# **Detailed Specifications & Technical Data**



#### ENGLISH MEASUREMENT VERSION

### 88102 Multi-Conductor - Low Cap. Computer Cable for EIA RS-232/422/485 Applications

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For more Information please call

1-800-Belden1



#### **General Description:**

24 AWG stranded (7x32) tinned copper conductors, plenum, foam FEP insulation, twisted pairs, overall Beldfoil shield (100% coverage), 24 AWG stranded TC drain wire, fluorocopolymer jacket.

Physical Characteristics (Overall)	
Conductor	
AWG:	
# Pairs         AWG         Stranding         Conductor Material           2         24         7x32         TC - Tinned Copper	
Total Number of Conductors:	4
Insulation Insulation Material:	
Insulation Material Wall Thicknes	ss (in.)
FFEP - Foam Fluorinated Ethylene Propylene 0.015	
Outer Shield	
Outer Shield Material:	
Outer Shield Trade Name         Type         Outer Shield Material           Beldfoil®         Tape         Aluminum Foil-Polyester Tape	Coverage (%) ape 100
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.)	
PVDF - Fluorocopolymer 0.014	
Overall Cable	
Overall Nominal Diameter:	0.203 in.
Number       Color         1       White/Blue & Blue/White         2       White/Orange & Orange/White	
Mechanical Characteristics (Overall)	
Operating Temperature Range:	-20°C To +150°C
Bulk Cable Weight:	20 lbs/1000 ft.
Max. Recommended Pulling Tension:	28 lbs.
Min. Bend Radius/Minor Axis:	2.250 in.
Applicable Specifications and Agency Complian	ce (Overall)
Applicable Standards & Environmental Programs	
NEC/(UL) Specification:	СМР
CEC/C(UL) Specification:	CMP
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):	04/01/2005
EU Directive 2002/96/EC (WEEE):	Yes

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#### 88102 Multi-Conductor - Low Cap. Computer Cable for EIA RS-232/422/485 Applications

CA Prop 86 (CJ for Wire & Cable):       Yes         Microar #36 (China Rolt5):       Yes         Flame Test       NPPA 262         CSA Flame Test:       FT6         Plenum (YRN):       Yes         Plenum (YRN):       Yes         Tompedance (Infinition Compedance):       Infinition Compedance (Infinition Compedance):         Indectance:       Infinition Compedance):         Nom. Capacitance (Infinition Compedance):       Infinition Compedance):         Indectance:       Infinition Compedance):         Nom. Capacitance (Infinition Conductor to Conductor:       Infinition Compedance):         State Conductor to Conductor:       Infinition Compedance):         Infinition Compedance (Infinition Conductor & Shield:       Infinition Compedance):         Infinition Compedance (Infinition Conductor & Shield:       Infinition Compedance):         Infinition Conductor DC Resistance:       Infinition Compedance):         Infinition Compedance (Infinition Compedance):       Infinition Compedance):         Infinition Compedance:       Infinition Compedance):         Infinition Compedance:       Infinition Compedance):         Infinition Compedance:       Infinition Compedance):         Infinition Compedance:       Infinition Compedance):         Infinition Compedaton Compedance):       Infinition Co		
MI Order #38 (China RoH5):         Ycs           Flame Test:         NFPA 282           GSA Fiame Test:         Fr6           Plenum (YA):         Ycs           Plenum (YA):         Ycs           Nom. Characteristics (Overall)         Nom. Characteristics (Overall)           Nom. Capacitance Coductor to Conductor:         Capacitance (Griff)           23         Nom. Characteristics (Overall)           Nom. Capacitance Coductor & Shield:         Capacitance (Griff)           23         Nom. Characteristics (Overall)           Nom. Characteristics (Overall)         Nom. Characteristics (Overall)           Nom. Characteristics (Overall)         Nom. Characteristics (Overall)           Nom. Characteristics (Characteristics (Overall)         Nom. Characteristics (Overall)           Nom. Characteristics (Characteristics)         Nom. Characteristics) </th <th>EU Directive 2003/11/EC (BFR):</th> <th>Yes</th>	EU Directive 2003/11/EC (BFR):	Yes
Film       NPA 202         CSA Plane Tost:       F16         Planum (YA):       Yes         Contractoristic (Overall)       Non-randomistic impediance (Composition in Conductor)         Impediance (Composition in Conductor)       Non-randomistic impediance (Composition in Conductor)         Non-randomistic impediance (Composition in Conductor)       Non-randomistic impediance (Composition in Conductor)         Non-randomistic impediance (Composition in Conductor)       Non-randomistic impediance (Composition in Conductor)         Non-randomistic impediance (Composition in Conductor)       Non-randomistic impediance (Composition in Conductor)         Non-randomistic impediance (Composition in Conductor)       Non-randomistic impediance (Composition in Conductor)         Non-randomistic impediance (Composition in Conductor)       Non-randomistic impediance (Composition in Conductor)         Non-randomistic impediance (Composition in Conductor)       Non-randomistic impediance (Composition in Conductor)         Vision (Composition in Composition C	CA Prop 65 (CJ for Wire & Cable):	Yes
UL Flame Test:NFPA 82Cost PlanumTGPlanum Non-PlanumvesEnvironmentation (Contractoristic (Dyectall)Non-Standardistic ImpedancesImpedance Conductor IDNon-Standardistic ImpedancesImpedance Conductor to Conductor IDNon-Standardistic ImpedancesConstruction (PfM) 100Non-Standardistic ImpedancesNon-Standardistic Impedance Conductor IDNon-Standardistic ImpedancesConstructor Conductor IDStandardistic ImpedancesImpedance (pfM) 100Non-Standardistic ImpedancesNon-Standardistic ImpedanceNon-Standardistic ImpedanceImpedance (pfM) 100Non-Standardistic ImpedanceNon-Standardistic ImpedanceNon-Standardistic ImpedanceImpedance (pfM) 100Non-Standardistic ImpedanceNon-Standardistic ImpedanceNon-Standardistic ImpedanceImpedance (pfM) 100Non-Standardistic ImpedanceImpedance (pfM) <b< th=""><th>MII Order #39 (China RoHS):</th><th>Yes</th></b<>	MII Order #39 (China RoHS):	Yes
CSA Plane Test:         FT6           Plenum/(Noi:-Plenum)         Yea           Plenum/(Ni::         Yea           Electrical Characteristics (Overall)         Non. Characteristic Impedance:           Impedance (Om)         Non. Characteristic Impedance:           Impedance (Om)         Non. Inductance:           Inductance:         Inductance:           Inductance (uHP)         Non.           2:3         Non.           Non.         Capacitance (pfP)           1:3         Non.           Non.         Shiekt:           Capacitance (pfP)         Shiekt:           2:3         Non.           Non.         Shiekt:           Capacitance (pfP)         Shiekt:           2:3         Non.           Non.         Shiekt:           Capacitance (pfP)         Shiekt:           2:3         Non.           Non.         Shiekt:           Capacitance (pfP)         Shiekt:           3:3         Non.           Non.         Shiekt:           Capacitance (pfP)         Shiekt:           3:3         Non.           Non.         Shiekt:           Capacitance (pfP)	Flame Test	
Plenum (Vin):         Yes           Electrical Characteristics (Overall)	UL Flame Test:	NFPA 262
Pennu (1%):         Yes           Exclate Calcuance         Impediance           Impediance (10%)         Impediance (10%)           Norm. Restance         Impediance (10%)           Impediance (10%)         Impediance (1	CSA Flame Test:	FT6
Electrical Characteristic Impedance:         Impedance (Offin)         100         Nom: Inductance:         Inductance (uHf1)         0.21         Nom: Capacitance Conductor to Conductor:         Capacitance (of /ft)         13.000         Nom: Capacitance (of /ft)         13.000         Nom: Capacitance (of /ft)         13.000         Nom: Capacitance (of /ft)         13.000         Nominal Velocity of Propagation:         VP (%)         Nominal Velocity of Propagation:         VP (%)         Nominal Velocity of Propagation:         VP (%)         Nominal Velocity of Propagation:         VE (%)         Nominal Outer Shield DC Resistance:         DE (%) 20°C (Dim/1000 ft)         15.5         Max. Accommended Current:         Velocity of NM <tr< th=""><th>Plenum/Non-Plenum</th><th></th></tr<>	Plenum/Non-Plenum	
Nom. Characteristic Impedance:   Impedance (Ohm)   10   10   Nom. Inductance:   Inductance (PHT)   10.21   Nom. Capacitance Conductor to Conductor:   Capacitance (PFT)   13.000   Nom. Capacitance (PFT)   23.3   Nominal Velocity of Propagation:   VF (%)   78   Nominal Delay:   Display (Institution)   Nom. Conductor DC Resistance:   Capacitance (2 PTT)   Nominal Delay:   Display (Institution)   Nominal Outer Shield DC Resistance:   Display (Institution)   Nominal Outer Shield DC Resistance:<	Plenum (Y/N):	Yes
Nom. Characteristic Impedance:   Impedance (Ohm)   10   10   Nom. Inductance:   Inductance (PHT)   10.21   Nom. Capacitance Conductor to Conductor:   Capacitance (PFT)   13.000   Nom. Capacitance (PFT)   23.3   Nominal Velocity of Propagation:   VF (%)   78   Nominal Delay:   Display (Institution)   Nom. Conductor DC Resistance:   Capacitance (2 PTT)   Nominal Delay:   Display (Institution)   Nominal Outer Shield DC Resistance:   Display (Institution)   Nominal Outer Shield DC Resistance:<	Electrical Characteristics (Overall)	
Iou   Nom. Inductance (µH/ft)   0.21   Nom. Capacitance Conductor to Conductor:   Capacitance (pF/ft)   13.00   Nom. Capacitance (pF/ft)   23.3   Nominal Volcity of Propagation:   VP (%)   78   Nominal Volcity of Propagation:   Define gazor (Dimiftion ft)   1.3   Nominal Volcity of Desistance:   Define gazor (Dimiftion ft)   1.4.0   Nominal Volta Shield Desistance:   Define gazor (Dimiftion ft)   1.5.5   Max: Operating Voltage - UL:   Voltage   300 VFINS   Max: Recommende Current:   Current   1.78 Amps per conductor @ 28°C		
Inductance (µHff)   0.21   Nom. Capacitance Conductor to Conductor:   Capacitance (pF/ff)   2.3   Sominal Velocity of Propagation:   VP (%)   78   Nominal Velocity of Propagation:   VP (%)   1.3   Nominal Velocity of Propagation:   VP (%)   24.0   Nominal Outer Shield DC Resistance:   VCR @ 20°C (Ohm/1000 ff)   1.5   Sour Conductor ID   8.8   Voltage   300 V RMS   Max. Recommended Current:   Curront   1.78 Amps per conduct @ 25°C		
0.21         Nom. Capacitance (pF/ft)         13.000         Nom. Capacitance Cond. to Other Conductor & Shield:         Capacitance (pF/ft)         23.3         Nominal Velocity of Propagation:         VP (%)         78         Nominal Delay:         Daiay (naff)         1.3         Nom. Conductor DC Resistance:         DCR @ 20°C (Ohm/1000 ft)         15.5         Naminal Velocity Voltage - UL:         Voltage         Voltage         Nature         Inf.         Inf.         Naminal Velocity Voltage - UL:         Voltage         Not Ration         Inf.         Not Ration         Inf.         Name Recommended Current:         Voltage reconductor @ 25°C	Nom. Inductance:	
Capacitance (pF/f)   13.000   Nom. Capacitance Cond. to Other Conductor & Shield:   Capacitance (pF/f)   23.3   Nominal Velocity of Propagation:   VP (%)   73   Nominal Delay:   elay (nsf1)   1.3   Nom. Conductor DC Resistance:   DCR 220°C (Ohm/1000 f)   24.0   Nominal Outer Shield DC Resistance:   DCR 220°C (Ohm/1000 f)   300 VRMS   Nax. Operating Voltage - UL:   Voltage   Voltage   Nax. Recommended Current:   Current   1.76 Amps per conductor @ 25°C		
13.000   Nom. Capacitance Cond. to Other Conductor & Shield:   Capacitance (pF/ft)   2.3   Nominal Velocity of Propagation:   VP (%)   78   Nominal Delay:   Delay (nft)   1.3   Nom. Conductor DC Resistance:   DCR @ 20°C (Ohm/100 ft)   24.0   Nominal Outer Shield DC Resistance:   DCR @ 20°C (Ohm/100 ft)   1.5.5   Nax. Recommended Current:   Voltage   Over Rais   Current   1.76 Amps per conductor @ 25°C	Nom. Capacitance Conductor to Conductor:	
Capacitance (pF/ft)   23.3   Nominal Velocity of Propagation:   VP (%)   78   Nominal Delay:   Delay (ns/ft)   1.3   Nom. Conductor DC Resistance:   DCR @ 20°C (Ohm/1000 ft)   24.0   Nominal Outer Shield DC Resistance:   DCR @ 20°C (Ohm/1000 ft)   15.5   Max. Operating Voltage - UL:   Voltage   300 V RMS   Max. Recommended Current:   Current   1.76 Amps per conductor @ 25°C		
23.3         Nominal Velocity of Propagation:         VP (%)         7a         Nominal Delay:         Diay (ns/ft)         1.3         Nom. Conductor DC Resistance:         DCR @ 20°C (Ohm/1000 ft)         24.0         Nominal Outer Shield DC Resistance:         DCR @ 20°C (Ohm/1000 ft)         15.5         Max. Operating Voltage - UL:         Voltage         300 V FMS         Max. Recommended Current:         Current         1.76 Amps per conductor @ 25°C	Nom. Capacitance Cond. to Other Conductor & Shield:	
VP (%)   78   Nominal Delay:   Delay (ns/ft)   1.3   Nom. Conductor DC Resistance:   DCR @ 20°C (Ohm/1000 ft)   24.0   Nominal Outer Shield DC Resistance:   DCR @ 20°C (Ohm/1000 ft)   15.5   Max. Operating Voltage - UL:   Voltage   300 V RMS   Max. Recommended Current:   Current   1.76 Amps per conductor @ 25°C		
78         Nominal Delay:         Delay (ns/ft)         1.3         Nom. Conductor DC Resistance:         DCR @ 20°C (Ohm/1000 ft)         24.0         Nominal Outer Shield DC Resistance:         DCR @ 20°C (Ohm/1000 ft)         15.5         Max. Operating Voltage - UL:         Voltage         300 V RMS         Max. Recommended Current:         Current         1.76 Amps per conductor @ 25°C	Nominal Velocity of Propagation:	
Delay (ns)ft         1.3         Nom. Conductor DC Resistance:         DCR @ 20°C (Ohm/1000 ft)         24.0         Nominal Outer Shield DC Resistance:         DCR @ 20°C (Ohm/1000 ft)         15.5         Max. Operating Voltage - UL:         Voltage         300 V RMS         Max. Recommended Current:         Current         1.76 Amps per conductor @ 25°C		
1.3         Nom. Conductor DC Resistance:         DCR @ 20°C (Ohm/1000 ft)         24.0         Nominal Outer Shield DC Resistance:         DCR @ 20°C (Ohm/1000 ft)         15.5         Max. Operating Voltage - UL:         Voltage 300 V RMS         Max. Recommended Current:         Current         1.76 Amps per conductor @ 25°C	Nominal Delay:	
DCR @ 20°C (Ohm/1000 ft)   24.0   Nominal Outer Shield DC Resistance:   DCR @ 20°C (Ohm/1000 ft)   15.5   Max. Operating Voltage - UL:   Voltage   300 V RMS   Max. Recommended Current:   Current   1.76 Amps per conductor @ 25°C		
24.0         Nominal Outer Shield DC Resistance:         DCR @ 20°C (Ohm/1000 ft)         15.5         Max. Operating Voltage - UL:         Voltage         300 V RMS         Max. Recommended Current:         Current         1.76 Amps per conductor @ 25°C	Nom. Conductor DC Resistance:	
DCR @ 20°C (Ohm/1000 ft)         15.5         Max. Operating Voltage - UL:         Voltage         300 V RMS         Max. Recommended Current:         Current         1.76 Amps per conductor @ 25°C		
15.5         Max. Operating Voltage - UL:         Voltage         300 V RMS         Max. Recommended Current:         Current         1.76 Amps per conductor @ 25°C	Nominal Outer Shield DC Resistance:	
Voltage         300 V RMS         Max. Recommended Current:         Current         1.76 Amps per conductor @ 25°C		
300 V RMS         Max. Recommended Current:         Current         1.76 Amps per conductor @ 25°C	Max. Operating Voltage - UL:	
Current 1.76 Amps per conductor @ 25°C		
1.76 Amps per conductor @ 25°C	Max. Recommended Current:	
Put Ups and Colors:	1.76 Amps per conductor @ 25°C	
	Put Ups and Colors:	

Item #	Putup	Ship Weight	Color	Notes	Item Desc
88102 0081000	1,000 FT	22.000 LB	GRAY	С	2#24 PR FS SOLEF
88102 008500	500 FT	12.000 LB	GRAY	С	2#24 PR FS SOLEF

Notes:

C = CRATE REEL PUT-UP.

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