

# SPECIFICATION CONTROL DRAWING

**82A0116**

TITLE	WIRE, RADIATION-CROSSLINKED, MODIFIED FLEXIBLE ETFE-INSULATED, LIGHTWEIGHT, GENERAL PURPOSE, 600 VOLT	Date	2-25-13	Revision	A
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This specification sheet forms a part of the latest issue of Raychem Specification 80.

CONDUCTOR - NICKEL-COATED HIGH-STRENGTH COPPER ALLOY

INSULATION - RADIATION-CROSSLINKED, MODIFIED FLEXIBLE ETFE

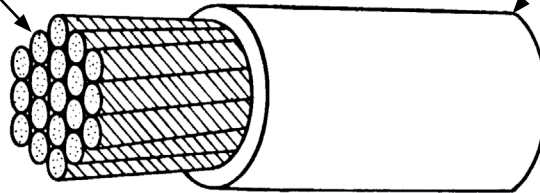


TABLE I. CONSTRUCTION DETAILS

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 (lbs/1000 ft.)
82A0116-28-*	28	42 x 44	.013	.017	87.7	.029 ± .003	1.1
82A0116-26-*	26	63 x 44	.017	.022	62.6	.033 ± .003	1.5
82A0116-24-*	24	105 x 44	.023	.028	36.7	.037 ± .003	2.1
82A0116-22-*	22	154 X 44	.029	.035	24.5	.043 ± .003	2.9
82A0116-20-*	20	154 X 42	.037	.043	15.8	.053 ± .004	4.3

TABLE II. PERFORMANCE DETAILS

PART NUMBER 1/	BEND TESTING	
	MANDREL DIAMETER (inch) (± 3%)	WEIGHT (lb) (± 3%)
	CROSSLINKING PROOF TEST	CROSSLINKING PROOF TEST
	82A0116-28-*	.250
82A0116-26-*	.375	.125
82A0116-24-*	.375	.250
82A0116-22-*	.500	.375
82A0116-20-*	.500	.500

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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**WIRE RATINGS AND ADDITIONAL REQUIREMENTS**

TEMPERATURE RATING: 200°C

Maximum continuous conductor temperature

VOLTAGE RATING: 600 volts (rms) at sea level

COLOR: White preferred

CONCENTRICITY: 70% (minimum)

CROSSLINKING PROOF TEST: 300 ± 3°C for 7 hours

IDENTIFICATION AND COLOR STRIPING DURABILITY:

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

INSULATION ELONGATION AND TENSILE STRENGTH:

AWG 28-26: Elongation, 75% (minimum)

Tensile Strength, 3000 lbf/in<sup>2</sup> (minimum)

AWG 24-20: Elongation, 75% (minimum)

Tensile Strength, 3500 lbf/in<sup>2</sup> (minimum)

INSULATION FLAWS:

Spark Test, 1.5 kV (rms) at 3 kHz

Impulse Dielectric Test, 6.0 kV (peak)

INSULATION THICKNESS: .004 in. (minimum)

PRODUCT IDENTIFICATION: black ink only

SECANT MODULUS (Test per ASTM D 882): 5.0 x 10<sup>4</sup> lbf/in<sup>2</sup> (maximum)

2% strain, 2 inch jaw separation, 0.2 inch/minute

SHRINKAGE: 200 ± 3°C for 6 hours, 0.13 in. (maximum) in 12 inches

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

PART NUMBER:

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

1/ Example: AWG 24, white; 82A0116-24-9

AWG 24, white with a black stripe; 82A0116-24-90

1/ See footer section on page 1