# **Detailed Specifications & Technical Data**

**ENGLISH MEASUREMENT VERSION** 



## 9L28320 Flat - Shielded Jacketed 9L283XX Series





For more Information please call

1-800-Belden1



## **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 | <b>Conductor Material</b> |
|--------------|-----|-----------|---------------------------|
| 20           | 28  | 7x36      | TC - Tinned Copper        |

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

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

Center:

#### 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 | <b>Drain Wire Conductor Material</b> |
|------|-----------|--------------------------------------|
| 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 |

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| 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)**

## **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 | <b>VP</b> (%) |
|-------------|---------------|
|             | 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                       |

## Max. Operating Voltage - UL:

Voltage 300 V RMS

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#### Max. Recommended 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

#### **Related Documents:**

No related documents are available for this product

## **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'

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