

# SPECIFICATION CONTROL DRAWING

55/0812

|   |  |      |        |          |   |
|---|--|------|--------|----------|---|
| TITLE   | WIRE, RADIATION-CROSSLINKED, MODIFIED ETFE-INSULATED, NORMAL WEIGHT, OUTER SPACE, 600 VOLT | Date | 5-9-11 | Revision | G |
| This specification sheet forms a part of the latest issue of Raychem Specification 55/. |  |      |        |          |   |

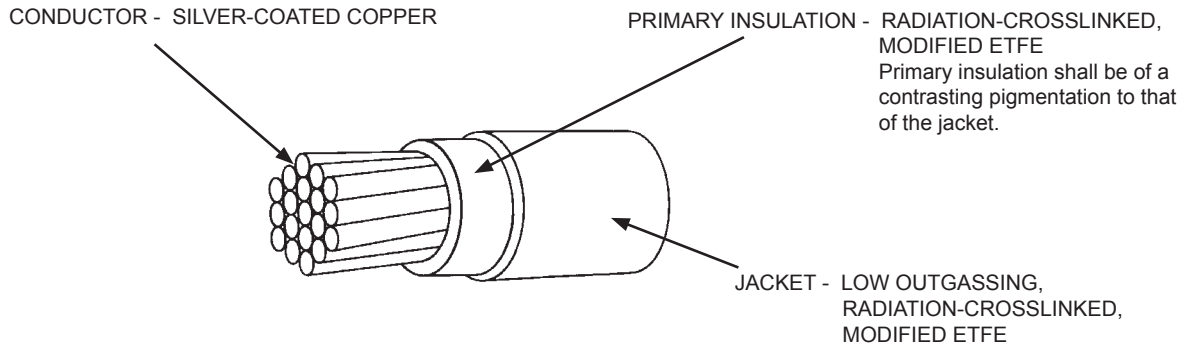


TABLE I. CONSTRUCTION DETAILS

| PART NUMBER<br><u>1/</u> | WIRE SIZE<br>(AWG) | CONDUCTOR STRANDING<br>(number x AWG) | DIAMETER OF STRANDED CONDUCTOR<br>(in.) |         | FINISHED WIRE                                    |                   |                                  |
|--------------------------|--------------------|---------------------------------------|---|---------|--|-------------------|----------------------------------|
|                          |                    |                                       | MINIMUM                                 | MAXIMUM | MAXIMUM RESISTANCE<br>AT 20°C<br>(ohms/1000 ft.) | DIAMETER<br>(in.) | MAXIMUM WEIGHT<br>(lbs/1000 ft.) |
|                          |                    |                                       |   |         |  |                   |                                  |
| 55/0812-28-*             | 28                 | 7 x 36                                | .014                                    | .015    | 63.8   | .035 ± .002       | 1.2                              |
| 55/0812-26-*             | 26                 | 19 x 38                               | .018                                    | .019    | 38.4   | .040 ± .002       | 1.7                              |
| 55/0812-24-*             | 24                 | 19 x 36                               | .023                                    | .025    | 24.3   | .045 ± .002       | 2.3                              |
| 55/0812-22-*             | 22                 | 19 x 34                               | .029                                    | .031    | 15.1   | .050 ± .002       | 3.2                              |
| 55/0812-20-*             | 20                 | 19 x 32                               | .037                                    | .039    | 9.19   | .058 ± .002       | 4.7                              |
| 55/0812-18-*             | 18                 | 19 x 30                               | .046                                    | .048    | 5.79   | .070 ± .003       | 7.2                              |
| 55/0812-16-*             | 16                 | 19 x 29                               | .052                                    | .054    | 4.52   | .077 ± .003       | 9.0                              |
| 55/0812-14-*             | 14                 | 19 x 27                               | .065                                    | .068    | 2.88   | .094 ± .003       | 13.8                             |
| 55/0812-12-*             | 12                 | 37 x 28                               | .084                                    | .087    | 1.90   | .111 ± .003       | 20.5                             |
| 55/0812-10-*             | 10                 | 37 x 26                               | .106                                    | .112    | 1.19   | .134 ± .004       | 32.4                             |
| 55/0812-8-*              | 8                  | 133 x 29                              | .158                                    | .169    | .658   | .195 ± .008       | 61.9                             |
| 55/0812-6-*              | 6                  | 133 x 27                              | .198                                    | .213    | .418   | .241 ± .010       | 94.5                             |

Users should evaluate the suitability of this product for their application. Specifications are subject to change without notice. Tyco Electronics Corporation 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.

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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.



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| TABLE II. PERFORMANCE DETAILS |                                   |                          |
|-------------------------------|-----------------------------------|--------------------------|
| PART NUMBER<br>1/             | BEND TESTING                      |                          |
|                               | MANDREL DIAMETER<br>(inch) (± 3%) | WEIGHT<br>(lb) (± 3%)    |
|                               | CROSSLINKED VERIFICATION          | CROSSLINKED VERIFICATION |
| 55/0812-28-*                  | .375                              | .250                     |
| 55/0812-26-*                  | .375                              | .500                     |
| 55/0812-24-*                  | .500                              | .750                     |
| 55/0812-22-*                  | .500                              | 1.00                     |
| 55/0812-20-*                  | .500                              | 1.50                     |
| 55/0812-18-*                  | .750                              | 2.00                     |
| 55/0812-16-*                  | 1.00                              | 2.00                     |
| 55/0812-14-*                  | 1.00                              | 3.00                     |
| 55/0812-12-*                  | 1.50                              | 3.00                     |
| 55/0812-10-*                  | 2.00                              | 3.00                     |
| 55/0812-8-*                   | 3.00                              | 4.00                     |
| 55/0812-6-*                   | 4.00                              | 4.00                     |

**WIRE RATINGS AND ADDITIONAL REQUIREMENTS**

TEMPERATURE RATING: 200°C

Maximum continuous conductor temperature

VOLTAGE RATING: 600 volts (rms) at sea level

COLOR: White preferred

CROSSLINKED VERIFICATION: 300 ± 3°C for 1 hour

IDENTIFICATION AND COLOR STRIPING DURABILITY:

125 cycles (250 strokes) (minimum), 500 g weight

INSULATION ELONGATION: 50% (minimum)

INSULATION FLAWS:

Primary Insulation:

Spark Test, 1.5 kV (rms)

Impulse Dielectric Test, 6.0 kV (peak)

Finished Wire,

Spark Test, 3.0 kV (rms)

Impulse Dielectric Test, 8.0 kV (peak)

INSULATION THICKNESS: .009 in. (minimum) total insulation

RADIATION RESISTANCE: 500 megarads

SHRINKAGE: 230 ± 3°C for 1 hour, 0.125 in. (maximum) in 12 inches

VACUUM STABILITY:

Total Mass Loss (TML), 1.00% (maximum)

Volatile Condensable Material (VCM), 0.10% (maximum)

VOLTAGE WITHSTAND (Post Environmental): 2500 volts (rms), 60 Hz, 5 minutes

PART NUMBER:

The "\*" in the part numbers on pages 1 and 2 shall be replaced by a color code designator.

1/ Example: AWG 22, white: 55/0812-22-9

AWG 22, white with a black stripe: 55/0812-22-90

1/ See footer section on page 1