## Product: [4542FDZ](#) ⧉

Life Cycle Status: Capability

OSDP RS485, 3 Pr #22 Str TC, PO Ins, OS, LSZH Jkt, Eca

### Product Description

OSDP RS-485, 3 Pair 22AWG (7x30) Tinned Copper, PO Insulation, Overall Beldfoil®+Tinned Copper drainwire, LSZH Outer Jacket, CPR Eca

### Technical Specifications

#### Product Overview

| | |
|---|---|
| Suitable Applications: | Instrumentation and computer cable. For OSDP EIA RS-485 transmissions applications |

#### Construction Details

**Conductor**

| Element | No. of Elements | Size | Stranding | Material |
|---|---|---|---|---|
| Pair(s) | 3 | 22 AWG | 7x30 | TC - Tinned Copper |

**Insulation**

| Element | Material | Nom. Thickness | Nom. Insulation Diameter | Color Code |
|---|---|---|---|---|
| Pair(s) | PE - Polyethylene (Foam) | 0.6 mm (0.024 in) | 1.95 mm (0.0768 in) | White/Blue & Blue/White, White/Orange & Orange/White, White/Green & Green/White |

**Outer Shield**

| Shield Type | Material | Coverage | Drainwire Type |
|---|---|---|---|
| Tape | Bi-Laminate (Alum+Poly) | 100% | 22 AWG (7x30) TC |

**Outer Jacket**

| Material | Nom. Thickness | Nom. Diameter |
|---|---|---|
| LSZH - Low Smoke Zero Halogen (Flame Retardant) | 0.7 mm (0.028 in) | 7.60 mm (0.299 in) |

| | |
|---|---|
| Overall Cable Diameter (Nominal): | 7.60 mm (0.299 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) | 78.7 Ohm/km (24.0 Ohm/1000ft) | 40 pF/m (12 pF/ft) | 78 pF/m | 120 Ohm | 78% | 2.0 Amps per Conductor |

**High Frequency (Nominal/Typical)**

| Element | Frequency [MHz] | Nom. Insertion Loss (Attenuation) |
|---|---|---|
| Pair(s) | 1 | 1.64 dB/100m (0.500 dB/100ft) |

**Voltage**

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

### Mechanical Characteristics

**Temperature**

| Operating | Installation | Storage |
|---|---|---|

| -30°C To +70°C | -15°C To +70°C | -30°C To +70°C |
|---|---|---|

**Bend Radius**

| Stationary Min. | Installation Min. |
|---|---|
| 38 mm (1.5 in) | 76 mm (3.0 in) |

| | |
|---|---|
| Max. Pull Tension: | 450 N (100 lbf) |
| Bulk Cable Weight: | 38 kg/km (26 lbs/1000ft) |

## Standards and Compliance

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|---|---|
| Environmental Suitability: | Indoor - Euroclass Eca, Indoor, Non-Halogenated, Sunlight Resistance |
| Flammability / Reaction to Fire: | IEC 60332-1-2 |
| CPR Compliance: | CPR Euroclass: Eca |
| 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 |

## Product Notes

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| Notes: | This is a preliminary Technical Design Specification (TDS). The minimum business quantity to offer is 3km for the first order. This product will have Orange as standard color and 305mt 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 4541FDW. Please liaise with your Belden representative for confirmation. |

## History

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| Update and Revision: | Revision Number: 0.18 Revision Date: 05-07-2025 |