instrumentation cable series

Galvanically Isolated Signal Cable

Galvanically Isolated Industrial Signal Transmission Cable



High-dielectric galvanically isolated industrial signal & HV impulse sensing cable

15 kV Galvanic Barrier | **Ultra-Low Coupling Cap** | **Dual Cu + Foil EMC Shield**

Application

Galvanically Isolated Signal Cable Galvanically Isolated Industrial Signal Transmission Cable engineered with high-dielectric XLPE/FEP/kapton barrier insulation (up to 15 kV rms galvanic isolation), low-capacitance balanced twisted pairs, and dual.

Typical uses: MV / HV IGBT & SiC Inverter Diagnostics, HVDC Valve Hall & Substation Telemetry, Pulsed-Power, Accelerator & Plasma Diagnostics, Railway Traction & Floating Battery (BESS) BMS, Electrochemical Cell Line Potential Sensing

Construction





Cross-section, not to scale

1. **Precision-balanced tinned/silver copper pairs**
2. **Low-permittivity FEP / cellular XLPE dielectric** — Lowers mutual capacitance to ≤ 38 pF/m

Technical data

Typical values

Galvanic isolation withstand	10 kV AC rms (Standard) · 15 kV AC rms / 25 kV DC (HV Series)	**Partial discharge extinction**	≥ 6.0 kV rms (< 5 pC partial discharge)
Mutual / barrier capacitance	≤ 38 pF/m (pair) · ≤ 18 pF/m (inner-to-outer screen)	**Differential impedance**	100 ± 5 Ω or 120 ± 6 Ω (RS-485 / CAN / LVDS compatible)
Operating temperature	-40 °C to +105 °C (fixed) · -20 °C to +80 °C (flexing)	**Short-circuit core rating**	+250 °C (FEP / XLPE core)
Thermal stability	Zero dielectric shrinkage under impulse heating	**Min. bend radius (fixed)**	8 × OD
Min. bend radius (installation)	12 × OD	**Crush & abrasion resistance**	≥ 1,500 N/100 mm crush resistance
dV/dt transient immunity	Withstands > 50 kV/µs SiC/IGBT common-mode edges	**Flame & halogen-free**	IEC 60332-1-2, IEC 60332-3-24, IEC 60754-1/2
Oil & chemical resistance	EN 60811-404 mineral oil & transformer fluid resistant	**Standards**	IEC 60664-1 & IEC 61010-1 Reinforced Insulation

Sizes

4 standard constructions

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

Order designation	Pairs & isolation rating	Outer Ø ≈ mm	Weight ≈ kg/km	AC Isolation kV rms	Screen-Screen C pF/m
Galvanically Isolated Twinax & Multipair Signal Cables 4 sizes					
☐ Galvanically Isolated Signal Cable 1P×0.50-10KV	1 Pair × 0.50 mm² · 10 kV AC Twinax	9.8	118	10.0	16
☐ Galvanically Isolated Signal Cable 2P×0.50-10KV	2 Pairs × 0.50 mm² · 10 kV AC	12.6	185	10.0	22
☐ Galvanically Isolated Signal Cable 4P×0.50-10KV	4 Pairs × 0.50 mm² · 10 kV AC	15.2	270	10.0	28
☐ Galvanically Isolated Signal Cable 1P×0.75-15KV	1 Pair × 0.75 mm² · 15 kV AC / 25 kV DC	12.4	172	15.0	14

– Every drum is 100 % routine tested for partial discharge (< 5 pC per IEC 60270) across the galvanic barrier wall.

Standards and approvals

- IEC 60664-1 & IEC 61010-1
- IEC 60270 Partial Discharge
- EN 50288-7 & RoHS 2

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/galvanicable-galvanically-isolated-industrial-signal-transmission-cable

Typical values for this cable type, based on IEC 61010-1 / IEC 60664-1 / EN 50288-7. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.