# SPECIFICATION CONTROL DRAWING

**44A0112**

| Title | Date | Revision |
|---|---|---|
| WIRE ELECTRIC, RADIATION-CROSSLINKED POLYALKENE INSULATED, SILVER-COATED COPPER, LIGHTWEIGHT, GENERAL PURPOSE, 600 VOLT | 05-20-03 | C |

This specification sheet forms a part of the latest issue of Raychem Specification 44 and MIL-W-81044 as applicable

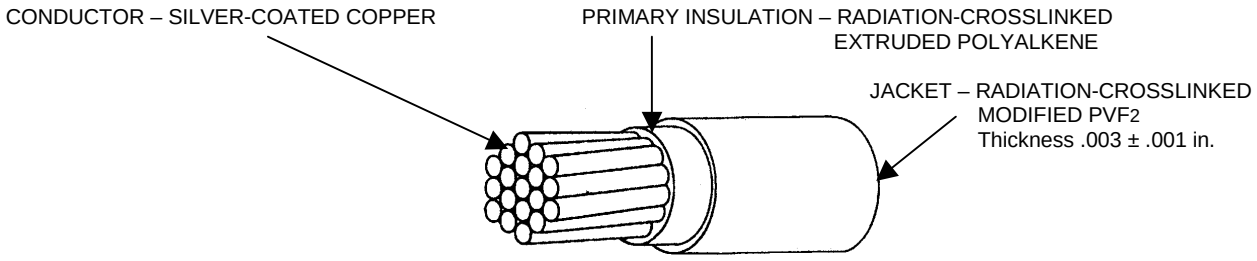



TABLE I. CONSTRUCTION DETAILS

| PART NUMBER 1/ | WIRE SIZE (AWG) | CONDUCTOR STRANDING (number x AWG) | DIAMETER OF STRANDED CONDUCTOR (in.) | | FINISHED WIRE | | |
|---|---|---|---|---|---|---|---|
| | | | MINIMUM | MAXIMUM | MAXIMUM RESISTANCE AT 20°C (ohms/1000 ft) | DIAMETER (in.) | MAXIMUM WEIGHT (lb/1000 ft) |
| 44A0112-26-* | 26 | 19 x 38 | .018 | .020 | 38.4 | .034 ± .002 | 1.4 |
| 44A0112-24-* | 24 | 19 x 36 | .023 | .025 | 24.3 | .040 ± .002 | 2.1 |
| 44A0112-22-* | 22 | 19 x 34 | .029 | .032 | 15.1 | .047 ± .002 | 3.1 |
| 44A0112-20-* | 20 | 19 x 32 | .037 | .040 | 9.19 | .055 ± .002 | 4.6 |
| 44A0112-18-* | 18 | 19 x 30 | .046 | .050 | 5.79 | .065 ± .002 | 7.0 |
| 44A0112-16-* | 16 | 19 x 29 | .052 | .057 | 4.52 | .072 ± .003 | 8.9 |
| 44A0112-14-* | 14 | 19 x 27 | .065 | .072 | 2.88 | .089 ± .004 | 13.9 |
| 44A0112-12-* | 12 | 37 x 28 | .084 | .089 | 1.90 | .108 ± .004 | 21.7 |

TABLE II. PERFORMANCE DETAILS

| PART NUMBER 1/ | BEND TESTING | | | | |
|---|---|---|---|---|---|
| | MANDREL DIAMETER (inch) (± 3%) | | | WEIGHT (lb) (± 3%) | |
| | IMMERSION LIFE CYCLE AND ACCELERATED AGING | COLD BEND | WRAP | IMMERSION LIFE CYCLE AND ACCELERATED AGING | COLD BEND |
| 44A0112-26-* | .500 | .500 | .250 | .250 | .500 |
| 44A0112-24-* | .500 | .500 | .250 | .375 | .500 |
| 44A0112-22-* | .750 | .750 | .250 | .375 | 1.00 |
| 44A0112-20-* | .750 | .750 | .250 | .375 | 1.00 |
| 44A0112-18-* | 1.00 | 1.00 | .375 | .500 | 1.00 |
| 44A0112-16-* | 1.00 | 1.00 | .375 | .500 | 1.00 |
| 44A0112-14-* | 1.50 | 1.50 | .500 | 1.00 | 3.00 |
| 44A0112-12-* | 2.00 | 2.00 | .500 | 1.00 | 3.00 |

*Users should evaluate the suitability of this product for their application. Specifications are subject to change without notice.*
*Tyco Electronics also reserves the right to make changes in materials or processing, which do not affect compliance with any specification, without notification to Buyer.*

1/ COLORS AND COLOR CODE DESIGNATORS SHALL BE IN ACCORDANCE WITH MIL-STD-681. OTHER CODES AND SUFFIXES MAY BE ADDED TO THE PART NUMBER. AS NECESSARY, TO CAPTURE ANY ADDITIONAL REQUIREMENTS IMPOSED BY THE PURCHASE ORDER.

DIMENSIONS ARE IN INCHES AND, UNLESS OTHERWISE DESIGNATED, ARE NOMINAL.

THIS SPECIFICATION SHEET TAKES PRECEDENCE OVER DOCUMENTS REFERENCED HEREIN. REFERENCED DOCUMENTS SHALL BE OF THE ISSUE IN EFFECT ON DATE OF INVITATION FOR BID.



tyco Electronics

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WIRE RATINGS AND ADDITIONAL REQUIREMENTS

TEMPERATURE RATING: 150°C,
Maximum continuous conductor temperature
VOLTAGE RATING: 600 volts (rms) at sea level
ACCELERATED AGING: 300 ± 2°C for 6 hours
Identification legibility, 225 ± 2°C for 6 hours
BLOCKING: 150 ± 2°C for 24 hours
COLOR: white preferred
FLAMMABILITY: 30 seconds (maximum); 3 in. (maximum);
no flaming of facial tissue
HUMIDITY RESISTANCE: Insulation Resistance,
5000 Megohms for 1000 ft. (minimum)
IDENTIFICATION, STRIPING OR BAND DURABILITY:
125 cycles (250 strokes) (minimum), 500 g weight
IMMERSION: Diameter increase 5% (maximum);
no cracking, no dielectric breakdown
INSULATION ELONGATION AND TENSILE STRENGTH:
Primary Insulation,
Elongation, 150% (minimum)
Tensile Strength, 2500 lbf/in² (minimum)
INSULATION FLAWS:
Primary Insulation,
Spark test, 1.5 kV (rms) at 60 Hz
High Frequency Spark Test, 4.2 kV (rms) at 3.0 kHz
Impulse Dielectric test, 6.0 kV (peak)
Finished Wire,
High Frequency Spark Test, 5.7 kV (rms) at 3.0 kHz
Impulse Dielectric test, 8.0 kV (peak)
INSULATION RESISTANCE: 5000 Megohms for 1000 ft. (minimum)
LIFE CYCLE: 200 ± 2°C for 168 hours
LOW TEMPERATURE-COLD BEND: -65 ± 2°C for 4 hours
SHRINKAGE: 300 ± 2°C, 0.125 in. (maximum) in 12 in.
SMOKE TEST: 200 ± 2°C. No visible smoke
SURFACE RESISTANCE: 500 Megohms-in. (minimum), both readings
THERMAL SHOCK RESISTANCE: 150 ± 2°C, 0.060 in. (maximum)
VOLTAGE WITHSTAND TEST (POST ENVIRONMENTAL):
2500 volts (rms), 60 Hz, 5 minutes
WICKING: 2.25 in. (maximum)

PART NUMBER:
The "*" in the part numbers on page 1 shall be replaced by a color code designator.
1/ Example: AWG 20, white: 44A0112-20-9
AWG 20, white with a black stripe: 44A0112-20-90

1/ See Footer section on page 1