Product: 3131A

ControlBus™, Coax RG6, #18 Sol BCCS, PO Ins, QUAD AL Shld, PVC Jkt, CMR

Request Sample

Product Description

ControlBus™, Coax RG6 18AWG (Solid) Bare Copper Covered Steel, PO Insulation, Overall Duofoil®+ Aluminum Braid(60%)+Overall Duofoil®+Aluminum Braid(40%) Shield, PVC Outer Jacket, CMR

Technical Specifications

Product Overview

Suitable Applications:	harsh environment, factory automation, ControlNet™, Modbus II, Industrial Coax, Belden ControlNet cables provide maximum signal integrity and run length exceeding the high-speed, time-critical requirements necessary for ControlNet factory floor applications

Physical Characteristics (Overall)

Conductor

AWG	Stranding	Material	Nominal Diameter	No. of Coax
18	Solid	BCCS - Bare Copper Covered Steel	0.04 in	1

Conductor Count:	1

Insulation

Material	Nominal Diameter
PE - Polyethylene (Foam)	0.18 in

Table Notes:	Gas Injected

Outer Shield

Type	Layer	Material	Material Trade Name	Coverage [%]
Tape	1	Tri-Laminate (Alum+Poly+Alum)	Duofoil®	100%
Braid	2	Aluminum		60%
Tape	3	Tri-Laminate (Alum+Poly+Alum)	Duofoil®	100%
Braid	4	Aluminum		40%

Outer Jacket

Material	Nominal Diameter
PVC - Polyvinyl Chloride	0.301 in

Electrical Characteristics

Conductor DCR

Nominal Conductor DCR	Nominal Outer Shield DCR	Outer Conductor DCR
28 Ohm/1000ft	3.6 Ohm/1000ft	3.6 Ohm/1000ft

Capacitance

Nom. Capacitance Conductor to Shield
16.2 pF/ft

Inductance

Nominal Inductance
0.097 µH/ft

Impedance

Nominal Characteristic Impedance	Nominal Characteristic Tolerance
120 Ohm	± 3 Ohm

High Frequency (Nominal/Typical)

Frequency [MHz]	Nom. Insertion Loss
1 MHz	0.35 dB/100ft
2 MHz	0.38 dB/100ft
5 MHz	0.45 dB/100ft
10 MHz	0.59 dB/100ft
20 MHz	0.86 dB/100ft
50 MHz	1.37 dB/100ft
100 MHz	1.97 dB/100ft
200 MHz	2.82 dB/100ft
300 MHz	3.48 dB/100ft
400 MHz	4.04 dB/100ft

Delay

Nominal Delay	Nominal Velocity of Propagation (VP) [%]
1.2 ns/ft	82%

Phase Delay Distortion

f/B	%PDD/100M (5MB)
0.5	-1.03
1	-0.3
1.5	0
2	0.2
2.5	0.4

High Frequency

Frequency [MHz]	Min. SRL (Structural Return Loss)
1 MHz	23 dB
2 MHz	
5 MHz	
10 MHz	
20 MHz	
50 MHz	
100 MHz	
200 MHz	
300 MHz	
400 MHz	

Electrical Characteristics Notes:	Tilt 5 to 10 MHz: 0.53 dB/100 M
Other Electrical Characteristic 2:	Tilt 10 to 20 MHz: 0.89 dB/100 M
Other Electrical Characteristic 3:	SRL Min. 23dB (5MHz - 50MHz)

Temperature Range

UL Temp Rating:	75°C
Operating Temperature Range:	-30°C To +75°C

Mechanical Characteristics

Bulk Cable Weight:	33 lbs/1000ft
Max. Pull Tension:	162 lbs
Min. Bend Radius/Minor Axis:	3 in

Standards

NEC Articles:	Article 800
NEC/(UL) Compliance:	CL2R, CMR
CEC/C(UL) Compliance:	CMG
CPR Euroclass:	Eca
IEEE Compliance:	802.4 MAP, 802.7 MIni-MAP

RG Type:	6

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 2):	Yes
EU Directive 2012/19/EU (WEEE):	Yes
EU Directive 2015/863/EU (RoHS 2 amendment):	Yes
EU Directive Compliance:	EU Directive 2003/11/EC (BFR)
EU CE Mark:	Yes
MII Order #39 (China RoHS):	Yes

Flammability, LS0H, Toxicity Testing

UL Flammability:	UL1666 Riser
CSA Flammability:	FT4
UL voltage rating:	300 V RMS

Plenum/Non-Plenum

Plenum (Y/N):	No
Plenum Number:	3132A

Related Part Numbers

Variants

Item #	Color	Put-Up Type	Length	UPC
3131A F2V1000	Gray, DEC	Reel	1,000 ft	612825142058

Product Notes

Notes:	Sweep tested 5 to 400 MHz. Tap Marks Every 2.6 Meters to aid in users installation.

History

Update and Revision:	Revision Number: 0.451 Revision Date: 07-19-2023

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