



**Part Number:** 7957A

DataTuff® 5e, 4 Bonded-Pr #24 Sol BC, PO Ins, OS+TC Brd, PVC Jkt, CMR CMX-Outdoor

[Request Sample](#)

## Product Description

Industrial Ethernet Cat 5e, 4 Bonded-Pair 24AWG (Solid) Bare Copper, PO Insulation, Overall Beldfoil®+Tinned Copper Braid(70%) Shield, PVC Outer Jacket, CMR CMX-Outdoor

## Technical Specifications

### Product Overview

Suitable Applications:	Industrial Ethernet Cable, Harsh Environments, Category 5e, Gigabit Ethernet, 100BaseTX, 100BaseVG ANYLAN, 155ATM, 622ATM, NTSC/PAL Component or Composite Video, AES/EBU Digital Audio, AES51, RS-422, Noisy Environments, CMX - Outdoor, EtherNet/IP™
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### Physical Characteristics (Overall)

#### Conductor

AWG	Stranding	Material	No. of Pairs
24	Solid	BC - Bare Copper	4

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

#### Insulation

Material	Nominal Wall Thickness
PO - Polyolefin	0.01 in

Bonded-Pair:	Yes
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#### 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

Type	Layer	Material	Material Trade Name	Coverage [%]	Drainwire Material	Drainwire AWG	Drainwire Construction n x D
Tape	1	Aluminum/Polyester	Beldfoil®	100 %	TC - Tinned Copper	26	Solid
Braid	2	TC - Tinned Copper		70 %			

#### Outer Jacket Material

Material	Nominal Diameter
Industrial Grade PVC - Polyvinyl Chloride	0.33 in

### Electrical Characteristics

#### Conductor DCR

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

#### Capacitance

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

#### Delay

Max. Delay	Max. Delay Skew	Nominal Velocity of Propagation (VP) [%]
538 ns/100m	45 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]	Min. SRL (Structural Return Loss)	Max./Min. Input Impedance (unFitted)	Max./Min. Fitted Impedance
1 MHz	2 dB/100m	65.3 dB	62.3 dB	63 dB	60 dB	63.8 dB	60.8 dB	20 dB	20 dB	100 ± 15 Ohm	95-110 Ohm
4 MHz	4.1 dB/100m	56.3 dB	53.3 dB	51 dB	49 dB	51.7 dB	48.7 dB	23.6 dB	23.6 dB	100 ± 15 Ohm	95-110
8 MHz	5.8 dB/100m	51.8 dB	48.8 dB	46 dB	43 dB	45.7 dB	42.7 dB	25.4 dB	25.4 dB	100 ± 15 Ohm	95-107
10 MHz	6.5 dB/100m	50.3 dB	47.3 dB	43 dB	41 dB	43.8 dB	40.8 dB	26 dB	26 dB	100 ± 15 Ohm	95-107
16 MHz	8.2 dB/100m	47.3 dB	44.3 dB	39 dB	36 dB	39.7 dB	36.7 dB	26 dB	26 dB	100 ± 15 Ohm	95-107
20 MHz	9.3 dB/100m	45.8 dB	42.8 dB	36.5 dB	33.5 dB	37.7 dB	34.7 dB	26 dB	26 dB	100 ± 15 Ohm	95-107
25 MHz	10.4 dB/100m	44.3 dB	41.3 dB	33.9 dB	30.9 dB	35.8 dB	32.8 dB	25.5 dB	25.5 dB	100 ± 15 Ohm	95-107
31.25 MHz	11.7 dB/100m	42.9 dB	39.9 dB	31 dB	28 dB	33.9 dB	30.9 dB	25 dB	25 dB	100 ± 15 Ohm	95-107
62.5 MHz	17 dB/100m	38.4 dB	35.4 dB	22 dB	19 dB	27.8 dB	24.8 dB	23.5 dB	23.5 dB	100 ± 15 Ohm	95-107
100 MHz	22 dB/100m	35.3 dB	32.3 dB	14 dB	11 dB	23.8 dB	20.8 dB	22.5 dB	22.5 dB	100 ± 15 Ohm	

#### Voltage

UL Description	UL Voltage Rating
	300 V RMS
Appliance Wiring Material	600 V RMS

#### Temperature Range

Installation Temp Range:	-25°C To +75°C
UL Temp Rating:	60°C
Operating Temp Range:	-40°C To +75°C

#### Mechanical Characteristics

Bulk Cable Weight:	50 lbs/1000ft
Max Recommended Pulling Tension:	75 lbs
Min Bend Radius/Minor Axis:	1.32 in

#### Standards

NEC/(UL) Specification:	CMR, CMX-Outdoor, UL 444
CEC/C(UL) Specification:	CMR
UL AWM Style:	UL Style 21047
ISO/IEC Compliance:	ISO/IEC 11801 Cat 5e
CPR Euroclass:	Eca
Data Category:	Category 5e
Telecommunications Standards:	TIA-568.C.2 Category 5e,
Other Standards:	AWM 21047 600V
Third Party Performance Verification:	UL Verified Category 5e

#### Applicable Environmental and Other Programs

EU Directive 2000/53/EC (ELV):	Yes
EU Directive 2003/11/EC (BFR):	Yes
EU Directive 2011/65/EU (ROHS II):	Yes
EU Directive 2012/19/EU (WEEE):	Yes
EU Directive 2015/863/EU:	Yes
EU Directive Compliance:	EU Directive 2003/11/EC (BFR)
EU CE Mark:	Yes
EU RoHS Compliance Date (yyyy-mm-dd):	2004-01-04

CA Prop 65 (CJ for Wire & Cable):	Yes
MII Order #39 (China RoHS):	Yes

## Suitability

Suitability - Oil Resistance:	Yes
Suitability - Outdoor:	Yes
Suitability - Sunlight Resistance:	Yes

## Flammability, LSOH, Toxicity Testing

UL Flammability:	UL1666 Riser
UL voltage rating:	300 V RMS

## Plenum/Non-Plenum

Plenum (Y/N):	No
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## Part Number

### Variants

Item #	Color	Footnote
7957A 0101000	Black	
7957A 0102000	Black	
7957A 0061000	Blue	
7957A 0081000	Gray	C
7957A 0021000	Red	C
7957A 1NH1000	Teal	

Footnote:	C - CRATE REEL PUT-UP.
Patent:	<a href="https://www.belden.com/resources/patents">https://www.belden.com/resources/patents</a>

## Product Notes

Notes:	US Patent #'s 5606151; 5734126. 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. Not intended for 600 V electrical power delivery.
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