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SPECIFICATION CONTROL DRAWING

SCD 55A0811

Title: WIRE, RADIATION-CROSSLINKED, MODIFIED ETFE-INSULATED, NORMAL WEIGHT, GENERAL PURPOSE, 600 VOLT

Date: 4-27-15

Revision: Z

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

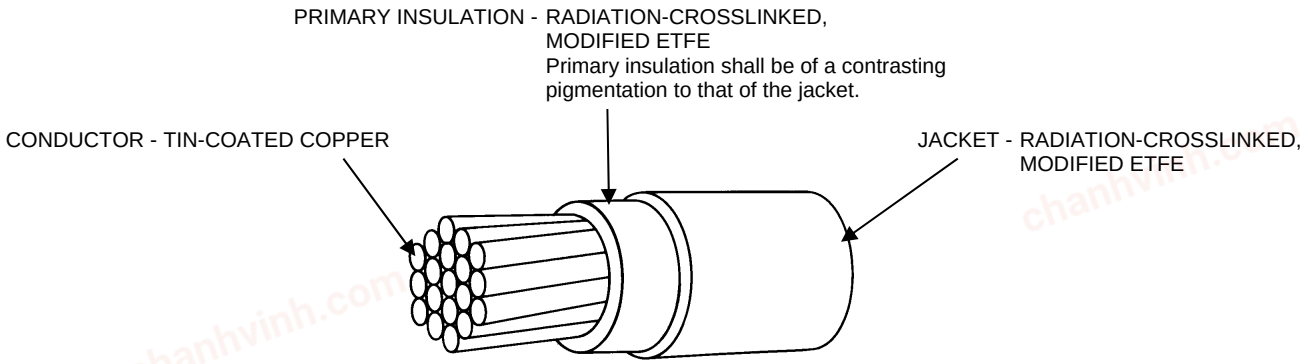


TABLE I. CONSTRUCTION DETAILS

PART NUMBER 1/	WIRE SIZE (AWG)	CONDUCTOR STRANDING (number x AWG)	DIAMETER OF STRANDED CONDUCTOR (inch)		FINISHED WIRE		
			MINIMUM	MAXIMUM	MAXIMUM RESISTANCE AT 20°C (ohms/1000 ft.)	DIAMETER (inch)	MAXIMUM WEIGHT (lbs/1000 ft.)
55A0811-28-*	28	7 x 36	.014	.016	68.6	.035 ± .002	1.3
55A0811-26-*	26	19 x 38	.018	.020	41.3	.040 ± .002	1.7
55A0811-24-*	24	19 x 36	.023	.025	26.2	.045 ± .002	2.3
55A0811-22-*	22	19 x 34	.029	.031	16.2	.050 ± .002	3.2
55A0811-20-*	20	19 x 32	.037	.039	9.88	.058 ± .002	4.7
55A0811-18-*	18	19 x 30	.046	.049	6.23	.070 ± .003	7.2
55A0811-16-*	16	19 x 29	.052	.055	4.81	.077 ± .003	9.0
55A0811-14-*	14	19 x 27	.065	.069	3.06	.094 ± .003	13.8
55A0811-12-*	12	37 x 28	.084	.089	2.02	.111 ± .003	20.5
55A0811-10-*	10	37 x 26	.106	.113	1.26	.134 ± .004	32.4
55A0811-8-*	8	133 x 29	.158	.173	.701	.195 ± .008	60.3
55A0811-6-*	6	133 x 27	.198	.217	.445	.241 ± .010	94.5
55A0811-4-*	4	133 x 25	.250	.274	.280	.310 ± .010	150.
55A0811-2-*	2	665 x 30	.320	.340	.183	.408 ± .012	249.
55A0811-1-*	1	817 x 30	.360	.380	.149	.470 ± .012	325.
55A0811-0-*	0	1045 x 30	.395	.425	.116	.510 ± .016	383.
55A0811-00-*	00	1330 x 30	.440	.475	.091	.570 ± .016	500.
55A0811-000-*	000	1665 x 30	.500	.540	.071	.610 ± .016	596.
55A0811-0000-*	0000	2109 x 30	.565	.605	.056	.675 ± .022	753.

Users should evaluate the suitability of this product for their application. Specifications are subject to change without notice.
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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 1/	MANDREL DIAMETER (inch) (± 3%)		WEIGHT (lb) (± 3%)	
	LIFE CYCLE, IMMERSION, AND ACCELERATED AGING	COLD BEND	LIFE CYCLE, IMMERSION, AND ACCELERATED AGING	COLD BEND
55A0811-28-*	.375	.750	.250	2.00
55A0811-26-*	.375	1.00	.500	3.00
55A0811-24-*	.500	1.00	.750	3.00
55A0811-22-*	.500	1.00	1.00	3.00
55A0811-20-*	.500	1.00	1.50	4.00
55A0811-18-*	.750	1.50	2.00	4.00
55A0811-16-*	1.00	1.50	2.00	5.00
55A0811-14-*	1.00	2.00	3.00	5.00
55A0811-12-*	1.50	2.00	3.00	5.00
55A0811-10-*	2.00	3.00	3.00	5.00
55A0811-8-*	3.00	4.00	4.00	6.00
55A0811-6-*	4.00	5.00	4.00	10.0
55A0811-4-*	5.00	6.00	4.00	10.0
55A0811-2-*	6.00	8.00	6.00	15.0
55A0811-1-*	8.00	10.0	6.00	15.0
55A0811-0-*	8.00	10.0	6.00	15.0
55A0811-00-*	10.0	12.0	8.00	20.0
55A0811-000-*	10.0	12.0	8.00	20.0
55A0811-0000-*	10.0	12.0	8.00	20.0

WIRE RATINGS AND ADDITIONAL REQUIREMENTS

TEMPERATURE RATING: 150°C
Maximum continuous conductor temperature
VOLTAGE RATING: 600 volts (rms) at sea level
ACCELERATED AGING (CROSSLINKING PROOF):
300 ± 3°C for 7 hours
BLOCKING: 200 ± 3°C for 24 hours
COLOR: White preferred
CONCENTRICITY: 70% (minimum)
FLAMMABILITY: Procedure 1,
3 seconds (maximum), 3 inches (maximum);
no flaming of facial tissue
HUMIDITY RESISTANCE: Insulation Resistance,
5000 megohms for 1000 ft. (minimum), AWG 28-10
3000 megohms for 1000 ft. (minimum), AWG 8-0000
IDENTIFICATION, COLOR STRIPING, AND 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:
Elongation,
125% (minimum) for primary insulation, AWG 28-10 only
75% (minimum) for total insulation (primary insulation & jacket)
Tensile Strength,
5000 lbf/in^2 (minimum) for primary insulation
5000 lbf/in^2 (minimum) for total insulation (primary insulation & jacket)
INSULATION FLAWS:
Primary Insulation,
Spark Test, 1.5 kV (rms) at 60 Hz; 4.2 kV (rms) at 3 kHz
Impulse Dielectric Test, 6.0 kV (peak)
Finished Wire,
Spark Test, 5.7 kV (rms) at 3 kHz
Impulse Dielectric Test, 8.0 kV (peak)

INSULATION RESISTANCE:
5000 megohms for 1000 ft. (minimum), AWG 28-10
3000 megohms for 1000 ft. (minimum), AWG 8-0000
INSULATION THICKNESS:
0.003 in. (minimum) for primary insulation
0.004 in. (minimum) for outer jacket
0.009 in. (minimum) for total insulation
LIFE CYCLE: 200 ± 3°C for 500 hours
LOW TEMPERATURE-COLD BEND: -65 ± 3°C for 4 hours
SHRINKAGE: 200 ± 3°C for 6 hours,
0.125 in. (maximum) in 12 inches
SMOKE TEST: 200 ± 2°C, no visible smoke
SOLDERABILITY (AWG 10 and smaller only):
Per MIL-STD-202, Method 208, except without steam aging
SURFACE RESISTANCE:
500 meghoms-in. (minimum), both readings
THERMAL SHOCK RESISTANCE: 150 ± 3°C,
0.060 in. (maximum), AWG 28-12
0.100 in. (maximum), AWG 10-8
0.125 in. (maximum), AWG 6-0000
VOLTAGE WITHSTAND (Post Environmental):
2500 volts (rms), 60 Hz
WICKING: 2.25 in. (maximum)
WRAP TEST: 200 ± 3°C for 2 hours

1/ PART NUMBER:
The "*" in the part numbers in Tables I and II shall be replaced by a color code designator.
Example: AWG 22, white: 55A0811-22-9
AWG 22, white with a black stripe: 55A0811-22-90

1/ See footer section on page 1