

INCH-POUND

MIL-DTL-24640C

SUPPLEMENT 1

8 November 2011

## DETAIL SPECIFICATION

CABLES, LIGHTWEIGHT, LOW SMOKE, ELECTRIC, FOR SHIPBOARD USE,  
GENERAL SPECIFICATION FOR

This supplement forms a part of MIL-DTL-24640C dated 8 November 2011.

TABLE I. Specification sheets, numerical listing.

MIL-DTL-24640/1	-	Cable, Electric, -20 to +105 °C, 600 Volts, Lightweight, Two-Conductor, Low Power, Types DX and DXWB
MIL-DTL-24640/2	-	Cable, Electric, -20 to +105 °C, 600 Volts, Lightweight, Three-Conductor, Low Power, Types TX and TXWB
MIL-DTL-24640/3	-	Cable, Electric, -20 to +105 °C, 600 Volts, Lightweight, Four-Conductor, Low Power, Types FX and FXWB
MIL-DTL-24640/4	-	Cable, Electric, -20 to +105 °C, 600 Volts, Lightweight, Multi-Pair, 20 AWG, Types TTX and TTXWB
MIL-DTL-24640/5	-	Cable, Electric, -20 to +105 °C, 600 Volts, Lightweight, Multi-Pair, 20 AWG, Types TTXS or TTXSW (Including Variation Type TTXSO or TTXSOW)
MIL-DTL-24640/6	-	Cable, Electric, -20 to +105 °C, 600 Volts, Lightweight, Multi-Pair, 22 AWG, Types 2XAO and 2XAOW
MIL-DTL-24640/7	-	Cable, Electric, -20 to +105 °C, 600 Volts, Lightweight, Multi-Conductor, 22 AWG, Types 1XMSO and 1XMSOW
MIL-DTL-24640/8	-	Cable, Electric, -20 to +105 °C, 600 Volts, Lightweight, Multi-Conductor, 20 AWG, Types MXO and MXOW
MIL-DTL-24640/9	-	Cable, Electric, -20 to +105 °C, 600 Volts, Lightweight, Multi-Pair, 22 AWG, Type 2XS and 2XSW (Including Variation Types 2XSO and 2XSOW)
MIL-DTL-24640/10	-	Cable, Electric, -20 to +105 °C, 600 Volts, Lightweight, Multi-Conductor, 16 AWG, Types MXSO and MXSOW
MIL-DTL-24640/11	-	Cable, Electric, -20 to +105 °C, 600 Volts, Lightweight, Multi-Triad, 18 AWG, Types 3XS and 3XSW
MIL-DTL-24640/12	-	Cable, Electric, -20 to +105 °C, 600 Volts, Lightweight, Multi-Pair, 26 AWG, Types 2XO and 2XOW
MIL-DTL-24640/13	-	Cable, Electric, -20 to +105 °C, 600 Volts, Lightweight, Multi-Pair, 26 AWG, Types 2XSXO and 2XSXOW
MIL-DTL-24640/14	-	Cable, Electric, -20 to +105 °C, 600 Volts, Lightweight, Multi-Conductor, 22 AWG, Type 1XSOW

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- MIL-DTL-24640/15 - Cable, Electric, -20 to +105 °C, 600 Volts, Lightweight, Multi-Pair, 22 AWG, Type 2XSAW (Including Variation Types 2XSAOW and 2XSAWA)
- MIL-DTL-24640/16 - Cable, Electric, -20 to +105 °C, 600 Volts, Lightweight, Multi-Pair, 18 AWG, Type 2XSW (Including Variation Type 2XSOW)
- MIL-DTL-24640/17 - Cable, Electric, -20 to +105 °C, 600 Volts, Lightweight, Multi-Pair, 26 AWG, Type 2XOW
- MIL-DTL-24640/18 - Cable, Electric, -20 to +105 °C, 600 Volts, Lightweight, Multi-Triad, 18 AWG, Type 3XSW (Including Variation Type 3XSOW)
- MIL-DTL-24640/19 - Cable, Electric, -20 to +105 °C, 600 Volts, Lightweight, Two-Conductor, Power, Type DXW (Including Variation Type DXOW)
- MIL-DTL-24640/20 - Cable, Electric, -20 to +105 °C, 600 Volts, Lightweight, Three-Conductor, Low Power, Type TXW (Including Variation Type TXOW)
- MIL-DTL-24640/21 - Cable, Electric, -20 to +105 °C, 600 Volts, Lightweight, Four-Conductor, Low Power, Type FXW (Including Variation Type FXOW)
- MIL-DTL-24640/22 - Cable, Electric, -20 to +105 °C, 600 Volts, Lightweight, Seven-Conductor, Low Power, Type 7XW
- MIL-DTL-24640/23 - Cable, Electric, -20 to +105 °C, 600 Volts, Lightweight, Multi-Conductor, 18 AWG, Type MXCW (Including Variation Type MXCOW)
- MIL-DTL-24640/24 - Cable, Electric, -20 to +105 °C, 600 Volts, Lightweight, Multi-Pair, 22 AWG, Type TTXW (Including Variation Type TTXOW)
- MIL-DTL-24640/25 - Cable, Electrical, -20 to +105 °C, 600 Volts, Type 9XS
- MIL-DTL-24640/26 - Cable, Electrical, -20 to +105 °C, 600 Volts, Type 5XO

The following tables provide a list of the cable types specified in the specification sheets categorized as power and lighting; control; and electronic, communication, and instrumentation. These categories are further subdivided as watertight, non-watertight, flexing, and non-flexing.

TABLE II. Low power – non-watertight, non-flexing.

Slant sheet	Title	Cable type(s)	Unarmored with overall shield	Armored	Number of conductors	Voltage (V)
1	Cable, Electric, -20 to +105 °C, 600 Volts, Lightweight, Two-Conductor, Low Power, Types DX and DXWB	DX DXWB			2	600
2	Cable, Electric, -20 to +105 °C, 600 Volts, Lightweight, Three-Conductor, Low Power, Types TX and TXWB	TX TXWB			3	600
3	Cable, Electric, -20 to +105 °C, 600 Volts, Lightweight, Four-Conductor, Low Power, Types FX and FXWB	FX FXWB			4	600
25	Cable, Electrical, -20 to +105 °C, 600 Volts, Type 9XS		9XS		4 pairs, 1 single	600
26	Cable, Electrical, -20 to +105 °C, 600 Volts, Type 5XO		5XO		5	600

TABLE III. Electronic, communication and instrumentation – non-watertight, non-flexing.

Slant sheet	Title	Cable type(s)	Unarmored with overall shield	Armored	Number of conductors	Voltage (V)
4	Cable, Electric, -20 to +105 °C, 600 Volts, Lightweight, Multi-Pair, 20 AWG, Types TTX and TTXWB	TTX TTXWB			3 & 15 pairs	600
5	Cable, Electric, -20 to +105 °C, 600 Volts, Lightweight, Multi-Pair, 20 AWG, Types TTXS or TTXSW (Including Variation Type TTXSO or TTXSOW)	TTXS TTXSW			2 & 4 pairs	600
5	Cable, Electric, -20 to +105 °C, 600 Volts, Lightweight, Multi-Pair, 20 AWG, Type TTXS (Including Variation Type TTXSO)		TTXSO		2, 6, 8, & 10 pairs	600
6	Cable, Electric, -20 to +105 °C, 600 Volts, Lightweight, Multi-Pair, 22 AWG, Types 2XAO and 2XAOW	2XAO 2XAOW	2XAO		2, 7, 10, 18, & 40 pairs	600
7	Cable, Electric, -20 to +105 °C, 600 Volts, Lightweight, Multi-Conductor, 22 AWG, Types 1XMSO and 1XMSOW	1XMSO 1XMSOW	1XMSO		7, 16, & 70	600
8	Cable, Electric, -20 to +105 °C, 600 Volts, Lightweight, Multi-Conductor, 20 AWG, Types MXO and MXOW	MXO MXOW	MXO		10 & 14	600
9	Cable, Electric, -20 to +105 °C, 600 Volts, Lightweight, Multi-Pair, 22 AWG, Type 2XS and 2XSW (Including Variation Types 2XSO and 2XSOW)	2XS 2XSW			2, 3, 7, 10, 14, 19, 24, & 30 pairs	600
9	Cable, Electric, -20 to +105 °C, 600 Volts, Lightweight, Multi-Pair, 22 AWG, Type 2XS (Including Variation Type 2XSO)		2XSO		3, 7, 10, 14, 19, & 30 pairs	600
10	Cable, Electric, -20 to +105 °C, 600 Volts, Lightweight, Multi-Conductor, 16 AWG, Types MXSO and MXSOW	MXSO MXSOW	MXSO		2, 9, 21, & 37	600
11	Cable, Electric, -20 to +105 °C, 600 Volts, Lightweight, Multi-Triad, 18 AWG, Types 3XS and 3XSW	3XS 3XSW			3 triads	600

TABLE III. Electronic, communication and instrumentation – non-watertight, non-flexing - Continued.

Slant sheet	Title	Cable type(s)	Unarmored with overall shield	Armored	Number of conductors	Voltage (V)
12	Cable, Electric, -20 to +105 °C, 600 Volts, Lightweight, Multi-Pair, 26 AWG, Types 2XO and 2XOW	2XO 2XOW	2XO		6, 18, 24, 42, 60, & 77 pairs	600
13	Cable, Electric, -20 to +105 °C, 600 Volts, Lightweight, Multi-Pair, 26 AWG, Types 2XSXO and 2XSXOW	2XSXO 2XSXOW	2XSXO		4 pairs	600

TABLE IV. Electronic, communication and instrumentation – watertight, non-flexing.

Slant sheet	Title	Cable type(s)	Unarmored with overall shield	Armored	Number of conductors	Voltage (V)
10	Cable, Electric, -20 to +105 °C, 600 Volts, Lightweight, Multi-Conductor, 16 AWG, Types MXSO and MXSOW		MXSOW		2, 9, 21, & 37	600
14	Cable, Electric, -20 to +105 °C, 600 Volts, Lightweight, Multi-Conductor, 22 AWG, Type 1XSOW		1XSOW		2, 14, 20, & 30	600
15	Cable, Electric, -20 to +105 °C, 600 Volts, Lightweight, Multi-Pair, 22 AWG, Type 2XSAW (Including Variation Types 2XSAOW and 2XSAWA)	2XSAW		2XSAWA	3, 7, & 14 pairs	600
15	Cable, Electric, -20 to +105 °C, 600 Volts, Lightweight, Multi-Pair, 22 AWG, Type 2XSAW (Including Variation Types 2XSAOW and 2XSAWA)		2XSAOW		3, 7, 10, 14, 19, 24, 30, & 37 pairs	600

TABLE IV. Electronic, communication and instrumentation – watertight, non-flexing - Continued.

Slant sheet	Title	Cable type(s)	Unarmored with overall shield	Armored	Number of conductors	Voltage (V)
16	Cable, Electric, -20 to +105 °C, 600 Volts, Lightweight, Multi-Pair, 18 AWG, Type 2XSW (Including Variation Type 2XSOW)	2XSW			1, 3, & 7 pairs	600
16	Cable, Electric, -20 to +105 °C, 600 Volts, Lightweight, Multi-Pair, 18 AWG, Type 2XSW (Including Variation Type 2XSOW)		2XSOW		3, 7, 12, 19, & 30 pairs	600
17	Cable, Electric, -20 to +105 °C, 600 Volts, Lightweight, Multi-Pair, 26 AWG, Type 2XOW		2XOW		6, 18, 24, 42, 60, & 77 pairs	600
18	Cable, Electric, -20 to +105 °C, 600 Volts, Lightweight, Multi-Triad, 18 AWG, Type 3XSW (Including Variation Type 3XSOW)	3XSW			3, 7, 10, & 14 triads	600
18	Cable, Electric, -20 to +105 °C, 600 Volts, Lightweight, Multi-Triad, 18 AWG, Type 3XSW (Including Variation Type 3XSOW)		3XSOW		3, 7, 10, 14, 19, & 24 triads	600

TABLE V. Low power – watertight (with circuit integrity), non-flexing.

Slant sheet	Title	Cable type(s)	Unarmored with overall shield	Armored	Number of conductors	Voltage (V)
19	Cable, Electric, -20 to +105 °C, 600 Volts, Lightweight, Two-Conductor, Power, Type DXW (Including Variation Type DXOW)	DXW	DXOW		2	600
20	Cable, Electric, -20 to +105 °C, 600 Volts, Lightweight, Three-Conductor, Low Power, Type TXW (Including Variation Type TXOW)	TXW	TXOW		3	600
21	Cable, Electric, -20 to +105 °C, 600 Volts, Lightweight, Four-Conductor, Low Power, Type FXW (Including Variation Type FXOW)	FXW	FXOW		4	600
22	Cable, Electric, -20 to +105 °C, 600 Volts, Lightweight, Seven-Conductor, Low Power, Type 7XW	7XW			7	600

TABLE VI. Control – watertight (with circuit integrity), non-flexing.

Slant sheet	Title	Cable type(s)	Unarmored with overall shield	Armored	Number of conductors	Voltage (V)
23	Cable, Electric, -20 to +105 °C, 600 Volts, Lightweight, Multi-Conductor, 18 AWG, Type MXCW (Including Variation Type MXCOW)	MXCW	MXCOW		7, 10, 14, 19, 24, 30, 37, 44, & 61	
24	Cable, Electric, -20 to +105 °C, 600 Volts, Lightweight, Multi-Pair, 22 AWG, Type TTXW (Including Variation Type TTXOW)	TTXW			1½, 3, 5, 10, 15, 20, 30, & 40 pairs	600
24	Cable, Electric, -20 to +105 °C, 600 Volts, Lightweight, Multi-Pair, 22 AWG, Type TTXW (Including Variation Type TTXOW)		TTXOW		1½, 3, 5, 15, 20, 30, & 40 pairs	600

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Custodians:

Army – MI  
Navy – SH

Preparing Activity:

Navy – SH

Review Activities:

Army – AR, AV, CR, CR4  
Navy – CG, EC  
DLA – CC

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