

## 7940T Multi-Conductor - Industrial Cat 6 CMG



For more Information  
please call

1-800-Belden1

**General Description:**

23 AWG Solid Bare Copper Conductors, Bonded Pair Polyolefin Insulation, Tape Separator, LSZH 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. Dia. (mm)
LSZH- Low Smoke Zero Halogen	6.121

**Outer Shield****Outer Shield Material:**

Outer Shield Material
Unshielded

**Outer Jacket****Outer Jacket Material:**

Outer Jacket Material
LSZH- Low Smoke Zero Halogen

**Outer Jacket Diameter:**

Nom. Dia. (mm)
7.493

**Outer Jacket Ripcord:**

No

**Overall Cable****Overall Cabling Separator Material:**

Foamed Polyolefin Tape.

**Overall Nominal Diameter:**

7.493 mm

**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:	62.504 Kg/Km
Max. Recommended Pulling Tension:	177.928 N
Min. Bend Radius/Minor Axis:	76.200 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
<a href="http://www.belden.com/p">www.belden.com/p</a>

**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)**

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## 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

## Electrical Characteristics (Overall)

## Nom. Mutual Capacitance:

Capacitance (pF/m)

49.215

Maximum Capacitance Unbalance (pF/100 m): 330

## 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
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

## 7940T Multi-Conductor - Industrial Cat 6 CMG

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
7940T 0105000	5,000 FT	225.000 LB	BLACK		4 PR #23 PO FR TPNH

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