

## 7940A Multi-Conductor - Industrial Cat 6 CMR

For more Information  
please call

1-800-Belden1



### Description:

23 AWG Solid Bare Copper Conductors, Bonded Pair Polyolefin Insulation, Tape Separator, Ripcord, DATATUFF® PVC 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

#### Insulation

**Insulation Material:**

Insulation Material	Wall Thickness (in.)
PO - Polyolefin	0.010

#### Outer Shield

**Outer Shield Material:**

Outer Shield Material
Unshielded

#### Outer Jacket

**Outer Jacket Material:**

Outer Jacket Trade Name	Outer Jacket Material	Nom. Wall Thickness (in.)
Datatuff®	Industrial Grade PVC - Polyvinyl Chloride	0.030

**Outer Jacket Diameter:**

Nom. Dia. (in.)
0.250

**Outer Jacket Ripcord:** Yes

### Overall Cable

**Overall Cabling Separator Material:** Foamed Polyolefin Tape.

**Overall Nominal Diameter:** 0.250 in.

### 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:** -40°C To +75°C

**Installation Temperature Range:** -20°C To +75°C

## 7940A Multi-Conductor - Industrial Cat 6 CMR

Operating Temperature Range:	-40°C To +75°C
Bulk Cable Weight:	30 lbs/1000 ft.
Max. Recommended Pulling Tension:	40 lbs.
Min. Bend Radius (Install)/Minor Axis:	2.500 in.

### Applicable Specifications and Agency Compliance (Overall)

#### Applicable Standards & Environmental Programs

NEC/(UL) Specification: CMR, CMX-Outdoor

CEC/C(UL) Specification: CMG

Other Standards: ISO/IEC 11801 ed 2.1 (2008) Class E

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): 10/13/2005

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

#### Applicable Patents:

Country	Patent
US	5606151
US	5734126
US	6570095
US	6998537
US	7179999
US	7977575

#### Flame Test

UL Flame Test: UL1666 Vertical Riser

C(UL) Flame Test: FT4

CSA Flame Test: FT4

IEEE Flame Test: 1202

#### Suitability

Suitability - Indoor: Yes

Suitability - Outdoor: Yes

Suitability - Aerial: Yes

Suitability - Burial: No

Sunlight Resistance: Yes

Oil Resistance: Yes

#### Plenum/Non-Plenum

Plenum (Y/N): No

### Surface Printing (Overall)

### Electrical Characteristics (Overall)

#### Nom. Mutual Capacitance:

Capacitance (pF/ft)

15

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
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.

### Related Documents:

No related documents are available for this product

### Put Ups and Colors:

Item #	Putup	Ship Weight	Color	Notes	Item Desc
7940A 0101000	1,000 FT	32.000 LB	BLACK	C	4 PR #23 PO FRPVC
7940A 0102000	2,000 FT	64.000 LB	BLACK	C	4 PR #23 PO FRPVC

**Notes:**

C = CRATE REEL PUT-UP.

Revision Number: 4    Revision Date: 08-16-2011

© 2012 Belden, Inc  
 All Rights Reserved.

Although Belden makes every reasonable effort to ensure their accuracy at the time of this publication, information and specifications described herein are subject to error or omission and to change without notice, and the listing of such information and specifications does not ensure product availability.

Belden provides the information and specifications herein on an "AS IS" basis, with no representations or warranties, whether express, statutory or implied. In no event will Belden be liable for any damages (including consequential, indirect, incidental, special, punitive, or exemplary damages) whatsoever, even if Belden has been advised of the possibility of such damages, whether in an action under contract, negligence or any other theory, arising out of or in connection with the use, or inability to use, the information or specifications described herein.

All sales of Belden products are subject to Belden's standard terms and conditions of sale.

Belden believes this product to be in compliance with EU RoHS (Directive 2002/95/EC, 27-Jan-2003). Material manufactured prior to the compliance date may be in stock at Belden facilities and in our Distributor's inventory. The information provided in this Product Disclosure, and the identification of materials listed as reportable or restricted within the Product Disclosure, is correct to the best of Belden's knowledge, information, and belief at the date of its publication. The information provided in this Product Disclosure is designed only as a general guide for the safe handling, storage, and any other operation of the product itself or the one that it becomes a part of. This Product Disclosure is not to be considered a warranty or quality specification. Regulatory information is for guidance purposes only. Product users are responsible for determining the applicability of legislation and regulations based on their individual usage of the product.

Belden declares this product to be in compliance with EU LVD (Low Voltage Directive 73/23/EEC), as amended by directive 93/68/EEC.