



Product: [2L28050](#)

Flat Gray Ribbon Cable 2L280XX Series, #28-50c, 1mm Pitch, PVC Jkt

Product Description

Belden 1.00mm pitch gray ribbon cable was designed for the disk drive market where the 2.00mm IDC connector is widely used.

Technical Specifications

Physical Characteristics (Overall)

Conductor

AWG	Material	Construction n x D	No. of Conductors
28	TC - Tinned Copper	Stranded	50

Conductor Count: 50

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
1.35 mm

Construction and Dimensions

Cond Spacing Center-Center:	1.0 +/- .08 mm
Cond Spacing Center-Center Outside:	48.99 +/- .30 mm
OuterJacket1, Nominal Width:	1.964 +/- .012 mm

Electrical Characteristics

Conductor DCR

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

Capacitance

Element	Nom. Capacitance Conductor to Conductor
@ 1 kHz (GSG)	20 pF/ft
@ 1 MHz (GS)	9.5 pF/ft
@ 1 MHz (GSG)	16.5 pF/ft

Inductance

Element	Nominal Inductance
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@ 1 MHz (GS)	0.24 μ H/ft
@ 1 MHz (GSG)	0.16 μ H/ft

Impedance

Nominal Balanced Characteristic Impedance Description	Nominal Characteristic Impedance	Nominal Characteristic Impedance Description
(GS)	130 Ohm	(GS)
(GSG)	90 Ohm	(GSG)

High Frequency (Nominal/Typical)

Frequency [MHz]	Nom. Insertion Loss
10 MHz	3.3 dB/100ft
20 MHz	5.1 dB/100ft
30 MHz	7 dB/100ft
40 MHz	8.3 dB/100ft
50 MHz	9.8 dB/100ft
60 MHz	11.6 dB/100ft
70 MHz	13.1 dB/100ft
80 MHz	14.2 dB/100ft
90 MHz	16.4 dB/100ft
100 MHz	17.6 dB/100ft

Delay

Nominal Delay	Nominal Velocity of Propagation (VP) [%]
1.47 ns/ft	69%

Unbalanced Crosstalk

Element	Typical Unbalanced NEXT %	Typical Unbalanced FEXT %	Typical Cross Talk Pulse Rise Time (ns)
10 ft. sample length	4.3 MHz	6.7 MHz	3 ns
10 ft. sample length	3.8 MHz	3.4 MHz	5 ns
10 ft. sample length	3.6 MHz	2.5 MHz	7 ns

High Freq

Frequency [MHz]	Max. Insertion Loss (Attenuation)
10 MHz	1.4 dB/100m
20 MHz	1.33 dB/100m
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

Electrical Characteristics Notes: Dielectric Withstand Voltage: 2000 Vrms

Temperature Range

Operating Temp Range: -40°C To +105°C

Mechanical Characteristics

Bulk Cable Weight:	57 lbs/1000ft
Min Bend Radius During Installation:	1.4 in
Min Bend Radius/Minor Axis:	1.4 in

Dimensions (WxHxD)

Height	Depth
1.41	1.378

Standards

UL Rating:	AWM Style 2651
UL AWM Style Compliance:	2651
CSA Rating:	I A
CSA AWM Compliance:	I A

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
2L28050 008H100	Gray	100 ft	612825127567

Product Notes

Notes:	GSG=Ground-Signal-Ground Mode
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History

Update and Revision:	Revision Number: 0.243 Revision Date: 06-24-2020
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