



**Part Number: 7928A**

DataTuff® Cat 5e, (4 pr) 24 AWG Solid BC, FEP/FEP, Ethernet/IP, CMP, Extreme Temp., Gasoline Res

**Product Description**

Four Cat 5e 24 AWG Bonded-Pairs solid bare copper conductors, FEP insulation, industrial grade oil- and gas-resistant FEP jacket.

**Technical Specifications**

**Product Overview**

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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**Physical Characteristics (Overall)**

**Conductor**

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

Conductor Count:	8
Total Number of Pairs:	4
AWG Size:	24

**Insulation**

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

**Color Chart**

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

**Outer Shield Material**

Material
Unshielded

**Outer Jacket Material**

Material	Nominal Diameter	Ripcord
FEP - Fluorinated Ethylene Propylene	0.187 in	No

**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)
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
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
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
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
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
310 MHz	41.3 dB/100m	27.9 dB	27.9 dB			13.9 dB	10.9 dB	18 dB	100 ± 20 Ohm
350 MHz	44.3 dB/100m	27.2 dB	27.2 dB			12.9 dB	9.9 dB	17 dB	100 ± 22 Ohm

Voltage

UL Voltage Rating
300V RMS

Temperature Range

Installation Temp Range:	-55°C To +150°C
UL Temp Rating:	150°C
Storage Temp Range:	-70°C To +150°C
Operating Temp Range:	-70°C To +150°C

Mechanical Characteristics

Bulk Cable Weight:	25 lbs/1000ft
Max Recommended Pulling Tension:	40 lbs
Min Bend Radius/Minor Axis:	0.25 in

Standards

NEC/(UL) Specification:	CMP, FHC 25/50
CEC/C(UL) Specification:	CMP
ISO/IEC Compliance:	ISO/IEC 11801 ed 2.1 (2008) Class D
CPR Euroclass:	Eca
Data Category:	Category 5e
Telecommunications Standards:	Category 5e - TIA 568.C.2
Other Specification:	NEMA WC-63.1 Category 5e, UL verified to Category 5e, Ethernet/IP™ Compliant

Applicable Environmental and Other Programs

EU Directive Compliance:	EU Directive 2003/11/EC (BFR)
CA Prop 65 (CJ for Wire & Cable):	Yes
MII Order #39 (China RoHS):	Yes

Flammability, LS0H, Toxicity Testing

UL Flammability:	NFPA 262,UL723 (NFPA 255)
CSA Flammability:	FT6

Part Number

Plenum (Y/N):	Yes
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Variants

Item #	Color
7928A 0101000	BLACK
7928A 0105000	BLACK

Patent:	<a href="http://www.belden.com/p">http://www.belden.com/p</a>
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Product 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 -70C Cold Bend per UL 1581.
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