



industrial data rf cable series

LSC50S-4 / LSC5POS-4

MIL-DTL-24643 LSC50S-4 / LSC5POS-4 Shipboard

MIL-DTL-24643/59 100 Ω 4-pair 24 AWG Cat.5e LSZH screened shipboard LAN cable



MIL-DTL-24643/59 · Cat.5e LAN

100 Ω · 4×2×24 AWG · 100 MHz

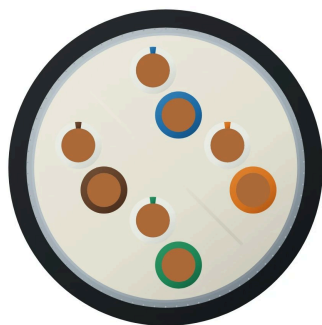
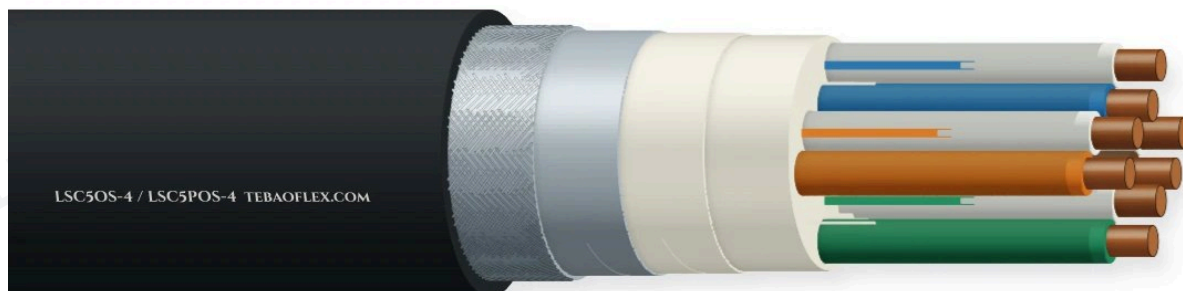
LSC50S-4 (SF/UTP) · LSC5POS-4 (S/FTP)

Application

US Navy shipboard Category 5e SF/UTP LAN cable (LSC50S-4 solid 24 AWG; LSC5POS-4 stranded patch 24/7 AWG) per MIL-DTL-24643/59 with four 100 Ω twisted pairs, overall aluminum/polyester tape plus $\geq 85\%$ tinned copper braid, and cross-linked naval LSZH jacket.

Typical uses: US Navy CANES & Shipboard IT Networks, Combat System & Bridge Consoles, Marine Propulsion & Damage Control LANs, Coast Guard & Auxiliary Vessels, Naval Simulator & Shore Integration Labs

Construction



Cross-section, not to scale

- 1 24 AWG solid or 7-strand copper conductors
- 2 Low-loss polyolefin / fluoropolymer core insulation
- 3 Overall Al/PET tape (plus individual pair foils on POS)
- 4 Overall tinned copper wire braid screen
- 5 Cross-linked low-smoke zero-halogen (LSZH XLPO) jacket

Technical data

Typical values

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

Mutual capacitance & VoP $\leq$ 56 pF/m · 70 % nominal velocity of propagation

NEXT @ 10 / 100 MHz $\geq$ 50.3 dB / $\geq$ 35.3 dB

Operating temperature -30 °C to +105 °C

Acid gas & smoke index MIL-DTL-24643 zero-halogen (< 0.2 % halogens)

Nominal outer diameter 7.62 mm (LSC5OS-4) · 8.38 mm (LSC5POS-4)

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

Oil & fluid resistance Resists marine lube oil, fuel & cleaning agents

Max. conductor DC resistance $\leq$ 93.8 Ω /km (28.6 Ω /1000 ft) at +20 °C

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

Propagation delay skew $\leq$ 45 ns/100m

Voltage rating 300 V RMS · PoE / PoE+ compliant

Pair count & conductor size 4 pairs $\times$ 24 AWG (solid or 7 $\times$ 32 AWG stranded)

Min. bending radius 8 $\times$ OD (unarmored) · 10 $\times$ OD (armored)

Watertightness class Non-watertight (dry interior compartments)

Standards MIL-DTL-24643/59 (M24643/59)

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 LSC5OS-4 / LSC5POS-4 configurations 8 sizes							
☐ M24643/59-01UO (LSC5OS-4)	4 $\times$ 2 $\times$ 24 AWG · SF/UTP	Solid 24 AWG + Overall Shield	0.95	7.62	34.0	72.0	61
☐ M24643/59-01AU (LSC5OSA-4)	4 $\times$ 2 $\times$ 24 AWG · Armored	Solid 24 AWG + SF/UTP + AI	0.95	9.27	52.0	108.0	93
☐ M24643/59-02UO (LSC5POS-4)	4 $\times$ 2 $\times$ 24 AWG · S/FTP	Solid 24 AWG + Pair & Overall	1.00	8.38	39.0	86.0	67
☐ M24643/59-02AU (LSC5POSA-4)	4 $\times$ 2 $\times$ 24 AWG · S/FTP Arm.	Solid 24 AWG + S/FTP + AI	1.00	10.03	58.0	125.0	100
☐ M24643/59-03UO (Flex OS)	4 $\times$ 2 $\times$ 24/7 AWG · SF/UTP	Stranded 24/7 + Overall Shield	0.95	7.87	35.0	76.0	63
☐ M24643/59-04UO (Flex POS)	4 $\times$ 2 $\times$ 24/7 AWG · S/FTP	Stranded 24/7 + Pair & Overall	1.00	8.64	40.0	90.0	69
☐ LSC5OS-2 (2-Pair Cat.5e)	2 $\times$ 2 $\times$ 24 AWG · SF/UTP	2-Pair Fast Ethernet LSZH	0.85	6.35	22.0	52.0	51
☐ LSC5POS-4-SHF1	4 $\times$ 2 $\times$ 24 AWG · IEC SHF1	DNV / ABS Naval Cat.5e S/FTP	0.95	8.20	38.0	82.0	66

– Outer diameters and weights are nominal engineering values for LSC5OS-4 / LSC5POS-4 subject to standard manufacturing tolerances per MIL-DTL-24643/59 & ANSI/TIA-568 Cat.5e (Shipboard LSZH Screened 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
M24643/59-01UO (LSC5OS-4) (4 $\times$ 2 $\times$ 24 AWG · SF/UTP)	93.80	100.0	70.0	1,500
M24643/59-01AU (LSC5OSA-4) (4 $\times$ 2 $\times$ 24 AWG · Armored)	93.80	100.0	70.0	1,500
M24643/59-02UO (LSC5POS-4) (4 $\times$ 2 $\times$ 24 AWG · S/FTP)	93.80	100.0	72.0	1,500
M24643/59-02AU (LSC5POSA-4) (4 $\times$ 2 $\times$ 24 AWG · S/FTP Arm.)	93.80	100.0	72.0	1,500
M24643/59-03UO (Flex OS) (4 $\times$ 2 $\times$ 24/7 AWG · SF/UTP)	105.00	100.0	68.0	1,500
M24643/59-04UO (Flex POS) (4 $\times$ 2 $\times$ 24/7 AWG · S/FTP)	105.00	100.0	70.0	1,500
LSC5OS-2 (2-Pair Cat.5e) (2 $\times$ 2 $\times$ 24 AWG · SF/UTP)	93.80	100.0	70.0	1,500
LSC5POS-4-SHF1 (4 $\times$ 2 $\times$ 24 AWG · IEC SHF1)	93.80	100.0	72.0	1,500

– Characteristic impedance, propagation velocity, DC resistance at +20 °C, and dielectric withstand voltages verified per MIL-DTL-24643/59 & ANSI/TIA-568 Cat.5e (Shipboard LSZH Screened LAN).

Standards and approvals

- ✓ MIL-DTL-24643/59 & ANSI/TIA-568 Cat.5e (Shipboard LSZH Screened 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

+86 185 9591 3361

Email

info@tebaoflex.com

Web

tebaoflex.com/cables/mil-dtl-24643-lsc5os-4-lsc5pos-4-shipboard-cat5e-screened-ethernet-cable



Typical values for this cable type, based on MIL-DTL-24643/59 & ANSI/TIA-568 Cat.5e (Shipboard LSZH Screened LAN). Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.