



**Product:** [50031LS](#)

RS485 FR, 1P 16AWG Str TC, MGT, XLPE Ins, OS+TC Brd, LSZH Inner Jkt, SWA, LSZH Outer Jkt, IEC60331-23, ABS Approved

### Product Description

RS-485 Fire Resistant, 1PR x 16AWG Stranded Tinned Copper, Mica Glass Tape, Electron-Beam Cross Linked Polyethylene Insulation, Overall Foil Plus Tinned Copper Braid Shield, Low Smoke Zero Halogen Inner Jacket, Steel Wire Armor, Low Smoke Zero Halogen Outer Jacket, IEC60331-23 Fire Resistant Rating, ABS Approved

### Technical Specifications

#### Product Overview

Suitable Applications:	Designed for applications which are used for RS 232/422/485, CANBUS, MODBUS communication protocols. Cable applications include motion oriented machine, machine control networks, temperature controllers, control panels, machine cutting tools, auxiliary equipment, SCADA communications, etc. These cables are used in emergency evacuation / shutdown systems in building automation, offshore, oil & gas and railway applications and are flame retardant according to IEC 60332-3-22 Category A
------------------------	---

#### Construction Details

##### Conductor

Size	Stranding	Material
16 AWG	Stranded	TC - Tinned Copper

##### Insulation

Material	Color Code	Notes
Mica Glass Tape		
XLPE	White & Blue	*XLPE (Electron-Beam Cross Linked Polyethylene)

##### Outer Shield

Shield Type	Material	Drainwire Type
Tape	Bi-Laminate (Alum+Poly)	
Braid	Tinned Copper (TC)	19 AWG (7x27) TC

##### Inner Jacket

Material
LSZH - Low Smoke Zero Halogen (Flame Retardant)

##### Armor

Armor Type & Material
SWA - Steel Wire Armor

##### Outer Jacket

Material
LSZH - Low Smoke Zero Halogen (Flame Retardant)

Overall Cable Diameter (Nominal):	17.1 mm (0.673 in)
-----------------------------------	--------------------

#### Electrical Characteristics

##### Electricals

Nom. Conductor DCR	Nom. Capacitance Cond-to-Cond	Nom. Capacitance Cond-to-Shield	Nom. Characteristic Impedance
14.6 Ohm/km (4.45 Ohm/1000ft)	46 pF/m (14 pF/ft)	82 pF/m	120 Ohm

Table Notes:	Nom. Inductance to Resistance ratio (L/R): 25 $\mu$ H/ $\Omega$
--------------	---

## Voltage

Voltage Rating	Breakdown Voltage
300 V	1.5 kVac / 5 min

Table Notes: Voltage Test in Water : 450Vac X 4 hours

## Mechanical Characteristics

### Temperature

Operating
-40°C To +90°C

Table Notes: Insulation Resistance  $\geq$  3670 M $\Omega$ \*km

Bulk Cable Weight: 512 kg/km (344 lbs/1000ft)

## Standards and Compliance

Environmental Suitability:	Sunlight Resistance, UV Resistance, Oil Resistance, Oil Resistance
Flammability / Reaction to Fire:	IEC 60332-1-2, IEC 60332-3-22
Resistance to Fire:	IEC 60331-23-E90
Marine Compliance:	ABS Type Approval Certificate 20-2029060-PDA
ISO/IEC Compliance:	IEC 60092-376, IEC 61034-2 - Smoke Density Min Transmittance = Min. 70% as per IEC 61034-2
European Halogen Free Standards:	IEC 60754-1 - Halogen Amount = Max 0.5%, IEC 60754-2 - Halogen Acid Gas Amount - Max. Conductivity = 10 $\mu$ S/mm, IEC 60754-2 - Halogen Acid Gas Amount - Min. pH = 4.3
European Directive Compliance:	EU CE Mark, EU Directive 2015/863/EU (RoHS 2 amendment), REACH, EU Directive 2011/65/EU (RoHS 2)
APAC Compliance:	China RoHS II (GB/T 26572-2011)
Other Standard Compliance(s):	Toxicity Index 5 as per EN 50305 / NF F63-305 (ITC)

## Product Notes

Notes: Smoke Density ASTM D2843 Max. 40%

## History

Update and Revision: Revision Number: 0.63 Revision Date: 07-05-2024

## Part Numbers

### Variants

Item #	Color	Putup Type	Length	EAN
50031LS-A305	Black	Reel	305 m	8719605219930
50031LS 010500M	Black	Reel	500 m	
50031LS 0101000M	Black	Reel	1,000 m	
50031LS 060500M	Grey	Reel	500 m	
50031LS 0601000M	Grey	Reel	1,000 m	

© 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.