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1-800-Belden1



## General Description:

Belden's .050" pitch, color-coded PVC flat cable allows for quick identification and circuit tracing, along with easy breakouts for circuit routing, and is designed for mass-termination with standard IDC connectors.

## Physical Characteristics (Overall)

### Conductor

AWG:

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

Total Number of Conductors: 20

Conductor Spacing Center to Center: .050

### Insulation

Insulation Material:

| Insulation Material      | Wall Thickness (in.) |
|--------------------------|----------------------|
| PVC - Polyvinyl Chloride | 0.010                |

Insulation Resistance: >10,000 Mega Ohms

Insulation Color Code Chart:

| Number             | Color              |
|--------------------|--------------------|
| 1                  | Brown              |
| 2                  | Red                |
| 3                  | Orange             |
| 4                  | Yellow             |
| 5                  | Green              |
| 6                  | Blue               |
| 7                  | Purple             |
| 8                  | Gray               |
| 9                  | White              |
| 10                 | Black              |
| Over 10 conductors | Repeat as required |

### Outer Shield

Outer Shield Material:

| Outer Shield Material |
|-----------------------|
| Unshielded            |

### Overall Cable

Overall Nominal Thickness: .036

Overall Nominal Width: 1.00

## Mechanical Characteristics (Overall)

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

Bulk Cable Weight: 24 lbs/1000 ft.

Min. Bend Radius/Minor Axis: 0.500 in.

## Applicable Specifications and Agency Compliance (Overall)

### Applicable Standards & Environmental Programs

UL Rating: AWM 20932

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

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 |
| MIL Order #39 (China RoHS):       | Yes |

**Flame Test**

|                |      |
|----------------|------|
| UL Flame Test: | VW-1 |
|----------------|------|

**Plenum/Non-Plenum**

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

**Electrical Characteristics (Overall)**

**Nom. Characteristic Impedance:**

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

**Nom. Inductance:**

| Description   | Inductance (µH/ft) |
|---------------|--------------------|
| @ 1 MHz (GS)  | .29                |
| @ 1 MHz (GSG) | .20                |

**Nom. Capacitance Conductor to Conductor:**

| Description   | Capacitance (pF/ft) |
|---------------|---------------------|
| @ 1 kHz (GSG) | 18                  |
| @ 1 MHz (GS)  | 10                  |
| @ 1 MHz (GSG) | 15                  |

**Nominal Velocity of Propagation:**

| Description | VP (%) |
|-------------|--------|
|             | 72     |

**Nominal Delay:**

| Delay (ns/ft)     |
|-------------------|
| 1.40 NS/FT. (GSG) |

**Nom. Conductor DC Resistance:**

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

**Nom. Attenuation:**

| Freq. (MHz) | Attenuation (dB/100 ft.) |
|-------------|--------------------------|
| 10          | 2.8                      |
| 20          | 4.8                      |
| 30          | 6.5                      |
| 40          | 8.3                      |
| 50          | 9.8                      |
| 60          | 12                       |
| 70          | 13                       |
| 80          | 14                       |
| 90          | 15.8                     |
| 100         | 17                       |

**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 | 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

**Put Ups and Colors:**

| Item #         | Putup  | Ship Weight | Color | Notes | Item Desc          |
|----------------|--------|-------------|-------|-------|--------------------|
| 9R28020 000100 | 100 FT | 2.600 LB    | NONE  |       | 20 #28 PVC RAINBOW |

Revision Number: 3    Revision Date: 10-02-2012

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