# **Detailed Specifications & Technical Data**



METRIC MEASUREMENT VERSION

# 8164 Multi-Conductor - Low Capacitance Computer Cable for EIA RS-232/422 & Digital



For more Information please call

1-800-Belden1



# **General Description:**

**Mechanical Characteristics (Overall)** 

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.

<b>Physical Characteris</b>	stics (Overa	all)	
Conductor			
AWG:			
# Pairs AWG Strandin	-		
4 24 7x32	TC - Tinned C	Copper	
Total Number of Cor	nductors:	8	
Insulation			
Insulation Material:			
Insulation Trade Name			(mm)
Datalene®	FPE - Foam Po	lyethylene 0.483	
Inner Shield			
Inner Shield Material:			
Inner Shield Trade Nar	me Type Inner	Shield Material Co	overage (%)
Beldfoil® (Z-Fold®)	Tape Alumir	num Foil-Polyester Tape 10	0
Inner Shield Drain Wir	e AWG:		
AWG			
24			
Inner Chield Drein W	line Ofnendine		
Inner Shield Drain W	/ire Stranding	: 7x32	
Inner Shield Drain W	/ire Conducto	r Material: TC - T	nned Copper
Inner Shield Drain W Outer Shield	/ire Conducto	r Material: TC - Ti	nned Copper
	/ire Conducto	r Material: TC - T	nned Copper
Outer Shield Outer Shield Material:		r Material: TC - T	nned Copper
Outer Shield Outer Shield Material:		De Outer Shield Material	Coverage (%
Outer Shield Outer Shield Material: Layer # Outer Shield 1	<b>Frade Name Typ</b> Tap	De Outer Shield Material	Coverage (%
Outer Shield Material: Outer Shield Material: Layer # Outer Shield T 1 Beldfoil® 2	<b>Frade Name Typ</b> Tap	De Outer Shield Material Aluminum Foil-Polyester	Coverage (% Tape 100
Outer Shield Outer Shield Material: Layer # Outer Shield T 1 Beldfoil®	Frade Name Typ Tap Bra	De Outer Shield Material Aluminum Foil-Polyester	Coverage (% Tape 100
Outer Shield Outer Shield Material: Layer # Outer Shield T 1 Beldfoil® 2 Outer Jacket	Trade Name Typ Tag Bra	De Outer Shield Material Aluminum Foil-Polyester	Coverage (% Tape 100
Outer Shield Outer Shield Material: Layer # Outer Shield T 1 Beldfoil® 2 Outer Jacket Outer Jacket Material:	Trade Name Typ Tap Bra Nom. Wall Th	Outer Shield Material   De Aluminum Foil-Polyester   iid TC - Tinned Copper	Coverage (% Tape 100
Outer Shield Outer Shield Material: Layer # Outer Shield T 1 Beldfoil® 2 Outer Jacket Outer Jacket Material: Outer Jacket Material PVC - Polyvinyl Chloride	Trade Name Typ Tap Bra Nom. Wall Th	Outer Shield Material   De Aluminum Foil-Polyester   iid TC - Tinned Copper	Coverage (% Tape 100
Outer Shield Outer Shield Material: Layer # Outer Shield T 1 Beldfoil® 2 Outer Jacket Outer Jacket Material: Outer Jacket Material PVC - Polyvinyl Chloride Overall Cable	Trade Name Typ   Tag Tag   Bra Bra   Nom. Wall Th   a 1.219	De   Outer Shield Material     De   Aluminum Foil-Polyester     iid   TC - Tinned Copper     ickness (mm)   Image: Comparison of Comparis	Coverage (% Tape 100 65
Outer Shield Material: Layer # Outer Shield Tail Layer # Outer Shield Tail Beldfoil® 2 Outer Jacket Outer Jacket Material: Outer Jacket Material PVC - Polyvinyl Chloride	Trade Name Typ   Tag Tag   Bra Bra   Nom. Wall Th   a 1.219	Outer Shield Material   De Aluminum Foil-Polyester   iid TC - Tinned Copper	Coverage (% Tape 100 65
Outer Shield Outer Shield Material: Layer # Outer Shield T 1 Beldfoil® 2 Outer Jacket Outer Jacket Material: Outer Jacket Material PVC - Polyvinyl Chloride Overall Cable	Trade Name Typ   Tag Tag   Bra Bra   Nom. Wall Th   a 1.219	De   Outer Shield Material     De   Aluminum Foil-Polyester     iid   TC - Tinned Copper     ickness (mm)   Image: Comparison of Comparis	Coverage (% Tape 100 65
Outer Shield Outer Shield Material: Layer # Outer Shield T 1 Beldfoil® 2 Outer Jacket Outer Jacket Material: Outer Jacket Material: PVC - Polyvinyl Chloride Overall Cable Overall Nominal Diar	Frade Name Typ Tap Bra Nom. Wall Th e 1.219 meter:	De   Outer Shield Material     De   Aluminum Foil-Polyester     iid   TC - Tinned Copper     ickness (mm)   Image: Comparison of Comparis	Coverage (% Tape 100 65
Outer Shield Outer Shield Material: Layer # Outer Shield T 1 Beldfoil® 2 Outer Jacket Outer Jacket Material: Outer Jacket Material: PVC - Polyvinyl Chloride Overall Cable Overall Nominal Dian Pair	Frade Name Typ Tap Bra Nom. Wall Th e 1.219 meter:	De   Outer Shield Material     De   Aluminum Foil-Polyester     iid   TC - Tinned Copper     ickness (mm)   Image: Comparison of Comparis	Coverage (% Tape 100 65
Outer Shield Outer Shield Material: Layer # Outer Shield T 1 Beldfoil® 2 Outer Jacket Outer Jacket Material: Outer Jacket Material: PVC - Polyvinyl Chloride Overall Cable Overall Nominal Diar Pair Pair Color Code Chart	Frade Name Typ Tap Bra Nom. Wall Th e 1.219 meter:	De   Outer Shield Material     De   Aluminum Foil-Polyester     iid   TC - Tinned Copper     ickness (mm)   Image: Comparison of Comparis	Coverage (% Tape 100 65
Outer Shield Outer Shield Material: Layer # Outer Shield T 1 Beldfoil® 2 Outer Jacket Outer Jacket Material: Outer Jacket Material: PVC - Polyvinyl Chloride Overall Cable Overall Nominal Dian Pair Pair Color Code Chart Number Color 1 Black & Red 2 Black & White	Trade Name Typ Tag Bra Nom. Wall Th e 1.219 meter:	Duter Shield Material Aluminum Foil-Polyester iid TC - Tinned Copper  ickness (mm)	Coverage (% Tape 100 65
Outer Shield Outer Shield Material: Layer # Outer Shield T 1 Beldfoil® 2 Outer Jacket Outer Jacket Material: Outer Jacket Material: Outer Jacket Material: PVC - Polyvinyl Chloride Overall Cable Overall Cable Overall Nominal Diar Pair Pair Color Code Chart Number Color 1 Black & Red 2 Black & White 3 Black & Green	Trade Name Typ Tag Bra Nom. Wall Th e 1.219 meter:	Duter Shield Material Aluminum Foil-Polyester iid TC - Tinned Copper  ickness (mm)	Coverage (% Tape 100 65
Outer Shield Outer Shield Material: Layer # Outer Shield T 1 Beldfoil® 2 Outer Jacket Outer Jacket Material: Outer Jacket Material: PVC - Polyvinyl Chloride Overall Cable Overall Nominal Dian Pair Pair Color Code Chart Number Color 1 Black & Red 2 Black & White	Trade Name Typ Tag Bra Nom. Wall Th e 1.219 meter:	Duter Shield Material Aluminum Foil-Polyester iid TC - Tinned Copper  ickness (mm)	Coverage (% Tape 100 65

# **Detailed Specifications & Technical Data**



## METRIC MEASUREMENT VERSION

## 8164 Multi-Conductor - Low Capacitance Computer Cable for EIA RS-232/422 & Digital

Operating Temperature Range:	-40°C To +60°C
UL Temperature Rating:	60°C
Bulk Cable Weight:	107.150 Kg/Km
Max. Recommended Pulling Tension:	493.750 N
Min. Bend Radius/Minor Axis:	101.600 mm

# Applicable Specifications and Agency Compliance (Overall)

# **Applicable Standards & Environmental Programs**

CEC/C(UL) Specification:CMAWM Specification:UL Style 2493 (300 V 60°C)EU Directive 2011/65/EU (ROHS II):YesEU CE Mark:YesEU Directive 2000/53/EC (ELV):YesEU Directive 2002/95/EC (RoHS):YesEU ROHS Compliance Date (mm/dd/yyyy):01/01/2004EU Directive 2002/96/EC (WEEE):YesEU Directive 2003/11/EC (BFR):YesCA Prop 65 (CJ for Wire & Cable):YesMII Order #39 (China RoHS):Yes	NEC/(UL) Specification:	CM
EU Directive 2011/65/EU (ROHS II):YesEU CE Mark:YesEU Directive 2000/53/EC (ELV):YesEU Directive 2002/95/EC (RoHS):YesEU RoHS Compliance Date (mm/dd/yyyy):01/01/2004EU Directive 2002/96/EC (WEEE):YesEU Directive 2003/11/EC (BFR):YesCA Prop 65 (CJ for Wire & Cable):YesMII Order #39 (China RoHS):YesPlenum/Non-PlenumYes	CEC/C(UL) Specification:	СМ
EU CE Mark:YesEU Directive 2000/53/EC (ELV):YesEU Directive 2002/95/EC (RoHS):YesEU RoHS Compliance Date (mm/dd/yyyy):01/01/2004EU Directive 2002/96/EC (WEEE):YesEU Directive 2003/11/EC (BFR):YesCA Prop 65 (CJ for Wire & Cable):YesMII Order #39 (China RoHS):YesPlenum/Non-Plenum	AWM Specification:	UL Style 2493 (300 V 60°C)
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     Plenum/Non-Plenum   Yes	EU Directive 2011/65/EU (ROHS II):	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     Mll Order #39 (China RoHS):   Yes     Plenum/Non-Plenum   Yes	EU CE Mark:	Yes
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MII Order #39 (China RoHS): Yes   Plenum/Non-Plenum Yes	EU Directive 2003/11/EC (BFR):	Yes
Plenum/Non-Plenum	CA Prop 65 (CJ for Wire & Cable):	Yes
	MII Order #39 (China RoHS):	Yes
	Plenum/Non-Plenum	
Plenum (Y/N): No	Plenum (Y/N):	No

### **Electrical Characteristics (Overall)**

#### Nom. Characteristic Impedance:

#### Impedance (Ohm)

100

#### Nom. Capacitance Conductor to Conductor:

Capacitance (pF/m)

41.0125

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

Capacitance (pF/m)

72.182

Nominal Velocity of Propagation:

VP (%)

78

Nom. Conductor DC Resistance:

DCR @ 20°C (Ohm/km)

78.744

#### Nominal Outer Shield DC Resistance:

DCR @ 20°C (Ohm/km)

10.4992

Ind. Pair Nominal Shield DC Resistance @ 20 59.058 Ohm/km Deg. C:

Max. Operating Voltage - UL:

Voltage 300 V RMS

Max. Recommended Current:

Current

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2.5 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
8164 060100	30 MT	3.719 KG	CHROME		4 FS PR #24 FHDPE SH PVC
8164 0601000	305 MT	35.834 KG	CHROME	С	4 FS PR #24 FHDPE SH PVC
8164 060500	152 MT	17.917 KG	CHROME	С	4 FS PR #24 FHDPE SH PVC

Notes:

C = CRATE REEL PUT-UP.

Revision Number: 2 Revision Date: 08-16-2012

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