

# Detailed Specifications & Technical Data



## METRIC MEASUREMENT VERSION

### 7939A Multi-Conductor - Category 5e DataTuff® Twisted Pair Cable



For more Information  
please call

1-800-Belden1



#### General Description:

24 AWG stranded (7x32) bare copper conductors, bonded pairs, polyolefin insulation, polyester separator, Beldfoil® shield (100% coverage), drain wire, industrial grade sunlight- and oil-resistant PVC jacket. Sequential marking at two foot intervals.

#### Usage (Overall)

##### Suitable Applications:

Industrial Ethernet, Harsh Environments, Flexible Applications, 200MHz Category 5e, Industrial Patch Cable, Gigabit Ethernet, 100BaseTX, 100BaseVG ANYLAN, 155ATM, 622ATM, NTSC/PAL Component or Composite Video, AES/EBU, Digital Video, RS-422, CMX - Outdoor, RJ-45 Compatible

#### Physical Characteristics (Overall)

##### Conductor

###### AWG:

# Pairs	AWG	Stranding	Conductor Material
4	24	7x32	BC - Bare Copper

Total Number of Conductors:

8

##### Insulation

###### Insulation Material:

Insulation Material
PO - Polyolefin

##### Outer Shield

###### Outer Shield Material:

Outer Shield Trade Name	Type	Outer Shield Material	Coverage (%)
Beldfoil®	Tape	Aluminum Foil-Polyester Tape	100.000

###### Outer Shield Drain Wire AWG:

AWG	Stranding	Drain Wire Conductor Material
24	7x32	TC - Tinned Copper

##### Outer Jacket

###### Outer Jacket Material:

Outer Jacket Material	Nom. Wall Thickness (mm)
Industrial Grade PVC - Polyvinyl Chloride	0.762

###### Outer Jacket Ripcord:

No

#### Overall Cable

Overall Cabling Separator Material:

Polyester

Overall Nominal Diameter:

7.493 mm

#### Pair

##### Pair Color Code Chart:

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

#### Mechanical Characteristics (Overall)

Installation Temperature Range:

-25°C To +75°C

Operating Temperature Range:

-40°C To +75°C

Bulk Cable Weight:

52.087 Kg/Km

Max. Recommended Pulling Tension:

177.928 N

Min. Bend Radius/Minor Axis:

15.240 mm

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#### Applicable Specifications and Agency Compliance (Overall)

##### Applicable Standards & Environmental Programs

CEC/C(UL) Specification:	CMR
EU Directive 2011/65/EU (ROHS II):	Yes
EU Directive 2000/53/EC (ELV):	Yes
EU Directive 2002/95/EC (RoHS):	Yes
EU RoHS Compliance Date (mm/dd/yyyy):	08/23/2007
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
Other Specification:	NEMA WC-63.1 Category 5e Patch, ICEA 661 Category 5 Patch, UL verified to Category 5e

##### Flame Test

UL Flame Test:	UL1666 Riser
CSA Flame Test:	FT4
IEEE Flame Test:	1202

##### Suitability

Suitability - Indoor:	Yes
Suitability - Outdoor:	Yes
Sunlight Resistance:	Yes
Oil Resistance:	Yes

##### Plenum/Non-Plenum

Plenum (Y/N):	No
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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 (%)
69.000

##### Maximum Delay:

Delay (ns/100 m)
510.000

##### Typical Delay Skew:

Delay Skew (ns/m)
39.372

##### Max. Delay Skew:

Delay Skew (ns/100 m)
45.000

##### Maximum Conductor DC Resistance:

DCR @ 20°C (Ohm/100 m)
9.380

##### Max. Operating Voltage - UL:

Voltage
300 V RMS

##### Maximum DCR Unbalanced:

DCR Unbalance @ 20°C (%)
3.000

#### 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	2.500	65.3	62.3	62.8	59.8	20.000	23.0
4	4.900	56.3	53.3	51.4	48.4	23.000	23.0

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8	6.900	51.8	48.8	44.9	41.9	24.500	24.5
10	7.800	50.3	47.3	42.5	39.5	25.000	25.0
16	9.900	47.3	44.3	37.4	34.4	25.000	25.0
20	11.100	45.8	42.8	34.7	31.7	25.000	25.0
25	12.500	44.3	41.3	21.8	28.8	24.300	24.3
31.25	14.100	42.9	39.9	28.8	25.8	23.600	23.6
62.5	20.400	38.4	35.4	18.0	15.0	21.500	21.5
100	26.400	35.3	32.3	8.9	5.9	20.100	20.1

Premise Cable Electrical Table 2:

Freq. (MHz)	Input (Unfitted) Imp. (Ohms)	Fitted Impedance	Min. ELFEXT (dB)	Min. PSELFEXT (dB)
1	100 ± 15	100 ± 15	63.8	60.8
4	100 ± 15	100 ± 15	51.7	48.7
8	100 ± 15	100 ± 15	45.7	42.7
10	100 ± 15	100 ± 15	43.8	40.8
16	100 ± 15	100 ± 15	39.7	36.7
20	100 ± 15	100 ± 15	37.7	34.7
25	100 ± 15	100 ± 15	35.8	32.8
31.25	100 ± 15	100 ± 15	33.9	30.9
62.5	100 ± 15	100 ± 15	27.8	24.8
100	100 ± 15	100 ± 15	23.8	20.8

#### Notes (Overall)

Notes: Operating temperatures are subject to length de-rating. Cable passes -40C Cold Bend per UL 1581.

#### Put Ups and Colors:

Item #	Putup	Ship Weight	Color	Notes	Item Desc
7939A 0021000	1,000 FT	40.000 LB	RED	C	4 PR #24 PP FS FRPVC
7939A 0061000	1,000 FT	40.000 LB	BLUE, LIGHT	C	4 PR #24 PP FS FRPVC
7939A 0081000	1,000 FT	40.000 LB	GRAY	C	4 PR #24 PP FS FRPVC
7939A 0101000	1,000 FT	40.000 LB	BLACK	C	4 PR #24 PP FS FRPVC
7939A 0102000	2,000 FT	80.000 LB	BLACK	C	4 PR #24 PP FS FRPVC
7939A 1NH1000	1,000 FT	40.000 LB	TEAL 1NH	C	4 PR #24 PP FS FRPVC

Notes:

C = CRATE REEL PUT-UP.

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