

# TYPE W - Three and Four Conductor

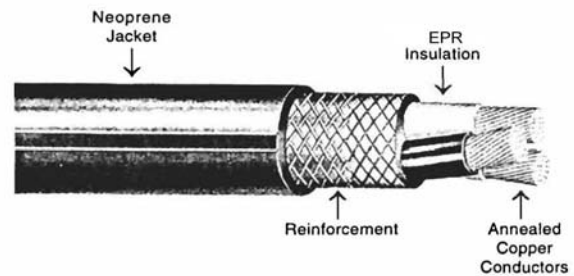
## Portable Power Cable

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

**APPLICATION:** Heavy duty portable power cable for use with mobile mining equipment such as continuous miners, cutting or loading conveyors, drills and pumps. For use in circuits not exceeding 2000 maximum conductor temperature of 90°C. Three conductor - for dc service with one conductor for grounding. Four conductor-for three phase service with one conductor for grounding.

**STANDARDS:** 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 cabled together, overall two layer reinforced Neoprene jacket 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	Nominal Diameter Inches	Approx. Net Wt. lbs/1000 ft	Copper Weight lbs/1000 ft	Ampacity* 40°C Ambient
8-03W	8	133	60	.91	520	150	59
6-03W	6	168	60	1.01	740	243	79
4-03W	4	259	60	1.17	1020	387	104
3-03W	3	329	60	1.24	1280	489	120
2-03W	2	259	60	1.34	1350	615	138
1-03W	1	329	80	1.51	1785	774	161
1/0-03W	1/0	259	80	1.65	2110	978	186
2/0-03W	2/0	329	80	1.75	2480	1233	215
3/0-03W	3/0	413	80	1.89	2940	1554	249
4/0-03W	4/0	532	80	2.04	3610	1959	287
250-03W	250	608	95	2.39	4475	2316	320
300-03W	300	741	95	2.56	5100	2778	357
350-03W	350	855	95	2.68	5980	3243	394
400-03W	400	988	95	2.82	6480	3705	430
500-03W	500	1221	95	3.03	7490	4632	487

#### Four Conductor

8-04W	8	133	60	.99	635	200	54
6-04W	6	168	60	1.10	845	324	72
4-04W	4	259	60	1.27	1180	516	93
3-04W	3	329	60	1.34	1460	652	106
2-04W	2	259	60	1.48	1715	820	122
1-04W	1	329	80	1.68	2205	1032	143
1/0-04W	1/0	259	80	1.79	2660	1304	165
2/0-04W	2/0	329	80	1.93	3170	1644	192
3/0-04W	3/0	413	80	2.07	3800	2072	221
4/0-04W	4/0	532	80	2.26	4570	3265	255
250-04W	250	608	95	2.66	6085	3088	280
300-04W	300	741	95	2.84	6700	3704	310
350-04W	350	855	95	2.98	7690	4324	335
400-04W	400	988	95	3.14	8500	4940	356
500-04W	500	1221	95	3.40	9520	6176	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 W, 2000 Volts

##### 1. SCOPE

- 1.1 This specification describes three- or four-conductor round Type W 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 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. Sizes 250 and larger shall have fillers and a binder tape applied over the 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. For sizes 4/0 and smaller, the first layer of jacket shall be extruded into the valleys.
- 7.2 The jacket shall be an extra-heavy duty Neoprene 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 MSHA and State of Pennsylvania approval number.

##### 10. TESTS,

- 10.1 Cable shall be tested in accordance with ICEA.