Belden



# Product: 87777

Audio, Control & Instrument, #22-3pr, FEP, Indiv. Foil, PVDF Jkt, CMP

## Product Description

Audio, Control & Instrument Cable, 22 AWG stranded (7x30) tinned copper conductor, FEP insulation, twisted pairs individually shielded with Beldfoil® (100% coverage), overall jacket per table below, 22 AWG stranded tinned copper drain wire.

## Technical Specifications

### Product Overview

| | |
|---|---|
| Suitable Applications: | extreme high temperature environments; chemical resistant; outdoor and burial applications; low voltage analog signals (4-20ma, 0-10v, ...); low voltage digital control (24v, …); line level audio; voice communications; panel wiring |

### Physical Characteristics (Overall)

**Conductor**

| AWG | Stranding | Material | Nominal Diameter | No. of Pairs |
|---|---|---|---|---|
| 22 | 7x30 | TC - Tinned Copper | 0.03 in | 3 |

| | |
|---|---|
| Conductor Count: | 6 |

**Insulation**

| Material | Nominal Wall Thickness |
|---|---|
| FEP - Fluorinated Ethylene Propylene | 0.01 in |

**Color Chart**

| Number | Color |
|---|---|
| 1 | Black & Red |
| 2 | Black & White |
| 3 | Black & Green |

**Inner Shield**

| Type | Material | Material Trade Name | Coverage [%] | Drainwire Material | Drainwire AWG | Drainwire Construction n x D |
|---|---|---|---|---|---|---|
| Tape | Bi-Laminate (Alum+Poly) | Beldfoil® (Z-Fold®) | 100% | TC - Tinned Copper | 22 | Stranded |

**Outer Shield**

| Material | Drainwire AWG |
|---|---|
| No Shield | 22 |

**Outer Jacket**

| Material | Nominal Diameter | Nominal Wall Thickness |
|---|---|---|
| PVDF - Polyvinylidene Fluoride | 0.234 in | 0.014 in |

### Electrical Characteristics

**Conductor DCR**

| Individual Pair Nominal Shield DCR | Max. Conductor DCR |
|---|---|
| 11.3 Ohm/1000ft | 160 Ohm/km |

**Capacitance**

| Nom. Capacitance Conductor to Conductor | Nom. Capacitance Conductor to Other Conductor to Shield |
|---|---|
| 31 pF/ft | 67 pF/ft |

**Inductance**

| Nominal Inductance |
|---|
| 0.18 µH/ft |

**Impedance**

| Nominal Characteristic Impedance |
|---|
| 50 Ohm |

**Delay**

| Max. Delay Skew | Nominal Delay | Nominal Velocity of Propagation (VP) [%] |
|---|---|---|
| 69 ns/100m | 1.47 ns/ft | 69% |

**Current**

| Max. Recommended Current [A] |
|---|
| 3.5 Amps per Conductor at 25ºC |

**Voltage**

| UL Voltage Rating |
|---|
| 300 V RMS |

## Temperature Range

| | |
|---|---|
| Operating Temperature Range: | -20°C To +150°C |

## Mechanical Characteristics

| | |
|---|---|
| Bulk Cable Weight: | 36 lbs/1000ft |
| Maximum Recommended Pulling Tension: | 82 lbs |
| Minimum Minor Axis Bend Radius: | 2.5 in |

## Standards

| | |
|---|---|
| NEC/(UL) Compliance: | CMP |
| CEC/C(UL) Compliance: | CMP |

## 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 Compliance: | EU Directive 2003/11/EC (BFR) |
| EU CE Mark: | Yes |
| MII Order #39 (China RoHS): | Yes |

## Flammability, LS0H, Toxicity Testing

| | |
|---|---|
| UL Flammability: | NFPA 262 Plenum Flame Test (UL910) |
| CSA Flammability: | FT6 |
| UL voltage rating: | 300 V RMS |

## Plenum/Non-Plenum

| | |
|---|---|
| Plenum (Y/N): | Yes |

## Related Part Numbers

| | |
|---|---|
| Non-Plenum Number: | 8777 |

**Variants**

| Item # | Color | UPC |
|---|---|---|
| 87777 0021000 | Red | 612825216209 |
| 87777 002500 | Red | 612825216216 |

| | |
|---|---|
| Footnote: | C - CRATE REEL PUT-UP. |

## History

| | |
|---|---|
| Update and Revision: | Revision Number: 0.348 Revision Date: 02-03-2025 |

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