



**Product:** [9L28040](#)

Flat Gray Ribbon Cable 9L280 Series, #28-40c, .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	40

Conductor Count:	40
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##### Insulation

Material	Nominal Wall Thickness
PVC - Polyvinyl Chloride	0.01 in

##### Color Chart

Number	Color
	Gray
3	

##### Outer Shield Material

Material
No Shield

##### Outer Jacket Material

Nominal Wall Thickness
0.035 in

#### Construction and Dimensions

Cond Spacing Center-Center:	.050 in
Cond Spacing Center-Center Outside:	1.95 in
OuterJacket1, Nominal Width:	2.00 in

#### Electrical Characteristics

##### Conductor DCR

Nominal Conductor DCR
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 $\mu$ H/ft
@ 1 MHz (GSG)	0.2 $\mu$ H/ft

## Impedance

Nominal Characteristic Impedance	Nominal Characteristic Impedance Description
150 Ohm	(GS)
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) [%]
1.4 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:	52 lbs/1000ft
Min Bend Radius/Minor Axis:	3 in

## 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:	I A 105°C 300V FT1

## Applicable Environmental and Other Programs

EU Directive 2000/53/EC (ELV):	Yes
EU Directive 2003/96/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)
EU CE Mark:	Yes
EU RoHS Compliance Date (yyyy-mm-dd):	2005-07-01
MII Order #39 (China RoHS):	Yes

## Suitability

Suitability - Indoor:	Yes
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## 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
9L28040 008H100	Gray	100 ft	612825221692

## Product Notes

Notes:	GS=Ground-Signal Mode; GSG=Ground-Signal-Ground Mode
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## History

Update and Revision:	Revision Number: 0.300 Revision Date: 06-24-2020
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