X3T9.2/90-108

NCR

SPECIFICATION SHEET

Cable, Shielded - 25 Pr, #28AWG, CL2, Fast SCSI

Specification	Revision
006-1085798	A
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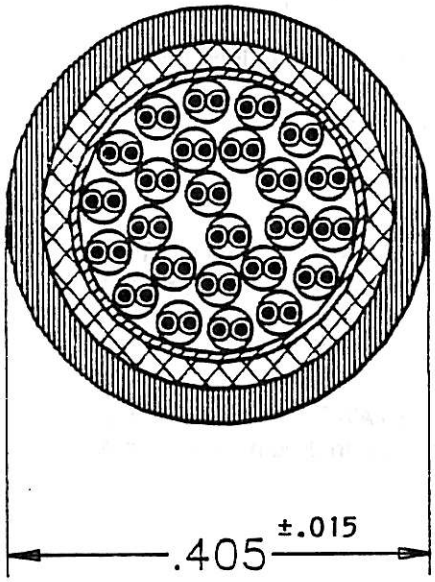
Pictorial shown for dimensional purposes only. DO NOT SCALE DRAWING



Unless otherwise specified dimensional limits are:
Inch (mm) nom. .XX +/-.02(0,5), .XXX +/-.005(0,127)

1.0 **SCOPE**

1.1 This document contains the requirements for the purchase and inspection of a shielded cable to be used in commercial computing, data processing and office equipment.

1.2 Cable supplied to this specification is intended to be used in Power Limited Circuits only.

1.3 **This cable cannot be used in plenums or other air handling systems unless enclosed in a cable tray or in conduit.**

2.0 **ASSOCIATED DOCUMENTS**

2.1 Required Documents

2.1.1 General Specification No. 006-0002581, "Cable - Multiconductor"

2.2 Reference Documents

2.2.1 Military Standard MIL-STD 105, "Sampling Procedures and Tables for Inspection by Attributes"

2.2.2 National Electric Code ® 1987

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3.0 **REQUIREMENTS**

3.1 Construction: 25 twisted pair of #28 AWG (7 strands of #36 AWG) tinned copper conductors (0.015 inch diameter)

3.1.1 Conductor insulation - Polyolefin, (0.010 inch thick)

3.1.2 Overall Outside Diameter (O.D.) of Conductor - 0.035 inch maximum

3.1.3 Conductor Twist: 0.75 - 1.25 inch left hand lay

3.1.4 Jacket: PVC (0.010 inch thick)

3.1.5 Jacket Color: NCR Gray #11 per color chip furnished by NCR Peripheral Products Division from the Purchasing Department through the Industrial Design Department.

3.1.6 Cable Twist: 5.50 inch left hand lay

3.1.7 Shields: Tinned Copper Braid #36 AWG, 85% minimum coverage over .002 inch aluminum/polyester tape with 25% minimum overlap

3.2 Electrical Properties

3.2.1 Impedance in Differential Mode:
Time Domain Reflectometer Method - 123 +/- 7 ohms
Network Analysis Method at 1 MHz - 133 +/- 7 ohms

3.2.2 Impedance in the Single Ended Mode:
Time Domain Reflectometer Method - 77 +/- 5 ohms
Network Analysis Method at 1 Mhz - 81 +/- 5 ohms

3.2.3 Capacitance

3.2.3.1 Mutual - 15 picofarads per foot maximum

3.2.3.2 Single Ended - 24 picofarads per foot maximum

3.2.3.3 Pair to Shield delta - 0.45 picofarads per foot maximum

3.2.4 Propagation Delay: 1.58 nanoseconds per foot maximum

3.2.4.1 Propagation Delay Delta (pair to pair): 0.035 nanoseconds per foot maximum

3.2.5 Attenuation at 50 MHz

3.2.5.1 Differential Mode - 0.07 db per foot maximum

3.2.5.2 Single Ended Mode - 0.15 db per foot maximum

3.2.6 DC Resistance at 68^{O} F (20^{O} C): 0.070 ohms per foot

3.3 Temperature Rating: 75^{O} C

3.4 Voltage Rating: 300 Volts

3.5 Cable supplied to this specification comply to the requirements spelled out in Article 724-38(b)(1) of the 1987 National Electric Code, for Class 2 Cable.

3.6 Cable supplied to this specification shall be UL Listed per UL Subject 13, Class 2, Type CL2 for Power Limited Circuit Cable Requirement and CSA Certified FT-4 75^{O} C 300V.

3.7 Color Coding: First color is the conductor insulation color, second color is the identifying band or stripe.

Pair No.	Conductor #1	Conductor #2
1	White / Tan	Tan / White
2	White / Brown	Brown / White
3	White / Pink	Pink / White
4	White / Orange	Orange / White
5	White / Yellow	Yellow / White
6	White / Green	Green / White
7	White / Blue	Blue / White
8	White / Violet	Violet / White
9	White / Gray	Gray / White
10	Tan / Brown	Brown / Tan
11	Tan / Pink	Pink / Tan
12	Tan / Orange	Orange / Tan
13	Tan / Yellow	Yellow / Tan
14	Tan / Green	Green / Tan
15	Tan / Blue	Blue / Tan
16	Tan / Violet	Violet / Tan
17	Tan / Gray	Gray / Tan
18	Brown / Pink	Pink / Brown
19	Brown / Orange	Orange / Brown
20	Brown / Yellow	Yellow / Brown
21	Brown / Green	Green / Brown
22	Brown / Blue	Blue / Brown
23	Brown / Violet	Violet / Brown
24	Brown / Gray	Gray / Brown
25	Pink / Orange	Orange / Pink

3.7.1 The conductor pairs shall lay in the cable in the following manner:

Pairs #1 through #14 inclusive in the outer layer - Pair #1 at the top and the subsequent pairs proceeding in clockwise fashion.

Pairs #15 through #23 inclusive in the middle layer - Pair #15 at the top and the subsequent pairs proceeding in clockwise fashion.

Pairs #24 and #25 are to form the inner core of the cable.

In order to minimize cross-talk problems it is suggested that pairs #24 and #25 be used for the ACK and REQ signals of the SCSI cable and the outer layer pairs be used for data signals.

4.0 **Marking**

4.1 Cable supplied to this specification shall be marked along its length with the following: manufacturer's name or UL file number, UL logo, AWG size, CL2 75°C, reference to shield and appropriate CSA markings.

4.2 The tag marking shall include the manufacturer's name, date of manufacture, number and size of conductors, procurement specification number and required UL and CSA information.