# **Detailed Specifications & Technical Data**



### 3082A Multi-Conductor - DeviceBus® for ODVA DeviceNet™



For more Information please call

1-800-Belden1



#### **General Description:**

15 and 18 AWG stranded tinned copper conductors, PVC insulation (power), FPE insulation (data), individually foil shielded (100% coverage) plus an overall tinned copper braid (65% coverage), sunlight/oil-resistant PVC jacket.

Physical Characteristics (Overall)			
Conductor AWG:			
# Pairs     AWG     Stranding     Conductor     Material       1     15     19x28     TC - Tinned Copper       1     18     19x30     TC - Tinned Copper			
Total Number of Conductors:	4		
Insulation Insulation Material: Insulation Material AWG			
PVC - Polyvinyl Chloride     15       FPE - Foam Polyethylene     18			
Inner Shield Inner Shield Material:			
Layer #         Type         Inner Shield Material         Coverage (%)			
15 AWG Pair         Tape         Aluminum Foil-Polyester Tape         100           18 AWG Pair         Tape         Aluminum Foil-Polyester Tape         100			
Outer Shield Outer Shield Material:			
Type         Outer Shield Material         Coverage (%)           Braid         TC - Tinned Copper         65			
Outer Shield Drain Wire AWG:			
AWGStrandingDrain Wire Conductor Material1819x30TC - Tinned Copper			
Outer Jacket Outer Jacket Material:			
Outer Jacket Material         Nom. Wall Thickness (in.)           PVC - Polyvinyl Chloride         .060			
Overall Cable			
Overall Nominal Diameter:	0.480 in.		
Pair			
Number     Color       1 (15 AWG)     Red & Black       2 (18 AWG)     Blue & White			
Mechanical Characteristics (Overall)			
Operating Temperature Range:	-20°C To +75°C		
UL Temperature Rating:	75°C		
Bulk Cable Weight:	108 lbs/1000 ft.		
Max. Recommended Pulling Tension:	190 lbs.		
Min. Bend Radius/Minor Axis:	4.800 in.		
Applicable Specifications and Agency Compliance (Overall)			
Applicable Standards & Environmental Programs NEC/(UL) Specification:	CMG, PLTC-ER		

# **Detailed Specifications & Technical Data**



## ENGLISH MEASUREMENT VERSION

## 3082A Multi-Conductor - DeviceBus® for ODVA DeviceNet™

CMU         CMU           RVM Specification:         UL Style 20201 (600 V 75°C)           EU Directive 2010/SEC (EU):         Yes           EU Directive 2010/SEC (EU):         Yes           EU Directive 2020/SEC (FUEE):         Yes           Other 59/S (Chains RoHS):         Yes           Isouriget mean         Yes           Other 59/S (Chains RoHS):         Yes           Other 59/S (Chains RoHS):         Yes           Other 59/
EU Directive 2011/85/EU (ROHS II):         Yes           EU Directive 2003/85C (ELV):         Yes           EU Directive 2003/85C (ROHS):         Yes           EU Directive 2002/98/EC (ROHS):         Yes           MI Order #39 (China RoHS):         Yes           Min Order #39 (China RoHS):         Yes           Min Order #39 (China RoHS):         Yes           Min Order #39 (China RoHS):         Yes           Ol Resistance:         Yes           Sunlight Resistance:         Yes           Non         Yes           Intersection for freq (MHz) Sant Freq (MHz) Sop Freq (MHz) Impedance (Ohm)           Tax Word Par Only         Tax           Non: Inductance (JHH)         Tax           Yes         Yes           Non: Inductance (JHH)         Tax           Non: Operation freq (MHz) Sant Freq (MHz) Sop Freq (MHz) Capacitance (pFH)
EU CE Mark:         Yes           EU Directive 2000/35/EC (ELV):         Yes           EU Directive 2000/35/EC (ELV):         Yes           EU Directive 2000/35/EC (ELV):         Yes           EU Directive 2000/35/EC (MoEE):         Yes           Mil Order #39 (China RoHS):         Yes           Mil Order #39 (China RoHS):         Yes           Mil Order #39 (China RoHS):         Yes           UL Flame Test:         Ul 1805 FT4 Loading           CSA Flame Test:         FT4           Sutbility         Sunlight Resistance:         Yes           Oll Resistance:         Yes           Oll Resistance:         Yes           Plenum (YM):         No           Varavergad Impadence:         Varavergad Impadence:           Discription         Freq. (MHZ) Start Freq. (MHZ) Stop Freq. (MHZ) Stape Freq.
EU Directive 2000/SUEC (ELV):         Yes           EU Directive 2002/SUEC (RoHS):         Yes           EU RoHS Compliance Date (mm/dd/yyyy):         04/01/2005           EU Directive 2002/SUEC (WEEE):         Yes           EU Directive 2002/SUEC (BFR):         Yes           GA Prop 65 (CJ for Wire & Cable):         Yes           Other Specification:         ODVA Class 2 Thick           Flame Test:         UL 1685 FT4 Loading           UL Flame Test:         UL 1685 FT4 Loading           Sanlight Resistance:         Yes           Oll Resistance:         Yes           Oll Resistance:         Yes           Plenum/Non-Plenum         Plenum (YN):           Plenum (YN):         No           Unavoraged Impedance:         Unavoraged Impedance (Ohm)           Discription         Freq. (MHz) Stor Freq. (MHz) Stop Freq. (MHz) Stop Freq. (MHz)           Discription         Freq. (MHz) Stor Freq. (MHz) Stop Freq. (MHz) Stop Freq. (MHz) Capacitance (pF/f)           Tis AWC Pare Condy 1         120           Nom.         Stop Freq. (MHz) Stop Freq. (MHz) Stop Freq. (MHz) Capacitance (pF/f)
EU Directive 2002/95/EC (RoHS):         Yes           EU RoHS Compliance Date (mm/dd/yyyy):         04/012005           EU Directive 2002/95/EC (WEEE):         Yes           MI Order #39 (China RoHS):         Yes           Other Specification:         ODVA Class 2 Thick           Flame Test         UL 1685 FT4 Loading           Sutiability         Sutiability           Sutiability         Yes           Oil Resistance:         Yes           Oil Resistance:         Yes           Plenum (YN):         No           Electrical Characteristics (Overall)         Unaveraged Impedance:           Unaveraged Impedance:         Use           Discription         Freq. (MHz) Stor Freq. (MHz) Stor Freq. (MHz)           Now. Inductance (JHM)         120           Now. Capacitor Nov / 174         120           Nom. Inductance (JHM)         120           Nom. Capacitor Nov / 175         120           Nom. Inductance (JHM)         120           Nom. Indivector of Propagitor:         120 </td
EV RoHS Compliance Date (mm/dd/yyyy):         04/01/2005           EU Directive 2002/96/EC (WEEE):         Yes           EU Directive 2002/96/EC (WEEE):         Yes           EU Directive 2002/96/EC (WEEE):         Yes           CA Prop 65 (CJ for Wire & Cable):         Yes           Mill Order #39 (China RoHS):         Yes           Other Specification:         ODVA Class 2 Thick           Flame Test:         UL flame Test:           UL Flame Test:         UL 1685 FT4 Loading           CSA Flame Test:         FT4           Suitability         Yes           Oil Resistance:         Yes           Oil Resistance:         Yes           Instrumt/Non-Plenum         Yes           Plenum (YN):         No           Uraveraged Impedance:         Yes           Description Freq. (MH2) Start Freq. (MH2) Stop Freq. (MH2) Impedance (Ohm)           16 AWG Pair Only         120           Nom. Respectance Conductor to Conductor:         Yes           Description Freq. (MH2) Start Freq. (MH2) Stop Freq. (MH2) Capacitance (pF/ft)           16 AWG Pair Only 1         120           Nom.         Yes           Description Freq. (MH2) Start Freq. (MH2) Stop Freq. (MH2) Capacitance (pF/ft)           16 AWG Pair Only 1         120
EU Directive 2002/96/EC (WEEE):       Yes         EU Directive 2003/11/EC (BFR):       Yes         CA Prop 65 (CJ for Wire & Cable):       Yes         Mill Order #39 (China RoHS):       Yes         Other Specification:       ODVA Class 2 Thick         Flame Test:       UL 1885 FT4 Loading         CSA Flame Test:       UL 1885 FT4 Loading         Suitability       Suitability         Suitability       Yes         Oil Resistance:       Yes         Oil Resistance:       Yes         Oil Resistance:       Yes         Diarearce (MHz) Start Freq. (MHz) Storp Freq. (MHz) Storp Freq. (MHz) Impedance (Ohm)         18 AWG Pair Only       120         Nom. Inductance (µHff)       120         Nom. Capacitance Conductor to Conductor:       Description         Description       Freq. (MHz) Storp Freq. (MHz) Capacitance (pFff)         18 AWG Pair Only       120         Nominal Velocity of Propagation:       120         Nominal Veloc
EU Directive 2003/11/EC (BFR):         Yes           CA Prop 65 (CJ for Wire & Cable):         Yes           Mill Order #39 (China RoHS):         Yes           Other Specification:         ODVA Class 2 Thick           Flame Test:         UL 1885 FT4 Loading           GSA Flame Test:         FT4           Suitability         Suitability           Suitability         Yes           Oil Resistance:         Yes           Plenum (YN):         No           Iso Capacitance (JMHZ) Start Freq. (MHZ) Storp Freq. (MHZ) Impedance (Ohm) 120           Now. Inductance:         Jusciption           Description         Freq. (MHZ) Storp Freq. (MHZ) Storp Freq. (MHZ) Capacitance (pF/ff) 15 AWG Pair Only 174           Now. Capacitance Conductor to Conductor:         Jusciption           Description Tereq. (MHZ) Start Freq. (MHZ) Storp Freq. (MHZ) Capacitance (pF/ff) 16 AWG Pair Only 1         12.0           Nominal Velocity of Propagation:         Jusciption         Yes           Description Tereq. (MHZ) Start Freq. (MHZ) Storp Freq. (MHZ) Capacitance (pF/ff) 16 AWG Pair Only 175         12.0
CA Prop 65 (CJ for Wire & Cable):         Yes           MII Order #39 (China RoHS):         Yes           Other Specification:         ODVA Class 2 Thick           Flame Test         UL flame Tost:         UL flame Tost:           Stability         Stability         Stability           Stability         Yes         Stability           Stability         No         Stability           Stability         Stability
Mil Order #39 (China RoHS):         Yes           Other Specification:         ODVA Class 2 Thick           Flame Test         UL 1685 FT4 Loading           CSA Flame Test:         UL 1685 FT4 Loading           Suitability         FT4           Suitability         Yes           Oil Resistance:         Yes           Oil Resistance:         Yes           Plenum/Non-Plenum         Yes           Plenum/Non-Plenum         No           Electrical Characteristics (Overall)         No           Unaveraged Impedance:         Ves           Description         Freq. (MHz) Start Freq. (MHz) Stop Freq. (MHz) Impedance (Ohm)           18 AWG Pair Only         120           Nom. Inductance (µH/ft)         120           Nom. Adv Grait Only         120           Nom. Capacitance Conductor to Conductor:         Description           Description         Inductance (µH/ft)           18 AWG Pair Only         1           Vas Grait Only         1           18 AWG Pair Onl
Other Specification:         ODVA Class 2 Thick           Flame Test:         UL 1685 FT4 Loading           CSA Flame Test:         FT4           Suitability         Suitability           Suitability         Yes           Oll Resistance:         Yes           Plenum/Non-Plenum         Yes           Plenum/Non-Plenum         No           Electrical Characteristics (Overall)         No           Description         Freq. (MHz) Start Freq. (MHz) Stop Freq. (MHz) Impedance (Ohm)           Is AWG Pair Only         120           Nom. Inductance:         Description         Inductance (µH/ft)           Description         Freq. (MHz) Start Freq. (MHz) Stop Freq. (MHz) Capacitance (PF/ft)           Is AWG Pair Only         1         12.0           Nom. Capacitance Conductor to Conductor:         Description         Freq. (MHz) Start Freq. (MHz) Start Freq. (MHz) Capacitance (pF/ft)           Is AWG Pair Only         1         12.0           Nom. Tapacitance Conductor to Conductor:         Description         Freq. (MHz) Start Freq. (MHz) Sta
Flame Test         UL 1885 FT4 Loading           CSA Flame Test:         FT4           Suitability         FT4           Suitability         Yes           Oil Resistance:         Yes           Oil Resistance:         Yes           Plenum//Non-Plenum         Yes           Plenum//Non-Plenum         No           Zetrical Characteristics (Overall)         No           Description         Freq. (MHz) Start Freq. (MHz) Stop Freq. (MHz) Impedance (Ohm)           18 AWG Pair Only         120           Nom. Inductance         No           Description         Inductance (µH/ft)           Nom. Capacitance Conductor to Conductor:         Secription           Description         Freq. (MHz) Start Freq. (MHz) Stop Freq. (MHz) Capacitance (pF/ft)           18 AWG Pair Only         1         12.0           Nom. Lapdictor for Conductor:         Description         Freq. (MHz) Start Freq. (MHz) Capacitance (pF/ft)           18 AWG Pair Only         1         12.0           Nom Hubus:         Yes         Yes
UL Flame Test:         UL 1685 FT4 Loading           Star Flame Test:         FT4           Star Flame Test:         Yes           Sunlight Resistance:         Yes           Oil Resistance:         Yes           Plenum (YIN):         No           Plenum (YIN):         No           Electrical Characteristics (Overall)         No           Unaveraged Impedance:         Description           Percentricit         Star Freq. (MHz) Stop Freq. (MHz) Impedance (Ohm)           18 AWG Pair Only         120           Now.         Inductance (µH/ft)           15 AWG Pair Only         120           Now.         Star Freq. (MHz) Stop Freq. (MHz) Capacitance (Ohm)           18 AWG Pair Only         120           Now.         Star Freq. (MHz) Stop Freq. (MHZ) Capacitance (PF/ft)           15 AWG Pair Only         120           Now.         Capacitance Conductor to Conductor:           Description         Freq. (MHz) Stop Freq. (MHz) Capacitance (pF/ft)           15 AWG Pair Only         1           10 a 20         12.0
CSA Flame Test:         FT4           Suitability         Suilight Resistance:         Yes           Oil Resistance:         Yes           Oil Resistance:         Yes           Oil Resistance:         Yes           Plenum/Non-Plenum         Plenum (YiN):           Plenum (YiN):         No           CSA Flame Test:         Suilability           Plenum (YiN):         No           Description         Freq. (MHz) Start Freq. (MHz) Stop Freq. (MHz) Impedance (Ohm)           18 AWG Pair Only         120           Nom. Inductance:         Pescription           Pescription         freq. (MHz) Start Freq. (MHz) Stop Freq. (MHz) Capacitance (pF/ft)           15 AWG Pair Only         120           Nom. Capacitance Conductor to Conductor:         Description           Pescription         Freq. (MHz) Start Freq. (MHz) Stop Freq. (MHz) Capacitance (pF/ft)           18 AWG Pair Only         1           18 AWG Pair Only         1           Nominal Velocity of Propagation:         Description           Description         Freq. (MHz) Start Freq. (MHz) Start Freq. (MHz)           18 AWG Pair Only         1           18 AWG Pair Only         1           18 AWG Pair Only         75
Suitability         Yes           Oil Resistance:         Yes           Oil Resistance:         Yes           Plenum/Non-Plenum         No           Plenum (YN):         No           Clectrical Characteristics (Overall)         No           Unaveraged Impedance:         Description Freq. (MHz) Start Freq. (MHz) Stop Freq. (MHz) Impedance (Ohm)           18 AWG Pair Only         120           Nom. Inductance:         Inductance (µH/ft)           15 AWG Pair Only         174           Nom. Conductor to Conductor:         Description Freq. (MHz) Start Freq. (MHz) Stop Freq. (MHz) Capacitance (pF/ft)           18 AWG Pair Only         174           Nom Labeloity of Propagation:         Description VP (%)           18 AWG Pair Only         12.0           Nominal Velocity of Propagation:         Description VP (%)           18 AWG Pair Only         12.0
Sunight Resistance:         Yes           Oil Resistance:         Yes           Plenum/Non-Plenum         No           Plenum (Y/N):         No           Clectrical Characteristics (Overall)         No           Clectrical Characteristics (Overall)         Impedance (Ohm)           18 AWG Pair Only         120           Nom. Inductance:         Impedance (Ohm)           15 AWG Pair Only         1120           Nom. Capacitance Conductor to Conductor:         Conductor to Conductor:           Description         Freq. (MHz) Stop Freq. (MHz) Capacitance (pF/ft)           18 AWG Pair Only         12.0           Nom. Capacitance Conductor to Conductor:         Impedance (Ohm)           18 AWG Pair Only         1           18 AWG Pair On
Oil Resistance:         Yes           Plenum/Non-Plenum         Plenum (Y/N):         No           Plenum (Y/N):         No         No           Electrical Characteristics (Overall)         Unaveraged Impedance:         Description         Freq. (MHz) Start Freq. (MHz) Stop Freq. (MHz) Impedance (Ohm)           18 AWG Pair Only         120         Nom. Inductance         Nom. Inductance (µH/ft)           15 AWG Pair Only         174         Nom. Capacitance Conductor to Conductor:           Description         Freq. (MHz) Start Freq. (MHz) Capacitance (pF/ft)         18 AWG Pair Only         12.0           Nominal Velocity of Propagation:         12.0         Nominal Velocity of Propagation:         Nominal Velocity of Propagation:           Description         Freq. (MHz) Start Freq. (MHz) Stop Freq. (MHz) Capacitance (pF/ft)         18 AWG Pair Only         12.0
Plenum/Non-Plenum           Plenum (Y/N):         No           Electrical Characteristics (Overall)           Unaveraged Impedance: <u>Pescription</u> <u>Freq. (MHz) Start Freq. (MHz) Stop Freq. (MHz) Impedance (Ohm)</u> 18 AWG Pair Only             120            Nom. Inductance: <u>Description Inductance (µH/ft)</u> 15 AWG Pair Only             174            Nom. Capacitance Conductor to Conductor: <u>Description Freq. (MHz) Start Freq. (MHz) Stop Freq. (MHz) Capacitance (pF/ft)</u> 18 AWG Pair Only             1                  12.0            Nominal Velocity of Propagation: <u>Description VP (%)</u> 18 AWG Pair Only             75                 Maximum Delay:
Plenum (Y/N):         No           Electrical Characteristics (Overall)           Unaveraged Impedance: <u>Pescription Freq. (MHz) Start Freq. (MHz) Impedance (Ohm)</u> <u>120</u> Nom. Inductance: <u>Pescription Inductance (µH/ft)</u> <u>174</u> Nom. Capacitance Conductor to Conductor: <u>Pescription Freq. (MHz) Start Freq. (MHz) Stop Freq. (MHz) Capacitance (pF/ft)</u> <u>18 AWG Pair Only 1             12.0            Nominal Velocity of Propagation:                <u>Pescription VP (%)</u> <u>18 AWG Pair Only 75            Maimum Delay:  </u></u>
Description       Freq. (MHz) Start Freq. (MHz) Stop Freq. (MHz) Impedance (Ohm)         18 AWG Pair Only       120         Nom. Inductance (µH/ft)         15 AWG Pair Only       .174         Nom. Capacitance (µH/ft)         17 A         Description       Inductance (µH/ft)         18 AWG Pair Only       .174         Nom. Capacitance conductor to Conductor:         Description       Freq. (MHz) Start Freq. (MHz) Stop Freq. (MHz) Capacitance (pF/ft)         18 AWG Pair Only       1       .12.0         Nominal Velocity of Propagation:         Description       Freq. (MHz) Start Freq. (MHz) Capacitance (pF/ft)         18 AWG Pair Only       1       .12.0         Nominal Velocity of Propagation:         Maximum Delay:
Description         Freq. (MHz)         Start Freq. (MHz)         Impedance (Ohm)           18 AWG Pair Only         0         120   Note: Inductance:           Description         Inductance (µH/ft)           15 AWG Pair Only         .174   Note: Capacitance Conductor to Conductor:           Description         Freq. (MHz)         Start Freq. (MHz)         Stop Freq. (MHz)         Capacitance (pF/ft)           18 AWG Pair Only         1         0         120   Note: N
Description       Inductance (µH/ft)         15 AWG Pair Only       .174         Nom. Capacitance Conductor to Conductor:       Eastington       Freq. (MHz)       Start Freq. (MHz)       Stop Freq. (MHz)       Capacitance (pF/ft)         18 AWG Pair Only       1       1       12.0         Nominal Velocity of Propagation:         18 AWG Pair Only       75         Maximum Delay:
Nominal Velocity of Propagation: Description VP (%) 18 AWG Pair Only 75 Maximum Delay:
Description     VP (%)       18 AWG Pair Only     75       Maximum Delay:
Description Freq. (MHz) Start Freq. (MHz) Stop Freq. (MHz) Delay (ns/ft)
18 AWG Pair Only     1.36       Nom. Conductor DC Resistance:     1.36
Description DCR @ 20°C (Ohm/1000 ft)
15 AWG 3.6
18 AWG 6.9
Nominal Outer Shield DC Resistance: DCR @ 20°C (Ohm/1000 ft)
1.8
Max. Attenuation:
O         Description         Freq. (MHz)         Attenuation (dB/100 ft.)           1.13         18 AWG Pair Only         0.125         0.130
25 0.500 0.250
.40 1.000 0.360
Voltage
Voltage 300 V RMS (CL2, CMG)
Voltage           300 V RMS (CL2, CMG)           600 V RMS (UL AWM Style 20201)           300 V RMS (C(UL) AWM)
Voltage 300 V RMS (CL2, CMG) 600 V RMS (UL AWM Style 20201)
Voltage           300 V RMS (CL2, CMG)           600 V RMS (UL AWM Style 20201)           300 V RMS (C(UL) AWM)           Max. Recommended Current:

# **Detailed Specifications & Technical Data**



#### ENGLISH MEASUREMENT VERSION

### 3082A Multi-Conductor - DeviceBus® for ODVA DeviceNet™

#### Notes (Overall)

Notes: Thick. Meter marks on jacket to aid users in installation. ODVA DeviceNet is an Open DeviceNet Vendor Associatio, Inc. Trademark. Jacket printed "1PR16" instead of "1PR15" due to UL requirements for CMG Listing

#### Put Ups and Colors:

Item #	Putup	Ship Weight	Color	Notes	Item Desc
3082A T5U2000	2,000 FT	270.000 LB	GRAY T5U	С	2 #15, 2 #18 SHLD PVC
3082A T5U3000	3,000 FT	426.000 LB	GRAY T5U		2 #15, 2 #18 SHLD PVC
3082A T5U500	500 FT	68.500 LB	GRAY T5U	С	2 #15, 2 #18 SH PVC

Notes

C = CRATE REEL PUT-UP

Revision Number: 3 Revision Date: 08-01-2013

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