



Product: [9841LW](#)

RS485, 1 Pr #24 Str TC, PO Ins, OS+TC Brd, LSZH Jkt, Cca

Product Description

RS-485, 1 Pair 24AWG (7x32) Tinned Copper, PO Insulation, Overall Beldfoil®+Tinned Copper Braid(90%) Shield, LSZH Outer Jacket, CPR Cca

Technical Specifications

Product Overview

Suitable Applications:	Data link standard: RS-485, compatible with RS-422 and RS-232 Protocols: Modbus RTU, CANopen, BACNET MS/TP, DMX512 Signal types: Digital; Low Voltage Analog (4-20ma, 0-10v, ...); Low Voltage Digital Control (24v, ...); Line Level Audio; Systems: serial communication (RS-485 standard) comprising of PLCs, VFDs, HMIs, motors, RTU, SCADA, etc.; Panel Wiring ; Audio & Lighting Environment: Noisy, long distances
------------------------	---

Physical Characteristics (Overall)

Conductor			
AWG	Stranding	Material	No. of Pairs
24	7x32	TC - Tinned Copper	1
Conductor Count:		2	
Total Number of Pairs:		1	

Insulation		
Material	Nominal Diameter	Diameter +/- Tolerance
PE - Polyethylene	1.73 mm	0.05 mm

Color Chart	
Number	Color
Pair 1	White/Blue & Blue/White

Outer Shield								
Type	Layer	Material	Material Trade Name	Coverage [%]	Thickness of Foil	Drainwire Material	Drainwire AWG	Drainwire Construction n x D
Tape	1	Bi-Laminate (Alum+Poly)	Beldfoil®	100%	9 / 23 µm	TC - Tinned Copper	AWG24/7	7x32
Braid	2	Tinned Copper (TC)		90%				

Outer Jacket			
Material	Color	Nominal Diameter	Nominal Wall Thickness
LSZH - Low Smoke Zero Halogen (Flame Retardant)	Chrome (RAL 7037)	6.50 mm	1.10 mm

Construction and Dimensions

Stranding	
Lay Direction	Twists
Left Hand	5.333 twist/ft

Cabling	
Description	1 pair and 2 fillers twisted to cable core

Electrical Characteristics

Conductor DCR

Nominal Conductor DCR	Nominal Inner Shield DCR
78.7 Ohm/km	11.0 Ohm/km

Capacitance

Nom. Capacitance Conductor to Conductor	Nom. Capacitance Conductor to Other Conductor to Shield
42 pF/m	75.5 pF/m

Impedance

Frequency [MHz]	Nominal Characteristic Impedance
1	120 Ohm

High Frequency (Nominal/Typical)

Frequency [MHz]	Nom. Insertion Loss
1 MHz	1.97 dB/100m

Delay

Max. Delay Skew	Nominal Delay	Nominal Velocity of Propagation (VP) [%]
66 ns/100m	5.2 ns/m	66%

Current

Element	Max. Recommended Current [A]
Conductor(s)	2.1 Amps per Conductor

Voltage

Voltage Rating [V]
300 V

Temperature Range

Installation Temperature Range:	-15°C To +80°C
Storage Temperature Range:	-45°C To +80°C
Operating Temp Range (Flexible Install):	-15°C To +80°C
Operating Temp Range (Fixed Install):	-45°C To +80°C

Mechanical Characteristics

Oil Resistance:	IEC 60811-404
Max. Pull Tension:	328 N
Min. Bend Radius During Installation:	65 mm
Min. Bend Radius/Minor Axis:	2.5 in

Standards

CPR Euroclass:	Cca-s1,d1,a1
CENELEC Compliance:	EN 50290-2-20
Other Specification:	DMX-512

Applicable Environmental and Other Programs

Environmental Space:	Indoor - Euroclass Cca
EU Directive Compliance:	EU Directive 2003/11/EC (BFR)
EU CE Mark:	Yes

Suitability

Suitability - Indoor:	Yes
Suitability - Non-Halogenated:	Yes
Suitability - Sunlight Resistance:	Yes

Flammability, LS0H, Toxicity Testing

IEC Flammability:	IEC 60332-1-2
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
IEC 61034-2 - Smoke Density Min. Transmittance:	80%

Related Part Numbers

Variants

Item #	Color	Put-Up Type	Length	EAN
9841LW.001000				
9841LW.00305				
9841LW.00500	Chrome	Reel	500 m	8719605187925

History

Update and Revision:	Revision Number: 0.73 Revision Date: 06-28-2024
----------------------	---

© 2024 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 here in 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 "ASIS" 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 all applicable environmental programs as listed in the data sheet. The information provided is correct to the best of Belden's knowledge, information and belief at the date of its publication. This information 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. The 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.