# **Detailed Specifications & Technical Data**



ENGLISH MEASUREMENT VERSION

# 8107 Multi-Conductor - Low Capacitance Computer Cable for EIA RS-232/422 Applicatio



For more Information please call

1-800-Belden1



### **General Description:**

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

|  | overage), 24 Awo stranded 10 drain wire, 1 vo jacket.     |  |  |  |
|--|---|--|--|--|
| Physical Characteristics (Overall)   |   |  |  |  |
| Conductor<br>AWG:  |   |  |  |  |
| # Pairs AWG Stranding Conductor Material   |   |  |  |  |
| 7 24 7x32 TC - Tinned Copper   |   |  |  |  |
|  |   |  |  |  |
| Total Number of Conductors:  | 14  |  |  |  |
| Insulation   |   |  |  |  |
| Insulation Material:   |   |  |  |  |
|  | Vall Thickness (in.)                                      |  |  |  |
| Datalene® FPE - Foam Polyethylene 0.   |   |  |  |  |
| Outer Shield   |   |  |  |  |
| Outer Shield Material:   |   |  |  |  |
| Layer # Outer Shield Trade Name Type Outer Shi   |   |  |  |  |
| 1         Beldfoil®         Tape         Aluminum           2         Braid         TC - Tinne | n Foil-Polyester Tape w/Shorting Fold 100<br>ed Copper 65 |  |  |  |
|  |   |  |  |  |
| 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 (in.)  |   |  |  |  |
| PVC - Polyvinyl Chloride 0.035   |   |  |  |  |
| Overall Cable  |   |  |  |  |
| Overall Nominal Diameter:  | 0.341 in.   |  |  |  |
| Pair   |   |  |  |  |
| Pair Color Code Chart:   |   |  |  |  |
| Number Color   |   |  |  |  |
| 1 White/Blue & Blue/White  |   |  |  |  |
| 2 White/Orange & Orange/White  |   |  |  |  |
| 3 White/Green & Green/White  |   |  |  |  |
| 4 White/Brown & Brown/White  |   |  |  |  |
| 5 White/Gray & Gray/White  |   |  |  |  |
| 6 Red/Blue & Blue/Red<br>7 Red/Orange & Orange/Red   |   |  |  |  |
|  |   |  |  |  |
| Mechanical Characteristics (Overall)   |   |  |  |  |
| Operating Temperature Range:   | -30°C To +80°C  |  |  |  |
| UL Temperature Rating:   | 80°C (UL AWM Style 2919)                                  |  |  |  |
| Bulk Cable Weight:   | 59 lbs/1000 ft.   |  |  |  |
| Max. Recommended Pulling Tension:  | 82.500 lbs.   |  |  |  |
|  |   |  |  |  |
| Min. Bend Radius/Minor Axis:   | 3.500 in.   |  |  |  |
| Applicable Specifications and Agency Com   | ipliance (Overall)  |  |  |  |
| Applicable Standards & Environmental Program   |   |  |  |  |
| NEC/(UL) Specification:  | СМ  |  |  |  |
| CEC/C(UL) Specification:   | СМ  |  |  |  |
| AWM Specification:   | UL Style 2919 (30 V 80°C)                                 |  |  |  |
|  |   |  |  |  |

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| UL Flame Test:         UL 1085 UL Loading           Plenum Vinton-Plenum         No           Restricted Characteristics (Overall)         No           Non-Characteristics (Develance:         Science Conductor to Conductor & Shield:           Speciance (pf ff)         No         Science Conductor & Shield:           Non-Concellatore Conductor & Shield:         Science Conductor Develation:           VInton         Vinton         No         Science Conductor & Shield:           Speciance (pf ff)         Science:         Science Conductor & Shield:         Science Conductor & Shield:           Speciance (pf ff)         Science:         Science Conductor & Shield:         Science Conductor & Shield:           Speciance (pf ff)         Science:         Science Conductor & Shield:         Science Conductor & Shield:           Speciance (Conductor ff)         Science:         Science Conductor & Shield:         Science Conductor & Shield: <th></th> <th></th>  |  |                   |  |  |  |
|---|--|-------------------|--|--|--|
| EU Directive 2002/SEC (ELV):         Yes           EU Directive 2002/SEC (MoHS):         Yes           EU Directive 2002/SEC (MEEE):         Yes           EU Directive 2002/SEC (MEEE):         Yes           EU Directive 2002/SEC (MEEE):         Yes           CA Prop 55 (CJ for Wire & Cable):         Yes           MIL Order #38 (China RoHS):         Yes           MIL Order #38 (China RoHS):         Yes           Plana Test:         UL 1885 UL Loading           Plana Tost:         Blana Tost:           Plana Tost:         <  | EU Directive 2011/65/EU (ROHS II):   | Yes               |  |  |  |
| EU Directive 2002/95/EC (RoH9):         Yes           EU RoH8 Compliance Date (mmiddlyyyy):         01/01/2004           EU Directive 2002/95/EC (WEEE):         Yes           EU Directive 2002/95/EC (WIEE):         Yes           Penum Yuhon:         No           Plenum Yuhon:         No           Plenum Yuho:         No           Plenum Yuho:<   | EU CE Mark:  | Yes               |  |  |  |
| EUR APIS Compliance Date (mmiddlyyyy):         01/01/2004           EU Directive 2002/HEC (VFEE):         Yes           EU Directive 2002/HEC (GFR):         Yes           EU Directive 2002/HEC (GFR):         Yes           EU Directive 2002/HEC (GFR):         Yes           Mil Order 39 (bina RoHS):         Yes           Flame Test:         UL1885 UL Loading           Plenum (YN):         No           Plenum Number:         88107           Rotection: Concentration (Concentration)           Non. Characteristics Inpedance:           Impact Plenum           Monor Concentration (Concentration)           Non. Capacitance Conductor to Conductor:           Egectionce (GFR)           12:5           Non. Capacitance Conductor to Conductor & Shield:           Capacitance Conductor Of Dreagation:           Yer (5)           22           Non: Capacitance Conductor Of Conductor & Shield:           Capacitance Conductor Of Chesistance:           VEC (50m (Sim (Sim (Sim (Sim (Sim (Sim (Sim (Si   | EU Directive 2000/53/EC (ELV):   | Yes               |  |  |  |
| EU Directive 2002/94/EC (WEEE):         Yes           EU Directive 2002/11/EC (BFR):         Yes           CA Prop 65 (CJ for Wire & Cabio):         Yes           MIL Order #39 (China Rolls):         Yes           MIL Order #39 (China Rolls):         Yes           UL Flame Test:         UL 1685 UL Loading           Plenum Wire:         No           Impedance:         Impedance:           Impedance (PMI)         Statustic Impedance:           Impedance (PMI) </th <th>EU Directive 2002/95/EC (RoHS):</th> <th>Yes</th>  | EU Directive 2002/95/EC (RoHS):  | Yes               |  |  |  |
| EU Directive 2003/11/EC (#FR):         Yes           CA Prop 65 (CJ for Wire & Cable):         Yes           MI Order #39 (China RoH5):         Yes           Will offer #39 (China RoH5):         Yes           UL Flame Fort:         UL1685 UL Loading           Plenum //Non-Plenum         No           Plenum //Non-Plenum         88107           Plenum //Non-Plenum         88107           Plenum //Non-Characteristics (Overall)         No           None. Characteristics (Overall)         No           None. Characteristics Impedance:         No           Impedance (Onin)         No           None. Capacitance for/fil         Steleditics           If 2         Steleditics Impedance:           Impedance (Onin)         No           None. Capacitance for/fil         Steleditics           If 2         Steleditics (Steleditics Impedance)           Impedance (Onin)         Steleditics           If 2         Steleditics (Steleditics Impedance)           Impedance (Onin)         Steleditics           If 2         Steleditics (Steleditics Impedance)           Impedance (Steleditics Impedance)         Steleditics Impedance)           Impedance (Steleditics Impedance)         Steleditics Impedance)           Impedan  | EU RoHS Compliance Date (mm/dd/yyyy):  | 01/01/2004        |  |  |  |
| CA Prop 65 (CJ for Wire & Cable):         Yes           MI Order #39 (China RoHS):         Yes           Flame Test:         UL 1885 UL Loading           UL Rame Test:         UL 1885 UL Loading           Plenum (YN):         No           Plenum Number:         88107           Rise Control Co | EU Directive 2002/96/EC (WEEE):  | Yes               |  |  |  |
| MI Order #39 (China RoHS):         Yes           Flame Test         UL 1685 UL Loading           UL Finame Test:         UL 1685 UL Loading           Plenum (Yin):         No           Plenum (Yin):         No           Plenum (Yin):         No           Plenum (Yin):         No           Impedance (Orm)         Basility           Non. Characteristic Impedance:         Impedance (Orm)           Impedance (Orm)         State   | EU Directive 2003/11/EC (BFR):   |                   |  |  |  |
| UL Flame Test:       UL 1085 UL Loading         UL Flame Test:       UL 1085 UL Loading         Plenum Non-Plenum       Plenum Number:         Plenum Number:       08107         Contractoristics (Overall)       Non         Non. Characteristics (Overall)       Non         Contractoristic Impedance:       Impedance (Onn)         00       Contractoristics (Overall)         Non. Capacitance Conductor to Conductor to Conductor to Conductor to Conductor & Shield:       Capacitance (of If)         12       Capacitance (of If)         22       Non. Conductor DC Resistance:         VP (56)       State of the  | CA Prop 65 (CJ for Wire & Cable):  | Yes               |  |  |  |
| UL Flame Test:         UL 1085 UL Loading           Plenum Vinton-Plenum         No           Restricted Characteristics (Overall)         No           Non-Characteristics (Develance:         Science Conductor to Conductor & Shield:           Speciance (pf ff)         No         Science Conductor & Shield:           Non-Concellatore Conductor & Shield:         Science Conductor Develation:           VInton         Vinton         No         Science Conductor & Shield:           Speciance (pf ff)         Science:         Science Conductor & Shield:         Science Conductor & Shield:           Speciance (pf ff)         Science:         Science Conductor & Shield:         Science Conductor & Shield:           Speciance (pf ff)         Science:         Science Conductor & Shield:         Science Conductor & Shield:           Speciance (Conductor ff)         Science:         Science Conductor & Shield:         Science Conductor & Shield: <th>MII Order #39 (China RoHS):</th> <th>Yes</th>  | MII Order #39 (China RoHS):  | Yes               |  |  |  |
| Plenum Number:         No           Plenum Number:         88107           Capacitance Conductor Coordallow         Sector Callow           Nom. Characteristic Impedance:         Impedance Conductor to Conductor:           Capacitance Conductor to Conductor:         Capacitance (pf:ft)           Nom. Capacitance Conductor to Conductor:         Capacitance (pf:ft)           Nom. Capacitance Conductor to Conductor:         Capacitance (pf:ft)           Nom. Capacitance Conductor to Conductor & Shield:         Capacitance (pf:ft)           Z2         Nom. Capacitance (pf:ft)           Nom. Conductor DC Resistance:         DCR @ 20*C (Ohm/1000 ft)           Nom. Conductor DC Resistance:         DCR @ 20*C (Ohm/1000 ft)           Source Shield DC Resistance:         DCR @ 20*C (Ohm/1000 ft)           Source Shield DC Resistance:         Nom. Source Shield DC Resistance:           DCR @ 20*C (Ohm/1000 ft)         Source Shield DC Resistance:           Max. Operating Voltage - UL:         Viotage Description           Source Max Gauge         Source Max Gauge           Source Max Gauge         So  | Flame Test   |                   |  |  |  |
| Pienum (Yi/h):         No           Pienum Number:         88107           Contractoristics (Overall)         Contractoristics (Overall)           Num. Characteristics (Overall)         Contractoristics (December 2000)           Num. Capacitance Conductor to Conductor to Conductor & Shield:         Contractoristics (December 2000)           Capacitance (Pf/ft)         Contractoristics (December 2000)           Num. Capacitance Conductor of Shield:         Contractoristics (December 2000)           Capacitance (Pf/ft)         Contractoristics (December 2000)           Num. Capacitance (Pf/ft)         Contractoristics (December 2000)           Num. Capacitance (Pf/ft)         Contractoristics (December 2000)           Num. Capacitance (Pf/ft)         Contractoristics (December 2000)           Yet (2000)         Contractoristics (December 2000)           Static (December 2000)         Contractoristic (December 2000)           Yet (2000)         Contractoristics (December 2000)           Static (December 2000)         Contractoristic (December 2000)   | UL Flame Test:   | UL1685 UL Loading |  |  |  |
| Plenum Number:         88107           Citectrical Characteristics (Overall)         Nom. Characteristic Impedance:           Impedance (Ohm)         Nom.           100         Nom.           Nom. Capacitance Conductor to Conductor:         Capacitance Conductor to Conductor & Shield:           Capacitance (Pfff)         2           Nom.         Capacitance (Pfff)           22         Nom.           Nom.         Shield:           Capacitance (Pfff)         2           78         Nom.           Nom.         Capacitance:           DCR @ 20°C (Ohm/1000 ft)         3.5           Nominal Outer Shield DC Resistance:         DCR @ 20°C (Ohm/1000 ft)           3.5         Max.           Nominal Outer Shield DC Resistance:         DCR @ 20°C (Ohm/1000 ft)           3.5         Max.           Starting Voltage - UL:         Max.           Voltage Description         Max           30 V Rix Or Kts         U. AWM Sile 2919           30 V Rix Or Kts         Max           I. 5 Amps per conductor @ 25°C   | Plenum/Non-Plenum  |                   |  |  |  |
| Electrical Characteristics (Overall)         Nom. Characteristic Impedance:         Impedance (Ohm)         100         Nom. Capacitance Conductor to Conductor:         Capacitance (pF/f)         12.5         Nom. Capacitance Cond. to Other Conductor & Shield:         Capacitance (pF/f)         22         Nom. Conductor JC Resistance:         VP (%)         24         Nom.all Outer Shield DC Resistance:         DCR 20°C (Ohm/1000 ft)         3.5         Max. Operating Voltage - UL:         Voltage Description         30 V FMS         Max. Recommended Current:         Current         1.5 Amps per conductor @ 25°C   | Plenum (Y/N):  | No                |  |  |  |
| Nom. Characteristic Impedance:         Impedance (Ohm)         Nom. Capacitance Conductor to Conductor:         Capacitance (pf/f)         12.5         Nom. Capacitance Cond. to Other Conductor & Shield:         Capacitance (pf/f)         22         Nom.Inal Velocity of Propagation:         VF (%)         Nom. Conductor DC Resistance:         DR @ 20°C (Ohm/1000 ft)         3.5         Max. Operating Voltage - UL:         Voltage         Description         30 V RMS (CM.         Max. Recommended Current:         Current         1.5 Amps per conductor @ 25°C   | Plenum Number:   | 88107             |  |  |  |
| Nom. Characteristic Impedance:         Impedance (Ohm)         Nom. Capacitance Conductor to Conductor:         Capacitance (pf/f)         12.5         Nom. Capacitance Cond. to Other Conductor & Shield:         Capacitance (pf/f)         22         Nom.Inal Velocity of Propagation:         VF (%)         Nom. Conductor DC Resistance:         DR @ 20°C (Ohm/1000 ft)         3.5         Max. Operating Voltage - UL:         Voltage         Description         30 V RMS (CM.         Max. Recommended Current:         Current         1.5 Amps per conductor @ 25°C   | Electrical Characteristics (Overall)   |                   |  |  |  |
|   | 12.5         Nom. Capacitance (ord. 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         Nominal Outer Shield DC Resistance:         DCR @ 20°C (Ohm/1000 ft)         3.5         Max. Operating Voltage - UL:         Voltage       Description         30 V RMS       UL AWM Style 2919         300 V RMS       CM         Max. Recommended Current: |                   |  |  |  |
| lotes (Overall)   | 1.5 Amps per conductor @ 25°C  |                   |  |  |  |
|   | Notes (Overall)  |                   |  |  |  |

## 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             |
|--------------|----------|-------------|--------|-------|-----------------------|
| 8107 060100  | 100 FT   | 6.800 LB    | CHROME |       | 7 PR #24 FHDPE SH PVC |
| 8107 0601000 | 1,000 FT | 63.000 LB   | CHROME | С     | 7 PR #24 FHDPE SH PVC |
| 8107 060500  | 500 FT   | 33.000 LB   | CHROME | С     | 7 PR #24 FHDPE SH PVC |

Notes: C = CRATE REEL PUT-UP.



#### ENGLISH MEASUREMENT VERSION

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Revision Number: 2 Revision Date: 08-31-2012

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