

ROME PORTABLE POWER CABLE

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

<p>APPLICATION: Heavy duty portable power cable for use with mobile mining equipment such as continuous miners, cutting or loading machines, conveyors, drills and pumps. For use in circuits not exceeding 2000 volts, maximum conductor temperature of 90°C. Three conductor - for dc service with one conductor for grounding. Four conductor-for three phase ac service with one conductor for grounding.</p> <p>STANDARDS: Conforms to ICEA S-75-381 (NEMA WC58).</p> <p>CONSTRUCTION: Three or four insulated conductors each consisting of flexible stranded annealed coated copper, color coded Rome-EPR ethylene-propylene rubber insulation. Three or four insulated conductors cabled together, 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.</p>			<p>The diagram shows a cross-section of the cable with labels: Neoprene⁽¹⁾ Jacket (outermost layer), Rome-EPR Insulation (inner layer), Reinforcement (braided metal mesh), and Annealed Copper Conductors (innermost strands).</p>					
Size AWG or kcmil	No. of Strands	Insulation Thickness Mils	Three Conductor			Four Conductor		
			Nominal Diameter Inches	Approx. Net Wt. Lb./1000 Ft.	Ampacity* 40°C Ambient	Nominal Diameter Inches	Approx. Net Wt. Lb./1000 Ft.	Ampacity* 40°C Ambient
8	133	60	.91	520	59	.99	635	54
6	168	60	1.01	740	79	1.10	845	72
4	259	60	1.17	1020	104	1.27	1180	93
3	329	60	1.24	1280	120	1.34	1460	106
2	259	60	1.34	1350	138	1.48	1715	122
1	329	80	1.51	1785	161	1.68	2205	143
1/0	259	80	1.65	2110	186	1.79	2660	165
2/0	329	80	1.75	2480	215	1.93	3170	192
3/0	418	80	1.89	2940	249	2.07	3800	221
4/0	532	80	2.04	3610	287	2.26	4570	255
250	427	95	2.39	4475	320	2.66	6085	280
300	427	95	2.56	5100	357	2.84	6700	310
350	427	95	2.68	5980	394	2.98	7690	335
400	427	95	2.82	6480	430	3.14	8500	356
450	427	95	2.94	6990	460	3.26	9000	377
500	427	95	3.03	7490	487	3.40	9520	395

*AMPACITY based upon continuous duty at 90°C conductor temperature, 40°C ambient temperature, cable in free air. For other ambient temperatures 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.

⁽¹⁾Hypalon jacket may also be supplied.

Information on this sheet subject to change without notice.

Specification

ROME PORTABLE POWER CABLE

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

1. SCOPE

- 1.1 This specification describes three- or four-conductor round Type W portable power cable with Rome-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, coated copper per Part 2 of ICEA.

4. INSULATION

- 4.1 A homogeneous wall of Rome-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 or 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. ASSEMBLY

- 6.1 The conductors shall be twisted together with a left-hand lay meeting the requirements of Table 3-5 of ICEA. Suitable fillers shall be used to produce an essentially round cross-section in the completed cable.
- 6.2 A binder tape shall be helically applied over the filled cable assembly.

7. JACKET

- 7.1 A two-layer reinforced thermosetting jacket shall be extruded over the assembly in accordance with Par. 3.21 of ICEA.
- 7.2 The jacket shall be an extra-heavy duty Neoprene or Hypalon meeting the requirements of Table 3-3 of ICEA.

8. COMPLETED CABLE

- 8.1 The nominal outside diameter shall be in accordance with Table 3-9 for three-conductor or Table 3-10 for four-conductor of ICEA.
- 8.2 The tolerances shall be within the requirements of Par. 3.22.2 of ICEA.

9. SURFACE MARKING

- 9.1 All cable shall have an embossed print legend showing manufacturer, cable type, size, voltage, and Mine Safety and Health Administration (MSHA) Approval Number.

10. TESTS

- 10.1 Cable shall be tested in accordance with ICEA.