

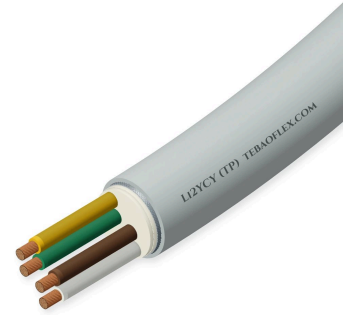


Control & signal cables

Li2YCY (TP)

Low-Capacitance Data Cable

Low-capacitance PE-insulated screened twisted-pair data cable for RS-422/RS-485

Low Capacitance ≤ 55 nF/km

PE Insulation (2Y)

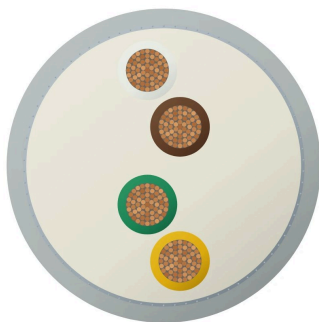
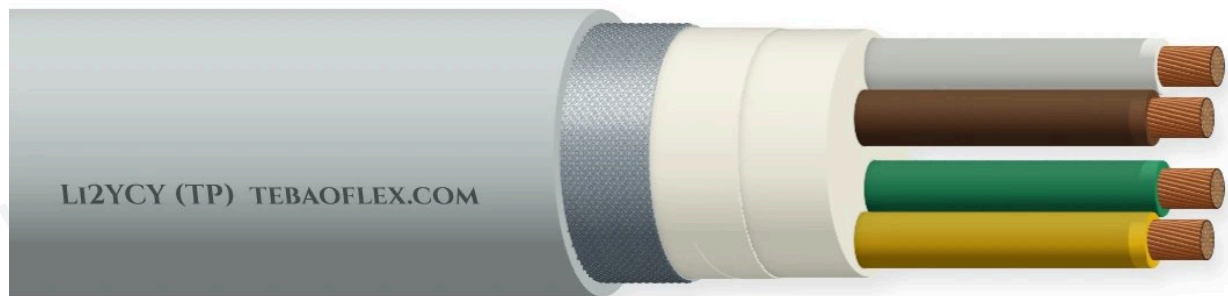
RS-422 / RS-485

Application

Low-capacitance twisted-pair serial data cable ('Li2YCY (TP)') with polyethylene ('2Y') core insulation (mutual capacitance $\approx 45\text{--}55$ nF/km, $Z_0 \approx 100\text{--}120\ \Omega$), Al/PET foil + $\geq 80\%$ tinned-copper braid screen and grey YM2 PVC outer sheath.

Typical uses: RS-485 / RS-422 & Modbus RTU networks, SSI & EnDat absolute encoder feedback, Automated warehousing & sortation buses, Process plant & SCADA serial telemetry, Weighbridge & long-run digital instrumentation

Construction



Cross-section, not to scale

1	7-wire / fine-stranded copper	DIN VDE 0812
2	Polyethylene (2Y) core insulation	DIN VDE 0207-2 2Y11 · DIN 47100
3	Impedance-matched twisted pairs	DIN VDE 0812
4	Al/PET foil + tinned-copper braid (C)	DIN VDE 0812 · EN 55011 EMC
5	PVC outer sheath	DIN VDE 0207-5 YM2 · IEC 60332-1-2

Technical data

Typical values

Mutual capacitance (800 Hz)	Approx. 45–55 nF/km (core/core) — < 50 % of standard PVC LiYCY	Characteristic impedance (Z_0)	100 $\Omega \pm 15 \Omega$ (at > 1 MHz) / ~100–120 Ω for RS-422 & RS-485
Peak operating voltage	350 V (0.14/0.22 mm ²) · 500 V (≥ 0.25 mm ²)	AC test voltage (50 Hz)	1500 V (core/core) · 1000–1500 V (core/screen)
Velocity of propagation	Approx. 66 % (0.66 c)	Insulation resistance	≥ 5000 M Ω ·km at +20 °C (polyethylene 2Y)
Temperature, flexing	–5 °C to +70 °C	Temperature, fixed	–30 °C to +80 °C
Max. conductor temperature	+70 °C in motion · +80 °C fixed	Min. bending radius, fixed	6–7.5 × overall diameter
Min. bending radius, flexing	15 × overall diameter	Screen construction	Plastic-laminated Al foil + ≥ 80 % tinned-copper wire braid
Flame retardance	IEC 60332-1-2 / EN 60332-1-2 self-extinguishing · CPR Eca	Signal integrity	Low dielectric loss tangent ($\tan \delta \approx 0.0003$) supports long cable runs up to 1200 m on RS-485
Standards	DIN VDE 0812 & DIN VDE 0207-2 (2Y11 PE)	Standard packing	Heat-treated ISPM-15 timber drums with sealed cable ends

Sizes

20 standard constructions

Tick the sizes you need and send this page to info@tebaoflex.com or WhatsApp +86 185 9591 3361.

Order designation	Cores × mm ²	AWG ≈	Outer Ø min mm	Outer Ø max mm	Copper kg/km	Weight ≈ kg/km	Min. bend R mm
n × 2 × 0.22 mm² (24 AWG) Low-Capacitance PE Data Pairs 4 sizes							
☐ Li2YCY (TP) 1×2×0.22	1×2×0.22	24	4.7	5.1	16	33	36
☐ Li2YCY (TP) 2×2×0.22	2×2×0.22	24	6.0	6.5	26	49	46
☐ Li2YCY (TP) 4×2×0.22	4×2×0.22	24	7.0	7.6	39	72	53
☐ Li2YCY (TP) 8×2×0.22	8×2×0.22	24	9.0	9.8	68	124	69
n × 2 × 0.25 mm² (24 AWG) Low-Capacitance PE Data Pairs 5 sizes							
☐ Li2YCY (TP) 1×2×0.25	1×2×0.25	24	4.9	5.3	18	36	37
☐ Li2YCY (TP) 2×2×0.25	2×2×0.25	24	6.2	6.7	28	54	47
☐ Li2YCY (TP) 3×2×0.25	3×2×0.25	24	6.5	7.1	35	64	50
☐ Li2YCY (TP) 4×2×0.25	4×2×0.25	24	7.4	8.0	43	79	56
☐ Li2YCY (TP) 8×2×0.25	8×2×0.25	24	9.5	10.3	75	134	72
n × 2 × 0.34 mm² (22 AWG) Low-Capacitance PE Data Pairs 5 sizes							
☐ Li2YCY (TP) 1×2×0.34	1×2×0.34	22	5.2	5.7	21	42	40
☐ Li2YCY (TP) 2×2×0.34	2×2×0.34	22	6.7	7.3	34	64	51
☐ Li2YCY (TP) 3×2×0.34	3×2×0.34	22	7.2	7.8	43	77	55
☐ Li2YCY (TP) 4×2×0.34	4×2×0.34	22	8.0	8.7	53	95	61
☐ Li2YCY (TP) 8×2×0.34	8×2×0.34	22	10.5	11.4	96	168	80
n × 2 × 0.50–0.75 mm² Low-Capacitance PE Data Pairs 6 sizes							
☐ Li2YCY (TP) 1×2×0.5	1×2×0.5	20	5.8	6.3	27	52	44
☐ Li2YCY (TP) 2×2×0.5	2×2×0.5	20	7.6	8.3	45	82	58
☐ Li2YCY (TP) 4×2×0.5	4×2×0.5	20	9.0	9.8	72	124	69
☐ Li2YCY (TP) 8×2×0.5	8×2×0.5	20	12.1	13.1	132	218	92
☐ Li2YCY (TP) 2×2×0.75	2×2×0.75	18	8.6	9.3	59	104	65
☐ Li2YCY (TP) 4×2×0.75	4×2×0.75	18	10.2	11.1	98	162	78

– Dimensions and weights are typical values per DIN VDE 0812 / EIA RS-422 & RS-485. Minimum fixed bending radius shown is 7 × OD.

Electrical & current ratings

5 sizes

Cross-section mm ²	AWG ≈	Max. DC resistance 20 °C, Ω/km	Single pair/core 30 °C, A	Multi-core bundle 30 °C, A
0.22	24	85	3.0	2.0
0.25	24	79	4.0	3.0
0.34	22	57	5.0	4.0
0.5	20	39	9.0	6.0
0.75	18	26	12.0	10.0

– Current ratings at 30 °C ambient in free air per DIN VDE 0298-4 / DIN VDE 0891-1. Apply grouping derating factors for multi-core control and signal bundles.

Standards and approvals

✓ DIN VDE 0812 / EIA RS-422 & RS-485

✓ CE · RoHS 2 (2011/65/EU) · REACH

Certifications



Management systems: ISO 9001, ISO 14001, ISO 45001

Request a quotation

Send the size, length and destination. An application engineer replies within 2 business hours.

WhatsApp / phone

+86 185 9591 3361

Email

info@tebaoflex.com

Web

tebaoflex.com/cables/li2ycy-tp-low-capacitance-data-cable



Typical values for this cable type, based on DIN VDE 0812 / EIA RS-422 & RS-485. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.