Detailed Specifications & Technical Data



METRIC MEASUREMENT VERSION

7924A Multi-Conductor - Category 5e DataTuff® Twisted Pair Cable



For more Information please call

1-800-Belden1



General Description:

24 AWG Bonded-Pairs stranded (7x32) tinned copper conductors, polyolefin insulation, industrial grade sunlight- and oil-resistant PVC jacket. Sequential marking at two foot intervals.

Usage (Overall)

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, CMX - Outdoor, RJ-45 Compatible, Flexible Applications

Phys	ical Characteri	stics (Overall)	
Con	ductor		
AV	VG:		

AWG:			
# Pairs AWG Stranding Conductor Ma	terial Dia. (mm)		
4 24 7x32 TC - Tinned Co	pper 0.5588		
Total Number of Conductors:	8		
nsulation Insulation Material:			
Insulation Material Wall Thickness (mn	n) Dia. (mm)		
PO - Polyolefin 0.203	1.067		
Outer Shield Outer Shield Material:			
Outer Shield Material			
Unshielded			
Unshielded Outer Jacket			
Duter Jacket	Nom. Wall Thickness (mm)		
Outer Jacket Outer Jacket Material:	• •		
Outer Jacket Material: Outer Jacket Material: Outer Jacket Material Industrial Grade PVC - Polyvinyl Chloride	• •		
Outer Jacket Outer Jacket Material: Outer Jacket Material	• •		
Outer Jacket Outer Jacket Material: Outer Jacket Material Industrial Grade PVC - Polyvinyl Chloride	0.762		
Outer Jacket Outer Jacket Material: Outer Jacket Material Industrial Grade PVC - Polyvinyl Chloride Overall Cable Overall Nominal Diameter:	0.762		
Outer Jacket Outer Jacket Material: Outer Jacket Material Industrial Grade PVC - Polyvinyl Chloride Overall Cable Overall Nominal Diameter: Pair	0.762		
Outer Jacket Material: Outer Jacket Material: Outer Jacket Material Industrial Grade PVC - Polyvinyl Chloride Overall Cable Overall Nominal Diameter: Pair Pair Color Code Chart: Number Color 1 White/Orange Stripe & Orange	0.762		
Outer Jacket Material: Outer Jacket Material: Outer Jacket Material Industrial Grade PVC - Polyvinyl Chloride Overall Cable Overall Nominal Diameter: Pair Pair Color Code Chart: Number Color 1 White/Orange Stripe & Orange 2 White/Blue Stripe & Blue	0.762		
Outer Jacket Material: Outer Jacket Material: Outer Jacket Material Industrial Grade PVC - Polyvinyl Chloride Overall Cable Overall Nominal Diameter: Pair Pair Color Code Chart: Number Color 1 White/Orange Stripe & Orange	0.762		

Mechanical Characteristics (Overall)

Storage Temperature Range:	-25°C To +75°C
Installation Temperature Range:	-25°C To +75°C
Operating Temperature Range:	-40°C To +75°C
Bulk Cable Weight:	38.693 Kg/Km
Max. Recommended Pulling Tension:	177.928 N

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Min. Bend Radius/Minor Axis:	6.350 mm
Applicable Specifications and Agency Com	
Applicable Standards & Environmental Program	
NEC/(UL) Specification:	CMR, CMX-Outdoor, UL444
CEC/C(UL) Specification:	CMR
Other Standards:	11801 Category 5e Patch
EU Directive 2000/53/EC (ELV):	Yes
EU Directive 2002/95/EC (RoHS):	Yes
EU RoHS Compliance Date (mm/dd/yyyy):	01/01/2004
EU Directive 2002/96/EC (WEEE):	Yes
EU Directive 2003/11/EC (BFR):	Yes
CA Prop 65 (CJ for Wire & Cable):	Yes
MII Order #39 (China RoHS):	Yes
Telecommunications Standards:	568-B.2 Category 5e Patch
Other Specification:	NEMA WC-63.1 Category 5, ICEA 661, Category 5e Patch, UL verified to TIA/EI-568-B.2, 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):	No
Electrical Characteristics (Overall)	
Nom. Mutual Capacitance: Capacitance (pF/m) 49.215	
Maximum Capacitance Unbalance (pF/100 m):	66
Nominal Velocity of Propagation: VP (%) 70	
Maximum Delay: Delay (ns/100 m) 510	
Max. Delay Skew: Delay Skew (ns/100 m) 25	
Maximum Conductor DC Resistance: DCR @ 20°C (Ohm/100 m) 9	
Max. Operating Voltage - UL: Voltage 300 V RMS	



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Maximum DCR Unbalanced:

DCR Unbalance @ 20°C (%)

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Electrical Characteristics-Premise (Overall)

Premise Cable Electrical Table 1:

Freq. (MHz)	Max. Attenuation (dB/100 m)	Min. NEXT (dB)	Min. PSNEXT (dB)	Min. PSACR (dB)	Min RL (dB)
1	2.4	65.3	65.3	62.9	20.0
4	4.8	56.3	56.3	51.5	23.0
8	6.8	51.8	51.8	45.0	24.5
10	7.7	50.3	50.3	42.6	25.0
16	9.7	47.3	47.3	37.5	25.0
20	11.0	45.8	45.8	34.8	25.0
25	12.4	44.3	44.3	31.9	24.3
31.25	13.9	42.9	42.9	29.0	23.6
62.5	20.2	38.4	38.4	18.3	21.5
100	26.0	35.3	35.3	9.2	20.1
155	33.2	32.5	32.5	0	19.0
200	38.4	30.8	30.8		19.0
250	43.7	29.3	29.3		18.0
300	48.6	28.2	28.2		18.0
310	49.5	27.9	27.9		18.0
350	53.2	27.2	27.2		17.0

Premise Cable Electrical Table 2:

Freq. (MHz)	Input (Unfitted) Imp. (Ohms)	Fitted Impedance	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 ± 18	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 (Overall)

Notes: US Patents 5, 606, 151; 5, 734, 126; 5, 763, 823. EtherNet/IP is a trademark of ControlNet Internation, 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 #	Putup	Ship Weight	Color	Notes	Item Desc
7924A 0021000	305 MT	13.608 KG	RED	С	4 PR #24 PP PVC
7924A 0101000	305 MT	13.608 KG	BLACK	С	4 PR #24 PP PVC
7924A 0102000	610 MT	26.308 KG	BLACK	С	4 PR #24 PP PVC
7924A 1NH1000	305 MT	13.608 KG	TEAL 1NH	С	4 PR #24 PP PVC

Notes:

C = CRATE REEL PUT-UP.



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Test Reports

a) UL

- i) UL Test Reports are available on-line through the UL Client Document Access web portal.
 ii) UL Inspection Reports are also available through the UL Client Document Access web portal.
- b) CSA

i) CSA "Descriptive Report and Test Results" documents are available on the CSA Gateway Portal.
 ii) CSA Inspection Reports are maintained on the CSA issued 'flash drive' at each manufacturing location.

* other test data may be available if requested at time of order.

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