13 (28.7)	818 (1217)
X-SHDGC-2KV-6-03	6	133 7x19	8	10 (49 7x7)	0.07 (1.778)	0.155 (3.937)	1.26 (32.0)	1076 (1601)
X-SHDGC-2KV-4-03	4	259 7x37	8	8 (133 7x19)	0.07 (1.778)	0.155 (3.937)	1.36 (34.5)	1308 (1947)
X-SHDGC-2KV-2-03	2	259 7x37	8	6 (133 7x19)	0.07 (1.778)	0.17 (4.318)	1.55 (39.4)	1874 (2789)
X-SHDGC-2KV-1/O-03	1/O	266 19x14	8	4 (259 7x37)	0.08 (2.032)	0.19 (4.826)	1.81 (46.0)	2694 (4009)
X-SHDGC-2KV-2/O-03	2/O	342 19x18	8	3 (259 7x37)	0.08 (2.032)	0.205 (5.207)	1.94 (49.3)	3301 (4913)
X-SHDGC-2KV-4/O-03	4/O	532 19x28	8	1 (259 7x37)	0.08 (2.032)	0.220 (5.588)	2.24 (56.9)	4701 (6996)

ELECTRICAL AND MECHANICAL PARAMETERS

Conductor size power (grounding)	Power conductor resistance at 25 C°	Grounding conductor resistance at 25 C°	Ground check conductor resistance at 25 C°	Inductance per unit length	Operating capacitance per unit length	Permissible Short-Circuit (1s)	Ampacity 40 C°	Max. Permissible Tensile Force
AWG or MCM	Ω/1000 Ft	Ω/1000 Ft	Ω/1000 Ft	mH/1000Ft	µF/1000 Ft	kA	A	N
6 (10)	0.436	1.109	0.679	0.118	0.09	1.90	93	600
4 (8)	0.274	0.697	0.679	0.107	0.11	3.03	122	950
2 (6)	0.172	0.436	0.679	0.101	0.13	4.80	159	1500
1/O (4)	0.109	0.274	0.679	0.097	0.14	7.65	211	2400
2/O (3)	0.0868	0.227	0.679	0.092	0.16	9.64	243	3000
4/O (1)	0.0546	0.137	0.679	0.088	0.19	15.30	321	4800

5000 V

Insulation shield: Non-conductor bedding tape and composite tinned copper/polyamide braid 60% minimum coverage
Separator: Single faced rubber-filled binder tape applied over core
Bend radius: 8 x OD

Part Number	Conductor Size AWG-MCM	Conductor Stranding	Ground Check Conductor Size AWG	Grounding Conductor Size AWG (Stranding)	Insulation Thickness Inch (mm)	Jacket Thickness Inch (mm)	OD Inch (mm)	Cable Wt lbs/Mft (kg/km)
X-SHDGC-5KV-4-03	4	259 7X37	8	8 (133 7X19)	0.110 (2.794)	0.185 (4.699)	1.68 (42.7)	1769 (2633)
X-SHDGC-5KV-2-03	2	259 7X37	8	6 (133 7X19)	0.110 (2.794)	0.205 (5.207)	1.87 (47.5)	2370 (3527)
X-SHDGC-5KV-1-03	1	259 7X37	8	5 (133 7X19)	0.110 (2.794)	0.205 (5.207)	1.95 (49.5)	2660 (3959)
X-SHDGC-5KV-1/O-03	1/O	266 19X14	8	4 (259 7X37)	0.110 (2.794)	0.220 (5.588)	2.08 (52.8)	3200 (4762)
X-SHDGC-5KV-2/O-03	2/O	342 19X18	8	3 (259 7X37)	0.110 (2.794)	0.220 (5.588)	2.20 (55.9)	3615 (5380)
X-SHDGC-5KV-4/O-03	4/O	532 19X18	8	1 (259 7X37)	0.110 (2.794)	0.235 (5.969)	2.50 (63.5)	5059 (7529)
X-SHDGC-5KV-350-03	350	888 37X24	6	2/O (342 19X18)	0.120 (3.048)	0.265 (6.731)	2.95 (74.9)	7700 (11458)
X-SHDGC-5KV-500-03	500	1221 37X33	6	4/O (523 19X28)	0.120 (3.048)	0.280 (7.112)	3.31 (84.1)	10200 (15178)

ELECTRICAL AND MECHANICAL PARAMETERS

Conductor size power (grounding)	Power conductor resistance at 25 C°	Grounding conductor resistance at 25 C°	Ground check conductor resistance at 25 C°	Inductance per unit length	Operating capacitance per unit length	Permissible Short-Circuit (1s)	Ampacity 40 C°	Max. Permissible Tensile Force
AWG or MCM	Ω/1000 Ft	Ω/1000 Ft	Ω/1000 Ft	mH/1000Ft	µF/1000 Ft	kA	A	N
4 (8)	0.274	0.697	0.679	0.107	0.11	3.03	122	950
2 (6)	0.172	0.436	0.679	0.101	0.13	4.80	159	1500
1 (5)	0.137	0.349	0.679	0.100	0.13	6.06	184	1900
1/O (4)	0.109	0.274	0.679	0.097	0.14	7.65	211	2400
2/O (3)	0.0868	0.227	0.679	0.092	0.16	9.64	243	3000
4/O (1)	0.0546	0.137	0.679	0.088	0.19	15.30	321	4800
350 (2/O)	0.0333	0.0868	0.436	0.081	0.24	25.31	453	7900
500 (4/O)	0.0233	0.0546	0.436	0.078	0.28	36.18	536	11400

8000V / 15000 V

Insulation shield: Non-conductor bedding tape and composite tinned copper/polyamide braid 60% minimum coverage
Separator: Single faced rubber-filled binder tape applied over core
Bend radius: 8 x OD

Part Number	Conductor Size AWG	Conductor Stranding	Ground Check Conductor Size AWG	Grounding Conductor Size AWG (Stranding)	Insulation Thickness Inch (mm)	Jacket Thickness Inch (mm)	OD Inch (mm)	Cable Wt lbs/Mft (kg/km)
X-SHDGC-8KV-1/O-03	1/O	266 19X14	8	4 (259 7X37)	0.15 (3.81)	0.220 (5.588)	2.23 (58.9)	3530 (5112)
X-SHDGC-8KV-1/O-03	2/O	342 19X18	8	3 (259 7X37)	0.15 (3.81)	0.235 (5.969)	2.46 (62.5)	47160 (6191)
X-SHDGC-8KV-4/O-03	4/O	532 19X28	8	1 (259 7X37)	0.15 (3.81)	0.250 (6.350)	2.45 (69.9)	5590 (8319)
X-SHDGC-15KV-2-03	2	259 7X37	8	6 (259 7X19)	0.21 (5.334)	0.235 (5.969)	2.41 (61.2)	3505 (5216)
X-SHDGC-15KV-1/O-03	1/O	266 19X14	8	4 (259 7X37)	0.21 (5.334)	0.250 (6.350)	2.64 (67.1)	4614 (6867)
X-SHDGC-15KV-2/0-03	2/O	342 19X18	8	3 (259 7X37)	0.21 (5.334)	0.250 (6.350)	2.73 (69.3)	4895 (7285)
X-SHDGC-15KV-4/0-03	4/O	532 19X28	8	1 (259 7X37)	0.21 (5.334)	0.265 (6.731)	3.05 (77.5)	6821 (10151)

ELECTRICAL AND MECHANICAL PARAMETERS

Conductor size power (grounding)	Power conductor resistance at 25 C°	Grounding conductor resistance at 25 C°	Ground check conductor resistance at 25 C°	Inductance per unit length	Operating capacitance per unit length	Permissible Short-Circuit (1s)	Ampacity 40 C°	Max. Permissible Tensile Force
AWG or MCM	Ω/1000 Ft	Ω/1000 Ft	Ω/1000 Ft	mH/1000Ft	µF/1000 Ft	kA	A	N
2 (6)	0.172	0.436	0.679	0.122	0.09	4.80	159	1500
1/O (4)	0.109	0.274	0.679	0.113	0.10	7.65	211	2400
2/O (3)	0.0868	0.227	0.679	0.107	0.11	9.64	243	3000
4/O (1)	0.0546	0.137	0.679	0.101	0.13	15.30	321	4800