



# SHD-GC

## 15kV

**ICEA S-75-381/NEMA WC-58**

Round portable power cable Mining grade

## APPLICATIONS

Use on AC off track equipment such as long wall miners loaders, drills, shovels, conveyors, pumps and mobile equipment requiring grounding conductors and a ground check conductor and metallic shielding overall. Other industrial, mining applications

## CONSTRUCTION

|                        |                                                                                                                  |
|------------------------|------------------------------------------------------------------------------------------------------------------|
| Conductors             | Soft drawn flexible stranded tinned copper wires                                                                 |
| Conductor shield       | Semi-conducting layer over the conductor                                                                         |
| Insulation             | Ethylene-propylene rubber (EPR)                                                                                  |
| Insulation shield      | Semi-conducting tape + composite tinned copper/polyamide braid. Covering minimum 60%.                            |
| Circuit identification | The polyamide in the shielding braid is colored black, white, red                                                |
| Grounding              | Soft drawn flexible stranded tinned copper wires                                                                 |
| Ground check           | Yellow PP insulated soft drawn flexible stranded tinned copper wires                                             |
| Assembly               | Three power, ground check and two non-insulated grounding conductors cabled together to form a round cable core  |
| Separator              | A single faced rubber filled binder tape applied over core                                                       |
| Outer jacket           | Extra heavy duty, high torsion resistant, integral-filled, reinforced poly-chloroprene (CR) thermosetting jacket |
| Color of outer jacket  | Black                                                                                                            |
| Minimum bending radius | Eight times overall diameter of the cable                                                                        |



## Features

Excellent flexibility. Highly ozone, sun, weather and flame resistant. Rated and flexible at -40°C. Excellent impact and abrasion resistant. Oil and heat resistant. Indent printed for easy identification.

## Approvals

**MSHA:** P-07-KA060012-2

## Selection Data

| Part Number    | Cond. Size | Cond. Strand | Cond. Size |    | Nominal Insulation Thickness |      | Nominal Jacket Thickness |      | Outside Diameter |      | Approx. Weight |       | Max. Tensile Force |
|----------------|------------|--------------|------------|----|------------------------------|------|--------------------------|------|------------------|------|----------------|-------|--------------------|
|                | AWG/MCM    | No. of wires | AWG        | GC | Inches                       | mm   | Inches                   | mm   | Inches           | mm   | Lbs./1000ft.   | kg/km | N                  |
| SHDGC15KV2-3   | 2          | 259          | 6          | 8  | 0.210                        | 5.33 | 0.235                    | 5.97 | 2.31             | 58.8 | 3264           | 4857  | 1500               |
| SHDGC15KV1-3   | 1          | 259          | 5          | 8  | 0.210                        | 5.33 | 0.235                    | 5.97 | 2.42             | 61.4 | 3644           | 5423  | 1900               |
| SHDGC15KV1/0-3 | 1/0        | 266          | 4          | 8  | 0.210                        | 5.33 | 0.250                    | 6.35 | 2.53             | 64.3 | 4110           | 6116  | 2400               |
| SHDGC15KV2/0-3 | 2/0        | 342          | 3          | 8  | 0.210                        | 5.33 | 0.250                    | 6.35 | 2.62             | 66.5 | 4625           | 6883  | 3000               |
| SHDGC15KV3/0-3 | 3/0        | 418          | 2          | 8  | 0.210                        | 5.33 | 0.265                    | 6.73 | 2.78             | 70.6 | 5332           | 7935  | 3800               |
| SHDGC15KV4/0-3 | 4/0        | 532          | 1          | 8  | 0.210                        | 5.33 | 0.265                    | 6.73 | 2.92             | 74.2 | 6141           | 9138  | 4800               |
| SHDGC15KV250-3 | 250*       | 627          | 1/0        | 8  | 0.210                        | 5.33 | 0.265                    | 6.73 | 2.97             | 75.5 | 7082           | 10539 | 5800               |
| SHDGC15KV350-3 | 350*       | 888          | 2/0        | 8  | 0.210                        | 5.33 | 0.280                    | 7.11 | 3.26             | 82.7 | 8364           | 12447 | 7900               |

\* Based on ICEA S-75-381 NEMA WC 58

## Electrical parameters

| Power-Grounding Conductor Size | 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 Current (1s) (2) | Ampacity(1) 40°C Ambient Temp |
|--------------------------------|------------------------------------|----------------------------------------|-------------------------------------------|----------------------------|---------------------------------------|--------------------------------------------|-------------------------------|
| AWG or MCM                     | Ω/1000Ft                           | Ω/1000Ft                               | Ω/1000Ft                                  | mH/1000Ft                  | μF/1000Ft                             | kA                                         | A                             |
| 2 AWG                          | 0,172                              | 0,436                                  | 0,679                                     | 0,131                      | 0,07                                  | 4,80                                       | 164                           |
| 1 AWG                          | 0,137                              | 0,346                                  | 0,679                                     | 0,126                      | 0,07                                  | 6,06                                       | 187                           |
| 1/0 AWG                        | 0,109                              | 0,274                                  | 0,679                                     | 0,122                      | 0,08                                  | 7,65                                       | 215                           |
| 2/0 AWG                        | 0,0868                             | 0,217                                  | 0,679                                     | 0,115                      | 0,09                                  | 9,64                                       | 246                           |
| 3/0 AWG                        | 0,0688                             | 0,172                                  | 0,679                                     | 0,114                      | 0,09                                  | 12,15                                      | 283                           |
| 4/0 AWG                        | 0,0546                             | 0,137                                  | 0,679                                     | 0,109                      | 0,10                                  | 15,30                                      | 325                           |
| 250 MCM                        | 0,0466                             | 0,109                                  | 0,679                                     | 0,101                      | 0,12                                  | 18,16                                      | 359                           |
| 350 MCM                        | 0,0333                             | 0,0868                                 | 0,679                                     | 0,096                      | 0,13                                  | 25,31                                      | 438                           |

(1) Ampacity – Based on continuous duty at 90°C conductor temperature

(2) Short-circuit current (1s) – Based on conductor temperature from 90°C up to 250°C

## Standard print legend:

TF CABLE 15000V 3/C (SIZE) TYPE SHD-GC FT1 FT5 (-40C) +90C P-07-KA060012-2-MSHA

## Special factory option

|         |                        |
|---------|------------------------|
| Jacket: | Other colors available |
| Jacket: | TPU jacket available   |
| MSHA:   | P-07-KA120001 (TPU)    |

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