



Part Number: 7928A

Cat 5e High & Low Temp DataTuff®, (4 pr) 24 AWG
Solid BC, FEP/FEP, CMP

Product Description

Four Cat 5e 24 AWG Bonded-Pair solid bare copper conductors, FEP insulation, FEP jacket.

Product Specifications

Technical Specifications

Suitable Applications:	Industrial Ethernet Cable, Harsh Environments, 350MHz Enhanced Category 5e, Gigabit Ethernet, 100BaseTX, 100BaseVG ANYLAN, 155ATM, 622ATM, NTSC/PAL Component or Composite Video, AES/EBU Digital Audio, AES51, RS-422, RJ-45 Compatible, High and Low Temperature, Oil and Gasoline Exposure, Limited Combustible FHC 25/50
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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

Total Number of Conductors:	8
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Insulation:

Material	Nominal Diameter	Nominal Wall Thickness
FEP - Fluorinated Ethylene Propylene	0.036 in	0.007 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

Outershield 1:

Material
Unshielded

Outerjacket 1:

Material	Nominal Diameter
FEP - Fluorinated Ethylene Propylene	0.187 in

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	72 %

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	23.6 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	25.4 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	26 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	26 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	26 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	25.5 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	25 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	23.5 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	22.5 dB	100 ± 15 Ohm	95-107 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

Max Recommended Pulling Tension: 40 lbs

Safety

CSA Flammability: FT6

UL Flammability: NFPA 262,UL723 (NFPA 255)

Temperature Range

Installation Temp Range: -55°C To +150°C

Operating Temp Range: -70°C To +150°C

Storage Temp Range: -70°C To +150°C

Mechanical Characteristics

Min Bend Radius/Minor Axis: 0.25 in

Part Number

Plenum (Y/N): Yes

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

EU Directive Compliance: EU Directive 2003/11/EC (BFR)

History

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 -70C Cold Bend per UL 1581.

Product Variants

Part Number	Color	Put-Up Type	Length
7928A 0101000	BLACK	Reel	1000 ft
7928A 0105000	BLACK	Reel	5000 ft

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