



Product: [71743ELW](#)

Life Cycle Status: Capability

RS485, 4 Pr #20 Str TC, PE Ins, OS+TC Brd, LSZH Jkt, Cca

Product Description

RS-485, 4 Pair 20AWG (7x28) Tinned Copper, PO Insulation, Overall Beldfoil®+Tinned Copper Braid(65%) Shield, LSZH Outer Jacket, CPR Cca

Technical Specifications

Product Overview

| | |
|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Suitable Applications: | RS-485, POS; Computer communications; Low Voltage Analog Signals (4-20ma, 0-10v, ...); Low Voltage Digital Control (24v, ...); Line Level Audio; Panel Wiring; serial communication (RS-485 standard) comprising of PLCs, VFDs, HMIs, motors, RTU, SCADA, etc. within noisy environments over long distance, etc. |
|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Construction Details

Conductor

| Element | No. of Elements | Size | Stranding | Material |
|---------|-----------------|--------|-----------|--------------------|
| Pair(s) | 3 | 20 AWG | 7x28 | TC - Tinned Copper |

Insulation

| Element | Material | Nom. Thickness | Nom. Insulation Diameter | Color Code |
|---------|-------------------|--------------------|--------------------------|------------------------------------------------------------------------------------------------------------|
| Pair(s) | PE - Polyethylene | 0.82 mm (0.032 in) | 2.60 mm (0.102 in) | White/Blue & Blue/White, White/Orange & Orange/White, White/Green & Green/White, White/Brown & Brown/White |

Outer Shield

| Shield Type | Material | Coverage | Drainwire Type |
|-------------|-------------------------|----------|------------------|
| Tape | Bi-Laminate (Alum+Poly) | 100% | 24 AWG (7x32) TC |
| Braid | Tinned Copper (TC) | | |

Outer Jacket

| Material | Nom. Thickness | Nom. Diameter |
|-------------------------------------------------|-------------------|--------------------|
| LSZH - Low Smoke Zero Halogen (Flame Retardant) | 1.1 mm (0.043 in) | 13.6 mm (0.535 in) |

| | |
|-----------------------------------|--------------------|
| Overall Cable Diameter (Nominal): | 13.6 mm (0.535 in) |
|-----------------------------------|--------------------|

Electrical Characteristics

Electricals

| Element | Nom. Conductor DCR | Nom. Capacitance Cond-to-Cond | Nom. Capacitance Cond-to-Other (Conds + Shield) | Nom. Characteristic Impedence | Nom. Velocity of Prop. | Max. Current |
|---------|---------------------------|-------------------------------|-------------------------------------------------|-------------------------------|------------------------|------------------------|
| Pair(s) | 36 Ohm/km (11 Ohm/1000ft) | 40 pF/m (12 pF/ft) | 78 pF/m | 120 Ohm | 66% | 2.7 Amps per Conductor |

High Frequency (Nominal/Typical)

| Element | Frequency [MHz] | Nom. Insertion Loss (Attenuation) |
|---------|-----------------|-----------------------------------|
| Pair(s) | 1 | 1.45 dB/100m (0.442 dB/100ft) |

Voltage

| Voltage Rating |
|----------------|
| 300 V |

Mechanical Characteristics

Temperature

| Operating | Installation | Storage |
|----------------|----------------|----------------|
| -45°C To +70°C | -15°C To +70°C | -45°C To +70°C |

Bend Radius

| Stationary Min. | Installation Min. |
|-----------------|-------------------|
| 68 mm (2.7 in) | 136 mm (5.35 in) |

| | |
|--------------------|----------------------------|
| Max. Pull Tension: | 930 N (210 lbf) |
| Bulk Cable Weight: | 172 kg/km (116 lbs/1000ft) |

Standards and Compliance

| | |
|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Environmental Suitability: | Indoor - Euroclass Eca, Indoor, Non-Halogenated, Sunlight Resistance, Oil Resistance |
| Flammability / Reaction to Fire: | IEC 60332-1-2 |
| CPR Compliance: | CPR Euroclass: Cca-s1,d1,a1 |
| ISO/IEC Compliance: | IEC 61034-2 - Smoke Density Min Transmittance = 60% |
| CENELEC Compliance: | EN 50290-2-20 |
| European Halogen Free Standards: | IEC 62821-1 Halogen Free Compliance = Yes, IEC 60754-1 - Halogen Amount = Zero, IEC 60754-2 - Halogen Acid Gas Amount - Max. Conductivity = 2.5 µS/mm, IEC 60754-2 - Halogen Acid Gas Amount - Min. pH = 4.3 |
| European Directive Compliance: | EU CE Mark |
| UK Regulation Compliance: | UKCA Mark |
| Other Standard Compliance(s): | DMX-512 |

Product Notes

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| Notes: | This is a preliminary Technical Design Specification (TDS) which is subject to modification throughout the prototyping phase. The minimum business quantity to offer is 3km for the first order. This product will have Grey as standard color and 305mt or 500mt as standard put-ups. Additional options for colors and put-ups are available on special request. The estimated production lead time for the first order will be similar to the production lead time of 3107ENH plus extra 6-7 weeks. Please liaise with your Belden representative for confirmation. |
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History

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| Update and Revision: | Revision Number: 0.21 Revision Date: 05-07-2025 |
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