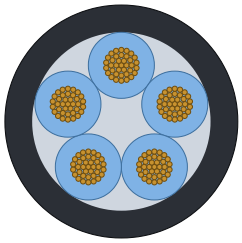
YY / CY / SY PVC Flexible Control Cable

SORIVO Product Series: **PVC control cable** | 0.14–2.5 mm² | Class 5 · IEC 60228 | unscreened, Cu braid, steel braid



- PVC sheath — TM2 type
- PVC insulation — TI2 / YI2 type
- Tinned copper braid screen (CY) — approx. 85 % optical
- Class 5 flexible copper to IEC 60228

APPLICATION

Multi-core PVC control and connection cable for machine wiring, switchgear, instrumentation panels and internal equipment runs. YY is the unscreened construction; CY adds a tinned copper braid for EMC; SY adds a galvanised steel wire braid for tensile and mechanical protection where no screen is needed.

CONSTRUCTION

Conductor
Class 5 flexible stranded copper, IEC 60228 / DIN VDE 0295 cl. 5

Insulation
PVC, TI2 type, colour or numeral coded cores

Screen
CY — tinned copper braid, approx. 85 % optical coverage. SY — galvanised steel wire braid

Sheath
PVC, TM2 type, transparent or grey

MODEL DESIGNATION

YY unscreened · **CY** copper braid screen · **SY** steel wire braid — the British (BS 6500) naming; the German equivalents are LiYY and LiYCY, and there is no German equivalent of SY

KEY FEATURES

- Class 5 conductor throughout — the range is a flexible control cable, not a fixed-installation one
- CY screen is a tinned copper braid at roughly 85 % optical coverage: an EMC screen, not a mechanical one
- SY is the opposite: steel braid for tensile load and crush, with no EMC value
- -10 °C to +80 °C, fixed and flexible, in the same cable

STANDARDS AND STATUS

- IEC 60228 — Class 5 flexible conductors
- EN 50363-3 / -4-1 — PVC insulation and sheath compounds
- IEC 60332-1 — single vertical flame test
- **No harmonised product standard** covers YY, CY or SY as a construction
- SY in particular has no CENELEC equivalent at all

TECHNICAL PARAMETERS

Max. Operating Voltage
350 V AC, line to line — the figure the LiYY / LiYCY data sheets give

Test Voltage
2000 V AC conductor / conductor
1200 V AC conductor / screen (CY)

Temperature
-10 °C to +80 °C, fixed and flexible
Storage -30 °C to +80 °C

Conductor
Class 5 flexible copper

Core Counts
Up to 50 at 0.14–0.5 mm²; 24 at 0.75; typically 6 at 1.0–2.5 mm²

Cross-sections
0.14–2.5 mm²

Bend Radius
10 × OD, fixed installation

Sheath Colour
Transparent or grey; other colours on request

+80 °C	85 %	Class 5
PVC	CY coverage	IEC 60228

WHICH CONSTRUCTION, AND WHY

Table 1 — the three designs differ by function, not by quality

	YY	CY	SY
Screen	None	Tinned copper braid, ~85 %	Galvanised steel wire braid
Screen purpose	—	EMC — shields against interference	Tensile and crush protection only
EMC performance	None	Yes	**No** — steel braid is not a screen
Typical use	Panel and machine wiring	VFD feeds, servo, signal runs	Trailing, hoisting, rough handling
German equivalent	LiYY	LiYCY	**None**
Harmonised standard	None	None	None
Bend radius, fixed	10 × OD	10 × OD	On request

The screen choice is a functional decision, and choosing wrong is expensive either way. A CY ordered where SY was wanted gives no mechanical protection; an SY ordered for an EMC problem solves nothing, because a steel braid shuts out mechanical damage and lets interference straight through.

CORE COUNT AGAINST CROSS-SECTION

Table 2 — core count limits by cross-section and construction

CROSS-SECTION mm²	MAX. CORES, YY	MAX. CORES, CY	TYPICAL APPLICATION
0.14	50	24	Dense signal bundles, panel internals
0.25	50	24	Sensor and relay wiring
0.5	50	32	General control
0.75	24	24	Control with 230 V contactors
1.0	6	6	Small power and motor feeds
1.5	6	6	Motor feeds
2.5	6	6	Motor feeds, longer runs

Core count falls as the cross-section rises — a manufacturing limit, not a commercial one. Above 0.75 mm² the laid-up assembly is too large to sheath, so the range tops out at six cores; 12 × 1.5 mm² needs a different construction.

> **On the "300/500 V" in the catalogue.** The LiYY and LiYCY data sheets state a maximum operating voltage of 350 V, and no harmonised standard gives this construction a 300/500 V U_0/U rating. Treat 300/500 V as a catalogue convention and check the actual system voltage against 350 V before specifying.

Disclaimer. The information in this datasheet is for guidance only and is subject to change without notice. Dimensions and masses are nominal and subject to manufacturing tolerance; confirm against the certificate of the delivered product. This document is uncontrolled once printed or forwarded — the current revision, issued under document number SORIVO-TM-YY-001, governs. © 2026 SORIVO. All rights reserved. Flexing bend radius is not specified by the manufacturer; if the cable will travel, state the application and a tested radius will be quoted.