



industrial data rf cable series

LSC60SW-4

MIL-DTL-24643 LSC60SW-4 Watertight Shipboard Cat6

MIL-DTL-24643/65 · Watertight shipboard Cat6 250 MHz SF/UTP · 100 Ω · Spline · LSZH



MIL-DTL-24643/65 · Cat.6 250 MHz

100 Ω · Watertight Bulkhead LAN

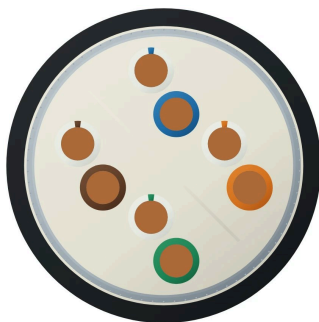
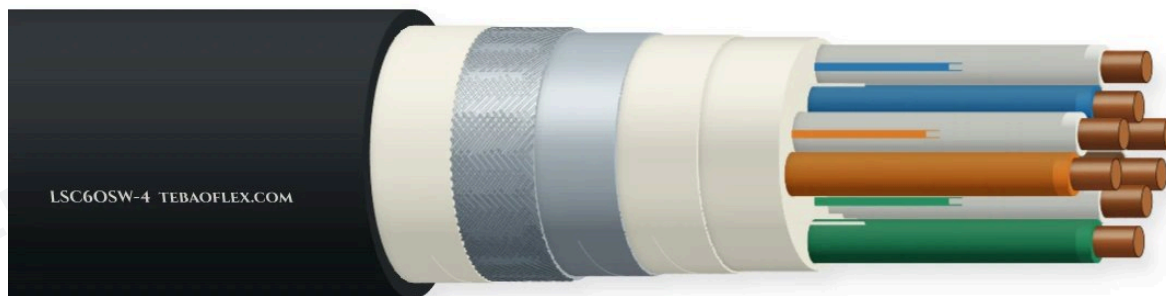
4×2×23 AWG · 1000BASE-T / PoE++

Application

US Navy watertight shipboard Category 6 SF/UTP Gigabit LAN cable (LSC60SW-4) per MIL-DTL-24643/65 (250 MHz) with four 100 Ω 23 AWG pairs, cross-web spline, 35 psi (2.4 bar) water blocking, overall foil + tinned braid, and naval LSZH jacket.

Typical uses: US Navy CANES & Combat System Backbones, Submarine & Destroyer Watertight Bulkheads, Shipboard IP Radar, Sonar & EO/IR Video, High-Power IEEE 802.3bt PoE++ Ship Consoles, Coast Guard & Allied Frigate Upgrades

Construction



Cross-section, not to scale

- 1 23 AWG solid or 7-strand copper conductors
- 2 Low-loss polyolefin insulation + central spline
- 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 Ω $\pm$ 15 Ω (1 to 250 MHz)

Attenuation @ 100 / 250 MHz 19.8 / 32.8 dB/100m max.

Propagation velocity & skew 70 % nominal VoP · $\leq$ 45 ns/100m delay skew

Voltage & PoE rating 300 V RMS · IEEE 802.3bt PoE++ Type 4 (90 W)

Pair count & conductor size 4 pairs $\times$ 23 AWG + central cross-web spline

Min. bending radius 8 $\times$ OD (77 mm unarmored) · 10 $\times$ OD (armored)

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

Standards MIL-DTL-24643/65 (M24643/65-01UO & -01AU)

Max. conductor DC resistance $\leq$ 73.2 Ω /km at +20 $^{\circ}$ C (23 AWG)

NEXT @ 100 / 250 MHz $\geq$ 44.3 dB / $\geq$ 38.3 dB

Operating temperature -30 $^{\circ}$ C to +105 $^{\circ}$ C

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

Nominal outer diameter 9.65 mm (LSC6OSW-4) · 11.30 mm (LSC6OSWA-4)

Watertightness test MIL-DTL-24643 longitudinal hydrostatic water block

Marine oil & salt fog Resists NATO F-76 fuel, lube oil & salt spray

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 LSC6OSW-4 configurations 8 sizes							
☐ M24643/65-01UO (LSC6OSW-4)	4 $\times$ 2 $\times$ 23 AWG · Watertight	Solid 23 AWG + Spline + OS	1.20	9.65	45.0	118.0	77
☐ M24643/65-01AU (LSC6OSWA-4)	4 $\times$ 2 $\times$ 23 AWG · WT Armored	Solid 23 AWG + WT + Al Braid	1.20	11.30	68.0	165.0	113
☐ M24643/65-02UO (LSC6POSW-4)	4 $\times$ 2 $\times$ 23 AWG · WT S/FTP	Pair Foil + Overall Braid WT	1.25	10.16	50.0	132.0	81
☐ M24643/65-02AU (LSC6POSWA-4)	4 $\times$ 2 $\times$ 23 AWG · WT S/FTP Arm.	Pair Foil + Overall + Al Braid	1.25	11.81	74.0	180.0	118
☐ M24643/65-03UO (Flex WT)	4 $\times$ 2 $\times$ 23/7 AWG · Watertight	Stranded 23/7 + Spline + OS	1.20	9.90	46.0	124.0	79
☐ M24643/65-03AU (Flex WT Arm)	4 $\times$ 2 $\times$ 23/7 AWG · WT Armored	Stranded 23/7 WT + Al Braid	1.20	11.55	70.0	172.0	116
☐ LSC6OS-4 Non-Watertight	4 $\times$ 2 $\times$ 23 AWG · Dry Cat.6	Non-Watertight Interior Cat.6	1.00	8.40	43.0	92.0	67
☐ LSC6AOSW-4 (500 MHz 10G)	4 $\times$ 2 $\times$ 23 AWG · Cat.6A WT	10GBASE-T Watertight S/FTP	1.25	10.40	52.0	138.0	83

– Outer diameters and weights are nominal engineering values for LSC6OSW-4 subject to standard manufacturing tolerances per MIL-DTL-24643/65 & ANSI/TIA-568 Cat.6 (250 MHz Watertight Shipboard LAN).

RF & electrical data

8 sizes

Configuration	Max. DC R @ 20 $^{\circ}$ C Ω /km	Char. Z0 Ω	Velocity VoP / L (% or nH/m)	Dielectric test V AC rms
M24643/65-01UO (LSC6OSW-4) (4 $\times$ 2 $\times$ 23 AWG · Watertight)	73.20	100.0	70.0	1,500
M24643/65-01AU (LSC6OSWA-4) (4 $\times$ 2 $\times$ 23 AWG · WT Armored)	73.20	100.0	70.0	1,500
M24643/65-02UO (LSC6POSW-4) (4 $\times$ 2 $\times$ 23 AWG · WT S/FTP)	73.20	100.0	72.0	1,500
M24643/65-02AU (LSC6POSWA-4) (4 $\times$ 2 $\times$ 23 AWG · WT S/FTP Arm.)	73.20	100.0	72.0	1,500
M24643/65-03UO (Flex WT) (4 $\times$ 2 $\times$ 23/7 AWG · Watertight)	82.00	100.0	68.0	1,500
M24643/65-03AU (Flex WT Arm) (4 $\times$ 2 $\times$ 23/7 AWG · WT Armored)	82.00	100.0	68.0	1,500
LSC6OS-4 Non-Watertight (4 $\times$ 2 $\times$ 23 AWG · Dry Cat.6)	73.20	100.0	72.0	1,500
LSC6AOSW-4 (500 MHz 10G) (4 $\times$ 2 $\times$ 23 AWG · Cat.6A WT)	73.20	100.0	75.0	1,500

– Characteristic impedance, propagation velocity, DC resistance at +20 $^{\circ}$ C, and dielectric withstand voltages verified per MIL-DTL-24643/65 & ANSI/TIA-568 Cat.6 (250 MHz Watertight Shipboard LAN).

Standards and approvals

- ✓ MIL-DTL-24643/65 & ANSI/TIA-568 Cat.6 (250 MHz 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

info@tebaoflex.com

Web

tebaoflex.com/cables/mil-dtl-24643-lsc6osw-4-watertight-shipboard-cat6-gigabit-lan-cable



Typical values for this cable type, based on MIL-DTL-24643/65 & ANSI/TIA-568 Cat.6 (250 MHz 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.