

**SPECIFICATION CONTROL DRAWING**

**7724M1664**

**CHEMINAX**

77 OHM, AWG 24, 19 STRANDS OF AWG 36,  
OPTIMIZED SHIELD, DATA BUS CABLE, MIL-STD-1553

Date: 8-15-14  
Revision: A

THIS SPECIFICATION SHEET FORMS A PART OF THE LATEST ISSUE OF RAYCHEM SPECIFICATION 1200.

**CONSTRUCTION DETAILS**

**ELECTRICAL CHARACTERISTICS**

DIMENSIONS ARE NOMINAL VALUES IN INCHES, UNLESS OTHERWISE DESIGNATED.

CHARACTERISTIC IMPEDANCE	77 ± 5 ohms, Method C at 1 MHz
MUTUAL CAPACITANCE	30.0 pF/ft. (maximum)
ATTENUATION	1.4 dB/100 ft. (maximum) at 1 MHz
SURFACE TRANSFER IMPEDANCE	80 milliohms/meter (maximum) from 10 kHz to 100 MHz

**ADDITIONAL REQUIREMENTS**

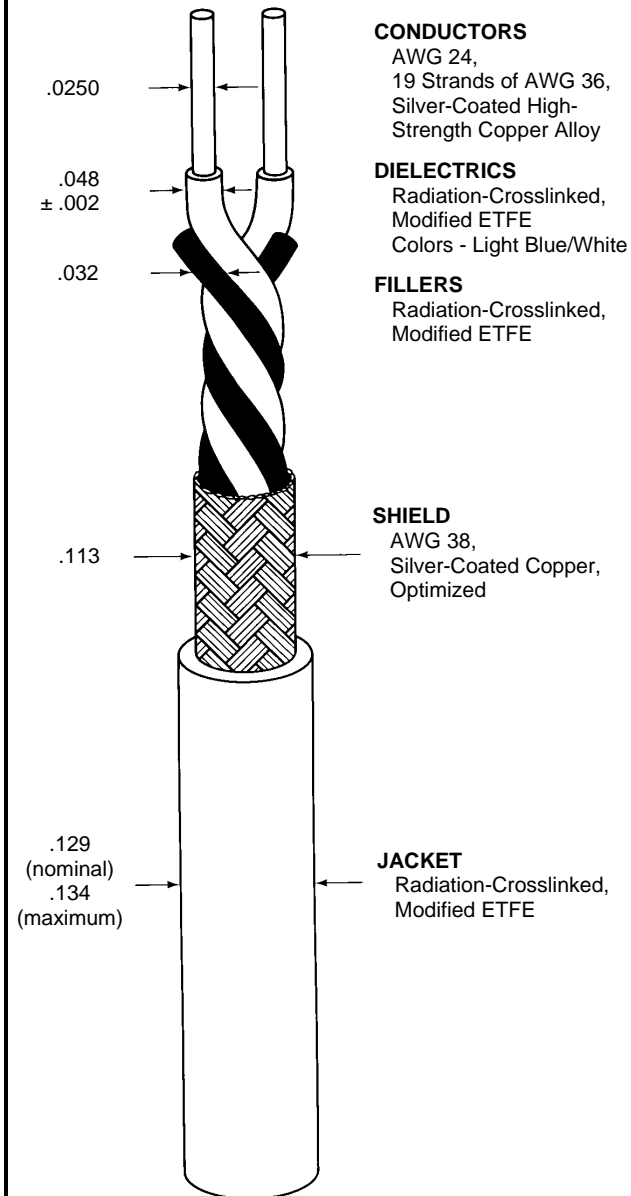
**COMPONENT WIRE PRIOR TO CABLING  
(Test procedures per SAE AS22759)**

CONDUCTOR RESISTANCE	26.5 ohms/1000 ft. (nominal)
CROSSLINKING PROOF TEST	300 ± 3°C for 1 hour, .625 inch mandrel, .375 lb, 2.5 kV dielectric test
INSULATION (DIELECTRIC) ELONGATION	50% (minimum)
TENSILE STRENGTH	5000 lbf/in <sup>2</sup> (minimum)
INSULATION FLAWS SPARK TEST	3.0 kV (rms)
IMPULSE TEST	8.0 kV (peak)
INSULATION RESISTANCE	5000 megohms for 1000 ft. (minimum)
LOW TEMPERATURE-COLD BEND	-65 ± 3°C for 4 hours, .750 inch mandrel, 1.00 lb, 2.5 kV dielectric test
SHRINKAGE	200 ± 3°C for 1 hour, .125 inch (maximum) in 12 inches

**FINISHED CABLE**

(Test procedures per NEMA WC 27500, unless otherwise specified)

BLOCKING	200°C for 6 hours
CABLE LAY LENGTH	.75 inch (minimum), 1.25 inches (maximum)
CROSSLINKED VERIFICATION	300 ± 5°C for 6 hours, 6.00 inch mandrel
FLAMMABILITY (Method B of Spec 1200)	3 seconds (maximum); 3 inches (maximum); no flaming of facial tissue
JACKET ELONGATION	50% (minimum)
TENSILE STRENGTH	5000 lbf/in <sup>2</sup> (minimum)
JACKET FLAWS SPARK TEST	1.0 kV (rms)
IMPULSE TEST	6.0 kV (peak)
JACKET THICKNESS	.008 inch (nominal)
LOW TEMPERATURE-COLD BEND	-55 ± 5°C for 4 hours, 6.00 inch mandrel
VOLTAGE WITHSTAND (DIELECTRIC)	1500 volts (rms)



**CONDUCTORS**  
AWG 24,  
19 Strands of AWG 36,  
Silver-Coated High-  
Strength Copper Alloy

**DIELECTRICS**  
Radiation-Crosslinked,  
Modified ETFE  
Colors - Light Blue/White

**FILLERS**  
Radiation-Crosslinked,  
Modified ETFE

**SHIELD**  
AWG 38,  
Silver-Coated Copper,  
Optimized

**JACKET**  
Radiation-Crosslinked,  
Modified ETFE

Designate outer jacket color with a dash number in accordance with MIL-STD-681. Unless otherwise specified, outer jacket color will be white (designated by a "-9" appended to the part number, e.g. 7724M1664-9). Other codes and suffixes may be added to the part number, as necessary, to capture any additional requirements imposed by the purchase order.

WEIGHT	15.9 lbs/1000 ft. (maximum)
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**ENGINEERING REFERENCE**

TEMPERATURE RATING	200°C (maximum)
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Users should evaluate the suitability of this product for their application. Specifications are subject to change without notice. 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.

