



SPECIFICATION CONTROL DRAWING

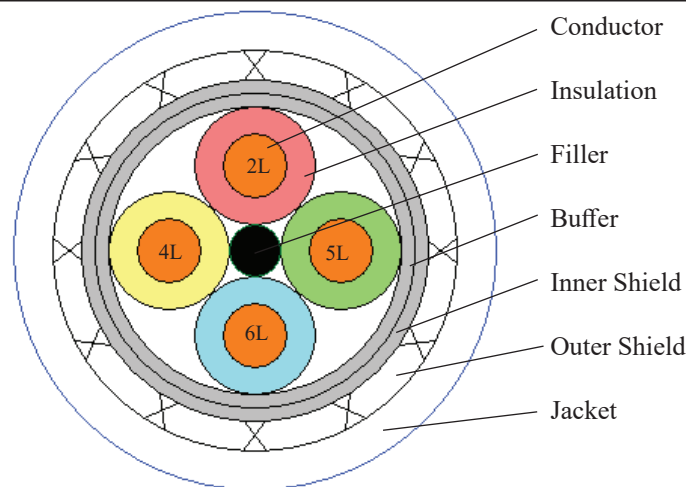
THX-24C422-814

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

Date: 1/8/2020
Issue: E
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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 (nom/max)	Return Loss dB/100m (min)	NEXT dB/100m (min)	Propagation Delay ns/100m (max)
1	2.2/2.8	20.0	65.3	570
4	4.5/5.5	23.0	56.3	552
8	6.2/7.8	24.5	51.8	547
10	6.8/8.7	25.0	50.3	545
16	8.5/11.1	25.0	47.3	543
20	9.8/12.5	25.0	45.8	542
25	11/14.1	24.2	44.3	541
31.25	12.3/15.8	23.3	42.9	540
62.5	18.6/22.9	20.7	38.4	539
100	24.8/29.7	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-568.2 (issue in effect).

Impedance: 100 \pm 10 ohms at 1 to 100 MHz.
Mutual Capacitance: 13.0 pF/ft. (nominal) at 1 kHz.
Conductor DC Resistance: 27.8 ohms/1000ft (nominal) @ 20°C
Velocity of Propagation: 77% (nominal)

Electrical Testing: In accordance with ANSI/TIA-568.2 (issue in effect).

ADDITIONAL REQUIREMENTS & RATINGS

Temperature Rating: -65°C to 150°C
Voltage Withstand: 1000 volts (rms), conductor to conductor and shield
Jacket Tensile Strength: 2000 psi minimum
Jacket Elongation: 200% minimum
Jacket Flaws: Spark Test: 2.5kV (rms)
Impulse Dielectric Test: 6.0 kV (peak)

Flammability: Finished cable shall meet the requirements of FAR Part 25, Appendix F, Part I when tested in accordance with the 60° test specification herein.

Marker Tape: There shall be a marker tape under the jacket with the following legend:
"RAYCHEM THX-24C422-814 06090 A - B"

Every other mark is an inverted mirror image. The orientation of the tape shall be as follows: The "A" end components shall be Red, Green, Blue and Yellow in a clockwise direction. The "B" end components shall be Red, Yellow, Blue, and Green in a clockwise direction.

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

Single Component

Dimensions
inches (nom)

Conductor:	AWG 24 19/36, silver-coated high strength copper alloy	.0235
Insulation:	Rayfoam H (foamed FEP)	.044
Cable Assembly		
Filler:	Solid FEP	.018
Layer 1:	4 single components	.104
Buffer:	Fluoropolymer wrap, .002 inch thick (nom), 25% overlap (min).	.112
Inner Shield:	Aluminum/PET wrap, .002 inch thick (nom), Aluminum. facing out, 25% overlap (min).	.120
Outer Shield:	AWG 38, tin-coated copper	.137
Jacket:	Modified FEP .010 inch thickness	.157 \pm .006
Cable Weight	21.75 lbs/kft	

Designate outer jacket color with a dash number appended to the part number.
Example: Clear; THX-24C422-814-X.

TABLE I

Single Components	Pair	Wire Insulation color
1	1	2L (light red)
2	2	5L (lightgreen)
3	1	6L (light blue)
4	2	4L (light yellow)

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

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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. TE Connectivity 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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