

## 8166 Multi-Conductor - Low Capacitance Computer Cable for EIA RS-232/422 & Digital

For more Information  
please call

1-800-Belden1



### General Description:

24 AWG stranded (7x32) TC conductors, Datalene® insulation, twisted pairs individually Beldfoil® shielded + overall 100% Beldfoil + TC braid shield (65% coverage), drain wire, PVC jacket.

### Physical Characteristics (Overall)

#### Conductor

AWG:

# Pairs	AWG	Stranding	Conductor Material
6	24	7x32	TC - Tinned Copper

Total Number of Conductors: 12

#### Insulation

Insulation Material:

Insulation Trade Name	Insulation Material	Wall Thickness (in.)
Datalene®	FPE - Foam Polyethylene	0.019

#### Inner Shield

Inner Shield Material:

Inner Shield Trade Name	Type	Inner Shield Material	Coverage (%)
Beldfoil® (Z-Fold®)	Tape	Aluminum Foil-Polyester Tape	100

Inner Shield Drain Wire AWG:

AWG
24

Inner Shield Drain Wire Stranding: 7x32

Inner Shield Drain Wire Conductor Material: TC - Tinned Copper

#### Outer Shield

Outer Shield Material:

Layer #	Outer Shield Trade Name	Type	Outer Shield Material	Coverage (%)
1	Beldfoil®	Tape	Aluminum Foil-Polyester Tape	100
2		Braid	TC - Tinned Copper	65

#### Outer Jacket

Outer Jacket Material:

Outer Jacket Material	Nom. Wall Thickness (in.)
PVC - Polyvinyl Chloride	0.048

#### Overall Cable

Overall Nominal Diameter: 0.446 in.

#### Pair

Pair Color Code Chart:

Number	Color
1	Black & Red
2	Black & White
3	Black & Green
4	Black & Blue
5	Black & Yellow
6	Black & Brown

### Mechanical Characteristics (Overall)

Operating Temperature Range: -40°C To +60°C

Non-UL Temperature Rating: 60°C (UL AWM Style 2493)

Bulk Cable Weight: 90 lbs/1000 ft.

Max. Recommended Pulling Tension: 151 lbs.

Min. Bend Radius/Minor Axis: 4.500 in.

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### Applicable Specifications and Agency Compliance (Overall)

#### Applicable Standards & Environmental Programs

NEC/UL Specification:	CM
CEC/C(UL) Specification:	CM
AWM Specification:	UL Style 2493 (300 V 60°C)
EU Directive 2011/65/EU (ROHS II):	Yes
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):	01/01/2004
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

#### Flame Test

UL Flame Test:	UL1581 Vertical Tray
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#### Plenum/Non-Plenum

Plenum (Y/N):	No
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### Electrical Characteristics (Overall)

#### Nom. Characteristic Impedance:

Impedance (Ohm)  
100

#### Nom. Capacitance Conductor to Conductor:

Capacitance (pF/ft)  
12.5

#### Nom. Capacitance Cond. to Other Conductor & Shield:

Capacitance (pF/ft)  
22

#### Nominal Velocity of Propagation:

VP (%)  
78

#### Nom. Conductor DC Resistance:

DCR @ 20°C (Ohm/1000 ft)  
24.0

#### Nominal Outer Shield DC Resistance:

DCR @ 20°C (Ohm/1000 ft)  
2.8

Ind. Pair Nominal Shield DC Resistance @ 20 Deg. C: 18 Ohm/1000 ft

#### Max. Operating Voltage - UL:

Voltage  
300 V RMS

#### Max. Recommended Current:

Current  
1.6 Amps per conductor @ 25°C

### Notes (Overall)

**Notes:** Datalene® insulation features include low dielectric constant and a dissipation factor for high-speed, low-distortion data handling. Physical properties include good crush resistance and light weight.

### Put Ups and Colors:

Item #	Putup	Ship Weight	Color	Notes	Item Desc
8166 060100	100 FT	10.700 LB	CHROME	C	6 FS PR #24 FHDPE SH PVC
8166 0601000	1,000 FT	99.000 LB	CHROME	C	6 FS PR #24 FHDPE SH PVC
8166 060500	500 FT	50.000 LB	CHROME	C	6 FS PR #24 FHDPE SH PVC

#### Notes:

C = CRATE REEL PUT-UP.

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Revision Number: 2    Revision Date: 09-21-2012

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