# **Detailed Specifications & Technical Data**

METRIC MEASUREMENT VERSION



## 9L28010 Flat - Gray Ribbon 9L280XX Series



For more Information please call

1-800-Belden1



### **General Description:**

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

# **Physical Characteristics (Overall)**

#### Conductor

#### AWG:

# Conductors	AWG	Stranding	<b>Conductor Material</b>
10	28	7x36	TC - Tinned Copper

Total Number of Conductors: 10

Conductor Spacing Center to Center: .050 +/- .002

Conductor Spacing Outside Center to Outside .45 +/- .008

Center:

#### Insulation

#### **Insulation Material:**

Insulation Material	Wall Thickness (mm)
PVC - Polyvinyl Chloride	0.254

Insulation Resistance: >10,000 Megaohms

#### **Outer Shield**

# **Outer Shield Material:**

Outer Shield Material Unshielded

#### **Overall Cable**

Overall Nominal Thickness: .035 +/- .003

Overall Nominal Width: .50 +/- .008

**Mechanical Characteristics (Overall)** 

Operating Temperature Range: -40°C To +105°C

Bulk Cable Weight: 17.858 Kg/Km

# **Applicable Specifications and Agency Compliance (Overall)**

# **Applicable Standards & Environmental Programs**

UL AWM Style:	2651
UL Rating:	105°C, 300 V RMS, VW-1
CSA Specification:	AWM I A 105°C 300 V FT1
CSA Rating:	105°C, 300 V RMS, FT1
EU Directive 2011/65/EU (ROHS II):	Yes
EU CE Mark:	Yes
EU Directive 2000/53/EC (ELV):	Yes
EU Directive 2002/95/EC (RoHS):	Yes

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07/01/2005
Yes
Yes
Yes
Yes
VW-1
FT1
No
BELDEN 28 AWG CSA AWM I A 105°C 300 V FT1 238400 (UL LOGO) AWM STYLE 2651 VW-1 E12683-HM ROHS

**Electrical Characteristics (Overall)** 

# Nom. Characteristic Impedance:

Description	Impedance (Ohm)
(GS)	150
(GSG)	105

### Nom. Inductance:

Description	Inductance (µH/m)			
@ 1 MHz (GS)	0.95149			
@ 1 MHz (GSG)	0.6562			

# Nom. Capacitance Conductor to Conductor:

Description	Capacitance (pF/m)			
@ 1 kHz (GSG)	59.058			
@ 1 MHz (GS)	32.81			
@ 1 MHz (GSG)	49.215			

# Nominal Velocity of Propagation:

Description	VP	(%)
	72	

# **Nominal Delay:**

Delay (ns/m) 1.40 NS/FT. (GSG)

#### Nom. Conductor DC Resistance:

DCR @ 20°C (Ohm/km) 68.2 OHMS/1000 FT. MAX.

# Nom. Attenuation:

Freq. (MHz)	Attenuation (dB/100m)
10	9.1868
20	15.7488
30	21.3265
40	27.2323
50	32.1538
60	39.372
70	42.653
80	45.934
90	51.8398
100	55.777

### Max. Operating Voltage - UL:

Voltage

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300 V RMS

#### Max. Recommended Current:

Current 1 Amp per conductor @ 20°C

2,000 V RMS Dielectric Withstand Voltage:

#### Typical Unbalanced Crosstalk:

Description	Pulse Rise Time (NS) (MHz)	Near End % (MHz)	Far End % (MHz)
10 ft. sample length	3	4.8	7
10 ft. sample length	5	3.5	4.7
10 ft. sample length	7	3	3

#### **Notes (Overall)**

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

#### **Polarity Identification (Overall)**

**Polarity Identification:** RED POLARITY STRIPE ON #1 CONDUCTOR

#### **Put Ups and Colors:**

Item #	Putup	Ship Weight	Color	Notes	Item Desc
9L28010 008H100	100 FT	1.300 LB	GRAY		10 #28 STR PVC RIBBON
9L28010 008H300	300 FT	5.100 LB	GRAY		10 #28 STR PVC RIBBON

Revision Number: 2 Revision Date: 10-05-2018

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