



Product: [183092A](#)

ControlNet™, (1) 18 AWG Solid BCCS, FPE/PVC/PVC, Foil+Alum Braid Shld, Alum Armor, CL2R, CMR

[Request Sample](#)

Product Description

One 18 AWG solid bare copper-covered steel, foam polyethylene (FPE) insulation, Duobond® IV Quad Shield, PVC inner jacket, continuously corrugated aluminum armor, PVC outer jacket.

Technical Specifications

Product Overview

Suitable Applications:	exposure to rodent, crush, or cut through force, 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
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Physical Characteristics (Overall)

Conductor

AWG	Stranding	Material	Nominal Diameter	No. of Coax
18	Solid	BCCS - Bare Copper Covered Steel	0.0403 in	1

Conductor Count:	1
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Insulation

Material	Nominal Diameter
PE - Polyethylene (Foam)	0.178 in

Inner Jacket Material

Material	Nominal Diameter
PVC - Polyvinyl Chloride	0.298 in

Outer Shield Material

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

Material	Nominal Diameter
PVC - Polyvinyl Chloride	0.605 in

Construction and Dimensions

Armor

Type of Armor	Material
Continuously Corrugated	Aluminum

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 μ H/ft

Impedance

Nominal Characteristic Impedance
100 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
1.28 ns/ft

High Freq

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	

Voltage

UL Voltage Rating
300 V RMS

Electrical Characteristics Notes: SRL Min 23dB (5MHz - 50MHz)

Temperature Range

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

Mechanical Characteristics

Max. Pull Tension:	162 lbs
Min. Bend Radius/Minor Axis:	6.85 in

Standards

NEC Articles:	Article 725, Article 800
NEC/(UL) Compliance:	CL2R, CM
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)
MII Order #39 (China RoHS):	Yes

Suitability

Suitability - Indoor:	Yes
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Flammability, LSOH, Toxicity Testing

UL Flammability:	UL Vertical Tray
UL voltage rating:	300 V RMS

Plenum/Non-Plenum

Plenum (Y/N):	No
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History

Update and Revision:	Revision Number: 0.228 Revision Date: 05-26-2021
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