



Product: [9L28020](#)

Flat Gray Ribbon Cable 9L280 Series, #28-20c, .050" Pitch

Product Description

Belden .050" pitch gray ribbon cable was designed for general purpose electronic interconnect applications. The cable provides reliable mass-termination to standard IDC connectors.

Technical Specifications

Physical Characteristics (Overall)

Conductor

AWG	Material	Construction n x D	No. of Conductors
28	TC - Tinned Copper	Stranded	20

Conductor Count: 20

Insulation

Material	Nominal Wall Thickness
PVC - Polyvinyl Chloride	0.01 in

Color Chart

Color
Gray

Outer Shield Material

Material
No Shield

Outer Jacket Material

Nominal Wall Thickness
.035 in

Construction and Dimensions

Cond Spacing Center-Center:	.050 +/- .002
Cond Spacing Center-Center Outside:	.95 +/- .008

Stranding

Twists
2.75 twist/ft

OuterJacket1, Nominal Width: 1.00 +/- .008 mm

Electrical Characteristics

Conductor DCR

Nominal Conductor DCR	Nominal Conductor DCR	Conductor Resistance
Max. 68.2 Ohm/1000ft	68.2 Ohm/1000ft	

Capacitance

Element	Nom. Capacitance Conductor to Conductor
@ 1 kHz (GSG)	18 pF/ft

@ 1 MHz (GS)	10 pF/ft
@ 1 MHz (GSG)	15 pF/ft

Inductance

Element	Nominal Inductance
@ 1 MHz (GS)	0.29 μ H/ft
@ 1 MHz (GSG)	0.2 μ H/ft

Impedance

Nominal Balanced Characteristic Impedance Description	Nominal Characteristic Impedance	Nominal Characteristic Impedance Description
(GS)	150 Ohm	(GS)
(GSG)	105 Ohm	(GSG)

High Frequency (Nominal/Typical)

Frequency [MHz]	Nom. Insertion Loss
10 MHz	2.8 dB/100ft
20 MHz	4.8 dB/100ft
30 MHz	6.5 dB/100ft
40 MHz	8.3 dB/100ft
50 MHz	9.8 dB/100ft
60 MHz	12 dB/100ft
70 MHz	13 dB/100ft
80 MHz	14 dB/100ft
90 MHz	15.8 dB/100ft
100 MHz	17 dB/100ft

Delay

Nominal Delay	Nominal Velocity of Propagation (VP) [%]
1.40 ns/ft	72%

Unbalanced Crosstalk

Element	Typical Unbalanced NEXT %	Typical Unbalanced FEXT %	Typical Cross Talk Pulse Rise Time (ns)
10 ft. sample length	4.8 MHz	7 MHz	3 ns
10 ft. sample length	3.5 MHz	4.7 MHz	5 ns
10 ft. sample length	3 MHz	3 MHz	7 ns

High Freq

Frequency [MHz]
10 MHz
20 MHz
30 MHz
40 MHz
50 MHz
60 MHz
70 MHz
80 MHz
90 MHz
100 MHz

Current

Max. Recommended Current [A]
1 Amp per Conductor at 20°C

Voltage

Dielectric Withstand Voltage	UL Voltage Rating
2,000 V RMS	300 V RMS

Temperature Range

Operating Temp Range:	-40°C To +105°C
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Mechanical Characteristics

Bulk Cable Weight:	23 lbs/1000ft
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Standards

UL Rating:	105°C, 300 V RMS, VW-1
UL AWM Style Compliance:	2651
CSA Rating:	105°C, 300 V RMS, FT1
CSA AWM Compliance:	AWM I A 105°C 300 V FT1

Applicable Environmental and Other Programs

EU Directive 2000/53/EC (ELV):	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:	Yes
EU CE Mark:	Yes
EU RoHS Compliance Date (yyyy-mm-dd):	2005-07-01
MII Order #39 (China RoHS):	Yes

Flammability, LSOH, Toxicity Testing

UL Flammability:	VW-1
CSA Flammability:	FT1
UL voltage rating:	300 V RMS

Plenum/Non-Plenum

Plenum (Y/N):	No
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Part Number

Variants

Item #	Color	Length	UPC
9L28020 008H100	Gray	100 ft	612825221654

Product Notes

Notes:	GSG=Ground-Signal-Ground Mode
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History

Update and Revision:	Revision Number: 0.240 Revision Date: 06-24-2020
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