

# Hitachi Cable America Customer Specification

HCM - 30180/8

## ITEM DESCRIPTION

CATEGORY 6 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. The four (4) twisted pairs are cabled around a star filler with a left hand lay.

**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  
.270" (6.858mm) NOM OD  
.030" (.762mm) AVG WALL  
The cable core is pulled in with gel and jacketed.

## MARKING:

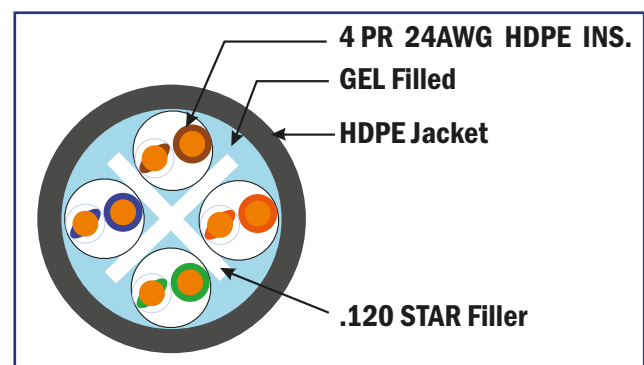
THE CABLE IS IDENTIFIED WITH THE FOLLOWING PRINT LEGEND:

HITACHI CABLE AMERICA - HCM CATEGORY 6 --- 4PR/24 AWG DIRECT BURIAL CABLE -

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

## AGENCY APPROVALS:

NON-UL PRODUCT



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Outside Plant / Category 6 Worst Case Electrical Characteristics†

Characteristic Impedance:	100 ± 15 Ω (1.0-100 MHz) 100 ± 20 Ω (101-250 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
Maximum Delay:	565 ns/100 Meters @ 10 MHz
Operational Temps:	-50 to +75 (F)
Installation Temps:	-40 to +75 (F)
Weight Per 1,000ft:	34 lbs (15.4Kg)

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)
		WP	PS	WP	PS	WP	PS	
0.772	-----	76.0	74.0	-----	-----	70.0	67.0	-----
1.0	2.0	74.3	72.3	72.3	70.3	67.8	64.8	20.0
4.0	3.8	65.3	63.3	61.5	59.5	55.8	52.8	23.0
8.0	5.3	60.8	58.8	55.4	53.4	49.7	46.7	24.5
10.0	6.0	59.3	57.3	53.3	51.3	47.8	44.8	25.0
16.0	7.6	56.2	54.2	48.7	46.7	43.7	40.7	25.0
20.0	8.5	54.8	52.8	46.3	44.3	41.8	38.8	25.0
25.0	9.5	53.3	51.3	43.8	41.8	39.8	36.8	24.3
31.25	10.7	51.9	49.9	41.2	39.2	37.9	34.9	23.6
62.5	15.4	47.4	45.4	32.0	30.0	31.9	28.9	21.5
100.0	19.8	44.3	42.3	24.5	22.5	27.8	24.8	20.1
155.0	25.2	41.4	39.4	16.3	14.3	24.0	21.0	18.8
200.0	29.0	39.8	37.8	10.8	8.8	21.8	18.8	18.0
250.0	32.8	38.3	36.3	5.5	3.5	19.8	16.8	17.3

†Discrete values are for information only. Equations for swept frequencies govern limits.

THE IMPEDANCE VALUES ABOVE REFLECT ACTUAL INPUT IMPEDANCE DATA. THIS FAMILY DOES NOT UTILIZE CURVESMOOTHING OR FITTING WHEN MEASURING AND REPORTING IMPEDANCE DATA. THIS FAMILY MEETS INTERNATIONAL REQUIREMENTS FOR NON-FITTED INPUT IMPEDANCE.

THIS CABLE IS COMPLIANT TO ANSI/TIA 568-C.2 FOR CATEGORY 6 .