

TYPE G - Three and Four Conductor

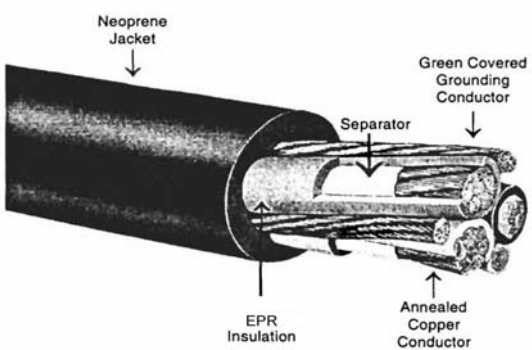
Portable Power Cable

Three and Four Conductor Round - Type G, 2000 Volts

APPLICATION: Heavy duty portable power cable for use with mobile mining equipment, such as continuous miners, cutting or loading machines, conveyors, drills or pumps. For use in circuits not exceeding 2000 volts, maximum conductor temperature of 90°C. Three conductor - for three phase ac where grounding is required. Four conductor where full neutral is needed.

STANDARD: Conforms to ICEA S-75-381 (NEMA WC58).

CONSTRUCTION: Three or four insulated conductors each consisting of flexible stranded annealed tinned copper, color coded EPR ethylene-propylene rubber insulation. Three or four insulated conductors cabled together with one green covered uninsulated grounding conductor in each valley. Overall two layer reinforced Neoprene jacket vulcanized in a metal mold. Embossed marking molded as an integral part of the jacket, including the inscription P-105-MSHA, indicating full compliance with Federal and State of Pennsylvania Safety Codes.



Three Conductor

USAWC Part #	Size AWG or kcmil	No. of Strands	Insulation Thickness Mils	Grounding Cond. Size AWG	Nominal Diameter Inches	Approx. Net Wt. lbs/1000 ft	Copper Weight lbs/1000 ft	Ampacity 40°C Ambient
8-03G	8	133	60	10	.91	590	246	59
6-03G	6	168	60	10	1.01	760	336	79
4-03G	4	259	60	8	1.17	1070	537	104
3-03G	3	329	60	8	1.24	1280	645	120
2-03G	2	259	60	8	1.34	1530	765	138
1-03G	1	329	80	7	1.51	1890	969	161
1/0-03G	1/0	259	80	6	1.65	2320	1221	186
2/0-03G	2/0	329	80	5	1.75	2700	1548	215
3/0-03G	3/0	413	80	4	1.89	3270	1941	249
4/0-03G	4/0	532	80	3	2.04	3970	2454	287
250-03G	250	608	95	2	2.39	5080	2931	320
300-03G	300	741	95	1	2.56	6080	3552	357
350-03G	350	855	95	1	2.68	7140	4017	394
400-03G	400	988	95	1/0	2.82	7780	4683	430
500-03G	500	1221	95	2/0	3.03	9065	5865	487

Four Conductor

6-04G	6	259	60	12	1.10	910	404	72
4-04G	4	412	60	10	1.27	1378	644	93
2-04G	2	259	60	9	1.48	1914	980	122
1-04G	1	331	80	8	1.68	2311	1236	143
1/0-04G	1/0	414	80	7	1.79	2810	1564	165
2/0-04G	2/0	522	80	6	1.93	3253	1968	192
3/0-04G	3/0	658	80	5	2.07	4099	2732	221
4/0-04G	4/0	829	80	4	2.26	4925	3132	255
250-04G	250	973	95	3	2.66	6060	3748	280
350-04G	350	1361	95	1	2.98	8126	5356	335
500-04G	500	1921	95	1/0	3.40	10758	7480	395

*AMPACITY based upon continuous duty at 90 C conductor temperature, 40 C ambient temperature as indicated, cable in free air. For other ambient temperature and when cables are used with one or more layers wound on a reel, use correction factors shown in Appendix H, ICEA S-75-381

Specification

PORTABLE POWER CABLE

Three- and Four-Conductor Round - Type G, 2000 Volts

1. SCOPE
 - 1.1 This specification describes three- or four-conductor round Type G portable power cable with EPR (ethylene-propylene rubber) insulation for use in circuits not exceeding 2000 volts at a maximum conductor temperature of 90°C. Cables are intended for use on equipment where a heavy power load is required, such as mining equipment, portable generator leads, welders and power supplies on barges.
2. STANDARDS
 - 2.1 The following standard shall form a part of this specification:
 - 2.1.1 ICEA Pub. No. S-75-381 for Portable and Power Feeder Cables for Use in Mines and Similar Applications (NEMA WC58).
3. CONDUCTORS
 - 3.1 Minimum Class H stranded, annealed, tinned copper per Part 2 of ICEA.
4. INSULATION
 - 4.1 A homogeneous wall of EPR insulation shall be extruded over the conductor. The average thickness of the insulation shall be as specified in Table 3-9 for three-conductor and Table 3-10 for four-conductor of ICEA. The minimum thickness shall be not less than 90 percent of the specified average values.
 - 4.2 Physical and electrical properties of the insulation shall be in accordance with Par. 3.15 of ICEA.
5. CIRCUIT IDENTIFICATION
 - 5.1 Colored insulation meeting the requirements of Par.3.18 of ICEA.
6. GROUNDING CONDUCTORS
 - 6.1 The grounding conductors shall be annealed tinned copper of not less than the size and number of wires in Table 3-24 of ICEA for the corresponding power conductor sizes.
 - 6.2 Each grounding conductor shall have a green covering.
7. ASSEMBLY
 - 7.1 The conductors shall be twisted together with a left-hand lay meeting the requirements of Table 3-5 of ICEA. Sizes 250 and larger shall have fillers and a binder tape applied over the assembly.
8. JACKET
 - 8.1 A two-layer reinforced thermosetting jacket shall be extruded over the assembly in accordance with Par. 3.21 of ICEA. For sizes 4/0 and smaller, the first layer of jacket shall be extruded into the valleys.
 - 8.2 The jacket shall be an extra-heavy duty Neoprene meeting the requirements of Table 3-3 of ICEA.
9. COMPLETED CABLE
 - 9.1 The nominal outside diameter shall be in accordance with Table 3-9 for three-conductor or Table 3-10 for four-conductor of ICEA.
 - 9.2 The tolerances shall be within the requirements of Par. 3.22.2 of ICEA.
10. SURFACE MARKING
 - 10.1 All cable shall have an embossed print legend showing manufacturer, cable type, size, voltage, MSHA and State of Pennsylvania approval number.
11. TESTS
 - 11.1 Cable, shall be tested in accordance with ICEA.