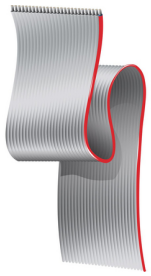
Belden



# Product: 9L28014

Flat Gray Ribbon Cable .050" Pitch, 9L280XX Series, #28-14c, PVC Ins

## Product Description

Flat Gray Ribbon Cable .050" Pitch, 9L280XX Series, 14 Conductor, 28 AWG (7x36) Tinned Copper, PVC Insulation

## Technical Specifications

### Product Overview

| | |
|---|---|
| Suitable Applications: | Internal interconnection, internal wiring of electronic equipment, reliable mass-termination to standard IDC connectors |

### Physical Characteristics (Overall)

**Conductor**

| AWG | Stranding | Material |
|---|---|---|
| 28 | 7x36 | TC - Tinned Copper |

| | |
|---|---|
| Conductor Count: | 14 |

**Insulation**

| Material | Nominal Wall Thickness |
|---|---|
| PVC - Polyvinyl Chloride | 0.010 in |

**Color Chart**

| Color |
|---|
| Gray |

| | |
|---|---|
| Color Chart1 Table Notes: | First Conductor has Red Stripe |

### Construction and Dimensions

| | |
|---|---|
| Conductor Spacing: | .050 +/- .002 in |
| Conductor Spacing Center-Center Outside: | .650 +/- .008 in |
| OuterJacket1, Nominal Width: | .700 +/- .008 in |
| OuterJacket1, Nom Thick Flat Section: | 0.035 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 |

| | |
|---|---|
| Min Insulation Resistance: | 10,000 MOhm |

**Inductance**

| Element | Nominal Inductance |
|---|---|
| @ 1 MHz (GS) | 0.29 µH/ft |

| | |
|---|---|
| @ 1 MHz (GSG) | 0.2 µH/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 |

| | |
|---|---|
| High Frequency Table (Nominal/Typical) Notes: | GSG=Ground-Signal-Ground Mode |

**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 | 7 | 3 ns |
| 10 ft. sample length | 3.5 | 4.7 | 5 ns |
| 10 ft. sample length | 3 | 3 | 7 ns |

**Current**

| Max. Recommended Current [A] |
|---|
| 1 Amp per Conductor at 20ºC |

**Voltage**

| Dielectric Withstand Voltage | UL Voltage Rating |
|---|---|
| 2000 V | 300 V |

## Temperature Range

| | |
|---|---|
| Operating Temperature Range: | -40°C to +105°C |

## Mechanical Characteristics

| | |
|---|---|
| Bulk Cable Weight: | 16 lbs/1000ft |
| Minimum Bend Radius During Installation: | 2.55 in |
| Minimum Minor Axis Bend Radius: | 2.52 in |

## Standards

| | |
|---|---|
| UL AWM Style Compliance: | AWM 2651 |
| CSA AWM Compliance: | I A |

## 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 2): | Yes |
| EU Directive 2012/19/EU (WEEE): | Yes |
| EU Directive 2015/863/EU (RoHS 2 amendment): | Yes |
| EU Directive Compliance: | EU Directive 2003/11/EC (BFR) |
| EU CE Mark: | Yes |
| CA Prop 65 (CJ for Wire and Cable): | Yes |
| MII Order #39 (China RoHS): | Yes |

## Suitability

| | |
|---|---|
| Suitability - Indoor: | Yes |

## Flammability, LS0H, Toxicity Testing

| | |
|---|---|
| UL Flammability: | VW-1 |
| UL voltage rating: | 300 V |

## Plenum/Non-Plenum

| | |
|---|---|
| Plenum (Y/N): | No |

## Related Part Numbers

**Variants**

| Item # | Color | Length | UPC |
|---|---|---|---|
| 9L28014 008H100 | Gray | 100 ft | 612825221616 |
| 9L28014 008H300 | Gray | 300 ft | 612825221623 |

## History

| | |
|---|---|
| Update and Revision: | Revision Number: 0.397 Revision Date: 02-03-2025 |

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