



Product: [4643FDW](#)

Life Cycle Status: Capability

OSDP RS485, 4 Pr #24 Str TC, PO Ins, OS, LSZH Jkt, Cca

Product Description

OSDP RS-485, 4 Pair 24AWG (7x32) Tinned Copper, PO Insulation, Overall Beldfoil®+Tinned Copper drainwire, LSZH Outer Jacket, CPR Cca

Technical Specifications

Product Overview

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

Conductor

Element	No. of Elements	Size	Stranding	Material
Pair(s)	4	24 AWG	7x32	TC - Tinned Copper

Insulation

Element	Material	Nom. Thickness	Nom. Insulation Diameter	Color Code
Pair(s)	PE - Polyethylene (Foam)	0.4 mm (0.016 in)	1.40 mm (0.0551 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

Outer Jacket

Material	Nom. Thickness	Nom. Diameter
LSZH - Low Smoke Zero Halogen (Flame Retardant)	1.1 mm (0.043 in)	8.10 mm (0.319 in)

Overall Cable Diameter (Nominal):	8.10 mm (0.319 in)
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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)	42 pF/m (13 pF/ft)	75.5 pF/m	120 Ohm	78%	1.5 Amps per Conductor

High Frequency (Nominal/Typical)

Element	Frequency [MHz]	Nom. Insertion Loss (Attenuation)
Pair(s)	1	1.97 dB/100m (0.600 dB/100ft)

Voltage

Voltage Rating
300 V

Mechanical Characteristics

Temperature

Operating	Installation	Storage
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-45°C To +70°C	-15°C To +70°C	-45°C To +70°C
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Bend Radius

Stationary Min.	Installation Min.
41 mm (1.6 in)	81 mm (3.2 in)

Max. Pull Tension:	440 N (99 lbf)
Bulk Cable Weight:	65 kg/km (44 lbs/1000ft)

Standards and Compliance

Environmental Suitability:	Indoor - Euroclass Cca, Indoor, Non-Halogenated, Sunlight Resistance
Flammability / Reaction to Fire:	IEC 60332-1-2
CPR Compliance:	CPR Euroclass: Cca-s1a,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

Product Notes

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 Orange 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 4541FDW plus extra 6-7 weeks. Please liaise with your Belden representative for confirmation.
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History

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