Belden



Product: 7953T

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

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

Technical Drawing

Technical Specifications

Product Overview

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

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

Inner Shield

Coverage	Drainwire Type

100%	24 AWG (7x32) TC

Inner Jacket

Material	Nom. Diameter
LSZH - Low Smoke Zero Halogen (Flame Retardant)	0.274 in (6.96 mm)

Outer Shield

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

Outer Jacket

Material	Material Trade Name	Nom. Diameter
LSZH - Low Smoke Zero Halogen (Flame Retardant)	Haloarrest®	0.487 in (12.4 mm)

Overall Cable Diameter (Nominal):	0.487 in (12.4 mm)

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
60°C	-30°C To +60°C	-20°C To +75°C	-30°C To +60°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:	144 lbs/1000ft (214 kg/km)

Standards and Compliance

Environmental Suitability:	Indoor/Outdoor, Indoor, Outdoor, Non-Halogenated, UV Resistance, Oil 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: 0.420 Revision Date: 09-23-2025

Part Numbers

Variants

Item #	Color
7953T 0101000	
7953T 0104000	
7953T 0105000	Black

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