



industrial data rf cable series

LSC50SW-4

MIL-DTL-24643 LSC50SW-4 Watertight Shipboard Cat5e LAN

MIL-DTL-24643/61 · Watertight shipboard Cat5e SF/UTP LAN · 100 Ω · 2.4 bar · LSZH



MIL-DTL-24643/61 · Watertight

100 Ω · Cat.5e 100 MHz · 4×2×24 AWG

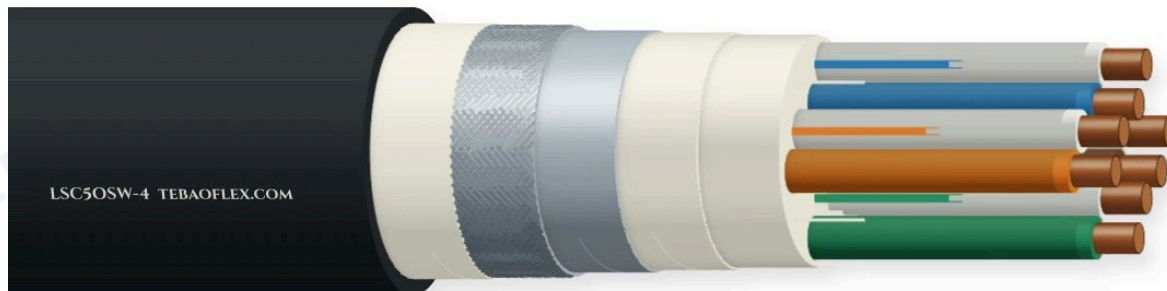
LSZH XLPO · Bulkhead Transit

Application

US Navy watertight shipboard Category 5e SF/UTP LAN cable (LSC50SW-4) per MIL-DTL-24643/61 with four 100 Ω 24 AWG pairs, longitudinal water-blocking compounds tested to 35 psi (2.4 bar), overall Al/PET tape plus ≥ 85 % tinned copper braid, and LSZH sheath.

Typical uses: US Navy Surface Ship & Submarine Bulkheads, Shipboard Damage-Control & Propulsion LANs, Amphibious & Auxiliary Naval Vessels, Offshore Platform Safety Shutdown Networks, Naval Shipyard Multi-Cable Transits

Construction



Cross-section, not to scale

- 1 24 AWG solid or water-blocked 7-strand copper
- 2 Low-permittivity polyolefin / fluoropolymer insulation
- 3 Water-swellable tape + 100 % Al/PET foil screen
- 4 Water-blocked tinned copper wire braid screen
- 5 Cross-linked low-smoke zero-halogen (LSZH XLPO) sheath

Technical data

Typical values

Characteristic impedance 100 $\Omega \pm 15 \Omega$ (1 to 100 MHz)

Mutual capacitance & VoP ≤ 56 pF/m · 68–70 % velocity of propagation

NEXT @ 10 / 100 MHz ≥ 50.3 dB / ≥ 35.3 dB

Voltage rating 300 V RMS · IEEE 802.3at PoE+ capable

Configuration 4 pairs × 24 AWG watertight SF/UTP

Min. bending radius 8 × OD (71 mm unarmored) · 10 × OD (armored)

Flame propagation MIL-DTL-24643 / IEEE 1202 vertical tray flame

Standards MIL-DTL-24643/61 (M24643/61-01UO & -01AU)

Max. conductor DC resistance $\leq 93.8 \Omega/\text{km}$ at +20 °C

Attenuation @ 10 / 100 MHz 6.5 / 22.0 dB/100m max.

Operating temperature -30 °C to +105 °C

Smoke & halogen content MIL-DTL-24643 low-smoke zero-halogen (< 0.2 %)

Nominal outer diameter 8.89 mm (LSC5OSW-4) · 10.54 mm (LSC5OSWA-4)

Watertightness test MIL-DTL-24643 longitudinal hydrostatic water block

Oil, fuel & weather Resists marine diesel, lube oil, UV & salt fog

Sizes

8 standard constructions

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

Order designation	Impedance / size	Conductor & dielectric	Wall $\approx$ mm	Outer $\varnothing \approx$ mm	Metal kg/km	Weight $\approx$ kg/km	Min. bend R fixed mm
Standard LSC5OSW-4 configurations 8 sizes							
☐ M24643/61-01UO (LSC5OSW-4)	4×2×24 AWG · Watertight	Solid 24 AWG + Dry Block + OS	1.15	8.89	36.0	96.0	71
☐ M24643/61-01AU (LSC5OSWA-4)	4×2×24 AWG · WT Armored	Solid 24 AWG + WT + Al Braid	1.15	10.54	56.0	138.0	105
☐ M24643/61-02UO (LSC5OSW-4)	4×2×24 AWG · WT S/FTP	Pair Foil + Overall Braid WT	1.20	9.40	41.0	108.0	75
☐ M24643/61-02AU (LSC5OSWA-4)	4×2×24 AWG · WT S/FTP Arm.	Pair Foil + Overall + Al Braid	1.20	11.05	62.0	152.0	111
☐ M24643/61-03UO (Flex WT)	4×2×24/7 AWG · Watertight	Stranded 24/7 Blocked + OS	1.15	9.14	37.0	101.0	73
☐ M24643/61-03AU (Flex WT Arm)	4×2×24/7 AWG · WT Armored	Stranded 24/7 WT + Al Braid	1.15	10.80	58.0	144.0	108
☐ LSC5OSW-2 (2-Pair WT)	2×2×24 AWG · Watertight	2-Pair Watertight Cat.5e	1.05	7.40	24.0	68.0	59
☐ LSC5OSW-4-22 (22 AWG WT)	4×2×22 AWG · Long-Run WT	22 AWG Extended Reach WT	1.20	9.80	48.0	118.0	78

– Outer diameters and weights are nominal engineering values for LSC5OSW-4 subject to standard manufacturing tolerances per MIL-DTL-24643/61 & ANSI/TIA-568 Cat.5e (Watertight Shipboard LAN).

RF & electrical data

8 sizes

Configuration	Max. DC R @ 20 °C Ω/km	Char. Z0 Ω	Velocity VoP / L (% or nH/m)	Dielectric test V AC rms
M24643/61-01UO (LSC5OSW-4) (4×2×24 AWG · Watertight)	93.80	100.0	69.0	1,500
M24643/61-01AU (LSC5OSWA-4) (4×2×24 AWG · WT Armored)	93.80	100.0	69.0	1,500
M24643/61-02UO (LSC5OSW-4) (4×2×24 AWG · WT S/FTP)	93.80	100.0	70.0	1,500
M24643/61-02AU (LSC5OSWA-4) (4×2×24 AWG · WT S/FTP Arm.)	93.80	100.0	70.0	1,500
M24643/61-03UO (Flex WT) (4×2×24/7 AWG · Watertight)	105.00	100.0	68.0	1,500
M24643/61-03AU (Flex WT Arm) (4×2×24/7 AWG · WT Armored)	105.00	100.0	68.0	1,500
LSC5OSW-2 (2-Pair WT) (2×2×24 AWG · Watertight)	93.80	100.0	69.0	1,500
LSC5OSW-4-22 (22 AWG WT) (4×2×22 AWG · Long-Run WT)	59.00	100.0	70.0	1,500

– Characteristic impedance, propagation velocity, DC resistance at +20 °C, and dielectric withstand voltages verified per MIL-DTL-24643/61 & ANSI/TIA-568 Cat.5e (Watertight Shipboard LAN).

Standards and approvals

- ✓ MIL-DTL-24643/61 & ANSI/TIA-568 Cat.5e (Watertight Shipboard LAN)
- ✓ CE (2014/35/EU) & RoHS 3 (2015/863/EU) Compliant
- ✓ REACH SVHC Compliance Verified

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

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Email

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Web

tebaoflex.com/cables/mil-dtl-24643-lsc5osw-4-watertight-shipboard-cat5e-lan-data-cable



Typical values for this cable type, based on MIL-DTL-24643/61 & ANSI/TIA-568 Cat.5e (Watertight Shipboard LAN). Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.