



instrumentation cable series

LSTCJU / LSTCJA / LSTCTU / LSTCTA

MIL-DTL-24643 LSTCJU / LSTCJA /

MIL-DTL-24643/55 single-pair Type J & Type T low-smoke shipboard thermocouple cable



MIL-DTL-24643/55

Type J & Type T (1 Pair)

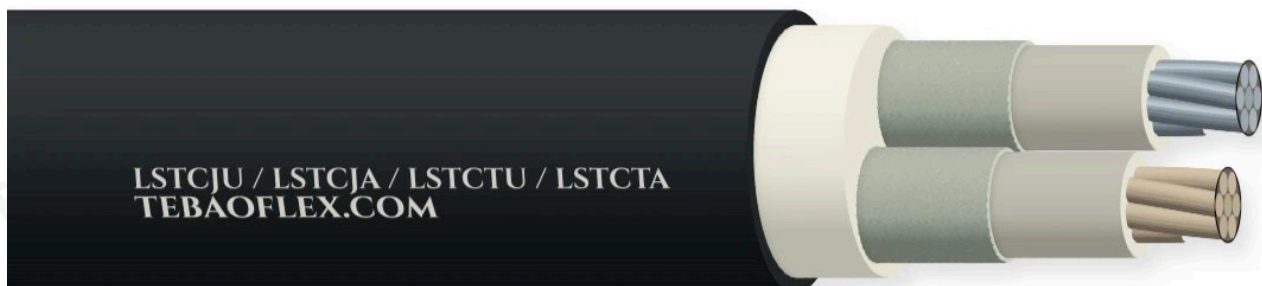
Unarmoured (U) / Armoured (A)

Application

MIL-DTL-24643/55 (LSTCJU, LSTCJA, LSTCTU, LSTCTA) Low-Smoke Zero-Halogen Naval Shipboard Thermocouple Cable featuring a single 20 AWG Type J (Iron/Constantan) or Type T (Copper/Constantan) twisted pair, XLPO insulation, LSZH jacket,.

Typical uses: Naval Propulsion & Auxiliary Machinery Rooms, Shipboard Chilled-Water, HVAC & Galley Cold Stores, Ammunition Magazine Temperature Monitoring, Marine Diesel & Gas Turbine Bearing Sensors, Coast Guard & Commercial Marine Retrofits

Construction



Cross-section, not to scale

- 1 20 AWG stranded Type J or Type T thermocouple pair
- 2 Cross-linked polyolefin (XLPO) core insulation
- 3 Low-Smoke Zero-Halogen (LSZH) cross-linked outer jacket
- 4 Braided Aluminum 5056 armour (LSTCJA / LSTCTA only)

Technical data

Typical values

Thermocouple calibrations	Type J (Fe/CuNi, 50.4 µV/°C) · Type T (Cu/CuNi, 38.7 µV/°C)	Loop resistance @ 20 °C	1.17 Ω/m (Type J 20 AWG) · 0.98 Ω/m (Type T 20 AWG)
Voltage & dielectric test	300 V rms working · 1,500 V AC rms for 1 min	Insulation resistance	≥ 1,000 MΩ·1000 ft (≥ 305 MΩ·km) @ 500 V DC
Cable operating temp.	-30 °C to +105 °C continuous shipboard service	Type J / T EMF accuracy	Type J: ±2.2 °C (±1.1 °C Spec) · Type T: ±1.0 °C (±0.5 °C Spec)
Cold bend performance	-30 °C cold mandrel bend test without cracking	Min. bend radius	6 × OD (LSTCJU / LSTCTU) · 8 × OD (LSTCJA / LSTCTA)
Conductor stranding	7 strands × 28 AWG (nominal 20 AWG / 0.52 mm²)	Armour coverage (-A)	≥ 80 % Aluminum alloy 5056 external wire braid
Flame & smoke	IEEE 1202 vertical tray flame & MIL-DTL-24643 low smoke	Zero halogen / acid gas	Halogen content < 0.2 %, acid gas evolution < 2.0 %
Marine fluid resistance	Resistant to NATO F-76 diesel, JP-5 jet fuel & lube oil	Standards	MIL-DTL-24643/55 (M24643/55-01UN/AN & -02UN/AN)

Sizes

4 standard constructions

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

Type & military PIN	TC calibration & armour	Nominal Ø mm	Weight ≈ kg/km	TC loop R Ω/m	Min. bend R mm
MIL-DTL-24643/55 Single-Pair Shipboard Thermocouple Cables 4 sizes					
☐ LSTCJU (M24643/55-01UN)	Type J (Fe/CuNi) · 1P×20 AWG · Unarmoured	5.8	48	1.17	35
☐ LSTCJA (M24643/55-01AN)	Type J (Fe/CuNi) · 1P×20 AWG · Al-Armoured	7.1	74	1.17	57
☐ LSTCTU (M24643/55-02UN)	Type T (Cu/CuNi) · 1P×20 AWG · Unarmoured	5.8	49	0.98	35
☐ LSTCTA (M24643/55-02AN)	Type T (Cu/CuNi) · 1P×20 AWG · Al-Armoured	7.1	75	0.98	57

- For watertight cross-linked single-pair Type J, K, T shipboard cables with water-blocking filler, see MIL-DTL-24643/56 (LSTCJX / LSTCKX / LSTCTX).

Standards and approvals

- ✓ MIL-DTL-24643/55 Compliant
- ✓ ASTM E230 Type J & Type T
- ✓ IEEE 1202 Naval Low-Smoke

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/mil-dtl-24643-lstcju-lstcja-lstctu-lstcta-shipboard-thermocouple-cable



Typical values for this cable type, based on MIL-DTL-24643/55 (M24643/55) / ASTM E230. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.