

Cat6 Outdoor Shielded w/ Messenger

23AWG • 4 Twisted Pairs • CMX
F/UTP • 550MHz • Solid Copper
16AWG Steel Messenger Wire

Lengths Available

- 500ft
- 1000ft

Jacket Colors



Key Features

- Bandwidth tested up to 550 MHz
- Suitable for 1 Gigabit and 5 Gigabit Ethernet up to 328 ft
- In compliance with ANSI/TIA 568.2-D
- UV resistant CMX jacket designed to withstand sunlight, snow, and ice
- Supports Power over Ethernet: PoE/PoE+/PoE++ (IEEE 802.3af/at/bt) 4PPoE up to 90W
- Sequential footage markings every 2ft

Technical Data

Insulation	PE
Average Thickness (mm)	0.278
Min Point Thickness (mm)	0.253
Conductor Insulation Dia. (±0.02mm)	1.12
Twisted Pair Dia. (±0.02mm)	2.24
Ripcord	Nylon
Spline	PE
Polyethylene Tape	Present
Shielding	F/UTP
Drain Wire - Solid Tinned Copper (mm)	0.40
Water Resistance	Jacket Only

Cable Jacket	LLDPE
Average Thickness (mm)	0.60
Min. Point Thickness (mm)	0.55
Cable Outer Diameter (±0.2mm)	7.40
Messenger Outer Diameter (±0.2mm)	2.60

Standards Reference

UL-444 / cETLus

ANSI/TIA 568-2.D

ISO/IEC 11801

Color of Pairs

Pair 1	Blue- White/Blue
Pair 2	Orange- White/Orange
Pair 3	Green- White/Green
Pair 4	Brown- White/Brown

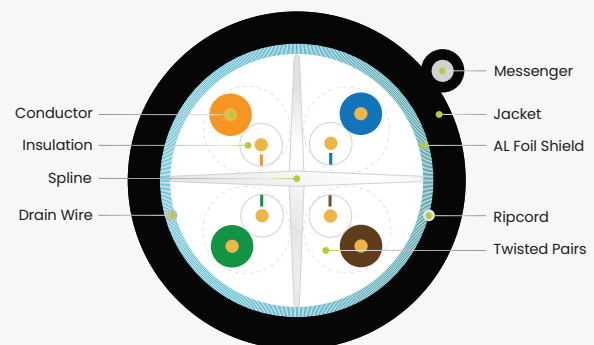
Conductor

Conductor	Solid Bare Copper
Size	23AWG
Conductor Dia. (±0.05mm)	0.57

Messenger Wire

Messenger Wire	LLDPE Coated Steel
Diameter (mm)	1.3 ± 0.2
Tensile Strength (mm)	600 to 850 MPa
Support Interval	Max 70m / 230ft

(While following local overhead clearance codes for sag)



Print Legend

CAT6 CMX F/UTP OUTDOOR UV W/ MSGR 75°C 4PR 23AWG

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Electrical Characteristics

PoE Certification	PoE/PoE+/PoE++ 4PPoE
Maximum PoE Wattage	90W
PoE Application Compatibility	802.3af/at/bt Type 4
TIA 568-2.D Cat6 Permanent Link +PoE	CERTIFIED
Maximum Application Speed @ 295ft	5GBASE-T
Nominal Velocity of Propagation (NVP)	66.8
Maximum Operating Voltage	300V
1.0 - 550MHz Impedance (Ω)	100 \pm 15
Maximum Operating Frequency	550MHz
1.0 - 550MHz Delay Skew (ns/100m)	\leq 45
Pair-to-Ground Capacitance Unbalance (pF/km)	\leq 3300
Max. Conductor DC Resistance 20°C (Ω /km)	68



Mechanical & Environmental Operating Parameters

Test Object	Jacket	Aging Condition ($^{\circ}\text{C} \times \text{hrs}$)	100 x 168
Test Material	LLDPE	After Tensile Strength (Mpa)	\geq 85% of unaged
Before- Tensile Strength (Mpa)	\geq 13.8	Aging Condition - Elongation (%)	\geq 50% of unaged
Aging- Elongation (%)	\geq 100	Cold Bend ($-20 \pm 2^{\circ}\text{C} \times 4\text{hrs}$)	No Crack
Min. Bend Radius	5.5cm/2.25in	Operating & Storage Temp.	-40°C to 75°C -40°F to 167°F
Max. Installation Tension	110N/25lb-ft	Installation Temp.	-20°C to 75°C -4°F to 167°F

Tested Compatible Accessories

Product

Part Number

Cat6 Toolless Keystone Jack Shielded	6ESTL90CMPT
Cat6/6A Pass Through RJ45 Connectors Shielded	LGEGPTRJ45
Cat6A Field Term Plug Shielded	6ASFT
Conductive Copper Fabric Strips	CUSTrips_100pc
Large Slip-On RJ45 Strain Relief Boot 8.00mm	LGSLIP



Cable ID: 6ESCMX MSG STP JACK > STP RJ45 JACKET DATE 01/22

Test Limit: TIA Cat 6 MPTL (+PoE)

Limits Version: V7.6

Date / Time: 02/14/2022 11:39:40 AM

Operator: DON S

Headroom 2.2 dB (NEXT 3,6-4,5)

Cable Type: Cat 6 F/UTP

NVP: 66.8%

Main: Versiv

S/N: 1924100

Software Version: V6.7 Build 1

Calibration Date: 11/14/2020

Adapter: DSX-8000 (DSX-PLA804)

S/N: 4523169

Remote: Versiv

S/N: 1917273

Software Version: V6.7 Build 1

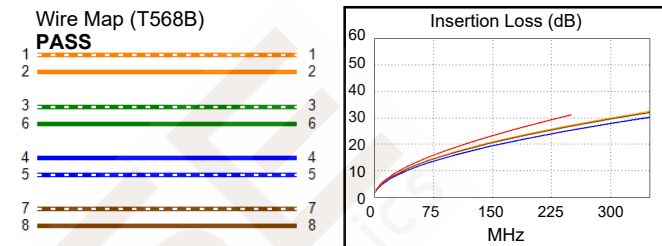
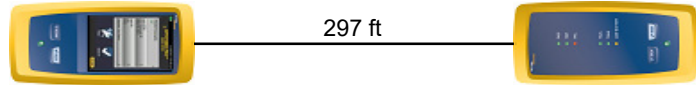
Calibration Date: 11/14/2020

Adapter: DSX-8000R (DSX-PC6)

S/N: 4716104

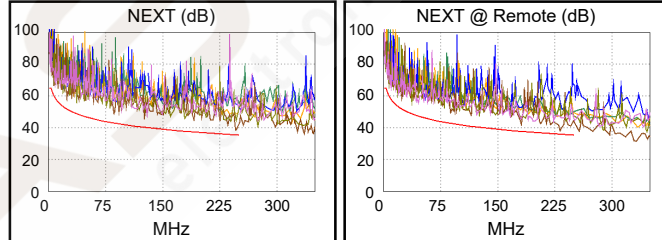
Test Summary: PASS

Length (ft), Limit 295	[Pair 4,5]	297
Prop. Delay (ns), Limit 498	[Pair 1,2]	484
Delay Skew (ns), Limit 44	[Pair 1,2]	32
Resistance (ohms), Limit 21.00	[Pair 1,2]	13.54
Resist. Unbal. (ohms)	[Pair 4,5]	0.081
Resist. P2P Unbal. (ohms)	[Pair 1,2-4,5]	0.205
Insertion Loss Margin (dB)	[Pair 1,2]	3.9
Frequency (MHz)	[Pair 1,2]	250.0
Limit (dB)	[Pair 1,2]	31.1

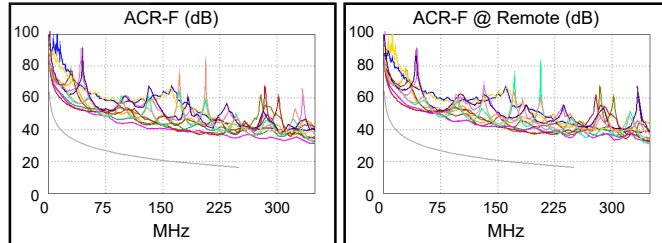


Worst Case Margin Worst Case Value

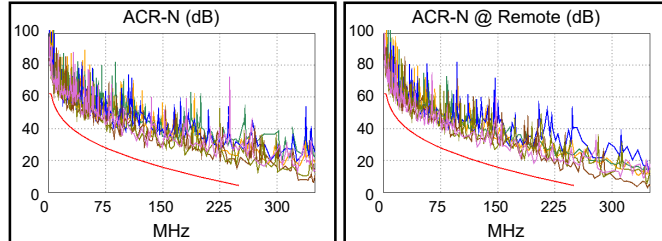
PASS	MAIN	SR	MAIN	SR
Worst Pair	3,6-4,5	3,6-4,5	3,6-4,5	3,6-4,5
NEXT (dB)	3.0	2.2	3.1	2.2
Freq. (MHz)	246.0	232.0	246.5	232.0
Limit (dB)	35.5	35.9	35.4	35.9
Worst Pair	3,6	4,5	3,6	4,5
PS NEXT (dB)	4.4	4.1	4.4	4.1
Freq. (MHz)	246.5	232.0	246.5	232.0
Limit (dB)	32.8	33.2	32.8	33.2



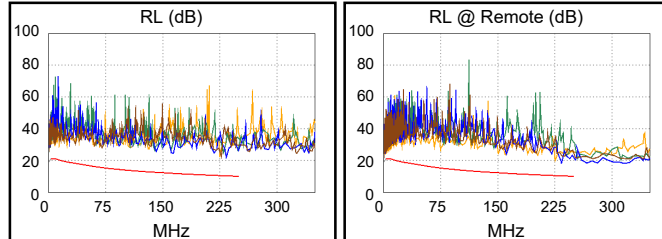
PASS	MAIN	SR	MAIN	SR
Worst Pair	4,5-1,2	4,5-1,2	4,5-1,2	4,5-1,2
ACR-F (dB)	18.2	18.5	18.4	18.5
Freq. (MHz)	240.5	245.5	246.5	245.5
Limit (dB)	16.6	16.4	16.4	16.4
Worst Pair	4,5	4,5	1,2	1,2
PS ACR-F (dB)	18.0	18.5	19.8	19.3
Freq. (MHz)	2.4	1.0	246.5	245.5
Limit (dB)	53.7	61.2	13.4	13.4



N/A	MAIN	SR	MAIN	SR
Worst Pair	3,6-4,5	3,6-4,5	3,6-4,5	3,6-4,5
ACR-N (dB)	6.5	7.4	8.8	7.6
Freq. (MHz)	7.1	24.1	246.5	232.0
Limit (dB)	55.5	43.1	4.6	6.1
Worst Pair	3,6	3,6	3,6	4,5
PS ACR-N (dB)	7.3	8.3	10.0	9.4
Freq. (MHz)	7.3	7.3	246.5	232.0
Limit (dB)	53.0	53.0	2.0	3.5



PASS	MAIN	SR	MAIN	SR
Worst Pair	1,2	1,2	4,5	4,5
RL (dB)	10.3	5.9	11.8	8.1
Freq. (MHz)	24.4	3.5	233.5	233.5
Limit (dB)	19.1	21.0	10.3	10.3



Compliant Network Standards:
 10BASE-T 100BASE-TX 100BASE-T4
 1000BASE-T 2.5GBASE-T 5GBASE-T
 ATM-25 ATM-51 ATM-155
 100VG-AnyLan TR-4 TR-16 Active
 TR-16 Passive