Hitachi Cable America Customer Specification

HCM - 30145/8

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ITEM DESCRIPTION

CATEGORY 5e DIRECT BURIAL, CONSISTING OF 4 PAIRS, 24 AWG, UNSHIELDED, WITH A POLYOLEFIN JACKET. NON-UL

COMPONENT

Conductor: 24 AWG SOLID BARE COPPER
.0215" (.5461mm) NOM OD

Insulation: POLYOLEFIN
.039" (.998mm) NOM OD
.0089" (.2261mm) AVG WALL

PAIRING

Components are twisted into pairs with varying left hand lays to minimize crosstalk.

Pair # color: 1 Blu+wht/blu / 2 Orn+wht/orn / 3 Grn+wht/grn / 4 Brn+wht/brn

ENVIRONMENTAL CONDITIONS

Mechanical: Static (Non-Flexing)
Climate: Direct Bury, Solar/UV Resistant
Ingress: Oil Resistant
Electromagnetic: Unshielded

OVERALL JACKET:

POLYOLEFIN BLACK
.230" (5.842mm) NOM OD
.025" (.635mm) AVG WALL
The cable core is pulled in with gel and jacketed.

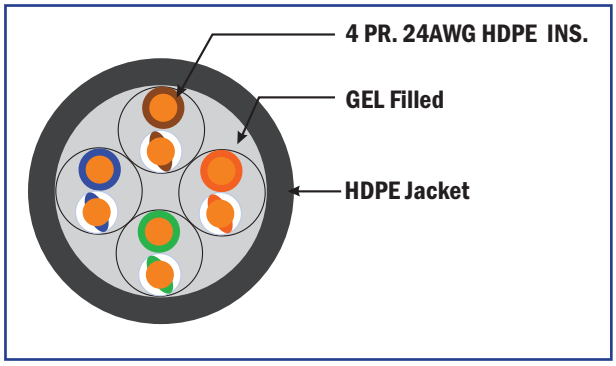
MARKING:

HITACHI CABLE AMERICA - HCM CATEGORY 5e --- 4PR/24 DIRECT BURIAL CABLE.

Z/YY (XXXXX) - NNNNNN FEET / WHERE: Z = MONTH OF MFG. / YY = YEAR OF MFG. / XXXXX = JOB NUMBER / NNNNNN = SEQUENTIAL FOOTAGE MARKERS)

AGENCY APPROVALS:

NON-UL PRODUCT



Hitachi Cable America Inc.
900 Holt Avenue-East Industrial Park, Manchester, N.H. 03109 (603) 669-4347

MADE IN USA

ITEM: 30145-0008-L15-XXX-000-S-01000-4147-00

Drawn By: RPO Date: 03/12/02
Checked By: KDA Date: 03/13/02
Issued By: RPO Date: 03/13/02

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ITEM DESCRIPTION

Category 5e / Direct Burial Worst Case Electrical Characteristics†

Characteristic Impedance:	100 + 15 Ω (0.772-100 MHz)
Maximum Conductor Resistance:	9.38 Ω /100 Meters @ 20°C
Maximum Resistance Unbalance:	5%
Maximum Mutual Capacitance:	5.6 nF/100 Meters @ 1 kHz
Maximum Capacitance Unbalance:	330 pF/100 Meters
Maximum Delay Skew:	45 ns/100 Meters
Nominal Velocity of Propagation:	63%
Operational Temps:	-50 to +75 (F)
Installation Temps:	-40 to +75 (F)
Weight Per 1,000ft:	23 lbs (10.5Kg)

Frequency (MHz)	Insertion Loss Max. (dB / 100 m)	*NEXT Loss Min. (dB / 100 m)		*ACR Min. (dB / 100 m)		*ELFEXT Min. (dB / 100 m)		*Return Loss Min. (dB / 100 m)	*Delay Max. (ns / 100 m)
		WP	PS	WP	PS	WP	PS		
1.0	2.0	65.3	62.3	63.3	60.3	63.8	60.8	20.0	590
4.0	4.1	56.3	53.3	52.2	49.2	51.8	48.8	23.0	572
8.0	5.8	51.8	48.8	46.0	43.0	45.7	42.7	24.5	567
10.0	6.5	50.3	47.3	43.8	40.8	43.8	40.8	25.0	565
16.0	8.2	47.2	44.2	39.0	36.0	39.7	36.7	25.0	563
20.0	9.3	45.8	42.8	36.5	33.5	37.8	34.8	25.0	562
25.0	10.4	44.3	41.3	33.9	30.9	35.8	32.8	24.3	561
31.25	11.7	42.9	39.9	31.2	28.2	33.9	30.9	23.6	560
62.5	17.0	38.4	35.4	21.4	18.4	27.9	24.9	21.5	559
100.0	22.0	35.3	32.3	13.3	10.3	23.8	20.8	20.1	558
155.0*	28.1	32.4	29.4	---	---	20.0	17.0	18.8	557
200.0*	32.4	30.8	27.8	---	---	17.8	14.8	18.0	557
250.0*	36.9	29.3	26.3	---	---	15.8	12.8	17.3	556
300.0*	41.0	28.1	25.1	---	---	14.3	11.3	16.8	556
350.0*	44.9	27.1	24.1	---	---	12.9	9.9	16.3	556
400.0*	48.5	26.3	23.3	---	---	11.8	8.8	15.9	556
400.0*	48.5	26.3	23.3	---	---	11.8	8.8	15.9	536

*Frequencies beyond TIA and ISO requirements are for information only.
†Discrete values are for information only. Equations for swept frequencies govern limits.

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