



**Part Number:** 11700A

Cat 5e Upjacketed MSHA DataTuff®, (4 pr) 24 AWG  
Solid BC, PO/PVC/PVC, CMR, CMX-Outdoor

## Product Description

Four Cat 5e 24 AWG Bonded-Pairs solid bare copper conductors, polyolefin insulation, PVC inner jacket, rip cord, PVC outer jacket.

## Product Specifications

## Technical Specifications

<b>Suitable Applications:</b>	Industrial Ethernet Cable, Harsh Environments, EtherNet/IP™, 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
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## Construction and Dimensions

### Conductor:

AWG	Stranding	Material	Nominal Diameter	No. of Pairs
24	Solid	BC - Bare Copper	0.02 in	4

<b>Total Number of Conductors:</b>	8
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### Insulation:

Material	Nominal Diameter	Nominal Wall Thickness
PO - Polyolefin	0.035 in	0.009 in

### Color Chart 1:

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

#### Innerjacket:

Material	Nominal Diameter	Ripcord
PVC - Polyvinyl Chloride	0.2 in	Yes

#### Outershield 1:

Type	Material
0.001 in	Unshielded

#### Outerjacket 1:

Material	Nominal Diameter	Nominal Wall Thickness	Ripcord
Industrial Grade PVC - Polyvinyl Chloride	0.285 in	0.035 in	Yes

## Electrical Characteristics

#### Conductor DCR:

Max. Conductor DCR	Max. DCR Unbalance
9 Ohm/1000ft	3 %

#### Capacitance:

Max. Capacitance Unbalance	Nom.Mutual Capacitance
66 pF/ft	15 pF/ft

#### Delay:

Max. Delay	Max. Delay Skew	Nominal Velocity of Propagation (VP) [%]
510 ns/100m	25 ns/100m	70 %

#### High Freq:

Frequency [MHz]	Max. Insertion Loss (Attenuation)	Min. NEXT [dB]	Min. PSNEXT [dB]	Min. ACR [dB]	Min. PSACR [dB]	Min. ACRF (ELFEXT) [dB]	Min. PSACRF (PSELFEXT) [dB]	Min. RL (Return Loss) [dB]	Max./Min. Input Impedance (unFitted)	Max./Min. Fitted Impedance
1 MHz	2 db/100m	65.3 dB	65.3 dB	63.3 dB	63.3 dB	63.8 dB	60.8 dB	20 dB	100 ± 12 Ohm	
4 MHz	4 db/100m	56.3 dB	56.3 dB	52.3 dB	52.3 dB	51.7 dB	48.7 dB	23 dB	100 ± 12 Ohm	
8 MHz	5.7 db/100m	51.8 dB	51.8 dB	46.1 dB	46.1 dB	45.7 dB	42.7 dB	24.5 dB	100 ± 12 Ohm	
10 MHz	6.4 db/100m	50.3 dB	50.3 dB	43.9 dB	43.9 dB	43.8 dB	40.8 dB	25 dB	100 ± 12 Ohm	
16 MHz	8.1 db/100m	47.3 dB	47.3 dB	39.1 dB	39.1 dB	39.7 dB	36.7 dB	25 dB	100 ± 12 Ohm	
20 MHz	9.2 db/100m	45.8 dB	45.8 dB	35.2 dB	35.2 dB	37.7 dB	34.7 dB	25 dB	100 ± 12 Ohm	
25 MHz	10.3 db/100m	44.3 dB	44.3 dB	34.1 dB	34.1 dB	35.8 dB	32.8 dB	24.3 dB	100 ± 15 Ohm	
31.25 MHz	11.6 db/100m	42.9 dB	42.9 dB	31.3 dB	31.3 dB	33.9 dB	30.9 dB	23.6 dB	100 ± 15 Ohm	
62.5 MHz	16.8 db/100m	38.4 dB	38.4 dB	21.6 dB	21.6 dB	27.8 dB	24.8 dB	21.5 dB	100 ± 15 Ohm	
100 MHz	21.7 db/100m	35.3 dB	35.3 dB	17.1 dB	17.1 dB	23.8 dB	20.8 dB	20.1 dB	100 ± 15 Ohm	100 ± 10 Ohm
155 MHz	27.7 db/100m	32.5 dB	32.5 dB	4.7 dB	4.7 dB	19.9 dB	16.9 dB	19 dB	100 ± 18 Ohm	100 ± 10 Ohm
200 MHz	32 db/100m	30.8 dB	30.8 dB	3 dB	3 dB	17.7 dB	14.7 dB	19 dB	100 ± 20 Ohm	100 ± 10 Ohm
250 MHz	36.4 db/100m	29.3 dB	29.3 dB	0 dB	0 dB	15.8 dB	12.8 dB	18 dB	100 ± 20 Ohm	100 ± 10 Ohm
300 MHz	40.5 db/100m	28.2 dB	28.2 dB	0 dB	0 dB	14.2 dB	11.2 dB	18 dB	100 ± 20 Ohm	100 ± 10 Ohm
310 MHz	41.3 db/100m	27.9 dB	27.9 dB			13.9 dB	10.9 dB	18 dB	100 ± 20 Ohm	100 ± 10 Ohm
350 MHz	44.3 db/100m	27.2 dB	27.2 dB			12.9 dB	9.9 dB	17 dB	100 ± 22 Ohm	100 ± 10 Ohm
1 MHz										
4 MHz										
8 MHz										
10 MHz										
16 MHz										
20 MHz										
25 MHz										
31.25 MHz										
62.5 MHz										
100 MHz										
155 MHz										
200 MHz										
250 MHz										
300 MHz										
310 MHz										
350 MHz										

Voltage:

UL Voltage Rating	
300 V RMS	

## Use

Suitability - Oil Resistance:	Yes
Suitability - Indoor:	Yes
Suitability - Outdoor:	Yes
Suitability - Sunlight Resistance:	Yes
Max Recommended Pulling Tension:	40 lbs

## Safety

CSA Flammability:	FT4
UL Flammability:	UL1666 Vertical Riser

## Temperature Range

Installation Temp Range:	-25°C To +75°C
Operating Temp Range:	-40°C To +75°C
Storage Temp Range:	-40°C To +85°C

## Mechanical Characteristics

Min Bend Radius/Minor Axis:	0.29 in
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## Part Number

Plenum (Y/N):	No
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## Standards

ISO/IEC Compliance:	Other Standards
Telecommunications Standards:	Telecommunications Standards
CA Prop 65 (CJ for Wire & Cable):	CA Prop 65 (CJ for Wire & Cable)
CEC/C(UL) Specification:	CEC/C(UL) Specification
MII Order #39 (China RoHS):	MII Order #39 (China RoHS)
NEC/(UL) Specification:	NEC/(UL) Specification
Other Specification:	Other Specification
PMSHA Specification:	PMSHA Specification
EU Directive Compliance:	EU Directive 2003/11/EC (BFR)

## History

<b>Notes:</b>	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. Outer Shield Separator Material: Polyester.
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## Product Variants

Part Number	Color	Put-Up Type	Length
11700A 0021000	RED	Reel	1000 ft
11700A 0061000	BLUE	Reel	1000 ft
11700A 0081000	GRAY	Reel	1000 ft
11700A 0101000	BLACK	Reel	1000 ft
11700A 0103000	BLACK	Reel	3000 ft
11700A 1NH1000	TEAL	Reel	1000 ft

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