

3/C CU 5KV 100% & 133% XLP/PVC RHINOPOWER™ Type MP-GC

Class B Copper conductors, Cross-Linked Polyethylene (XLP) 100% & 133% Insulation Level, Copper Tape Shield, Polyvinyl Chloride (PVC) Jacket, 90°C



Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

1. **Conductor:** Class B compact stranded bare copper per ASTM B3 and ASTM B496
2. **Conductor Shield:** Semi-conducting cross-linked copolymer
3. **Insulation:** Cross-Linked Polyethylene (XLP), 100% and 133% Insulation Level
4. **Insulation Shield:** Strippable semi-conducting cross-linked copolymer
5. **Copper Tape Shield:** Helically wrapped 5 mil copper tape with 25% overlap
6. **Ground Check:** Class B compressed stranded bare copper per ASTM B3 and ASTM B8 with yellow high strength, polypropylene insulation
7. **Grounding Conductors:** Two Class B compressed stranded bare copper per ASTM B3 and ASTM B8
8. **Filler:** Rubber Fillers as needed
9. **Tape:** Polyester tape, applied over the cable core for improved mechanical integrity and ease of stripping
10. **Reinforcement:** Reinforcing twine applied over the taped core
11. **Jacket:** Black, single layer, flame resistant, thermoplastic Polyvinyl Chloride (PVC). Alternate colors available

APPLICATIONS AND FEATURES:

RHINOPOWER™ Type MP-GC mine power feeder cable is a heavy-duty power cable for use in stationary horizontal HV mine power distribution circuits, for permanent or semi-portable applications with power transmission in deep mines, surface mines, open pits, tunnels, in conduit or duct (not to exceed max rated voltage), and suitable for direct burial in wet or dry locations. For vertical drop requirements consult with factory application specialist.

SPECIFICATIONS:

- ASTM B3 Standard Specification for Soft or Annealed Copper Wire
- ASTM B8 Concentric-Lay-Stranded Copper Conductors
- ASTM B496 Compact Round Concentric-lay-standard copper
- ICEA S-75-381 Portable and Power Feeder Cables for Use in Mines
- MSHA Approved

SAMPLE PRINT LEGEND:

SOUTHWIRE (R) RHINO™ BRAND CABLE # AWG COMPACT CU 3/C TYPE MP-GC 5000V 100% INS. LEVEL 90°C P-07-K130025 MSHA



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Table 1 – Weights and Measurements

Stock Number	Cond. Size	Cond. Number	Cond. Strands	Diameter Over Conductor	Insul. Thickness	Diameter Over Insulation	Ground Size	Ground Strands	Ground Check Size	Ground Check Strands	Ground Check Insulation Thickness	Jacket Thickness	Approx. OD	Approx. Weight
	AWG/Kcmil	No.	No.	inch	mil	inch	AWG	No.	AWG	No.	mil	mil	inch	lb/1000ft
TBA	6	3	7	0.169	90	0.385	10	7	10	7	30	110	1.21	980
57727699	4	3	7	0.213	90	0.429	8	7	8	7	45	110	1.32	1290
58082799	2	3	7	0.268	90	0.484	6	7	8	7	45	110	1.45	1710
59286899	1	3	19	0.299	90	0.515	5	7	8	7	45	110	1.53	1990
58464899	1/0	3	19	0.336	90	0.552	4	7	8	7	45	110	1.63	2360
TBA	2/0	3	19	0.376	90	0.592	3	7	8	7	45	110	1.74	2800
TBA	3/0	3	19	0.423	90	0.639	2	7	8	7	45	140	1.88	3380
57770301	4/0	3	19	0.475	90	0.691	1	19	8	7	45	140	2.00	4040
TBA	250	3	37	0.52	90	0.736	1/0	19	8	7	45	140	2.13	4700
TBA	300	3	37	0.57	90	0.786	1/0	19	8	7	45	140	2.25	5330
TBA	350	3	37	0.616	90	0.832	2/0	19	8	7	45	140	2.35	6090
TBA	400	3	37	0.659	90	0.875	3/0	19	8	7	45	140	2.45	6900
TBA	450	3	37	0.7	90	0.916	3/0	19	8	7	45	140	2.55	7510
57816299	500	3	37	0.736	90	0.952	4/0	19	8	7	45	140	2.64	8370

All dimensions are nominal and subject to normal manufacturing tolerances

◊ Cable marked with this symbol is a standard stock item

Table 2 – Electrical and Engineering Data

Stock Number	Cond. Size	Cond. Number	DC Resistance @ 25°C	AC Resistance @ 90°C	Capacitive Reactance	Inductive Reactance	Working Tension	Min Bending Radius	Allowable Ampacity In Air 90°C†
	AWG/Kcmil	No.	Ω/1000ft	Ω/1000ft	MΩ*1000ft	MΩ/1000ft	lb	inch	Amp
TBA	6	3	0.417	0.521	0.054	0.044	179.000	14.5	93
57727699	4	3	0.262	0.328	0.046	0.041	285.000	15.8	122
58082799	2	3	0.164	0.205	0.039	0.038	454.000	17.4	159
59286899	1	3	0.130	0.163	0.035	0.037	572.000	18.4	184
58464899	1/0	3	0.104	0.130	0.032	0.035	722.000	19.6	211
TBA	2/0	3	0.082	0.103	0.030	0.034	910.000	20.9	243
TBA	3/0	3	0.065	0.081	0.027	0.033	1147.000	22.6	279
57770301	4/0	3	0.052	0.065	0.024	0.032	1446.000	24	321
TBA	250	3	0.044	0.055	0.023	0.031	1709.000	25.6	355
TBA	300	3	0.037	0.046	0.021	0.031	2051.000	27	398
TBA	350	3	0.031	0.039	0.020	0.030	2393.000	28.2	435
TBA	400	3	0.027	0.034	0.018	0.030	2734.000	29.4	470
TBA	450	3	0.024	0.030	0.018	0.029	3075.000	30.6	502
57816299	500	3	0.022	0.028	0.017	0.029	3418.000	31.7	539

† Ampacity based on ICEA S-75-381 Table I-1 and is for a single isolated cable in air operated with an open-circuited shield at an ambient temperature of 40°C and a conductor temperature of 90°C



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