

METRIC MEASUREMENT VERSION



## 9877 Multi-Conductor - Audio, Control and Instrumentation Cable

For more Information  
please call

1-800-Belden1



### General Description:

20 AWG stranded (7x28) TC conductors, polypropylene insulation, twisted pairs, individually shielded w/Beldfoil® (100% coverage), 22 AWG stranded TC drain wire, overall PVC jacket.

### Physical Characteristics (Overall)

#### Conductor

AWG:

| # Pairs | AWG | Stranding | Conductor Material |
|---------|-----|-----------|--------------------|
| 12      | 20  | 7x28      | TC - Tinned Copper |

Total Number of Conductors: 24

#### Insulation

Insulation Material:

| Insulation Material | Wall Thickness (mm) |
|---------------------|---------------------|
| PP - Polypropylene  | 0.381               |

#### Inner Shield

Inner Shield Material:

| Inner Shield Trade Name | Type | Inner Shield Material        | Coverage (%) |
|-------------------------|------|------------------------------|--------------|
| Beldfoil® (Z-Fold®)     | Tape | Aluminum Foil-Polyester Tape | 100          |

Inner Shield Drain Wire AWG:

| AWG |
|-----|
| 22  |

Inner Shield Drain Wire Stranding: 19x34

Inner Shield Drain Wire Conductor Material: TC - Tinned Copper

#### Outer Jacket

Outer Jacket Material:

| Outer Jacket Material    | Nom. Wall Thickness (mm) |
|--------------------------|--------------------------|
| PVC - Polyvinyl Chloride | 1.270                    |

#### Overall Cable

Overall Nominal Diameter: 15.672 mm

#### Pair

Pair Color Code Chart:

| Number | Color          |
|--------|----------------|
| 1      | Black & Red    |
| 2      | Black & White  |
| 3      | Black & Green  |
| 4      | Black & Blue   |
| 5      | Black & Yellow |
| 6      | Black & Brown  |
| 7      | Black & Orange |
| 8      | Red & White    |
| 9      | Red & Green    |
| 10     | Red & Blue     |
| 11     | Red & Yellow   |
| 12     | Red & Brown    |

### Mechanical Characteristics (Overall)

|                                   |                          |
|-----------------------------------|--------------------------|
| Operating Temperature Range:      | -20°C To +80°C           |
| UL Temperature Rating:            | 80°C (UL AWM Style 2919) |
| Bulk Cable Weight:                | 290.199 Kg/Km            |
| Max. Recommended Pulling Tension: | 1957.208 N               |
| Min. Bend Radius/Minor Axis:      | 158.750 mm               |

### Applicable Specifications and Agency Compliance (Overall)

#### Applicable Standards & Environmental Programs

|                                       |                           |
|---------------------------------------|---------------------------|
| NEC/(UL) Specification:               | CM                        |
| CEC/C(UL) Specification:              | CM                        |
| AWM Specification:                    | UL Style 2919 (30 V 80°C) |
| 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): | 01/01/2004                |
| 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: | UL1685 UL Loading |
|----------------|-------------------|

#### Plenum/Non-Plenum

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

### Electrical Characteristics (Overall)

#### Nom. Characteristic Impedance:

Impedance (Ohm)

50

#### Nom. Inductance:

Inductance (µH/m)

0.59058

#### Nom. Capacitance Conductor to Conductor:

Capacitance (pF/m)

98.43

#### Nom. Capacitance Cond. to Other Conductor & Shield:

Capacitance (pF/m)

180.455

#### Nominal Velocity of Propagation:

VP (%)

66

#### Nom. Conductor DC Resistance:

DCR @ 20°C (Ohm/km)

34.4505

Ind. Pair Nominal Shield DC Resistance @ 20 Deg. C: 37.075 Ohm/km

## 9877 Multi-Conductor - Audio, Control and Instrumentation Cable

### Max. Operating Voltage - UL:

| Voltage   | Description       |
|-----------|-------------------|
| 30 V RMS  | UL AWM Style 2919 |
| 300 V RMS | CM                |

### Max. Recommended Current:

| Current                       |
|-------------------------------|
| 2.0 Amps per conductor @ 25°C |

### Put Ups and Colors:

| Item #       | Putup    | Ship Weight | Color  | Notes | Item Desc           |
|--------------|----------|-------------|--------|-------|---------------------|
| 9877 060100  | 100 FT   | 21.500 LB   | CHROME | C     | 12 #20 FS PR PP PVC |
| 9877 0601000 | 1,000 FT | 211.000 LB  | CHROME | C     | 12 #20 FS PR PP PVC |
| 9877 060500  | 500 FT   | 106.500 LB  | CHROME | C     | 12 #20 FS PR PP PVC |

#### Notes:

C = CRATE REEL PUT-UP.

Revision Number: 2    Revision Date: 09-07-2012

© 2019 Belden, Inc  
All Rights Reserved.

Although Belden makes every reasonable effort to ensure their accuracy at the time of this publication, information and specifications described herein are subject to error or omission and to change without notice, and the listing of such information and specifications does not ensure product availability.

Belden provides the information and specifications herein on an "AS IS" basis, with no representations or warranties, whether express, statutory or implied. In no event will Belden be liable for any damages (including consequential, indirect, incidental, special, punitive, or exemplary damages) whatsoever, even if Belden has been advised of the possibility of such damages, whether in an action under contract, negligence or any other theory, arising out of or in connection with the use, or inability to use, the information or specifications described herein.

All sales of Belden products are subject to Belden's standard terms and conditions of sale.

Belden believes this product to be in compliance with EU RoHS (Directive 2002/95/EC, 27-Jan-2003). Material manufactured prior to the compliance date may be in stock at Belden facilities and in our Distributor's inventory. The information provided in this Product Disclosure, and the identification of materials listed as reportable or restricted within the Product Disclosure, is correct to the best of Belden's knowledge, information, and belief at the date of its publication. The information provided in this Product Disclosure is designed only as a general guide for the safe handling, storage, and any other operation of the product itself or the one that it becomes a part of. This Product Disclosure is not to be considered a warranty or quality specification. Regulatory information is for guidance purposes only. Product users are responsible for determining the applicability of legislation and regulations based on their individual usage of the product.

Belden declares this product to be in compliance with EU LVD (Low Voltage Directive 2014/35/EU).