Detailed Specifications & Technical Data



11700A Paired - Category 5e DataTuff® Twisted Pair Cable



Description:

24 AWG Bonded-Pairs solid bare copper conductors, polyolefin insulation, PVC inner jacket, rip cord, industrial grade sunlight- and oilresistant PVC outer jacket. Sequential marking at two foot intervals.

SUITABLE APPLICATIONS:

Suitable Applications

Industrial Ethernet Cable, Harsh Environments, EtherNet/IPTM, 350MHz Enhanced Category 5e, Gigabit Ethernet, 100BaseTX, 100BaseVG ANYLAN, 155ATM, 622ATM, NTSC/PAL Component or Composite Video, AES/EBU Digital Audio, AES51, RS-422, CMX - Outdoor, RJ-45 Compatible, Extra Protection

PHYSICAL CHARACTERISTICS:

CONDUCTOR:

Number of Pairs	4
Total Number of Conductors	8
AWG	24
Stranding	Solid
Conductor Diameter	.020 in.
Conductor Material	BC - Bare Copper
INSULATION:	

Insulation Material	PO - Polyolefin
Nom. Insulation Wall Thickness	.009 in.
Insulation Diameter	.035 in.

Pair Color Code Chart :

Number	Color	Number	Color
1	White/Blue Stripe & Blue	3	White/Green Stripe & Green
2	White/Orange Stripe & Orange	4	White/Brown Stripe & Brown

INNER JACKET:

Inner Jacket Material	PVC - Polyvinyl Chloride
Inner Jacket Diameter	.200 in.
Inner Jacket Ripcord	Yes

OUTER SHIELD:



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Outer Shield Material	Unshielded
OUTER SHIELD SEPARATOR :	
Outer Shield Separator Material	Polyester
Outer Shield Separator Thickness	0.001 in.
OUTER JACKET:	
Outer Jacket Material	Industrial Grade PVC - Polyvinyl Chloride
Outer Jacket Nominal Wall Thickness	.035 in.
Outer Jacket Ripcord	Yes
OVERALL NOMINAL DIAMETER:	
Overall Nominal Diameter	.285 in.
MECHANICAL CHARACTERISTICS:	
Operating Temperature Range	-40°C To +75°C
Storage Temperature Range	-40°C To +85°C
Installation Temperature Range	-25°C To +75°C
Bulk Cable Weight	35 lbs/1000 ft.
Max. Recommended Pulling Tension	40 lbs.
Min. Bend Radius (Install)	0.29 in.
APPLICABLE SPECIFICATIONS AND AGE	NCY COMPLIANCE:
APPLICABLE STANDARDS:	
NEC/(UL) Specification	CMR, CMX-Outdoor, UL444
CEC/C(UL) Specification	CMR
IEC Specification	11801 Category 5
EU RoHS Compliant (Y/N)	Yes
EU RoHS Compliance Date (mm/dd/yyyy):	01/01/2004
TIA/EIA Specification	568-B.2 Category 5e
Other Specification	NEMA WC-63.1 Category 5e, Ethernet/IP [™] compliant, UL verified to Category 5e
FLAME TEST:	
UL Flame Test	UL1666 Riser
CSA Flame Test	FT4
SUITABILITY:	
Suitability - Indoor	Yes
Suitability - Outdoor	Yes
Sunlight Resistance	Yes
Oil Resistance	Yes
PLENUM/NON-PLENUM:	
Plenum (Y/N)	Ν



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ELECTRICAL CHARACTERISTICS:

Nom. Mutual Capacitance @ 1 KHz	15 pF/ft
Maximum Capacitance Unbalance (pF/100 m)	66 pF/100 m
Nominal Velocity of Propagation	70 %
Maximum Delay (ns/100 m)	510 ns/100 m
Maximum Delay Skew (ns/100m)	25 ns/100 m
Maximum Conductor DC Resistance @ 20 Deg. C	9 Ohms/100 m
Maximum DCR Unbalance @ 20 Deg. C	3 %
Max. Operating Voltage - UL	300 V RMS

ELECTRICAL CHARACTERISTICS - PREMISE:

T					M: DCACD		2.0
Frequency (MHz)	Max. Attenuation (dB/100 m)	Min. NEXT (dB)	Min. PSNEXT (dB)	Min. ACR (dB)	(dB)	Min. Return Loss (dB)	Min. Structural Return Loss (dB)
1	2.0	65.3	65.3	63.3	63.3	20.0	
4	4.0	56.3	56.3	52.3	52.3	23.0	
8	5.7	51.8	51.8	46.1	46.1	24.5	
10	6.4	50.3	50.3	43.9	43.9	25.0	
16	8.1	47.3	47.3	39.1	39.1	25.0	
20	9.2	45.8	45.8	35.2	35.2	25.0	
25	10.3	44.3	44.3	34.1	34.1	24.3	
31.25	11.6	42.9	42.9	31.3	31.3	23.6	
62.5	16.8	38.4	38.4	21.6	21.6	21.5	
100	21.7	35.3	35.3	17.1	17.1	20.1	
155	27.7	32.5	32.5	4.7	4.7	19.0	
200	32.0	30.8	30.8	3.0	3.0	19.0	
250	36.4	29.3	29.3	>0	>0	18.0	
300	40.5	28.2	28.2	>0	>0	18.0	
310	41.3	27.9	27.9			18.0	
350	44.3	27.2	27.2			17.0	

Premise Cable Electricals Table 2 :



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Frequency (MHz)	Input (Unfitted) Impedance (Ohms)	Fitted Impedance (Ohms)	Min. ELFEXT (dB)	Min. PSELFEXT (dB)	
1	100 ± 12	105 ± 10	63.8	60.8	
4	100 ± 12	100 ± 10	51.7	48.7	
8	100 ± 12	100 ± 10	45.7	42.7	
10	100 ± 12	100 ± 10	43.8	40.8	
16	100 ± 12	100 ± 10	39.7	36.7	
20	100 ± 12	100 ± 10	37.7	34.7	
25	100 ± 15	100 ± 10	35.8	32.8	
31.25	100 ± 15	100 ± 10	33.9	30.9	
62.5	100 ± 15	100 ± 10	27.8	24.8	
100	100 ± 15	100 ± 10	23.8	20.8	
155	100 ± 18	100 ± 10	19.9	16.9	
200	100 ± 20	100 ± 10	17.7	14.7	
250	100 ± 20	100 ± 10	15.8	12.8	
300	100 ± 20	100 ± 10	14.2	11.2	
310	100 ± 20	100 ± 10	13.9	10.9	
350	100 ± 22	100 ± 10	12.9	9.9	

NOTES:

Notes

US Patent #'s 5, 606, 151; 5, 734, 126. EtherNet/IP is a trademark of ControlNet International, Ltd. under license by Open DeviceNet Vendor Association, Inc. Operating temperatures are subject to length de-rating. Cable passes -40C Cold Bend per UL 1581.

PUT-UPS AND COLORS:

Item	Description	Put-Up (ft.)	Ship Weight (lbs.)	Jacket Color	Notes
11700A 0021000	4 PR #24 PP FRPVC PVC	1000	39	RED	С
11700A 0061000	4 PR #24 PP FR PVC PVC	1000	39	BLUE, LIGHT	С
11700A 0081000	4 PR #24 PP FR PVC PVC	1000	39	GRAY	С
11700A 0101000	4 PR #24 PP FR PVC PVC	1000	39	BLACK	С
11700A 0103000	4 PR #24 PP FR PVC PVC	3000	117	BLACK	С
11700A 1NH1000	4 PR #24 PP FRPVC PVC	1000	39	TEAL 1NH	С

C = CRATE REEL PUT-UP.

Revision Number: 6 Rev

Revision Date: 07-12-2006

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