## **SPECIFICATION CONTROL DRAWING**

82/0112

WIRE, RADIATION-CROSSLINKED, MODIFIED FLEXIBLE ETFE-INSULATED, LIGHTWEIGHT, OUTER SPACE, 600 VOLT

Date 1-6-11 Revision

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This specification sheet forms a part of the latest issue of Raychem Specification 80.

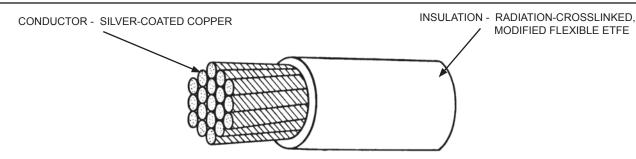


TABLE I. CONSTRUCTION DETAILS								
PART NUMBER <u>1</u> /	WIRE SIZE (AWG)	CONDUCTOR STRANDING (number x AWG)	DIAMETER OF STRANDED CONDUCTOR (in.)		FINISHED WIRE			
					MAXIMUM RESISTANCE AT 20°C	DIAMETER (in.)	MAXIMUM WEIGHT	
			MINIMUM	MAXIMUM	(ohms/1000 ft.)	` ′	(lbs/1000 ft.)	
82/0112-28-*	28	42 x 44	.013	.017	75.5	.029 ± .003	1.2	
82/0112-26-*	26	63 x 44	.017	.021	46.9	.033 ± .003	1.4	
82/0112-24-*	24	105 x 44	.023	.027	28.2	.037 ± .003	2.1	
82/0112-22-*	22	154 x 44	.029	.033	19.2	.043 ± .003	2.9	
82/0112-20-*	20	154 x 42	.037	.043	11.7	.053 ± .004	4.2	
82/0112-18-*	18	259 x 42	.047	.053	7.14	.064 ± .004	6.7	
82/0112-16-*	16	259 x 40	.061	.067	4.62	.079 ± .004	10.2	
82/0112-14-*	14	665 x 42	.078	.086	2.96	.099 ± .005	16.5	
82/0112-12-*	12	665 x 40	.096	.106	1.89	.121 ± .006	24.8	
82/0112-10-*	10	665 x 38	.126	.140	1.12	.157 ± .009	42.2	

TABLE II. PERFORMANCE DETAILS							
	BEND TESTING						
PART NUMBER 1/	MANDREL DIAMETER (inch) (± 3%)	WEIGHT (lb) (± 3%)					
	CROSSLINKING PROOF TEST	CROSSLINKING PROOF TEST					
82/0112-28-*	.250	.125					
82/0112-26-*	.375	.125					
82/0112-24-*	.375	.250					
82/0112-22-*	.500	.375					
82/0112-20-*	.500	.500					
82/0112-18-*	.500	.500					
82/0112-16-*	.750	.750					
82/0112-14-*	1.00	1.00					
82/0112-12-*	1.50	1.50					
82/0112-10-*	2.00	1.50					

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

COLOR: White preferred

CONCENTRICITY: 70% (minimum) CROSSLINKING PROOF TEST:

AWG 28-14:  $300 \pm 3^{\circ}$ C for 30 minutes AWG 12-10:  $300 \pm 3^{\circ}$ C for 1 hour

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/in² (minimum)

AWG 24-10: Elongation, 75% (minimum)

Tensile Strength, 3500 lbf/in² (minimum)

**INSULATION FLAWS:** 

Spark Test, 1.5 kV (rms) at 3 kHz

Impulse Dielectric Test, 6.0 kV (peak)

**INSULATION THICKNESS:** 

AWG 28-16: .004 in. (minimum)

AWG 14-10: .006 in. (minimum)

PRODUCT IDENTIFICATION: Black ink only

RADIATION RESISTANCE (Test per Raychem Spec. 55/): 500 megarads

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: 150 ± 3°C for 6 hours, 0.13 in. (maximum) in 12 inches

VACUUM STABILITY (Test per ASTM E 595):

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

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

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 22, white; 82/0112-22-9

AWG 22, white with a black stripe; 82/0112-22-90