

# SPECIFICATION CONTROL DRAWING

55/0312

|       |                                                                                                  |      |         |          |   |
|-------|--------------------------------------------------------------------------------------------------|------|---------|----------|---|
| TITLE | WIRE, RADIATION-CROSSLINKED MODIFIED ETFE INSULATED,<br>ULTRA LIGHTWEIGHT, OUTER SPACE, 600 VOLT | Date | 1-30-06 | Revision | J |
|-------|--------------------------------------------------------------------------------------------------|------|---------|----------|---|

This specification sheet forms a part of the latest issue of Raychem Specification 55/.

CONDUCTOR - SILVER-COATED COPPER

INSULATION - LOW OUTGASSING  
RADIATION-CROSSLINKED,  
MODIFIED ETFE

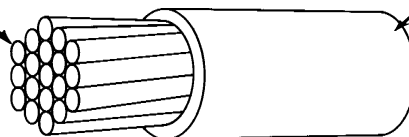


TABLE I. CONSTRUCTION DETAILS

| PART NUMBER<br>1/ | WIRE<br>SIZE<br>(AWG) | CONDUCTOR<br>STRANDING<br>(number x AWG) | DIAMETER OF<br>STRANDED<br>CONDUCTOR<br>(in.) |         | FINISHED WIRE                                       |                   |                                     |
|-------------------|-----------------------|------------------------------------------|-----------------------------------------------|---------|-----------------------------------------------------|-------------------|-------------------------------------|
|                   |                       |                                          | MINIMUM                                       | MAXIMUM | MAXIMUM<br>RESISTANCE<br>AT 20°C<br>(ohms/1000 ft.) | DIAMETER<br>(in.) | MAXIMUM<br>WEIGHT<br>(lbs/1000 ft.) |
| 55/0312-28-*      | 28                    | 7 x 36                                   | .0140                                         | .0150   | 63.8                                                | .0225 ± .0015     | .81                                 |
| 55/0312-26-*      | 26                    | 19 x 38                                  | .0175                                         | .0191   | 38.4                                                | .0274 ± .0017     | 1.22                                |
| 55/0312-24-*      | 24                    | 19 x 36                                  | .0225                                         | .0241   | 24.3                                                | .0322 ± .0017     | 1.80                                |
| 55/0312-22-*      | 22                    | 19 x 34                                  | .0285                                         | .0301   | 15.1                                                | .0390 ± .0017     | 2.70                                |
| 55/0312-20-*      | 20                    | 19 x 32                                  | .0365                                         | .0385   | 9.19                                                | .0495 ± .0017     | 4.27                                |
| 55/0312-18-*      | 18                    | 19 x 30                                  | .0452                                         | .0476   | 5.79                                                | .0590 ± .0017     | 6.56                                |
| 55/0312-16-*      | 16                    | 19 x 29                                  | .0514                                         | .0538   | 4.52                                                | .0665 ± .0019     | 8.33                                |
| 55/0312-14-*      | 14                    | 19 x 27                                  | .0644                                         | .0674   | 2.88                                                | .0810 ± .0021     | 12.81                               |
| 55/0312-12-*      | 12                    | 37 x 28                                  | .0825                                         | .0865   | 1.90                                                | .1000 ± .0026     | 19.71                               |
| 55/0312-10-*      | 10                    | 37 x 26                                  | .1050                                         | .1090   | 1.19                                                | .1260 ± .0040     | 31.70                               |

TABLE II. PERFORMANCE DETAILS

| BEND TESTING      |                                   |                        |
|-------------------|-----------------------------------|------------------------|
| PART NUMBER<br>1/ | MANDREL DIAMETER<br>(inch) (± 3%) | WEIGHT<br>(lb) (± 3%)  |
|                   | CROSSLINK VERIFICATION            | CROSSLINK VERIFICATION |
| 55/0312-28-*      | .250                              | .063                   |
| 55/0312-26-*      | .375                              | .063                   |
| 55/0312-24-*      | .375                              | .125                   |
| 55/0312-22-*      | .500                              | .188                   |
| 55/0312-20-*      | .500                              | .250                   |
| 55/0312-18-*      | .500                              | .250                   |
| 55/0312-16-*      | .750                              | .375                   |
| 55/0312-14-*      | 1.00                              | .500                   |
| 55/0312-12-*      | 1.50                              | .750                   |
| 55/0312-10-*      | 2.00                              | .750                   |

## WIRE RATINGS AND ADDITIONAL REQUIREMENTS

### TEMPERATURE RATING: 200°C

Maximum continuous conductor temperature

VOLTAGE RATING: 600 volts (rms) at sea level

CROSSLINK VERIFICATION: 300 ± 3°C for 1 hour

COLOR: White preferred

CONCENTRICITY: 80% (minimum)

IDENTIFICATION AND COLOR STRIPING DURABILITY:

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

INSULATION ELONGATION: 50% (minimum)

INSULATION FLAWS:

Spark Test, 1.5 kV (rms), (28 - 24 AWG)

3.0 kV (rms), (22 AWG & larger)

Impulse Dielectric Test, 6.0 kV (peak)

INSULATION THICKNESS: .004 in. (nominal)

RADIATION RESISTANCE: 500 megarads

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

VACUUM STABILITY:

Total Mass Loss (TML), 1.0% (maximum)

Volatle Condensable Material (VCM), 0.1% (maximum)

VOLTAGE WITHSTAND TEST (Post Environmental):

1500 volts (rms), 60 Hz, 5 minutes

PART NUMBER:

The "\*" in the part numbers above shall be replaced  
by color code designators.

1/ Example: AWG 20, white: 55/0312-20-9

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.

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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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# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

## TE Connectivity:

[55/0312-12-5CS2641](#) [55/0312-26-6L-CS2570](#) [55/0312-22-0](#) [55/0312-22-2CS2723](#) [55/0312-22-9CS2723](#) [55/0312-16-9CS3329](#) [55/0312-24-6L-CS2570](#) [55/0312-16-9CS2723](#) [55/0312-20-2CS3329](#) [55/0312-22-0CS3329](#) [55/0312-20-9CS2641](#) [55/0312-12-2CS2570](#) [55/0312-12-9CS2570](#) [55/0312-26-9CS2570](#) [55/0312-22-9CS2570](#) [55/0312-24-9CS2570](#) [55/0312-12-6L-CS2570](#) [55/0312-22-6CS2723](#) [55/0312-24-9](#) [55/0312-20-9](#) [55/0312-20-0CS2641](#) [55/0312-12-6CS2570](#) [55/0312-18-9CS2723](#) [55/0312-20-9CS2570](#) [55/0312-20-2CS2723](#) [55/0312-16-9](#) [55/0312-26-9](#) [55/0312-20-9CS3329](#) [55/0312-20-9CS2723](#) [55/0312-16-9CS2570](#) [55/0312-22-2CS3329](#) [55/0312-24-0CS2570](#) [55/0312-22-9CS2641](#) [55/0312-24-4-CS2570](#) [55/0312-20-5CS3329](#) [55/0312-24-9CS2723](#) [55/0312-22-0CS2792](#) [55/0312-16-0CS3329](#) [55/0312-12-9](#) [55/0312-12-0CS2641](#) [55/0312-22-0CS2723](#) [55/0312-18-0CS3329](#) [55/0312-22-9CS2792](#) [55/0312-24-0CS2723](#) [55/0312-20-0CS3329](#) [55/0312-22-3CS3329](#) [55/0312-12-9CS3329](#) [55/0312-26-2-CS2570](#)