BELDEN
SENDING ALL THE RIGHT SIGNALS

Part Number: 7961A

DataTuff® 5e, 1 Quad (2 Pr) #22 Str TC, PO Ins, OS+TC Brd, PVC Jkt, CMG CMX-Outdoor

Request Sample

Product Description

Industrial Ethernet Cat 5e, 1 Quad (2 Pair) 22AWG (7x30) Tinned copper, PO Insulation , Overall Belfoil®+Tinned Copper Braid(85%) Shield, PVC Outer Jacket, CMG CMX-Outdoor

Technical Specifications

Product Overview

Suitable Applications:	Industrial Ethernet Cable, Harsh Environments, Category 5e, ProfiNet, 100BaseTX, CMX - Outdoor, PLTC Listed, Approved for Cable Tray Use in Class 1, Division 2, Hazardous Areas and Non-hazardous Areas, Cable Trays, Raceways, Conduit and Supported by Messenger Wires, Approved for Outdoor Usage

Physical Characteristics (Overall)

Conductor

AWG	Stranding	Material
22	7x32	TC - Tinned Copper

Conductor Count:	4
Total Number of Pairs:	1 Quad (2)

Insulation

Material
PO - Polyolefin

Bonded-Pair:	No

Inner Jacket Material

Material	Nominal Diameter
FRPE - Flame Retardant Polyethylene	0.164 in

Outer Shield Material

Type	Material	Material Trade Name	Coverage [%]
Tape	Aluminum/Polyester	Beldfoil®	100 %
Braid	TC - Tinned Copper		85 %

Outer Jacket Material

Material	Nominal Diameter
Industrial Grade PVC - Polyvinyl Chloride	0.272 in

Electrical Characteristics

Conductor DCR

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

Capacitance

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

Delay

Max. Delay	Nominal Velocity of Propagation (VP) [%]

552 ns/100m	70 %

High Freq

Frequency [MHz]	Max. Insertion Loss (Attenuation)	Min. NEXT [dB]	Min. PSNEXT [dB]	Min. ACR [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	2.1 dB/100m	65.3 dB	62.3 dB	63.2 dB	63.8 dB	60.8 dB	23 dB	100 ± 20.2 Ohm	105 ±10 Ohm
4 MHz	4.0 dB/100m	56.3 dB	53.3 dB	56.3 dB	51.7 dB	48.7 dB	23 dB	100 ± 14.2 Ohm	100 ±10 Ohm
8 MHz	5.6 dB/100m	51.8 dB	48.8 dB	46.2 dB	45.7 dB	42.7 dB	23 dB	100 ± 11.3 Ohm	100 ±10 Ohm
10 MHz	6.3 dB/100m	50.3 dB	47.3 dB	43.9 dB	43.8 dB	40.8 dB	25 dB	100 ± 11.3 Ohm	100 ±10 Ohm
16 MHz	8.0 dB/100m	47.3 dB	44.3 dB	35.2 dB	39.7 dB	36.7 dB	25 dB	100 ± 11.3 Ohm	100 ±10 Ohm
20 MHz	9.0 dB/100m	45.8 dB	42.8 dB	36.5 dB	37.7 dB	34.7 dB	25 dB	100 ± 11.3 Ohm	100 ±10 Ohm
25 MHz	10.1 dB/100m	44.3 dB	41.3 dB	34.2 dB	35.8 dB	32.8 dB	25.5 dB	100 ± 11.3 Ohm	100 ±10 Ohm
31.25 MHz	11.4 dB/100m	42.9 dB	39.9 dB	31.3 dB	33.9 dB	30.9 dB	23.6 dB	100 ± 13.2 Ohm	100 ±10 Ohm
62.5 MHz	16.5 dB/100m	38.4 dB	35.4 dB	21.6 dB	27.8 dB	24.8 dB	21.5 dB	100 ± 16.9 Ohm	100 ±10 Ohm
100 MHz	21.3 dB/100m	35.3 dB	32.3 dB	17.1 dB	23.8 dB	20.8 dB	20.1 dB	100 ± 20.0 Ohm	100 ±10 Ohm

Voltage

UL Voltage Rating
300 V RMS

Temperature Range

Installation Temp Range:	-20°C To +60°C
UL Temp Rating:	60°C
Storage Temp Range:	-40°C To +80°C
Operating Temp Range:	-40°C To +80°C

Mechanical Characteristics

Bulk Cable Weight:	42.6 lbs/1000ft
Max Recommended Pulling Tension:	55 lbs
Min Bend Radius/Minor Axis:	2.560 in

Standards

NEC/(UL) Specification:	CMG, CMX-Outdoor, ITC, PLTC
CEC/C(UL) Specification:	CMG
ISO/IEC Compliance:	ISO/IEC 11801 ed 2.1 (2008) Class D
CPR Euroclass:	Eca
Data Category:	Category 5e
Telecommunications Standards:	NEMA WC-63.1 Category 5e

Applicable Environmental and Other Programs

EU Directive 2000/53/EC (ELV):	Yes
EU Directive 2002/96/EC (WEEE):	Yes
EU Directive 2003/11/EC (BFR):	Yes
EU Directive 2011/65/EU (ROHS II):	Yes
EU Directive 2015/863/EU:	Yes
EU RoHS Compliance Date (yyyy-mm-dd):	2004-01-01
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, LS0H, Toxicity Testing

UL Flammability:	UL1685 Vertical Tray Flame Test

CSA Flammability:	FT4
ISO/IEC Flammability:	IEC 60332-1-2
IEEE Flammability:	1202
UL voltage rating:	300 V RMS

Plenum/Non-Plenum

Plenum (Y/N):	No

Part Number

Variants

Item #	Color	UPC	Length
7961A.00305	Green		305 m
7961A.00610	Green		610 m
7961A 1SW1000	Green, RAL 6018	612825367314	
7961A 1SW2000	Green, RAL 6018	612825367321	

Patent:	https://www.belden.com/resources/patents

Product Notes

Notes:	Operating Temperature subject to length de-rating. Cable passes -40C Cold Bend per UL 1581. Limits below 4 MHz are for information only.

History

Update and Revision:	Revision Number: 0.197 Revision Date: 08-22-2019

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