## SPECIFICATION CONTROL DRAWING

TE Connectivity

.032

(.813 mm)

.114

(2.90 mm)

.131

(3.33 mm)

.147 (nominal)

(3.73 mm)

.154 (maximum)

(3.91 mm)

77 OHM, AWG 24, 19 STRANDS OF AWG 36, DATA BUS CABLE, MIL-STD-1553, OPTIMIZED DOUBLE SHIELD Date 28-Mar-11
Revision P1

77 ± 5 ohms, Method C at 1 MHz

10613

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. METRIC UNITS SHOWN IN PARENTHESIS ARE APPROXIMATE EQUIVALENTS IN MILLIMETERS AND ARE FOR INFORMATION ONLY

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

1st SHIELD AWG 38, Tin-Coated Copper Optimized

2<sup>nd</sup> SHIELD AWG 38, Tin-Coated Copper Optimized

**JACKET**Radiation-Crosslinked,
Modified ETFE

**ELECTRICAL CHARACTERISTICS** 

MUTUAL CAPACITANCE 30 pF/ft. (98 pF/m) (maximum)

ATTENUATION 1.4 dB/100 ft. (4.6 dB/100 m)

(maximum) at 1 MHz

SURFACE TRANSFER IMPEDANCE 10 milliohms/meter (maximum)

(Per SAE AS85485 at 30 MHz)

CHARACTERISTIC IMPEDANCE

#### ADDITIONAL REQUIREMENTS

### COMPONENT WIRE PRIOR TO CABLING (Test Procedures per SAE AS22759)

CROSSLINK PROOF 300 ± 3°C for 7 hours, .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<sup>2</sup> (34 N/mm<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.

(1525 megohms-km) (minimum)

LOW TEMPERATURE-COLD BEND -65 ± 2°C for 4 hours, .750 inch (19.1 mm)

mandrel, 1.00 lb. (454 g), 2.5 kV dielectric test

SHRINKAGE 200  $\pm$  3°C for 6 hours, .125 inch (3.2 mm)

(maximum) in 12 inches (300 mm)

## 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 inch (maximum)

CROSSLINKED VERIFICATION 300 ± 5°C for 6 hours, 1.75 inches

(44.5 mm) mandrel

FLAMMABILITY 3 seconds (maximum); 3 inches (76 mm)

(Method B of Spec 1200) (maximum); no flaming of facial tissue

JACKET

ELONGATION 50% (minimum)

TENSILE STRENGTH 5000 lbf/in² (34 N/mm²) (minimum)

JACKET FLAWS

 SPARK TEST
 1.0 kV (rms)

 IMPULSE TEST
 6.0 kV (peak)

JACKET THICKNESS .008 inch (.2 mm) (nominal)

LOW TEMPERATURE-COLD BEND -65 ± 2°C for 4 hours, 6.00 inch (152 mm)

mandrel

SHIELD COVERAGE (EACH) 90% (minimum)

VOLTAGE WITHSTAND 1000 volts (rms) (minimum)

(DIELECTRIC)

Outer jacket color will be white (designated by a "-9" appended to the part number, e.g. 10613-9) unless otherwise specified.

Designate outer jacket color with a dash number in accordance with MIL-STD-681. Other codes and suffixes may be added to the part number, as necessary, to capture any additional requirements imposed by the purchase order.

CABLE IDENTIFICATION: Outer jacket shall be marked in contrasting color at 12 inch (nominal) intervals between marks as follows: " 10613 RAYCHEM "

WEIGHT 26.2 lbs/1000 ft. (39.0 kg/km) (maximum)

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.

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