



## Description:

The shielded jacketed 9L283XX series provides shielding from external electrical interference and allows for greater flexibility, ease of termination, while providing exterior protection from the environment.

## Physical Characteristics (Overall)

### Conductor

**AWG:**

# Conductors	AWG	Stranding	Conductor Material
20	28	7x36	TC - Tinned Copper

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

Conductor Spacing Outside Center to Outside Center: .95 +/- .008

### Insulation

**Insulation Material:**

Insulation Material	Wall Thickness (in.)
PVC - Polyvinyl Chloride	.010

Insulation Resistance: >10, 000 Megaohms

### Outer Shield

**Outer Shield Material:**

Outer Shield Trade Name	Type	Outer Shield Material	Coverage (%)
Beldfoil®	Tape	Aluminum Foil-Polyester Tape (Foil Side In)	100.000

**Outer Shield Drain Wire AWG:**

AWG	Stranding	Drain Wire	Conductor Material
2-28	7x36		TC - Tinned Copper

### Outer Jacket

**Outer Jacket Material:**

Outer Jacket Material	Nom. Wall Thickness (in.)
PVC - Polyvinyl Chloride	.038

### Overall Cabling

Overall Nominal Thickness: .122 +/- .012

Overall Nominal Width: 1.10

## Mechanical Characteristics (Overall)

Operating Temperature Range: -20°C To +105°C

Bulk Cable Weight: 78 lbs/1000 ft.

## Applicable Specifications and Agency Compliance (Overall)

### Applicable Standards & Environmental Programs

UL AWM Style: 20081

UL Rating: 105°C, 300 V RMS, VW-1

CSA Specification: AWM II A 105°C 300 V, FT1

## 9L28320 Flat - Shielded Jacketed 9L283XX Series

CSA Rating: 105°C, 300 V RMS, FT1

EU CE Mark: Yes

EU Directive 2000/53/EC (ELV): Yes

EU Directive 2002/95/EC (RoHS): Yes

EU RoHS Compliance Date (mm/dd/yyyy): 10/01/2005

EU Directive 2002/96/EC (WEEE): Yes

EU Directive 2003/11/EC (BFR): Yes

CA Prop 65 (CJ for Wire & Cable): Yes

MII Order #39 (China RoHS): Yes

### Flame Test

UL Flame Test: VW-1

CSA Flame Test: FT1

### Plenum/Non-Plenum

Plenum (Y/N): No

### Surface Printing (Overall)

Surface Printing: BELDEN-T 28 AWG CSA AWM II A 105°C 300 V FT-1 LL7874 (UL LOGO)  
AWM STYLE 20081 VW-1 E12683

### Electrical Characteristics (Overall)

#### Nom. Characteristic Impedance:

Description	Impedance (Ohm)
(GSG) with shield grounded	45

#### Nom. Inductance:

Description	Inductance (µH/ft)
@ 1 MHz (GSG) with shield grounded	.11

#### Nom. Capacitance Conductor to Conductor:

Description	Capacitance (pF/ft)
@ 1 kHz (GSG) with shield grounded	70
@ 1 MHz (GSG) with shield grounded	50

#### Nominal Velocity of Propagation:

Description	VP (%)
	60

#### Nominal Delay:

Delay (ns/ft)
1.7 NS/FT. (GSG) with shield grounded

#### Nom. Conductor DC Resistance:

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

#### Nom. Attenuation:

Description	Freq. (MHz)	Attenuation (dB/100 ft.)
(GSG) with shield grounded	10	6
(GSG) with shield grounded	20	9.5
(GSG) with shield grounded	30	12.5
(GSG) with shield grounded	40	14.9
(GSG) with shield grounded	50	17.2
(GSG) with shield grounded	60	19
(GSG) with shield grounded	70	21.5
(GSG) with shield grounded	80	23
(GSG) with shield grounded	90	24.5
(GSG) with shield grounded	100	26

## 9L28320 Flat - Shielded Jacketed 9L283XX Series

### Max. Operating Voltage - UL:

Voltage
300 V RMS

### Max. Recommended Current:

Current
1 Amp per conductor @ 20°C

**Dielectric Withstand Voltage:** 2,000 V RMS

### Typical Unbalanced Crosstalk:

Description	Pulse Rise Time (NS) (MHz)	Near End % (MHz)	Far End % (MHz)
10 ft. sample length with ground connected to shield	3	1.5	2
10 ft. sample length with ground connected to shield	5	.9	1.5
10 ft. sample length with ground connected to shield	7	.7	1.2

### Notes (Overall)

**Notes:** 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
9L28320 010100	100 FT	7.800 LB	BLACK	E	20 #28 PVC FS PVC RIBBON

**Notes:**

E = MAY CONTAIN MORE THAN 1 PIECE. MINIMUM LENGTH OF ANY ONE PIECE IS 25'

# Shielded Jacketed 9L283XX Series

.050" Pitch, 28 AWG, PVC

## Product Description

Belden's shielded jacketed 9L283XX series was designed to help meet the FCC EMI/RFI requirements. In addition, the cable provides shielding from external electrical interference along with excellent crosstalk attenuation. The thin extruded jacket allows for greater flexibility, ease of termination, and reduced space requirements, while providing exterior protection from the environment. The core cable is Belden's 9L280XX PVC series allowing easy termination to any standard IDC connector. All cables are 100% shielded with a Duofoil® shield (aluminum/polyester/aluminum) and can be terminated with the two 28 AWG drain wires. Thirteen various conductor counts are standard; other sizes are available upon request. The cable is UL approved and CSA certified, and passes the VW-1 Vertical Wire Flame Test.

**Color Code:** Gray with Red polarity stripe.

**Application:** External interconnection or internal wiring of electronic equipment.

## Physical Specifications

<b>Conductor</b>	28 AWG (7x36) Tinned Copper
<b>Insulation</b>	.010" Nom. Wall Gray PVC
<b>Pitch</b>	.050" ± .002"
<b>Shielding</b>	Duofoil Shield (Aluminum/Polyester/Aluminum)
<b>Drain Wires</b>	Two 28 AWG (7x36) Tinned Copper
<b>Jacket</b>	.038" Nom. Wall Black PVC
<b>Temperature Rating</b>	-20 to +105°C
<b>Flammability Rating</b>	UL: VW-1; CSA: FT1
<b>UL Approval</b>	File #E12683, Style 20081
<b>CSA Approval</b>	File #LL7874, CSA AWM II A 105°C 300V FT1
<b>Packaging</b>	100

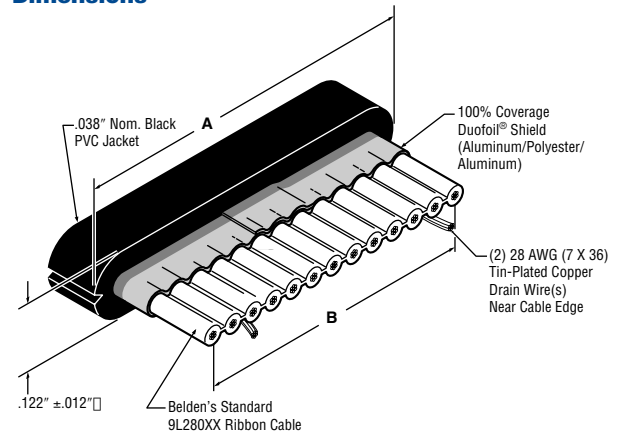
## Electrical Specifications

<b>Voltage Rating</b>	300V RMS
<b>Current Rating</b>	1A
<b>Conductor Resistance</b>	68.2Ω/1000 ft.
<b>Insulation Resistance</b>	>1 x 10 <sup>10</sup> Ω • 10 ft. (3m)
<b>Impedance*</b>	45Ω
<b>Capacitance* (@ 1 MHz)</b>	50 pF/ft. (164 pF/m)
<b>Inductance* (@ 1 MHz)</b>	.11 μH/ft. (.36 μH/m)
<b>Propagation Delay*</b>	1.70 ns/ft. (5.6 ns/m)

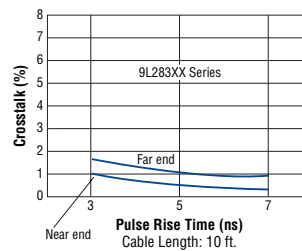
\*Test Configuration: G-S-G (ground-signal-ground), with shield grounded.

Part No.	No. of Cond.	Dimensions			
		Width "A"		Span "B"	
		Inch	mm	Inch	mm
9L28309	9	.55	13.97	.40 ±.008	10.16 ±.20
9L28310	10	.60	15.24	.45 ±.008	11.43 ±.20
9L28315	15	.85	21.59	.70 ±.008	17.78 ±.20
9L28320	20	1.10	27.94	.95 ±.008	24.13 ±.20
9L28325	25	1.35	34.29	1.20 ±.008	30.48 ±.20
9L28326	26	1.40	35.56	1.25 ±.008	31.75 ±.20
9L28334	34	1.80	45.72	1.65 ±.008	41.91 ±.20
9L28337	37	1.95	49.53	1.80 ±.012	45.72 ±.30
9L28340	40	2.10	53.34	1.95 ±.012	49.53 ±.30
9L28350	50	2.60	66.04	2.45 ±.012	62.23 ±.30
9L28360	60	3.10	78.74	2.95 ±.012	74.93 ±.30

## Dimensions



## Unbalanced Crosstalk\*



## Attenuation\*

