



Product: [777953T](#)

MarineTuff® 6, 4 Bonded-Pr #23 Sol BC, PO Ins, OS, PO Jkt, LSZH Jkt, Brz Brd, LSZH Jkt, CMG-ST1, FT4, ABS Cert.

Product Description

Industrial Ethernet Cat 6, 4 Bonded-Pair 24AWG (Solid) Bare Copper, PO Insulation, LSZH Jacket, Overall Beldfoil® Shield, LSZH Jacket, Flame Barrier, LSZH Jacket, Bronze Braid, LSZH Outer Jacket, NFPA 130, CMG-ST1, FT4, ABS Cert.

Technical Specifications

Product Overview

Suitable Applications:	Marine, shipboard, transit, transportation, outdoor, in cabinet with high volt devices, such as motor control center, mining, noisy environment, harsh environment, IoT, factory or process automation, IP cameras and devices, data communication, etc.
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Construction Details

Conductor

Element	Size	Stranding	Material	No. of Pairs
Pair(s)	23 AWG	Solid	BC - Bare Copper	4

Insulation

Element	Material	Nom. Insulation Diameter	Color Code
Pair(s)	PO - Polyolefin	0.043 in (1.1 mm)	Blue & White/Blue, Orange & White/Orange, Green & White/Green, Brown & White/Brown

Bonded-Pair:	Yes
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Inner Shield

Material	Coverage	Drainwire Type
Bi-Laminate (Alum+Poly)	100%	24 AWG (7x32) TC

Inner Jacket

Separator	Material	Nom. Diameter
	LSZH - Low Smoke Zero Halogen (Flame Retardant)	0.264 in (6.71 mm)
	LSZH - Low Smoke Zero Halogen (Flame Retardant)	0.361 in (9.17 mm)
Aramid Tape	LSZH - Low Smoke Zero Halogen (Flame Retardant)	0.487 in (12.4 mm)

Outer Shield

Shield Type	Material	Coverage	Drainwire Type
Tape	Bi-Laminate (Alum+Poly)	100%	24 AWG (7x32) TC

Armor

Armor Type & Material	Armor Material Diameter	Coverage
BBA - Bronze Braid Armor	0.542 in (13.8 mm)	80%

Outer Jacket

Material	Material Trade Name	Nom. Diameter
LSZH - Low Smoke Zero Halogen (Flame Retardant)	Haloarrest®	0.642 in (16.3 mm)

Overall Cable Diameter (Nominal):	0.642 in (16.3 mm)
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Electrical Characteristics

Electricals

Max. Conductor DCR	Max. Capacitance Unbalance
25 Ohm/1000ft (82 Ohm/km)	330 pF/100m

Delay

Max. Delay	Max. Delay Skew	Nom. Velocity of Prop.
537 ns/100m	45 ns/100m	72%

High Frequency

Frequency [MHz]	Max. Insertion Loss (Attenuation) [dB/100m]	Min. NEXT [dB]	Min. PSNEXT [dB]	Min. ACR [dB]	Min. PSACR [dB]	Min. ACRF (ELFEXT) [dB]	Min. PSACRF (PSELFEXT) [dB]	Min. RL (Return Loss) [dB]	Max./Min. Input Impedance (unFitted) [Ohm]
1	2	74.3	72.3	72.3	70.3	67.8	64.8	21	100 ± 15
4	3.8	65.3	63.3	61.5	59.5	55.8	52.7	24	100 ± 15
8	5.3	60.8	58.8	55.4	53.4	49.7	46.7	25.5	100 ± 15
10	6	59.3	57.3	53.3	51.3	47.8	44.8	26	100 ± 15
16	7.6	56.2	54.3	48.7	46.7	43.7	40.7	26	100 ± 15
20	8.5	54.8	52.8	46.3	44.3	41.8	38.8	26	100 ± 15
25	9.5	53.3	51.3	43.8	41.8	39.8	36.8	25.3	100 ± 15
31.25	10.7	51.9	49.9	41.2	39.2	37.9	34.9	24.6	100 ± 15
62.5	15.4	47.4	45.4	32	30	31.9	28.9	22.5	100 ± 15
100	19.8	44.3	42.3	24.5	22.5	27.8	24.8	21.1	100 ± 15
155	25.2	41.5	39.5	16.3	14.3	23.9	20.9	19.8	100 ± 22
200	29	39.8	37.8	10.8	8.8	21.8	18.8	19	100 ± 22
250	32.8	38.3	36.3	5.5	3.5	19.8	16.8	18.3	100 ± 32

Voltage

UL Voltage Rating
300 V RMS

Mechanical Characteristics

Temperature

UL Temperature	Operating	Installation	Storage
75°C	-30°C To +75°C	-20°C To +75°C	-30°C To +75°C

Bend Radius

Stationary Min.	Installation Min.
3.0 in (76 mm)	4.9 in (120 mm)

Max. Pull Tension:	55 lbs (25 kg)
Bulk Cable Weight:	244 lbs/1000ft (363 kg/km)

Standards and Compliance

Environmental Suitability:	Indoor/Outdoor, Indoor, Outdoor, Non-Halogenated, UV Resistance
Flammability / Reaction to Fire:	UL 1685 FT4 Loading, FT4, IEEE 1202
NEC / UL Compliance:	Article 800, CMG-ST1
CEC / C(UL) Compliance:	CMG-ST1
Data Category:	Category 6
TIA/EIA Compliance:	ANSI/TIA-568.2-D Category 6
European Directive Compliance:	EU Directive 2015/863/EU (RoHS 2 amendment), REACH, EU Directive 2011/65/EU (RoHS 2), EU Directive 2012/19/EU (WEEE)
APAC Compliance:	China RoHS II (GB/T 26572-2011)
Other Standard Compliance(s):	NFPA 130

History

Update and Revision:	Revision Number: 0.18 Revision Date: 04-02-2025
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