



**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	Alum / Poly / Alum	Bonded Duofoil®	100%
Braid	2	Aluminum		60%
Tape	3	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

<b>Nom. Capacitance Conductor to Shield</b>
16.2 pF/ft

## Inductance

<b>Nominal Inductance</b>
0.097 $\mu$ H/ft

## Impedance

<b>Nominal Characteristic Impedance</b>
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	Nominal Velocity of Propagation (VP) [%]
1.28 ns/ft	82%

## 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

<b>UL Voltage Rating</b>
300 V RMS

Electrical Characteristics Notes:	SRL Min 23dB (5MHz - 50MHz)
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## 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 800
NEC/(UL) Compliance:	CL2R, CM
RG Type:	6/U Type

## 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)
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: 0.205 Revision Date: 06-01-2020
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