



**SPECIFICATION CONTROL DRAWING**

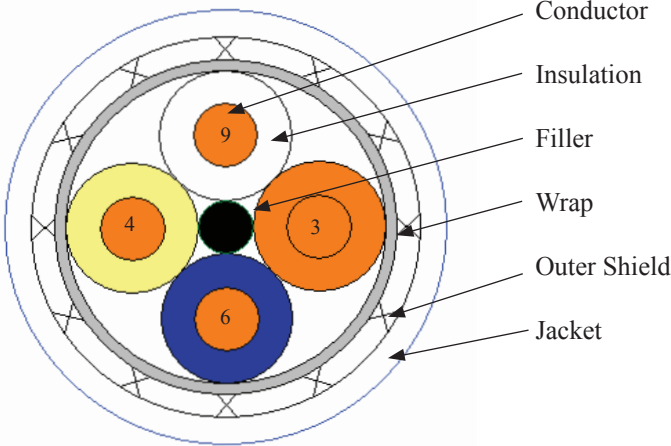
**THX-24C112-811**

**QUADRAX CABLE, 100 BASE-T, ETHERNET, AWG 24**

Date: 4/1/2015  
Issue: B  
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THIS SPECIFICATION SHEET FORMS A PART OF THE LATEST ISSUE OF RAYCHEM SPECIFICATION 1200.

**CONSTRUCTION DETAILS**



**ELECTRICAL CHARACTERISTICS**

TABLE II

Frequency MHz	Insertion Loss dB/100m (max)	Return Loss dB/100m (min)	NEXT dB/100m (min)	Propagation Delay ns/100m (max)
1	3.2	20.0	65.3	570
4	6.0	23.0	56.3	552
8	8.3	24.5	51.8	547
10	9.5	25.0	50.3	545
16	11.9	25.0	47.3	543
20	13.5	25.0	45.8	542
25	15.2	24.2	44.3	541
31.25	17.1	23.3	42.9	540
62.5	24.8	20.7	38.5	539
100	32.0	19.0	35.3	538

Note: Values in Table II for RL and NEXT are for reference only. Actual values shall be determined utilizing the formulas in ANSI/TIA-568-C.2.

Impedance: 100 (nominal) at 1 to 100 MHz.  
Mutual Capacitance: 13.0 pF/ft. (nominal) at 1 kHz.  
Conductor DC Resistance: 25.7 ohms/1000ft (nominal) @ 20°C  
Resistance Unbalance: 5% (maximum)  
Velocity of Propagation: 77% (nominal) at 31.25 MHz  
Propogation Delay Skew: 45 ns/100m (max)  
Resistance Unbalance: 5% (max)  
Electrical Testing: In accordance with ANSI/TIA-568-C.2.

<b>Single Component</b>		<b>Dimensions inches (nom)</b>
Conductor:	AWG 24 19/36, tin-coated copper	.0235
Insulation:	Foamed Polyethylene	.048
<b>Cable Assembly</b>		
Filler:	Polyethylene	.020
Layer 1:	4 single components	.116
Wrap:	AL-PET .002" - AL facing out	.124
Outer Shield:	AWG 38, tin-coated copper, 85% min coverage	.141
Jacket:	Thermorad K .010 inch thickness	.161 +.008
Cable Weight	18.55 lb/kft (nominal)	

Designate outer jacket color with a dash number appended to the part number. Example: White; THX-24C112-811-9.

**ADDITIONAL REQUIREMENTS & RATINGS**

Temperature Rating: -65°C to 150°C  
Voltage Withstand: 1000 volts (rms), conductor to conductor and shield  
Crosslink Verification: 200 ± 5°C for 6 hours per NEMA WC 27500 6" mandrel, 0.5 lbs.  
Jacket Flaws: Spark Test 2.5 kV (rms)  
Impulse Dielectric Test: 6.0 kV (peak)  
Cold Bend: 4 hrs @ -55 deg C, 3.75" Mandrel, 1.0 lbs weight  
Heat Shock: 4 hrs @ 225 deg C (No Melting or Flowing)  
Jacket Elongation: 200% minimum  
Jacket Tensile Strength: 2000 psi minimum  
Jacket Wall: Minimum jacket wall is 80% of the nominal jacket wall.  
Jacket Mark: "RAYCHEM THX-24C112-811 06090 A-B"  
The orientation of the mark shall be as follows: The "A" end components shall be White, Orange, Blue, and Yellow in a clockwise direction. The "B" end components shall be White, Yellow, Blue, Orange.

TABLE I

Single Components	Pair	Wire Insulation color
1	1	9 (white)
2	2	3 (orange)
3	1	6 (blue)
4	2	4 (yellow)

Color code designators shall be in accordance with MIL-STD-681. An "L" after the number indicates a light color.

Cable will be supplied in 50 ft minimum lengths unless otherwise specified.

Tyco Electronics Corporation  
Raychem Wire & Cable  
501 Oakside Avenue  
Redwood City, California 94063-3800  
1-800-522-6752

Other codes and suffixes may be added to the part number, as necessary, to capture any additional requirements imposed by the purchase order. Users should evaluate the suitability of this product for their application. 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.  
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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