

ICAT5E 2003B

Moderate Flex High Noise

Industrial Ethernet Cable

Catalog # 2003B

NEC/CEC: CMR(ETL) C(ETL) 75C SUN RES OIL RES II

1 of 2



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CONSTRUCTION:

CENTER CONDUCTOR:

(8) 24 AWG Solid Copper 0.0205" +/- 0.0001"

DIELECTRIC:

Polyethylene (PE)
Dia. Over Dielectric: 0.0395" +/- 0.003"
Nom. Avg. Wall: 0.00975"
Min. Avg. Wall: 0.00925"
Min. Spot: 0.0087"

INNER JACKET:

Polyvinylchloride (PVC)
Nom. Dia. Over Inner Jkt.: 0.225"
Max. Dia. Over Inner Jkt.: 0.235"
Nom. Avg. Wall Thickness: 0.020"
Min. Avg. Wall Thickness: 0.018"

DRAIN WIRE:

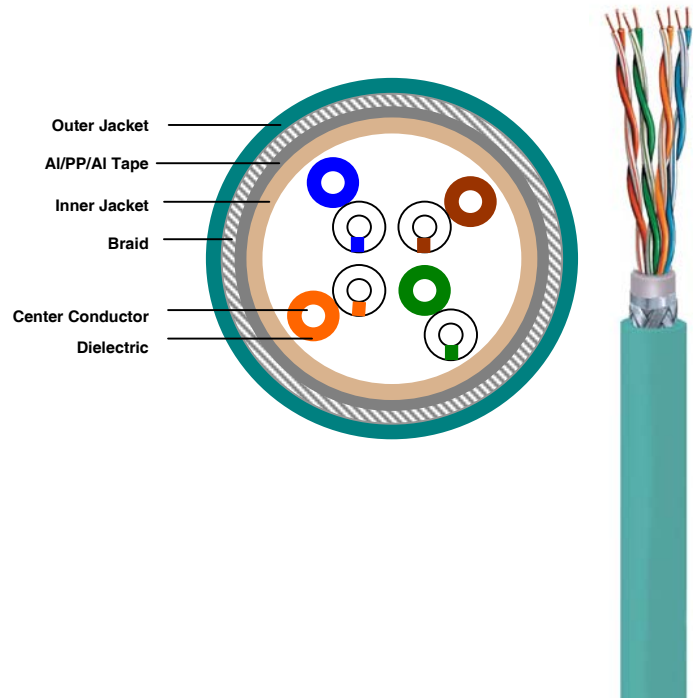
None

SHIELD:

Foil: Aluminum/Polypropylene/Aluminum Tape
(.32mil/.92mil/.32mil)
100% Coverage
Braid: Tinned/Copper
65% Coverage

OUTER JACKET:

Polyvinylchloride (PVC)
Nom. Dia. Over Outer Jkt.: 0.286"
Max. Dia. Over Outer Jkt.: 0.306"
Nom. Avg. Wall Thickness: 0.018"
Min. Avg. Wall Thickness: 0.016"
Min. Spot: 0.014"



ELECTRICAL PROPERTIES:

SPARKER TEST:	4000 VAC
DIELECTRIC STRENGTH:	Conductor to Conductor: 3 Sec. @ 2500 VDC
CAPACITANCE:	14 Pfi/ft. Nom.
IMPEDANCE:	100 +/- 15 Ohms
VELOCITY OF PROPAGATION:	71% Nom.
DCR:	
Conductor:	28.6 Ohms/1000 ft. Max.
RESISTANCE UNBALANCE:	2.5% Max.
SRL:	
DELAY SKEW:	<11 ns @ 100 m.
EMI PROTECTION*:	50 dB @ .772MHz – 100MHz

MECHANICAL PROPERTIES:

MINIMUM BEND TEST:	
Loaded:	20 times cable OD
Unloaded:	10 times cable OD
INSTALLATION AND STORAGE TEMP:	0°C (32° F) Min
MINIMUM FLEXES TO FAILURE**:	85,000 Plus

*Represents the additional shielding effectiveness gained compared against the unshielded cables.

**Cables were flexed on C-Track Flexing Machine @ 1.5" bend radius and then tested against Cat5e specs.



Drawings not to Scale
Specifications subject to change
Revision: 02/27/07

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ATTENUATION:

dB/100 m. (Nom.)	@ Frequency MHz
1.8 dB	.772 MHz
2.0 dB	1.0 MHz
4.1 dB	4.0 MHz
5.8 dB	8.0 MHz
6.5 dB	10.0 MHz
8.2 dB	16.0 MHz
9.3 dB	20.0 MHz
10.4 dB	25.0 MHz
11.7 dB	31.25 MHz
17.0 dB	62.5 MHz
22.0 dB	100.0 MHz

Pair Identification	
Pair 1	Blue/White w/Co-extruded Blue Stripe on White Single
Pair 2	Orange/White w/Co-extruded Orange Stripe on White Single
Pair 3	Green/White w/Co-extruded Green Stripe on White Single
Pair 4	Brown/White w/Co-extruded Brown Stripe on White Single

ELECTRICAL PERFORMANCE:

@ Frequency MHz	Pair to Pair		Return Loss (dB) Min	ACR (dB) Min	POWER SUM		
	NEXT (dB) Min	ELFEXT (Db/100m) Min			NEXT (dB) Min	ELFEXT (dB/100m) Min	ACR (dB) Min
.772 MHz	67	66	NA	65	64	63	62
1.0 MHz	65	64	20.0	63	62	61	60
4.0 MHz	56	52	23.0	52	53	49	49
8.0 MHz	52	46	24.5	46	49	43	43
10.0 MHz	50	44	25.0	44	47	41	41
16.0 MHz	47	40	25.0	39	44	37	36
20.0 MHz	46	38	25.0	37	43	35	34
25.0 MHz	44	36	24.3	34	41	33	31
31.25 MHz	43	34	23.6	31	40	31	28
62.5 MHz	38	28	21.5	21	35	25	18
100.0 MHz	35	24	20.1	13	32	21	10

(All tests include swept frequency measurements)

NEXT and Power Sum values are derived from functions and truncated to the nearest dB.

Available Packaging:	Reel
Available Colors:	Teal, Gray



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