# SPECIFICATION CONTROL DRAWING

**10612**

**CHEMINAX**

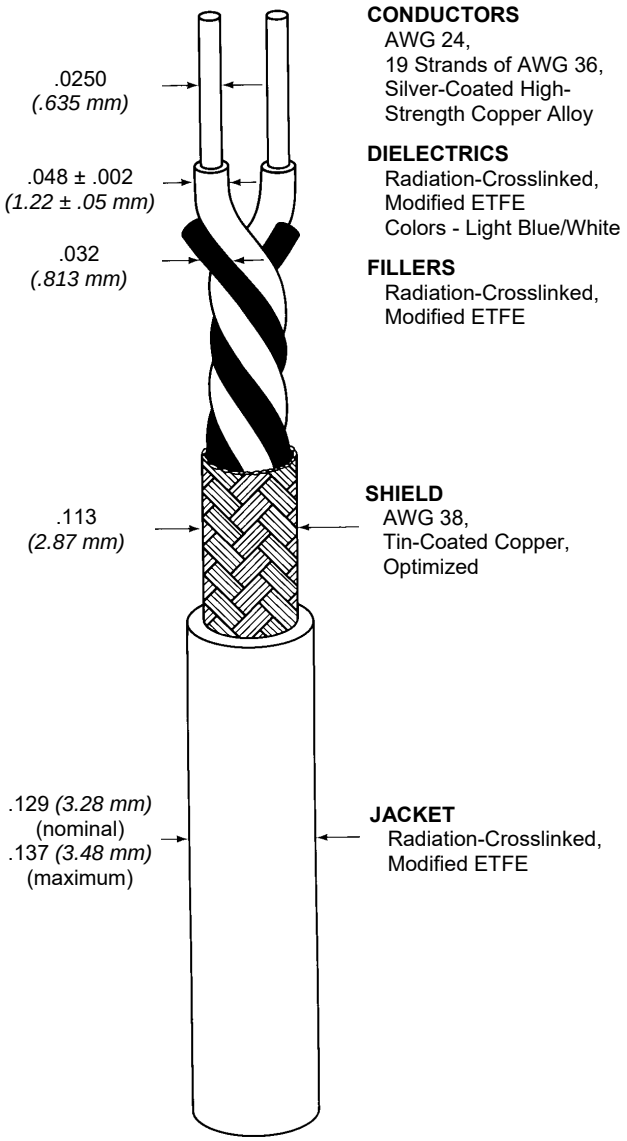
77 OHM, AWG 24, 19 STRANDS OF AWG 36, OPTIMIZED SHIELD, DATA BUS CABLE, MIL-STD-1553

Date: 2-13-18
Revision: K

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

## CONSTRUCTION DETAILS

DIMENSIONS ARE NOMINAL VALUES IN INCHES, UNLESS OTHERWISE DESIGNATED.




**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,
Tin-Coated Copper, Optimized

**JACKET**
Radiation-Crosslinked, Modified ETFE

The conductor AWG size and outer jacket color will be appended to the part number. Unless otherwise specified, outer jacket color will be white designated by a "-9" in accordance with MIL-STD-681, (e.g. 10612-24-9).

Other codes and suffixes may be added to the part number, as necessary, to capture any additional requirements imposed by the purchase order.

## ELECTRICAL CHARACTERISTICS

| | |
|---|---|
| CHARACTERISTIC IMPEDANCE | 77 ± 5 ohms, Method C at 1 MHz |
| MUTUAL CAPACITANCE | 30.0 pF/ft. *(98.4 pF/m)* (maximum) |
| ATTENUATION | 1.4 dB/100 ft. *(4.59 dB/100 m)* (maximum) at 1 MHz |
| SURFACE TRANSFER IMPEDANCE (Per SAE AS85485) | 100 milliohms/meter (maximum) at 30 MHz |

## ADDITIONAL REQUIREMENTS

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

| | |
|---|---|
| CONDUCTOR RESISTANCE | 26.5 ohms/1000 ft. *(86.9 ohms/km)* (nominal) |
| CROSSLINKING PROOF TEST | 300 ± 3°C for 1 hour, .500 inch *(12.7 mm)* mandrel, .375 lb *(170 g)*, 2.5 kV dielectric test |
| INSULATION (DIELECTRIC) | |
| ELONGATION | 50% (minimum) |
| TENSILE STRENGTH | 5000 lbf/in$^2$ *(34.5 N/mm$^2$)* (minimum) |
| INSULATION FLAWS | |
| SPARK TEST | 3.0 kV (rms) |
| IMPULSE TEST | 8.0 kV (peak) |
| INSULATION RESISTANCE | 5000 megohms for 1000 ft. *(1524 megohms-km)* (minimum) |
| LOW TEMPERATURE-COLD BEND | -65 ± 3°C for 4 hours, .750 inch *(19.1 mm)* mandrel, 1.00 lb *(454 g)*, 2.5 kV dielectric test |
| SHRINKAGE | 200 ± 3°C for 1 hour, .125 inch *(3.18 mm)* (maximum) in 12 inches *(305 mm)* |

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

| | |
|---|---|
| BLOCKING | 200°C for 6 hours |
| CABLE LAY LENGTH | .75 inch *(19.1 mm)* (minimum), 1.25 inches *(31.8 mm)* (maximum) |
| CROSSLINKED VERIFICATION | 300 ± 5°C for 6 hours, 6.00 inch *(152 mm)* mandrel |
| FLAMMABILITY (Method B of Spec 1200) | 3 seconds (maximum); 3 inches *(76.2 mm)* (maximum); no flaming of facial tissue |
| JACKET | |
| ELONGATION | 50% (minimum) |
| TENSILE STRENGTH | 5000 lbf/in$^2$ *(34.5 N/mm$^2$)* (minimum) |
| JACKET FLAWS | |
| SPARK TEST | 1.0 kV (rms) |
| IMPULSE TEST | 6.0 kV (peak) |
| JACKET THICKNESS | .008 inch *(.203 mm)* (nominal) |
| LOW TEMPERATURE-COLD BEND | -55 ± 5°C for 4 hours, 6.00 inch *(152 mm)* mandrel |
| VOLTAGE WITHSTAND (DIELECTRIC) | 1000 volts (rms) (minimum) |
| WEIGHT | 15.9 lbs/1000 ft. *(23.7 kg/km)* (maximum) |

CABLE IDENTIFICATION: Outer jacket shall be marked in contrasting color at 12 inch *(305 mm)* (nominal) intervals between marks as follows: "10612 RAYCHEM"

**ENGINEERING REFERENCE**

| | |
|---|---|
| TEMPERATURE RATING | 150°C (maximum) |

Users should evaluate the suitability of this product for their application. Specifications are subject to change without notice. TE Connectivity also reserves the right to make changes in materials or processing, which do not affect compliance with any specification, without notification to Buyer.





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