


**Detailed Specifications &
Technical Data**



7928A Paired - DataTuff® Enhanced Category 5e

	<p>For more information please call 1-800-Belden1</p> <p><u>See Put-ups and Colors</u></p> <p>Color Code Chart : No. 8 for DataTwist Cables (Modified Western Electric).pdf</p>
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Description:

4 bonded-pairs UTP, high and low temp., FHC 25/50 limited combustible rated, 24 AWG solid bare copper conductors, FEP insulation, FEP jacket, oil res I and II and gas resistant. Sequential marking at two foot intervals

SUITABLE APPLICATIONS:

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 Video, RS-422, RJ-45 Compatible, High and Low Temperature, Oil and Gasoline Exposure, Limited Combustible FHC 25/50
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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	FEP - Fluorinated Ethylene Propylene
Nom. Insulation Wall Thickness	.008 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

OUTER SHIELD:

Outer Shield Material	Unshielded
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OUTER JACKET:

Outer Jacket Material	FEP - Fluorinated Ethylene Propylene
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OVERALL NOMINAL DIAMETER:

Overall Nominal Diameter	0.187 in.
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MECHANICAL CHARACTERISTICS:

Operating Temperature Range	-70°C To +150°C
Installation Temperature Range	-70°C To +150°C
Bulk Cable Weight	25 lbs/1000 ft.
Max. Recommended Pulling Tension	40 lbs.
Min. Bend Radius (Install)	0.25 in.

APPLICABLE SPECIFICATIONS AND AGENCY COMPLIANCE:

APPLICABLE STANDARDS:

NEC/(UL) Specification	CMP, UL444, FHC 25/50
NEC Articles	NFPA 259
CEC/C(UL) Specification	CMP
IEC Specification	11801 Category 5
TIA/EIA Specification	568-B.2 Category 5e
Other Specification	NEMA WC-63.1 Category 5e, UL verified to Category 5e, Ethernet/IP™ Compliant

FLAME TEST:

UL Flame Test	UL723 (NFPA 255), NFPA 262
CSA Flame Test	FT6

PLENUM/NON-PLENUM:

Plenum (Y/N)	Y
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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	72 %
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:

Premise Cable Electricals Table 1 :	
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Frequency (MHz)	Max. Attenuation (dB/100 m)	Min. NEXT (dB)	Min. PSNEXT (dB)	Min. ACR (dB)	Min. PSACR (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	23.6	
8	5.7	51.8	51.8	46.1	46.1	25.4	
10	6.4	50.3	50.3	43.9	43.9	26.0	
16	8.1	47.3	47.3	39.1	39.1	26.0	
20	9.2	45.8	45.8	35.2	35.2	26.0	
25	10.3	44.3	44.3	34.1	34.1	25.5	
31.25	11.6	42.9	42.9	31.3	31.3	25.0	
62.5	16.8	38.4	38.4	21.6	21.6	23.5	
100	21.7	35.3	35.3	17.1	17.1	22.5	
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 :

Frequency (MHz)	Input (Unfitted) Impedance (Ohms)	Fitted Impedance (Ohms)	Min. ELFEXT (dB)	Min. PSELFEXT (dB)
1	100 ± 12	95-110	63.8	60.8
4	100 ± 12	95-110	51.7	48.7
8	100 ± 12	95-107	45.7	42.7
10	100 ± 12	95-107	43.8	40.8
16	100 ± 12	95-107	39.7	36.7
20	100 ± 12	95-107	37.7	34.7
25	100 ± 15	95-107	35.8	32.8
31.25	100 ± 15	95-107	33.9	30.9
62.5	100 ± 15	95-107	27.8	24.8
100	100 ± 15	95-107	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 -70C Cold Bend per UL 1581.

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PUT-UPS AND COLORS:

Item	Description	Put-Up (ft.)	Ship Weight (lbs.)	Jacket Color	Notes
7928A 0101000	4 PR #24 FEP FEP	1000	24	BLACK	

Revision Number: 5 Revision Date: 02-10-2005

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