Belden



Product: 777940T

MarineTuff® 6, 4 Pr #23 Sol BC, PO Ins, LSZH Jkt, Brnz Brd Armor, LSZH Jkts, CMG-LS, ABS

Product Description

Industrial Ethernet Cat 6, 4 Bonded Pair 23AWG (Solid) Bare Copper, PO Insulation, LSZH Jacket, Flame Retardant Tape, LSZH Jacket, Bronze Braid Armor, LSZH Outer Jacket, CMG-LS, ABS

Technical Specifications

Product Overview

Suitable Applications:	Marine, shipboard, transit, transportation, outdoor, harsh environment, IoT, factory or process automation, IP cameras and devices, data communication, etc. exposure to rodent, crush, or cut through force,

Construction Details

Conductor

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

Insulation

Material	Color Code
PO - Polyolefin	White/Blue Stripe & Blue, White/Orange Stripe & Orange, White/Green Stripe & Green, White/Brown Stripe & Brown

Bonded-Pair:	Yes

Inner Jacket

Separator	Material	Nom. Diameter
Aramid Tape	LSZH - Low Smoke Zero Halogen (Flame Retardant)	0.274 in (6.96 mm)
Aramid Tape	LSZH - Low Smoke Zero Halogen (Flame Retardant)	0.328 in (8.33 mm)

Armor

Armor Type & Material	Armor Material Diameter	Coverage
BBA - Bronze Braid Armor	0.363 in (9.22 mm)	80%

Outer Jacket

Material	Material Trade Name	Nom. Diameter
LSZH - Low Smoke Zero Halogen (Flame Retardant)	Haloarrest®	0.463 in (11.8 mm)

Overall Cable Diameter (Nominal):	0.463 in (11.8 mm)

Electrical Characteristics

Electricals

Max. Conductor DCR	Max. Capacitance Unbalance
93.8 Ohm/km (28.6 Ohm/1000ft)	330 pF/100m

Delay

Frequency	Max. Delay	Max. Delay Skew	Nom. Velocity of Prop.
100 MHz	537 ns/100m	45 ns/100m	69%

High Frequency

Frequency [MHz]	Max. Insertion Loss (Attenuation)	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]	Max./Min. Fitted Impedance [Ohm]	Min. TCL [dB]	Min. ELTCTL [dB]
1	2.0 dB/100m	74.3	72.3	72.3	70.3	67.8	64.8	20	100 ± 15	100 ± 15	40.0	35.0
4	3.8 dB/100m	65.3	63.3	61.5	59.5	55.8	52.7	23	100 ± 15	100 ± 15	40.0	23.0
8	5.3 dB/100m	60.8	58.8	55.4	53.4	49.7	46.7	24.5	100 ± 15	100 ± 15	40.0	16.9
10	6 dB/100m	59.3	57.3	53.3	51.3	47.8	44.8	25	100 ± 15	100 ± 15	40.0	15.0
16	7.6 dB/100m	56.2	54.3	48.7	46.7	43.7	40.7	25	100 ± 15	100 ± 15	38.0	10.9
20	8.5 dB/100m	54.8	52.8	46.3	44.3	41.8	38.8	25	100 ± 15	100 ± 15	37.0	9.0
25	9.5 dB/100m	53.3	51.3	43.8	41.8	39.8	36.8	24.3	100 ± 15	100 ± 15	36.0	7.0
31.25	10.7 dB/100m	51.9	49.9	41.2	39.2	37.9	34.9	23.6	100 ± 15	100 ± 15	35.1	5.1
62.5	15.4 dB/100m	47.4	45.4	32	30	31.9	28.9	21.5	100 ± 15	100 ± 15	32.0	
100	19.8 dB/100m	44.3	42.3	24.5	22.5	27.8	24.8	20.1	100 ± 15	100 ± 15	30.0	
155	25.2 dB/100m	41.5	39.5	16.3	14.3	23.9	20.9	18.8	100 ± 20	100 ± 15	28.1	
200	29.0 dB/100m	39.8	37.8	10.8	8.8	21.8	18.8	18	100 ± 20	100 ± 15	27.0	
250	32.8 dB/100m	38.3	36.3	5.5	3.5	19.8	16.8	17.3	100 ± 20	100 ± 15	26.0	

Mechanical Characteristics

Temperature

UL Temperature	Operating	Installation	Storage
75°C	-40°C To +75°C	0°C To +60°C	-40°C To +75°C

Bend Radius

Installation Min.
3.0 in (76 mm)

Max. Pull Tension:	40 lbs (18 kg)
Bulk Cable Weight:	133 lbs/1000ft (198 kg/km)

Standards and Compliance

Environmental Suitability:	MarineIndoor/Outdoor, Indoor, Outdoor, Non-Halogenated, Sunlight Resistance
Flammability / Reaction to Fire:	UL CMG-LS, FT4, IEEE 1202
NEC / UL Compliance:	Article 800
CEC / C(UL) Compliance:	CMG-ST1
IEEE Compliance:	IEEE 802.3bt Type 1, Type 2, Type 3, Type 4
Data Category:	Category 6
TIA/EIA Compliance:	Category 6 - TIA 568.2-D
Marine Compliance:	ABS Certified
ISO/IEC Compliance:	IEC 61034-2 - Smoke Density Min Transmittance = IEC 60332-3-22
European Halogen Free Standards:	IEC 60754-1 - Halogen Amount = Jacket only
European Directive Compliance:	EU CE Mark, EU Directive 2015/863/EU (RoHS 2 amendment), EU Directive 2011/65/EU (RoHS 2), EU Directive 2012/19/EU (WEEE), REACH: 2017-07-10
APAC Compliance:	China RoHS II (GB/T 26572-2011)

Product Notes

Notes:	Jacket sequentially marked at 2 ft. intervals.

History

Update and Revision:	Revision Number: 0.386 Revision Date: 09-07-2025

Part Numbers

Variants

Item #	Color	Putup Type	Length	UPC
777940T 0105000	Black	Reel	305 m	612825189138
777940T 0101000	Black	Reel	305 m	

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