IEC 60584-3 TC-JX Hybrid (2×2×0.5 JX + 5G1.5)

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Type JX Thermocouple Extension + 5G1.5 Control Composite Cable

IEC 60584-3 / DIN VDE 0285 · 300/500 V · −30…+90 °C industrial TC-JX Hybrid construction



IEC 60584-3 / DIN VDE 0285 | 300/500 V | −30…+90 °C

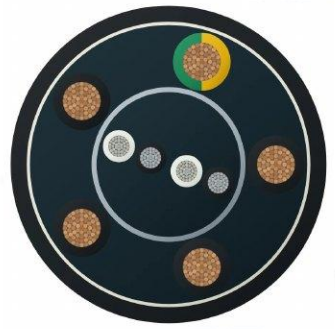
Application

Type JX Thermocouple Extension + 5G1.5 Control Composite Cable (TC-JX Hybrid (2×2×0.5 JX + 5G1.5)) engineered to IEC 60584-3 / DIN VDE 0285 for 300/500 V service across −30…+90 °C, featuring stranded iron / copper nickel / copper conductor and pvc outer

Typical uses: Automated Assembly & Packaging Lines, CNC Machine Tools & Robotics, PLC/DCS Control & Marshalling Cabinets, Industrial Drives & Motor Manufacturing, Metallurgical, Glass & Ceramic Furnaces

Construction





Cross-section, not to scale

1	Stranded iron / copper nickel / copper conductor	IEC 60584-3 / DIN VDE 0285
2	Thermocouple element tinned copper braid	IEC 60584-3 / DIN VDE 0285
3	PVC core insulation	IEC 60584-3 / DIN VDE 0285
4	Wrapping and banding	IEC 60584-3 / DIN VDE 0285
5	PVC outer sheath	IEC 60584-3 / DIN VDE 0285

Technical data

Typical values

Rated voltage / duty	300/500 V (IEC 60584-3 / DIN VDE 0285)	**Conductor construction**	Stranded iron / copper nickel / copper conductor — High-conductivity iron / copper nickel / copper conductor per IEC 60584-3 / DIN VDE 0285
Primary insulation / dielectric	Thermocouple element tinned copper braid — Thermocouple element tinned copper braid high-coverage braided layer (individual core / group layer)	**Continuous operating temperature**	−30…+90 °C per IEC 60584-3 / DIN VDE 0285
Short-circuit / peak thermal limit	+160 °C to +250 °C (5 s adiabatic limit depending on dielectric class)	**Minimum installation temperature**	−5 °C (thermoplastic) / −25 °C (cross-linked or elastomer) / −40 °C (metallic)
Outer protection / covering	PVC outer sheath — Extruded PVC outer sheath protective layer (continuous layer)	**Minimum bending radius**	7.5 × OD (installed / static routing)
Layer count & geometry	5 concentric/structural layers verified by cross-section inspection	**Environmental & chemical durability**	Engineered for industrial service in accordance with IEC 60584-3 / DIN VDE 0285
RoHS & REACH compliance	RoHS 2 (2011/65/EU + 2015/863) & REACH SVHC compliant	**Standards**	IEC 60584-3 / DIN VDE 0285

Sizes

12 standard constructions

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

Order designation	Configuration	Outer Ø ≈ mm	Weight ≈ kg/km	Min. bend R fixed mm
TC-JX Hybrid (2×2×0.5 JX + 5G1.5) Standard Construction Schedule (300/500 V · −30…+90 °C) 12 sizes				
☐ TC-JX Hybrid (2×2×0.5 JX + 5G1.5) 1×2×0.5	1×2×0.5 mm²	6.4	58	52
☐ TC-JX Hybrid (2×2×0.5 JX + 5G1.5) 2×2×0.5	2×2×0.5 mm²	9.2	112	74
☐ TC-JX Hybrid (2×2×0.5 JX + 5G1.5) 4×2×0.5	4×2×0.5 mm²	11.4	176	92
☐ TC-JX Hybrid (2×2×0.5 JX + 5G1.5) 8×2×0.5	8×2×0.5 mm²	14.8	295	118
☐ TC-JX Hybrid (2×2×0.5 JX + 5G1.5) 12×2×0.5	12×2×0.5 mm²	17.6	420	141
☐ TC-JX Hybrid (2×2×0.5 JX + 5G1.5) 1×2×1.0	1×2×1.0 mm²	7.6	86	61
☐ TC-JX Hybrid (2×2×0.5 JX + 5G1.5) 2×2×1.0	2×2×1.0 mm²	11.0	168	88
☐ TC-JX Hybrid (2×2×0.5 JX + 5G1.5) 4×2×1.0	4×2×1.0 mm²	13.5	264	108
☐ TC-JX Hybrid (2×2×0.5 JX + 5G1.5) 8×2×1.0	8×2×1.0 mm²	17.9	465	143
☐ TC-JX Hybrid (2×2×0.5 JX + 5G1.5) 1×2×1.5	1×2×1.5 mm²	8.5	114	68
☐ TC-JX Hybrid (2×2×0.5 JX + 5G1.5) 4×2×1.5	4×2×1.5 mm²	15.2	348	122
☐ TC-JX Hybrid (2×2×0.5 JX + 5G1.5) 12×2×1.5	12×2×1.5 mm²	23.4	860	187

– Additional pair/triad/quad counts (up to 48 pairs) and blue Ex-i intrinsically safe outer sheaths available per IEC 60584-3 / DIN VDE 0285.

Electrical parameters by conductor cross-section

5 sizes

Conductor size	Max. DC R_{20} Ω/km	Mutual cap. ≈ nF/km	Inductance ≈ mH/km
0.50 mm² (7/0.30 mm · AWG 20)	39.00	115	0.65
0.75 mm² (7/0.37 mm · AWG 18)	26.00	120	0.62
1.00 mm² (7/0.43 mm · AWG 17)	19.50	125	0.60
1.50 mm² (7/0.53 mm · AWG 16)	13.30	135	0.58
2.50 mm² (7/0.67 mm · AWG 14)	7.98	145	0.55

– L/R ratio ≤ 25 µH/Ω (0.5–1.0 mm²) and ≤ 40 µH/Ω (1.5 mm²) for intrinsically safe Ex-i circuits.

Standards and approvals

- IEC 60584-3 Compliant
- EN 10204 3.1 Routine Test Certificate
- 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/tc-jx-hybrid-thermocouple-and-control-composite-cable

Typical values for this cable type, based on IEC 60584-3 / DIN VDE 0285. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.