



instrumentation cable series

LSTCJX / LSTCKX / LSTCTX

MIL-DTL-24643 LSTCJX / LSTCKX / LSTCTX

MIL-DTL-24643/56 watertight low-smoke Type J, K & T shipboard thermocouple cable



MIL-DTL-24643/56 Watertight

Type J, Type K & Type T

Bulkhead Pressure Blocked

Application

MIL-DTL-24643/56 (LSTCJX, LSTCKX, LSTCTX) Watertight Cross-Linked Naval Shipboard Thermocouple Cable with a water-blocked 20 AWG Type J, Type K or Type T twisted pair, overall tinned copper shield, longitudinally watertight filler.

Typical uses: Marine Gas Turbine EGT & Enclosure Monitoring (Type K), Watertight Bulkhead & Damage-Control Zones, Submarine & Surface Combatant Propulsion Rooms, Bilge, Ballast & Weather-Deck Sensor Drops, Shipboard Cryogenic & Chilled-Water Loops (Type T)

Construction



Cross-section, not to scale

- 1 Water-blocked 20 AWG Type J, K or T stranded pair
- 2 Cross-linked polyolefin ('X') primary insulation
- 3 Longitudinal water-blocking filler & binder
- 4 Overall tinned copper wire braid shield
- 5 Watertight Low-Smoke Zero-Halogen (LSZH) outer jacket

Technical data

Typical values

Thermocouple calibrations	Type J (Fe/CuNi) · Type K (NiCr/NiAl) · Type T (Cu/CuNi)	Loop resistance @ 20 °C	1.17 Ω/m (Type J) · 1.90 Ω/m (Type K) · 0.98 Ω/m (Type T)
Voltage & dielectric test	300 V rms working · 1,500 V AC rms dielectric test	Insulation resistance	≥ 1,000 MΩ·1000 ft (≥ 305 MΩ·km) @ 500 V DC
Cable continuous rating	-30 °C to +105 °C shipboard ambient	EMF tolerance	ASTM E230 Standard (±2.2 °C J/K, ±1.0 °C T) or Special limits
Cold bend test	-30 °C mandrel bend without cracking	Min. bend radius	6 × OD (-UN unarmoured) · 8 × OD (-AN Al-armoured)
Watertight hydrostatic test	Zero axial leakage under MIL-DTL-24643 differential pressure	Shield coverage	≥ 85 % tinned copper wire braid screen
Flame propagation	IEEE 1202 / UL 1581 vertical tray flame test	Smoke & halogen content	Low-smoke optical density, < 0.2 % halogens, < 2 % acid gas
Oil & seawater resistance	Resistant to naval fuel, synthetic turbine oil & seawater	Standards	MIL-DTL-24643/56 (M24643/56-01, -02, -03 UN/AN)

Sizes

6 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-24643/56 Watertight Shielded Shipboard Thermocouple Cables 6 sizes					
☐ LSTCJX (M24643/56-01UN)	Type J (Fe/CuNi) · Watertight Unarmoured	7.4	82	1.17	44
☐ LSTCJXA (M24643/56-01AN)	Type J (Fe/CuNi) · Watertight Al-Armoured	8.6	112	1.17	69
☐ LSTCKX (M24643/56-02UN)	Type K (NiCr/NiAl) · Watertight Unarmoured	7.4	84	1.90	44
☐ LSTCKXA (M24643/56-02AN)	Type K (NiCr/NiAl) · Watertight Al-Armoured	8.6	114	1.90	69
☐ LSTCTX (M24643/56-03UN)	Type T (Cu/CuNi) · Watertight Unarmoured	7.4	83	0.98	44
☐ LSTCTXA (M24643/56-03AN)	Type T (Cu/CuNi) · Watertight Al-Armoured	8.6	113	0.98	69

– LSTCKX (M24643/56-02) is the sole MIL-DTL-24643 single-pair Type K shipboard thermocouple cable for marine gas turbines.

Standards and approvals

- ✓ MIL-DTL-24643/56 Watertight
- ✓ ASTM E230 Type J / K / 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-lstcjsx-lstckx-lstctx-watertight-cross-linked-shipboard-thermocouple-cable



Typical values for this cable type, based on MIL-DTL-24643/56 (M24643/56) / 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.