



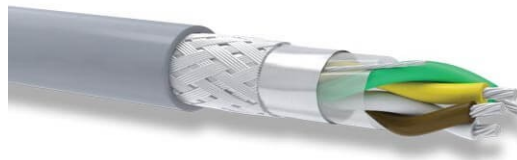
MOD BUS Cable Li2Y(St)CY

RS-485 Data Transmission cable



IEC 60228 ; EN 50290-2-22 ; IEC 60332-1-2

RoHS , REACH & CE Directives



Ambient installation T°
C range
0 + 50 °C



Operating temp.
-20 + 60 °C



Storage temperature
range
-20 + 70 °C



Flame retardant
IEC 60332-1



Smoke density

Applications

Li2Y(St)Y RS-485 Modbus cable is a shielded industrial data communication cable designed for **RS-485 serial communication** and **Modbus RTU** networks. It provides reliable data transmission in electrically noisy industrial environments. It is used in:

- Industrial automation systems
- PLC (Programmable Logic Controller) communication
- SCADA systems
- HMI (Human Machine Interface) panels
- Building Management Systems (BMS)
- HVAC control systems
- Variable Frequency Drives (VFDs)
- Servo drives
- Energy meters and power analyzers

- Process control equipment
- Temperature and pressure controllers
- Industrial sensors and actuators
- Remote I/O modules
- Factory automation networks
- Water and wastewater treatment plants
- Renewable energy monitoring systems

Features

- Designed for **RS-485** and **Modbus RTU** communication
- Twisted pair construction for improved signal integrity
- Aluminum/polyester foil shield with drain wire for excellent EMI/RFI protection
- Low capacitance PE insulation for high-quality data transmission
- Suitable for fixed installation in industrial environments
- Reliable communication over long distances (up to approximately **1,200 m**, depending on data rate and network design)

Typical Installation Areas

- Industrial control panels
- Manufacturing plants
- Process automation
- Power generation and distribution
- Building automation
- Chemical and pharmaceutical industries
- Food and beverage production
- Transportation infrastructure

Construction:

Conductor material:

Conductor make up for:

stranded bare copper-7 wire conductors

0.22 mm²=7x0.20 mm

0.34 mm²=7x0.25 mm

0.50 mm²=7x0.30 mm

Insulation material:

Core stranding

PE (Polyethylene)

Cores stranded in pairs

Pairs twisted in layers,

With AL- Polyester foil

Wrapping

Screening

Braiding of tinned copper wires

Jacket / sheath material:

PVC TM2 (Polyvinyl chloride)

Sheath colour:

Pebble gray (RAL 7032)

Core identification:

2 Core:  White  Brown

3 Core:  White  Brown  Green

4 Core:  White  Brown  Green  Yellow

5 Core:  White  Brown  Green  Yellow  Grey

6 Core:  White  Brown  Green  Yellow  Grey  Pink

Larger sizes: 6 Core colours + following colours in addition

7 Core :  Blue

8 Core:  Red

10 Core:  Black  Violet

12 Core:  Grey/Pink  Red/Blue

Li2Y(St)Y RS-485

Technical Data:

Characteristic impedance: at 1 MHz		100 ± 15 Ω
Mutual capacitance		max. 60 nF/km
Insulation resistance		min. 5 GΩ x km
Operating voltage		max. 250 V (not for power applications)
Test voltage	core/core	V 2000
	Core/screen	V 1000
Velocity of propagation		appr. 66%
Cross-talk attenuation:	up to 1 MHz	min. 50 dB
	Up to 10 MHz	min. 40 Db
Inductance:		approx. 0.65 Mh/km
Oil resistant		EN 50290-2-22 (TM54)
Temperature range (for flexible use)		-5°C to +70 °C
	(for stationary use)	-30°C to +70 °C
Bending radius	Ocassional movement)	15 x OD (overall diameter)
	(Fixed installation)	6 x OD (overall diameter)
Other properties		Good UV resistance, chemical resistance & flexibility

Li2Y(St)Y RS-485

Dimensions:

Cable Description	No. of Cores	Nominal Conductor Size (mm ²)	Nominal Cable Diameter (mm)	Nominal Cable Weight (kg/km)
2 x 2 x 0.22	4	0.22	7.0-7.2	58-60
3 x 2 x 0.22	6	0.22	7.1-7.2	70-72
4 x 2 x 0.22	8	0.22	8.0-8.2	86-88
5 x 2 x 0.22	10	0.22	8.4-8.6	98-101
6 x 2 x 0.22	12	0.22	9.1-9.4	122-126
2 x 2 x 0.34	4	0.34	7.4-7.6	68-71
3 x 2 x 0.34	6	0.34	7.5-7.7	80-82
4 x 2 x 0.34	8	0.34	8.5-8.7	98-101
5 x 2 x 0.34	10	0.34	9.1-9.3	120-124
6 x 2 x 0.34	12	0.34	9.8-10.2	154-156
2 x 2 x 0.5	4	0.5	8.0-8.1	79-82
3 x 2 x 0.5	6	0.5	8.1-8.3	96-98
4 x 2 x 0.5	8	0.5	9.1-9.3	114-116
5 x 2 x 0.5	10	0.5	9.8-10.2	136-139
6 x 2 x 0.5	12	0.5	10.6-10.8	166-169
2 x 2 x 0.75	4	0.75	8.5-8.6	96-98
3 x 2 x 0.75	6	0.75	8.6-8.8	114-116
4 x 2 x 0.75	8	0.75	10.0-10.2	142-145
5 x 2 x 0.75	10	0.75	10.6-10.8	168-172
6 x 2 x 0.75	12	0.75	11.1-11.3	221-225
2 x 2 x 1	4	1	9.2-9.4	110-112
3 x 2 x 1	6	1	9.5-9.7	136-140

4 x 2 x 1	8	1	10.8-11.0	168-171
5 x 2 x 1	10	1	11.5-11.7	212-216
6 x 2 x 1	12	1	12.1-12.3	255-260



The information contained within this datasheet is for guidance only and is subject to change without notice or liability. All the information is provided in good faith and is believed to be correct at the time of publication. When selecting cable accessories, please note that actual cable dimensions may vary due to manufacturing tolerances.