Rome Cable
CORPORATION

SPEC 3010

January 1, 2001

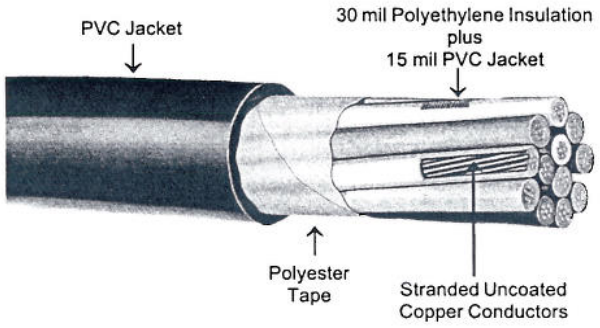
ROME TYPE CT-C CONTROL CABLE, 1000 VOLTS

Polyethylene - PVC Singles, PVC Jacket
General Purpose Control Cable

APPLICATION: Standard general purpose control cable for important control circuits in industrial plants and station control cable for utilities. Suitable for the operation of circuits with heavy magnetic trip of break devices where inductively induced over voltages may occur; rated circuit voltage 1000 volts, recommended for operation at 75°C maximum continuous conductor temperature. Cables may be installed in open air, in ducts or conduit, in tray or trough and direct burial.

STANDARDS: Physical and electrical tests in accordance with appropriate sections of ICEA S-73-532, NEMA Pub. No. WC57.

CONSTRUCTION: Stranded uncoated copper conductors, 30 mils black high molecular weight polyethylene insulation, 15 mils full color coded PVC Jacket[1] over each insulated conductor, two conductors flat, three or more conductors twisted with suitable fillers where necessary to make round, polyester tape over assembly, PVC jacket overall, surface printed.



	#10 AWG - 7 Strand			#12 AWG - 7 Strand			#14 AWG - 7 Strand		
Number of Conductors	Overall PVC Jacket Mils	Nom. Diam. Inches	Approx. Net Weight Lb./1000 Ft.	Overall PVC Jacket Mils	Nom. Diam. Inches	Approx. Net Weight Lb./1000 Ft.	Overall PVC Jacket Mils	Nom. Diam. Inches	Approx. Net Weight Lb./1000 Ft.
1	(1)	.24	45	(1)	.22	35	(1)	.20	25
2 Flat	45	.31 x .52	130	45	.28 x .47	95	45	.26 x .43	75
3	60	.59	205	45	.50	145	45	.46	105
4	60	.64	260	60	.58	190	45	.50	140
5	60	.70	310	60	.63	240	60	.58	180
6	60	.76	370	60	.69	275	60	.63	205
7	60	.76	400	60	.69	290	60	.63	220
8	80	.87	465	60	.75	340	60	.68	270
9	80	.93	560	60	.80	390	60	.73	295
10	80	1.02	605	80	.92	470	60	.80	330
11	80	1.02	660	80	.92	485	60	.80	360
12	80	1.05	700	80	.95	515	60	.82	380
13	80	1.07	755	80	.96	550	80	.88	420
14	80	1.11	800	80	1.00	580	80	.91	445
15	80	1.17	880	80	1.05	645	80	.95	485
16	80	1.17	910	80	1.05	660	80	.95	500
17	80	1.23	985	80	1.10	715	80	1.00	530
18	80	1.23	1010	80	1.10	730	80	1.00	550
19	80	1.23	1040	80	1.10	745	80	1.00	575
20	80	1.30	1150	80	1.16	810	80	1.06	610
23	80	1.36	1310	80	1.22	915	80	1.11	680
25	80	1.44	1415	80	1.29	1025	80	1.17	735
27	80	1.48	1500	80	1.32	1085	80	1.20	780
29	80	1.49	1595	80	1.34	1150	80	1.21	835
31	80	1.56	1705	80	1.39	1225	80	1.26	885
32	80	1.59	1735	80	1.42	1275	80	1.29	910
37	80	1.67	1980	80	1.48	1415	80	1.34	1025

NOTES:
1. Single conductor 45 mils high molecular weight polyethylene insulation and 15 mils polyvinyl chloride jacket, no further covering.
2. Single conductor cable not recommended for direct earth burial.
3. Color coding per TECH I005.

Information on this sheet subject to change without notice.

Rome Cable
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SPEC 3010

1-1-01

Specification

Single and Multi-Conductor Polyethylene Insulated, PVC Jacketed Control Cable, Type CT-C, 1000 Volts

1. SCOPE

1.1 This specification describes single and multi-conductor control cables insulated and jacketed with thermoplastic compounds for use on control circuits not exceeding 1000 volts between conductors, recommended for operation at 75°C maximum continuous conductor temperature. Cables may be installed in open air, in ducts or conduit, in trays or troughs, and direct burial. Single conductor cables are not recommended for direct earth burial.

2. APPLICABLE STANDARD

2.1 The following standard shall form a part of this specification to the extent specified herein:
2.1.1 ICEA Pub. No. S-73-532, NEMA Pub. No. WC57, Control Cables.

3. CONDUCTORS

3.1 Conductors shall be concentrically stranded, Class B, uncoated soft copper, conforming to Part 2 of ICEA S-73-532. Conductor sizes shall be American Wire Gauge No. 14, No. 12, and No. 10.

4. INSULATION

4.1 **Compound:** Each conductor shall be insulated with black high molecular weight, low density polyethylene, meeting the requirements of ICEA S-73-532, Par. 3.3 and ASTM Specification D-1248 for Type 1, Class C, Category 5, Grade E4 or E5.

4.2 **Thickness:** The average thickness of insulation for single conductor control cable shall be 45 mils. The average thickness of insulation for single conductors to be used in multi-conductor assemblies shall be 30 mils. The minimum thickness at any point shall be not less than 90% of the specified average thickness. The insulation shall be applied tightly to the conductor and shall be free-stripping.

5. COVERING OVER INSULATION

5.1 **Compound:** Each individual polyethylene insulated conductor shall be covered with a color coded PVC (polyvinyl chloride) compound, meeting the physical and aging requirements of Table 3-2 of ICEA S-73-532.

5.2 **Thickness:** The average thickness of the PVC covering for single conductor control cable shall be 15 mils. The average thickness of the PVC covering for single conductors to be used in multi-conductor assemblies shall be 15 mils. The minimum thickness at any point shall be not less than 90% of the specified thickness.

5.3 **Color Coding:** The color coding shall consist of colored PVC compound with colored bands applied to the surface in accordance with the first 21 colors of ICEA S-73-532, Appendix E, Table E-1 (TECH I005). For cables with more than 21 conductors, the colors shall be repeated as necessary.

6. ASSEMBLY

6.1 For three conductors or more, the insulated color coded conductors shall be cabled together with nonhygroscopic fillers when necessary to make round. The cable assembly shall be covered with a polyester tape applied with a 10% minimum lap. Two conductor cable shall be flat without separator tape, unless otherwise specified.

7. OVERALL JACKET

7.1 Each multi-conductor cable shall have a PVC protective jacket applied over the assembly. This jacket shall meet the requirements of Part 4 of ICEA S-73-532. The average thickness of the jacket shall be in accordance with ICEA S-73-532, Table 4-1. The minimum thickness at any point shall be not less than 80% of the specified average thickness.

8. SURFACE MARKING

8.1 Multi-conductor cables shall be identified by means of surface ink printing indicating: manufacturer, number of conductors, size and voltage rating.

9. TESTS

9.1 Individual conductors and completed cables shall be tested in accordance with the applicable tests as described in ICEA S-73-532, Part 6.