

# SPECIFICATION CONTROL DRAWING

## 44AM413X

TITLE THREE CONDUCTOR CABLE, JACKETED, GENERAL PURPOSE, 600 VOLT

Date 10-15-06

Revision B

This specification sheet forms a part of the latest issue of Raychem Specification 44 and NEMA WC 27500 as applicable.

COMPONENT WIRES - 44A011X

JACKET - RADIATION-CROSSLINKED,  
MODIFIED PVDF



TABLE I. CABLE CONSTRUCTION DETAILS

PART NUMBER 1/	CONDUCTOR SIZE (AWG)	JACKET THICKNESS (in.)		OUTSIDE DIAMETER (in.)		MAXIMUM WEIGHT (lb/1000 ft)
		MINIMUM	MAXIMUM	NOMINAL	MAXIMUM	
44AM413X-26-*	26	.005	.010	.089	.095	6.2
44AM413X-24-*	24	.005	.010	.102	.109	8.7
44AM413X-22-*	22	.005	.010	.118	.125	12.1
44AM413X-20-*	20	.005	.010	.135	.142	17.1
44AM413X-18-*	18	.005	.010	.156	.164	25.0
44AM413X-16-*	16	.006	.012	.174	.182	31.7
44AM413X-14-*	14	.006	.012	.210	.219	48.0
44AM413X-12-*	12	.007	.014	.251	.262	73.7

TABLE II. CABLE PERFORMANCE DETAILS

PART NUMBER 1/	BEND TESTING			
	MANDREL DIAMETER (inch) (± 3%)		WEIGHT (lb) (± 3%)	
	IMMERSION AND CROSSLINKED VERIFICATION	COLD BEND	IMMERSION AND CROSSLINKED VERIFICATION	COLD BEND
44AM413X-26-*	3.00	3.00	.375	2.25
44AM413X-24-*	3.00	3.00	.563	2.25
44AM413X-22-*	3.00	3.00	.563	4.50
44AM413X-20-*	6.00	6.00	.563	4.50
44AM413X-18-*	6.00	6.00	.750	4.50
44AM413X-16-*	6.00	6.00	.750	4.50
44AM413X-14-*	6.00	6.00	1.50	13.5
44AM413X-12-*	10.0	10.0	1.50	13.5

NOTE: Nominal values are for information only.  
Nominal values are not requirements.

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. HOWEVER, DUE TO LENGTH LIMITATIONS OF THE RAYCHEM PART NUMBER, AN ALTERNATIVE COLOR CODE MAY REPLACE MIL-STD-681 COLOR CODE DESIGNATORS. (EXAMPLE: "901/902..." MAY BE REPLACED BY "Axxx.") 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:** 150°C;

Maximum continuous conductor temperature

**VOLTAGE RATING:** 600 volts (rms) at sea level

**BLOCKING:** 150 ± 3°C for 6 hours

**CROSSLINK VERIFICATION:** 200 ± 5°C for 6 hours

**DIELECTRIC WITHSTAND:** 1500 volts (rms), 60 Hz,  
15 seconds (minimum), 30 seconds (maximum)

**FLAMMABILITY:** 30 seconds (maximum); 3 in. (maximum); no flaming of facial tissue.

**IMMERSION:** Diameter increase 5% (maximum), no cracking, no dielectric breakdown

**JACKET COLOR:** White preferred

**JACKET CONCENTRICITY:** 70% (minimum)

**JACKET ELONGATION AND TENSILE STRENGTH:**

Elongation, 200% (minimum)

Tensile strength, 4000 lbf/in<sup>2</sup> (minimum)

**LOW TEMPERATURE-COLD BEND:** -55 ± 5°C for 4 hours

**PART NUMBER**

The "X" in the part numbers on page 1 shall be replaced by the applicable conductor material designators as follows:

- 1 tin-coated copper
- 2 silver-coated copper
- 3 nickel-coated copper
- 4 silver-coated high strength copper alloy (AWG's 26 - 16 only)
- 6 nickel-coated high strength copper alloy (AWG's 26 - 20 only)

The "\*" in the part numbers on page 1 shall be replaced by color code designators with a slash separating the component wire colors and a dash separating the component wire colors from the jacket color. Colors shown do not necessarily reflect the sequence of manufacturing.

1/ Example: 20 Awg, tin-coated copper wires, black, brown and red component wires; white jacket:  
44AM4131-20-0/1/2-9

1/ See footer section on page 1