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1-800-Belden1



General Description:

23 AWG Solid Bare Copper Conductors, Bonded Pair Polyolefin Insulation, Tape Separator, LSZH Inner Jacket, Bronze Braid Armor, LSZH Outer Jacket.

Usage (Overall)

Suitable Applications: Premise Horizontal Cable, Gigabit Ethernet, 100BaseTX, 100BaseVG ANYLAN, 155 ATM, 622 ATM, 250MHz Category 6

Physical Characteristics (Overall)

Conductor

AWG:

# Pairs	AWG	Stranding	Conductor Material
4	23	Solid	BC - Bare Copper

Total Number of Conductors: 8

Insulation

Insulation Material:

Insulation Material	Wall Thickness (mm)
PO - Polyolefin	0.254

Inner Jacket

Inner Jacket Material:

Inner Jacket Material	Nom Wall (mm)	Nom. Dia. (mm)
LSZH- Low Smoke Zero Halogen	0.610	6.121

Outer Shield

Outer Shield Material:

Outer Shield Material
Unshielded

Outer Jacket

Outer Jacket Material:

Outer Jacket Material	Nom. Wall Thickness (mm)
LSZH- Low Smoke Zero Halogen	0.610

Outer Jacket Diameter:

Nom. Dia. (mm)
7.493

Outer Jacket Ripcord: No

Outer Jacket over Armor

Outer Jacket Material over Armor (y/n): Yes

Outer Jacket Material Over Armor:

OJ Over Armor Material	Nom. Wall (mm)	Dia. (mm)
LSZH - Low Smoke Zero Halogen	1.270	10.922

Armor

Armor Type: Bronze Braid Armor

Overall Cable

Overall Cabling Separator Material: Foamed Polyolefin Tape.

Pair**Pair Color Code Chart:**

Number	Color
1	White/Blue Stripe & Blue
2	White/Orange Stripe & Orange
3	White/Green Stripe & Green
4	White/Brown Stripe & Brown

Mechanical Characteristics (Overall)

Storage Temperature Range:	-20°C To +75°C
Installation Temperature Range:	-20°C To +75°C
Operating Temperature Range:	-20°C To +75°C
Bulk Cable Weight:	162.214 Kg/Km
Max. Recommended Pulling Tension:	177.928 N
Min. Bend Radius/Minor Axis:	109.220 mm

Applicable Specifications and Agency Compliance (Overall)**Applicable Standards & Environmental Programs**

NEC/(UL) Specification:	CMG-LS
CEC/C(UL) Specification:	CMG
EU Directive 2011/65/EU (ROHS II):	Yes
IEEE Specification:	45
EU CE Mark:	Yes
EU Directive 2000/53/EC (ELV):	Yes
EU Directive 2002/95/EC (RoHS):	Yes
EU RoHS Compliance Date (mm/dd/yyyy):	09/16/2014
EU Directive 2002/96/EC (WEEE):	Yes
EU Directive 2003/11/EC (BFR):	Yes
CA Prop 65 (CJ for Wire & Cable):	Yes
MII Order #39 (China RoHS):	Yes
Telecommunications Standards:	Category 6 - TIA 568.C.2
Other Specification:	UL Verified to Category 6, ABS Type Approval Certificate 06-HS184641G

Applicable Patents:

Country
www.belden.com/p

Flame Test

UL Flame Test:	UL1685 FT4 Loading, Limited Smoke
C(UL) Flame Test:	FT4
IEC Flame Test:	60332-3-22 (Category A)
IEEE Flame Test:	1202

Suitability

Suitability - Indoor:	Yes
Suitability - Outdoor:	Yes
Suitability - Aerial:	Yes
Suitability - Burial:	No
Sunlight Resistance:	Yes

Oil Resistance:	No
Non-halogenated:	Yes

Plenum/Non-Plenum

Plenum (Y/N):	No
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Surface Printing (Overall)

Surface Printing:	BELDEN MARINETUFF(TM) 7940T CAT 6 E108998(-PLANT ID) CABLE 4PR23 CMG-LS (UL) FT4 IEEE 1202 (2FT 5 DIGIT SEQUENTIAL NUMBER) FT
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Electrical Characteristics (Overall)

Nom. Mutual Capacitance:

Capacitance (pF/m)
49.215

Maximum Capacitance Unbalance (pF/100 m):	330
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Nominal Velocity of Propagation:

VP (%)
72

Maximum Delay:

Delay (ns/100 m)
537 @ 100MHz

Max. Delay Skew:

Delay Skew (ns/100 m)
45

Maximum Conductor DC Resistance:

DCR @ 20°C (Ohm/100 m)
8.2

Max. Operating Voltage - UL:

Voltage
300 V RMS

Maximum DCR Unbalanced:

DCR Unbalance @ 20°C (%)
5

Electrical Characteristics-Premise (Overall)

Premise Cable Electrical Table 1:

Freq. (MHz)	Max. Attenuation (dB/100 m)	Min. NEXT (dB)	Min. PSNEXT (dB)	Min. ACR (dB)	Min. PSACR (dB)	Min RL (dB)	Min. SRL (dB)
1	2.000	74.3	72.3	72.3	70.3	21.000	na
4	3.800	65.3	63.3	61.5	59.5	24.000	na
8	5.300	60.8	58.8	55.4	53.4	25.500	na
10	6.000	59.3	57.3	53.3	51.3	26.000	na
16	7.600	56.2	54.3	48.7	46.7	26.000	na
20	8.500	54.8	52.8	46.3	44.3	26.000	na
25	9.500	53.3	51.3	43.8	41.8	25.300	na
31.25	10.700	51.9	49.9	41.2	39.2	24.600	na
62.5	15.400	47.4	45.4	32.0	30.0	22.500	na
100	19.800	44.3	42.3	24.5	22.5	21.100	na
155	25.200	41.5	39.5	16.3	14.3	19.800	na
200	29.000	39.8	37.8	10.8	8.8	19.000	na
250	32.800	38.3	36.3	5.5	3.5	18.300	na

Premise Cable Electrical Table 2:

Freq. (MHz)	Input (Unfitted) Imp. (Ohms)	Fitted Impedance	Min. ELFEXT (dB)	Min. PSELFEXT (dB)
1	100 ± 15	100 ± 15	67.8	64.8
4	100 ± 15	100 ± 15	55.8	52.7

777940T Multi-Conductor - Industrial Cat 6 CMG

8	100 ± 15	100 ± 15	49.7	46.7
10	100 ± 15	100 ± 15	47.8	44.8
16	100 ± 15	100 ± 15	43.7	40.7
20	100 ± 15	100 ± 15	41.8	38.8
25	100 ± 15	100 ± 15	39.8	36.8
31.25	100 ± 15	100 ± 15	37.9	34.9
62.5	100 ± 15	100 ± 15	31.9	28.9
100	100 ± 15	100 ± 15	27.8	24.8
155	100 ± 22	100 ± 15	23.9	20.9
200	100 ± 22	100 ± 15	21.8	18.8
250	100 ± 32	100 ± 15	19.8	16.8

Notes (Overall)

Notes: Jacket sequentially marked at 2 ft. intervals. Third party verified to ANSI/TIA-568-C.2, Category 6.

Put Ups and Colors:

Item #	Putup	Ship Weight	Color	Notes	Item Desc
777940T 0101000	1,000 FT	13.000 LB	BLACK		4PR#23 PO FR TPNH BBRDARM TPNH
777940T 0105000	5,000 FT	0.000	BLACK		4PR#23 PO FR TPNH BBRDARM TPNH

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