ANHUI FEICHUN SPECIAL CABLE CO., LTD.
安徽飞纯特种电缆有限公司
INDUSTRIAL CONTROL, POWER & INSTRUMENTATION CABLE SPECIALIST · WWW.FEICHUNCABLES.COM

DOCUMENT FC-PDS-LIYCY-2026-006
REVISION Rev. A1 | **DATE** 2026-02-24
CLASS Product Data Sheet | Screened Control · Twisted-Pair Instrumentation & Data Cables
STANDARDS IEC 60228 | IEC 60502 | VDE 0295 | EN 50288 | VDE 0472

PRODUCT SPECIFICATION — TIN-BRAIDED SCREENED PVC CONTROL & TWISTED-PAIR INSTRUMENTATION CABLES · EMI-PROTECTED · INDUSTRIAL AUTOMATION & DATA TRANSMISSION

LiYCY 2×0.5 / 2×1.0 / 8×1.5 | LiYCY(TP) 2×2×0.75 / 4×2×0.75 / 12×2×0.75

Two complementary product families for shielded industrial control and screened twisted-pair signal transmission duties at 0.5 kV.
Tinned-Copper Braid Screen | Flexible PVC Sheath | Individually-Screened Twisted Pairs | EMI / RFI Rejection | IEC / VDE Rated

Contact: tech@feichuncables.com | +86 138 5512 3218 | www.feichuncables.com

FC PVC / TC-BRAID SCREEN | 0.5 kV | EMI-SHIELDED | TWISTED-PAIR (TP) | AUTOMATION & INSTRUMENTATION

★ FEICHUN CABLE SERIES
6-Variant Range Screened Cables
Control · Data · Instrumentation · Automation
0.5 mm² – 1.5 mm² · PVC · Tinned-Cu Braid
Feichun Engineering Cables · RoHS Compliant · IEC/VDE

LIYCY SERIES — SCREENED PVC CONTROL CABLE 0.5 KV

LIYCY SERIES — FAMILY OVERVIEW

TIN-BRAIDED SCREENED ELECTRONIC CONTROL CABLE

The **LiYCY series** are flexible, fine-stranded copper-conductor control cables enclosed in a **tinned-copper wire braid screen** and a soft PVC outer sheath. The braid screen provides a low-impedance path for induced interference currents, delivering effective suppression of electromagnetic interference (EMI) and radio-frequency interference (RFI). This makes LiYCY the standard specification for **industrial automation wiring, PLC I/O circuits, servo drive feedback lines, measurement instrumentation, and sensor cables** where signal integrity must be maintained in electromagnetically noisy environments. The designation follows the German VDE cable coding convention: *Li* = flexible, *Y* = PVC insulation, *C* = tinned-copper braid, *Y* = PVC outer sheath.

LIYCY 2×0.5 — 2-CORE 0.5 MM²



2×0.5 mm²
TC braid screen
PVC (grey)

LIYCY 2×0.5 — CORE DATA	
Configuration	2 × 0.5 mm²
AWG equivalent	≈ 20 AWG
Conductor class	Fine-stranded Cu
Outer diameter	5.5 – 6.2 mm
Copper weight	35 kg/km
Total weight	≈ 55 kg/km
Rated voltage	0.5 kV (U₀/U)
Screen	Tinned-Cu braid
Current capacity	9 A @ 30 °C, free air

LIYCY 2×1.0 — 2-CORE 1.0 MM²



LIYCY 2×1.0 — CORE DATA	
Configuration	2 × 1.0 mm²
AWG equivalent	≈ 18 AWG
Conductor class	Fine-stranded Cu
Outer diameter	6.5 – 7.2 mm

LIYCY 8×1.5 — 8-CORE 1.5 MM²

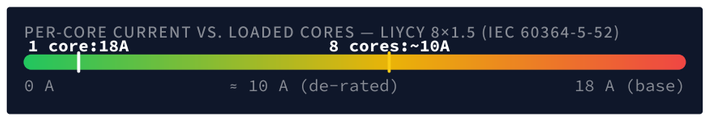


8×1.5 mm²
7× numbered black
1× G/Y earth
TC braid, PVC

LIYCY 8×1.5 — CORE DATA	
Configuration	8 × 1.5 mm²
AWG equivalent	≈ 16 AWG
Conductor class	Fine-stranded Cu
Outer diameter	11.5 – 12.5 mm
Copper weight	150 kg/km
Total weight	≈ 260 kg/km
Rated voltage	0.5 kV (U₀/U)
Screen	Tinned-Cu braid
Base current (single)	18 A @ 30 °C, free air
De-rated (8-core loaded)	≈ 10 A per core*

⚠ MULTI-CORE DE-RATING — IEC 60364-5-52 (CRITICAL)

The 18 A base rating applies to a **single conductor in free air at 30 °C**. When all 8 cores are simultaneously energised, a **de-rating factor of approximately 0.55** must be applied per IEC 60364-5-52, reducing the permissible per-core current to approximately **10 A**. Over-current protective devices must be selected and coordinated against this de-rated value.



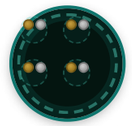
LIYCY(TP) SERIES — TWISTED-PAIR SCREENED INSTRUMENTATION 0.5 KV

LIYCY(TP) SERIES — FAMILY OVERVIEW

TWISTED-PAIR SCREENED DATA & INSTRUMENTATION CABLE

The **LiYCY(TP) series** extends the LiYCY construction with a **Twisted Pair (TP) core arrangement**. Each pair of signal conductors is twisted together at a defined lay length before the outer tinned-copper braid screen is applied. The twisting action progressively cancels the differential noise voltage induced by external magnetic fields across adjacent conductors, providing significantly superior common-mode rejection and inter-pair crosstalk suppression compared with a conventional parallel-core screened cable. LiYCY(TP) is the preferred specification for **RS-485 and RS-422 serial communications, PROFIBUS-DP field**

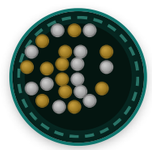
LIYCY(TP) 4×2×0.75 — 4 TWISTED PAIRS



4×2×0.75 mm²
4 twisted pairs
TC braid screen
PVC (grey)

LIYCY(TP) 4×2×0.75 — CORE DATA	
Configuration	4 × 2 × 0.75 mm²
AWG equivalent	≈ 18 AWG
Outer diameter	10.5 – 11.5 mm
Copper weight	96 kg/km
Total weight	≈ 165 kg/km
Rated voltage	0.5 kV (U₀/U)
Screen	TC braid (overall)
Current capacity / pair	12 A @ 30 °C

LIYCY(TP) 12×2×0.75 — 12 TWISTED PAIRS



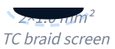
12×2×0.75 mm²
12 twisted pairs
TC braid screen
PVC (grey)

LIYCY(TP) 12×2×0.75 — CORE DATA	
Configuration	12 × 2 × 0.75 mm²
AWG equivalent	≈ 18 AWG
Outer diameter	16.0 – 17.5 mm
Copper weight	265 kg/km
Total weight	≈ 430 kg/km
Rated voltage	0.5 kV (U₀/U)
Screen	TC braid (overall)
Current cap. (de-rated)	12 A base / de-rate req.*

⚠ MULTI-PAIR DE-RATING — LIYCY(TP) 12×2×0.75

The 12 A figure is the per-conductor base rating for the 0.75 mm² cross-section. Where multiple pairs are simultaneously energised within the common braid screen, IEC 60364-5-52 de-rating provisions apply. For 12 simultaneously loaded pairs (24 active conductors), the effective per-core current should be de-rated by a factor of approximately **0.38–0.42**. Specifiers should treat this variant primarily as a **signal and data cable** for low-power circuits; power distribution at the base conductor rating is not intended for fully-loaded multi-pair installation.

CONSOLIDATED VARIANT TABLE — ALL SIX PRODUCTS



2×2.0 mm²
TC braid screen
PVC (grey)

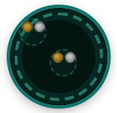
Copper weight	48 kg/km
Total weight	≈ 75 kg/km
Rated voltage	0.5 kV (U₀/U)
Screen	Tinned-Cu braid
Current capacity	14 A @ 30 °C, free air

✓ SHIELDING PERFORMANCE — TINNED-COPPER BRAID

The tinned-copper braid screen on the LiYCY series achieves a typical **coverage of ≥ 85%** (optical coverage) and provides an effective attenuation of conducted and radiated EMI across the frequency range relevant to PLC and servo systems (10 Hz – 30 MHz). The braid drain wire must be connected to protective earth (PE) at one end only — typically at the control cabinet end — to avoid circulating ground-loop currents in low-frequency analogue circuits. For high-frequency digital signals, both-end grounding is permissible and may improve RF screening performance.

bus wiring, analogue 4–20 mA differential pairs, encoder feedback, and multi-drop sensor networks where signal bandwidth, transmission distance, or bus topology demand maximised noise immunity.

LIYCY(TP) 2×2×0.75 — 2 TWISTED PAIRS



2×2×0.75 mm²
2 twisted pairs
TC braid screen
PVC (grey)

LIYCY(TP) 2×2×0.75 — CORE DATA	
Configuration	2 × 2 × 0.75 mm²
AWG equivalent	≈ 18 AWG
Outer diameter	8.0 – 9.0 mm
Copper weight	58 kg/km
Total weight	≈ 105 kg/km
Rated voltage	0.5 kV (U₀/U)
Screen	TC braid (overall)
Current capacity / pair	12 A @ 30 °C

TYPE & SERIES	CONFIG.	AWG	Ø (MM)	CU KG/KM	TOTAL KG/KM	I (A)†
LiYCY Screened	2×0.5	20	5.5–6.2	35	55	9
LiYCY Screened	2×1.0	18	6.5–7.2	48	75	14
LiYCY Screened	8×1.5	16	11.5–12.5	150	260	18/10‡
LiYCY(TP) Twisted	2×2×0.75	18	8.0–9.0	58	105	12
LiYCY(TP) Twisted	4×2×0.75	18	10.5–11.5	96	165	12
LiYCY(TP) Twisted	12×2×0.75	18	16.0–17.5	265	430	12 / ‡

† Ratings at 30 °C, single cable free air. ‡ Format = base / de-rated (all cores loaded per IEC 60364-5-52). All values are nominal; manufacturing tolerances apply per applicable IEC/VDE standard.

STANDARDS & CLASSIFICATION

- `IEC 60228` — Conductor classification, flexible fine-stranded conductors
- `IEC 60502-1` — Extruded insulation cables, rated voltage up to 1 kV
- `IEC 60364-5-52` — Wiring systems; current-carrying capacities and de-rating
- `VDE 0295 / VDE 0472` — Flexible conductor & cable testing (German equivalent)
- `EN 50288-7` — Instrumentation cables — paired & screened constructions
- `IEC 61084 / EN 50085` — Flame retardance classification for PVC-sheathed cables
- RoHS / REACH compliant across all variants listed in this document

TC Braid Screen | EMI / RFI Protected | Twisted-Pair TP
PROFIBUS / RS-485 | 0.5 kV Rated | 4–20 mA Loop
Flame Retardant | Fine-Stranded Cu | RoHS Compliant

ORDERING REFERENCE & CONTACT

Specify cables using the full type designation, e.g. `LiYCY 2×0.5 0.5kV`, `LiYCY 8×1.5 0.5kV`, `LiYCY(TP) 12×2×0.75 0.5kV`. Custom drum lengths, alternative core cross-sections, individually-screened-pair constructions (PiMF), and armoured variants available on request.

tech@feichuncables.com | **+86 138 5512 3218** | **www.feichuncables.com**

All data are nominal and subject to normal manufacturing tolerances.
The company reserves the right to modify specifications without prior notice.