



Product: [50031LB](#)

RS485 FR, 1P 16AWG Str TC, MGT, XLPE Ins, OS+TC Brd, LSZH Inner Jkt, SWB, 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 Braid 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
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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
SWB - Steel Wire Braid Armor

Outer Jacket

Material
LSZH - Low Smoke Zero Halogen (Flame Retardant)

Overall Cable Diameter (Nominal):	16.4 mm (0.646 in)
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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 µH/Ω
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Voltage

Voltage Rating	Breakdown Voltage
300 V	1.5 kVac / 5 min

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

Temperature

Operating
-40°C To +90°C

Table Notes:	Insulation Resistance \geq 3670 M Ω *km
Bulk Cable Weight:	393 kg/km (264 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 μ 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%
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History

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

Variants

Item #	Color	Putup Type	Length	EAN
50031LB 010500M	Black	Reel	500 m	
50031LB-A500	Black	Reel	500 m	8719605219923
50031LB 0101000M	Black	Reel	1,000 m	
50031LB 060500M	Grey	Reel	500 m	
50031LB 0601000M	Grey	Reel	1,000 m	

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