



**MILITARY**

Inventing *the Future* of Wire and Cable



# Champlain Cable Dataclear® Marine /59 M24643/59 Shielded Category 5e Data Cables Water-blocked and Non-water-blocked

**Champlain Cable** has a long history of success in the development and manufacture of data communication cables. We are the first supplier to be qualified by the US Naval Sea Systems Command (NAVSEA) for supply of all four construction variants of MIL-DTL-24643/59 (see product number table below).

**Dataclear® Marine /59** cables are Low Smoke Zero Halogen (LS0H) Category 5e data cables to serve the shipboard market. Dataclear Marine /59 provides two major solutions for shipboard communications:

1. Replacement of halogenated insulations (PVC, Fluoropolymer) in confined shipboard compartments, thereby eliminating a major source of halogenated toxic gases in the event of fire.
2. Maintains exceptional main link data communication capabilities in accordance with current ANSI/TIA/EIA 568B.2 standard for Local Area Network (LAN) premise wiring.

### Features and Benefits

- Qualified supplier for all four M24643/59 construction variants.
- Exceeds requirements of ANSI/EIA/TIA-568-B.2 premise wiring standard
- EMI/RFI protection via two shielding options.
- Resistant to many fluids normally encountered on or below deck.
- Print legend ensures traceability per ISO standards.

### Applications

- Backbone data rates up to 1,000Mb/s
- Shipboard Voice & Data networks.
- Compartments subject to submersion (waterblocked cables).
- Compartments subject to exposure of fuel and hydraulic fluids.
- Voice & Data networks requiring non-halogenated materials (PVC and Fluoropolymers).
- Sensitive communications subject to EMI/RFI (shielded cables).

Product Number	M24643/59 Type	Pairs	Conductor	Shield	Water-blocked	Jacket Color	Cable OD (nom)
24-4FUTP-LS0H/59	LSC5FS-4	4	24, solid BC	Foil	No	Black	.310"
24-4FUTP-W-LS0H/59	LSC5FSW-4	4	24, solid BC	Foil	Yes	Black	.320"
24-4FSTP-LS0H/59	LSC5OS-4	4	24, solid BC	Foil + Braid	No	Black	.325"
24-4FSTP-W-LS0H/59	LSC5OSW-4	4	24, solid BC	Foil + Braid	Yes	Black	.375"

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ELECTRICAL PROPERTIES					
DC Resistance (Ohms/100m)	9.38 max				
DC Resistance Unbalance	5% max				
Input Impedance (1 MHz – 100MHz)	100 Ohms ±15%				
<b>Frequency</b>	<b>1.0</b>	<b>10.0</b>	<b>31.25</b>	<b>62.5</b>	<b>100.0</b>
Return Loss dB/100m (min)	20.0	25.0	23.6	21.5	20.1
Insertion Loss dB/100m (max)	2.0	6.5	11.7	17.0	22.0
NEXT dB/100m (min)	65.3	50.3	42.9	38.4	35.3
ELFEXT dB/100m (min)	63.8	43.8	33.9	27.9	23.8
PS NEXT dB/100m (min)	62.3	47.3	39.9	35.4	32.3
PS ELFEXT dB/100m (min)	60.8	40.8	30.9	24.9	20.8
Propagation Delay ns/100m (max)	570	545	540	539	538
Delay Skew ns/100m (max)	45	45	45	45	45

PHYSICAL PROPERTIES	
Tensile Strength	
Insulation and Jacket (Un-aged)	1300 min
Insulation and Jacket (Retention after 168hrs at 136°C)	780 min
Elongation	
Insulation and Jacket (Un-aged)	160% min
Insulation and Jacket (Retention after 168hrs at 136°C)	96% min
Cross-link proof test (Jacket, Percent maximum)	50%
Flame Propagation (Cable)*	No Failure

We cannot anticipate all conditions under which this information and our products or the products of other manufacturers in combination with our products may be used. We accept no responsibility for results obtained by the application of this information or the safety and suitability of our products alone or in combination with other products. Users are advised to make their own tests to determine the safety and suitability of each such product combination for their own purpose. Unless otherwise agreed in writing, we sell the products without warranty, and buyers and users assume all responsibility and liability for loss and damage arising from the handling and use of our products whether used alone or in combination with other products.

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