



**Product:** [83350E](#) 

Electronic, 4 C #20 Str SPC, TFE Ins, OA SPC Brd, TFE Jkt, MIL-W-16878/4 (Type E)

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## Product Description

High Temperature Electronic, 4 Conductor 20AWG (19x32) Silver Plated Copper, TFE Insulation, Overall Silver Plated Copper Braid(85%) Shield, TFE Outer Jacket, MIL-W-16878/4 (Type E)

## Technical Specifications

### Product Overview

|                        |                                                                                                                                |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Suitable Applications: | MIL-W-16878/4 (Type E) Spec; extreme high/low temperature environments; up to 600V analog signals ; up to 600V voltage control |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------|

### Physical Characteristics (Overall)

#### Conductor

| Element      | AWG | Stranding | Material             | No. of Conductors |
|--------------|-----|-----------|----------------------|-------------------|
| Conductor(s) | 20  | 19x32     | SC - Silvered Copper | 4                 |

|                  |   |
|------------------|---|
| Conductor Count: | 4 |
|------------------|---|

#### Insulation

| Element      | Material                       | Material Trade Name | Nominal Wall Thickness |
|--------------|--------------------------------|---------------------|------------------------|
| Conductor(s) | PTFE - Polytetrafluoroethylene | Teflon®             | 0.0105 in              |

#### Color Chart

| Number | Color |
|--------|-------|
| 1      | White |
| 2      | Black |
| 3      | Red   |
| 4      | Green |

#### Outer Shield Material

| Type  | Material             | Coverage [%] |
|-------|----------------------|--------------|
| Braid | SC - Silvered Copper | 85 %         |

#### Outer Jacket Material

| Material                       | Material Trade Name | Nominal Diameter | Nominal Wall Thickness |
|--------------------------------|---------------------|------------------|------------------------|
| PTFE - Polytetrafluoroethylene | Teflon®             | 0.183 in         | 0.011 in               |

### Electrical Characteristics

#### Conductor DCR

| Nominal Conductor DCR | Nominal Outer Shield DCR |
|-----------------------|--------------------------|
| 7.8 Ohm/1000ft        | 4.4 Ohm/1000ft           |

#### Capacitance

| Nom. Capacitance Conductor to Conductor | Nom. Capacitance Conductor to Other Conductor to Shield |
|-----------------------------------------|---------------------------------------------------------|
| 31.7 pF/ft                              | 51 pF/ft                                                |

#### Inductance

| Nominal Inductance |
|--------------------|
|--------------------|

0.145 µH/ft

Current

| Max. Recommended Current [A]  |
|-------------------------------|
| 6.5 Amps per conductor @ 25°C |

Voltage

| UL Voltage Rating |
|-------------------|
| 600 V RMS         |

Temperature Range

|                       |                 |
|-----------------------|-----------------|
| Operating Temp Range: | -65°C To +200°C |
|-----------------------|-----------------|

Mechanical Characteristics

|                                  |               |
|----------------------------------|---------------|
| Bulk Cable Weight:               | 35 lbs/1000ft |
| Max Recommended Pulling Tension: | 94.7 lbs      |
| Min Bend Radius/Minor Axis:      | 2 in          |

Standards

|                         |                                                                 |
|-------------------------|-----------------------------------------------------------------|
| CPR Euroclass:          | Eca                                                             |
| Military Specification: | MIL-W-16878/4 (Type E except stranding), (insulated conductors) |
| Other Specification:    | NEMA HP3                                                        |

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 II):    | Yes                           |
| EU Directive 2012/19/EU (WEEE):       | Yes                           |
| EU Directive 2015/863/EU:             | Yes                           |
| EU Directive Compliance:              | EU Directive 2003/11/EC (BFR) |
| EU CE Mark:                           | Yes                           |
| EU RoHS Compliance Date (yyyy-mm-dd): | 2005-01-01                    |
| CA Prop 65:                           | Yes                           |
| MII Order #39 (China RoHS):           | Yes                           |

Flammability, LS0H, Toxicity Testing

|                       |               |
|-----------------------|---------------|
| ISO/IEC Flammability: | IEC 60332-1-2 |
| UL voltage rating:    | 600 V RMS     |

Plenum/Non-Plenum

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

Part Number

Variants

| Item #         | Color | Putup Type | Length   | UPC          |
|----------------|-------|------------|----------|--------------|
| 83350E 009500  | White |            |          | 612825204442 |
| 83350E 009100  | White | Reel       | 100 ft   | 612825204428 |
| 83350E 0091000 | White | Reel       | 1,000 ft | 612825204435 |

|           |                                                                            |
|-----------|----------------------------------------------------------------------------|
| Footnote: | E - MAY CONTAIN MORE THAN 1 PIECE. MINIMUM LENGTH OF ANY ONE PIECE IS 25'. |
|-----------|----------------------------------------------------------------------------|

Product Notes

|        |                                                                                                         |
|--------|---------------------------------------------------------------------------------------------------------|
| Notes: | Teflon« is a registered trademark of E. I. duPont de Nemours and Co. used under license by Belden, Inc. |
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History

|                      |                                                  |
|----------------------|--------------------------------------------------|
| Update and Revision: | Revision Number: 0.301 Revision Date: 05-05-2020 |
|----------------------|--------------------------------------------------|

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