MIL-DTL-24643/77
Category 6A Ethernet

4pr, Shielded, LSZH, 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 listed on the QPL database by the US Naval Sea Systems Command (NAVSEA) for all variants of MIL-DTL 24643/77.

Dataclear® Marine /77 CAT 6A provides significant improvements to the previous M24643/59 Cat5e cables:

- Substantially More Data Carrying Capacity in a Similar Footprint
- Pair-Balance Requirements Provide a Level of EMI Immunity
- Provides Bandwidth Headroom to Support Future Technology Improvements
- Interoperability: Terminates in the same RJ-45 Connectors as the Previous Cat5e Cables (M24643/59)
- Supports 10GBASE-T Systems (10,000BASE-T)
- Swept Electrical Performance to 500MHz

MIL-DTL 24643/77 PN	Type	Pairs	Conductor	Shield	Water-blocked	Jacket Color	Weight / KFT	Bend Radius (inch / min)	Nom Cable OD
-01UO	LSC6FS-4	4	23, solid BC	Foil	No	Black	109.5 LBS	1.5"	0.355"
-02UO	LSC6OS-4	4	23, solid BC	Foil + Braid	No	Black	124.2 LBS	1.5"	0.375"
-03UO	LSC6OSW-4	4	23, solid BC	Foil + Braid	Yes	Black	131.2 LBS	2.5"	0.410"

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ELECTRICAL PROPERTIES						
DC Resistance (Ohms/100m)	9.38 max					
DC Resistance Unbalance	4% max					
Input Impedance (1 MHz – 500MHz)	100 Ohms ±15%					
Frequency	**1.0**	**10.0**	**31.25**	**62.5**	**100.0**	**500.0**
Return Loss dB/100m (min)	20.0	25.0	23.6	21.5	20.1	15.2
Insertion Loss dB/100m (max)	2.1	5.9	10.5	15.0	19.1	45.3
NEXT dB/100m (min)	74.3	59.3	51.9	47.4	44.3	33.8
PS NEXT dB/100m (min)	72.3	57.3	49.9	45.4	42.3	31.8
ACRF [ELFEXT] dB/100m (min)	67.8	47.8	37.9	31.9	27.8	13.8
PSACRF [PS ELFEXT] dB/100m (min)	64.8	44.8	34.9	28.9	24.8	10.8
TCL dB (min)	40.0	40.0	35.1	32.0	30.0	23
Propagation Delay ns/100m (max)	570	545	540	539	538	536
Delay Skew ns/100m (max)	45	45	45	45	45	45

PHYSICAL PROPERTIES	
Tensile Strength (lb/in^2, min)	
Insulation (Un-aged)	450
Insulation (Retention after 48hrs at 100°C)	75%
Jacket (Un-aged)	1300
Jacket (Retention after 168hrs at 136°C)	60%
Elongation (Percent min)	
Insulation (Un-aged,)	75%
Insulation (Retention after 48hrs at 100°C)	75%
Jacket (Un-aged, percent min)	160%
Jacket (Retention after 168hrs at 136°C)	60%
Cross-link proof test (Jacket, Percent max)	50%
Tear (lb/in thickness, min)	35
Flame Propagation (Cable)	No Failure

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Manufacturing Locations:
Colchester, Vermont
El Paso, Texas
www.champcable.com