

# HITACHI CABLE AMERICA

## Customer Specification

HCM - 30245/8

### - C O N F I D E N T I A L -

**RFQ #:**

55131

**ITEM DESCRIPTION:**

CATEGORY 7 CABLE, CONSISTING OF 4 SHIELDED PAIRS,  
22 AWG, BRAID SHIELDED, WITH A LOW SMOKE PVC JKT.  
c(UL)us CMP-LP (0.9A) (105°C)

**COMPONENT:**

**CONDUCTOR:**

22 AWG SOLID BARE COPPER  
.0253" (.6426mm) NOM OD

**INSULATION:**

FLUOROPOLYMER  
.059" (1.499mm) NOM OD  
.0168" (.4267mm) AVG WALL

**PAIRING:**

THE COMPONENTS ARE TWISTED INTO PAIRS WITH VARYING  
LEFT HAND LAYS TO MINIMIZE CROSSTALK.

**PAIR # COLOR**

1 BLU+WHT  
3 GRN+WHT

**PAIR # COLOR**

2 ORN+WHT  
4 BRN+WHT

FOUR TWISTED PAIRS ARE INDIVIDUALLY WRAPPED WITH AN  
ALUMINUM/MYLAR SHIELD AND THEN CABLED TOGETHER WITH A LEFT  
HAND LAY.

**BRAID SHIELD:**

**CONDUCTOR:**

5 ENDS 38 AWG TINNED COPPER  
50% MIN COVERAGE

**OVERALL JACKET:**

LOW SMOKE PVC BLUE (RAL 5012)  
.326" (8.280mm) NOM OD  
.023" (.584mm) AVG WALL

A RIPCORDER IS PULLED IN UNDER JACKET.

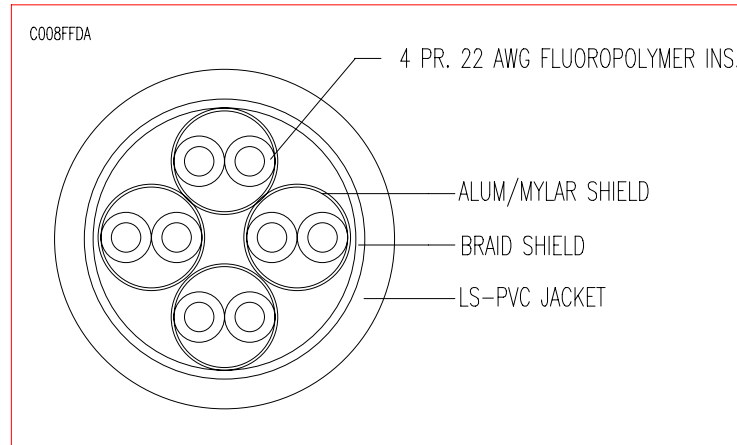
HITACHI CABLE AMERICA 900 Holt Avenue-East Industrial Park Manchester, N.H. 03109 (603) 669-4347	Drawn By: INI1      Date: DT1 Checked By: JLA      Date: 04/26/17 Issued By: JLA      Date: 04/26/17	REV# -
	THIS PRODUCT MADE IN THE U.S.A.	
ITEM: 30245-0008-AT4-XXX-650-S-01000-5368-00	PAGE 1 of 3 Approved By:      Date:	

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### MARKING:

THE CABLE IS IDENTIFIED WITH THE FOLLOWING PRINT LEGEND:

**HITACHI CABLE AMERICA CATEGORY 7 S/FTP --- 4PR/22 - 105C -  
c(UL)us CMP-LP (0.9A) - COMPLIANT TO CAT 7 ISO/IEC 11801 -  
Z/YY (XXXXX) - Mx - R# - NNNN FEET**

**WHERE: Z = MONTH OF MFG.**

**YY = YEAR OF MFG.**

**XXXXX = JOB NUMBER**

**x = RESPOOL MACHINE #**

**# = MASTER REEL #**

**NNNN = SEQUENTIAL FOOTAGE MARKERS**

### AGENCY APPROVALS:

UNDERWRITERS LABORATORIES, INC. TYPE CMP, COMMUNICATIONS PLENUM CABLE, LISTED AS BEING SUITABLE FOR USE IN DUCTS, PLENUMS, AND OTHER SPACES USED FOR ENVIRONMENTAL AIR. ALSO LISTED AS HAVING ADEQUATE FIRE-RESISTANT AND LOW SMOKE-PRODUCING CHARACTERISTICS, IN ACCORDANCE WITH ARTICLE 800 OF THE NATIONAL ELECTRICAL CODE.

UNDERWRITERS LABORATORIES, INC. TYPE CMP-LP, PLENUM LIMITED POWER (LP) CABLE RATED 0.9A AT 105°C, LISTED AS BEING SUITABLE FOR POWER OVER ETHERNET (POE) APPLICATIONS.

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### CATEGORY 7

### WORST CASE ELECTRICAL CHARACTERISTICS<sup>†</sup>

<b>Characteristic Impedance:</b>	In Accordance With 6.3.10 of IEC 61156-5 <sup>††</sup>
<b>Maximum Conductor Resistance:</b>	9.5 $\Omega$ /100 Meters @ 20°C
<b>Maximum Resistance Unbalance:</b>	2% (within a pair), 4% (between pairs)
<b>Maximum Capacitance Unbalance:</b>	160 pF/100 Meters @ 1 MHz
<b>Maximum Delay Skew:</b>	25ns/100 Meters
<b>Transfer Impedance:</b>	Meets Grade 1 (6.2.7 IEC 61156-5)
<b>Coupling Attenuation:</b>	Meets Type II (6.2.8 IEC 61156-5)

Freq (MHz)	IL Max (dB/100 m)	NEXT Min (dB/100 m)		ACR Calc Min (dB/100 m)		ELFEXT Min (dB/100 m)		PSANEXT Min (dB/100 m)	RL Min (dB/100 m)	Delay Max (ns/100 m)
		WP	PS	WP	PS	WP	PS			
4	3.74	78.00	75.00	74.26	71.26	78.00	75.00	67.00	23.01	552
8	5.24	78.00	75.00	72.76	69.76	77.24	74.24	67.00	24.52	547
10	5.86	78.00	75.00	72.14	69.14	75.30	72.30	67.00	25.00	545
16	7.41	78.00	75.00	70.59	37.59	71.22	68.22	67.00	25.00	543
20	8.29	78.00	75.00	69.71	66.71	69.28	66.28	67.00	25.00	542
25	9.29	78.00	75.00	68.71	65.71	67.34	64.34	67.00	24.32	541
31.25	10.41	78.00	75.00	37.59	64.59	65.40	62.40	67.00	23.64	540
62.5	14.88	75.46	72.46	60.58	57.58	59.38	56.38	67.00	21.54	539
100	19.02	72.40	69.40	53.38	50.38	55.30	52.30	67.00	20.11	538
200	27.47	67.88	64.88	40.41	37.41	49.28	46.28	61.48	18.00	537
300	34.19	65.24	62.24	31.05	28.05	45.76	42.76	57.96	17.30	536
400	40.01	63.37	60.37	23.36	20.36	43.26	40.26	55.46	17.30	536
500	45.26	61.92	58.92	16.66	13.66	41.32	38.32	53.52	17.30	536
600	50.10	60.73	57.73	10.63	7.63	39.74	36.74	51.94	17.30	535

<sup>†</sup>Not all Characteristics are shown. Refer to IEC 61156-5 for complete list of all required Characteristics and their limits. Discrete values are for information only. Equations for swept frequencies govern limits.

<sup>††</sup>Cables that meet the Return Loss requirements of 6.3.11 of IEC 31156-5 are not required to be measured for Characteristic Impedance.

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