



**Part Number: 7896A**

DeviceBus® for ODVA DeviceNet™, (1 pr) 16 AWG (19x29) TC & (1 pr) 18 AWG (19x30) TC, PVC-NYL/FRPP/PVC, Foil+Braid Shld, TC-ER

## Product Description

One 16 AWG pair stranded (19x29) tinned copper conductor and one 18 AWG pair stranded (19x30) tinned copper conductors, PVC/Nylon insulation (power), F-R Polypropylene insulation (data), individual foil shield (100% coverage) plus an overall tinned copper braid shield (65% coverage), oil- and UV-resistant PVC jacket.

## Technical Specifications

### Physical Characteristics (Overall)

#### Conductor

AWG	Stranding	Material	No. of Pairs
16	19x29	TC - Tinned Copper	1
18	19x30	TC - Tinned Copper	1

Conductor Count:	4
AWG Size:	16

#### Insulation

Element	Material	Nominal Diameter
16	PVC/Nylon - Polyvinyl Chloride/Nylon	0.101 in
18	FRPP - Flame Retardant Polypropylene	0.182 in

#### Color Chart

Number	Color
1 (16 AWG)	Red & Black
2 (18 AWG)	Blue & White

#### Inner Shield Material

Type	Material	Material Trade Name	Coverage [%]	Drainwire Material	Drainwire AWG
Tape	Aluminum Foil-Polyester Tape	Beldfoil®	100 %	TC - Tinned Copper	16

#### Outer Shield Material

Type	Material	Coverage [%]	Drainwire Construction n x D
Braid	TC - Tinned Copper	65 %	19x29 mm

#### Outer Jacket Material

Material	Nominal Diameter	Nominal Wall Thickness
PVC - Polyvinyl Chloride	0.525 in	0.06 in

### Construction and Dimensions

#### Stranding

Lay Length
1 MHz

### Electrical Characteristics

#### Conductor DCR

Element	Nominal Conductor DCR	Nominal Outer Shield DCR
16 AWG	4.9 Ohm/1000ft	1.8 Ohm/1000ft
18 AWG	6.9 Ohm/1000ft	

## Capacitance

Element	Nom. Capacitance Conductor to Conductor
18 AWG Pair Only	
	14.7 pF/ft

## Impedance

Nominal Characteristic Impedance
100 Ohm
120 Ohm

## Delay

Max. Delay	Max. Delay Description	Nominal Delay	Nominal Velocity of Propagation (VP) [%]	Nominal Velocity of Propagation (VP) Description
1.6 ns/ft	18 AWG Pair Only			18 AWG Pair Only
		1.6 ns/ft	64 %	

## High Freq

Element	Frequency [MHz]	Max./Min. Input Impedance (unFitted)
18 AWG Pair Only	0.125 MHz	120 Ohm
	0.5 MHz	

## Current

Element	Max. Recommended Current [A]
15 AWG	8.0 Amps per conductor at 25°C

## Voltage

UL Voltage Rating
600V RMS

## Temperature Range

Installation Temp Range:	-25°C To +75°C
UL Temp Rating:	75°C
Operating Temp Range:	-40°C To +75°C

## Mechanical Characteristics

Oil Resistance:	Yes
Bulk Cable Weight:	135 lbs/1000ft
Max Recommended Pulling Tension:	190 lbs
Min Bend Radius/Minor Axis:	5 in

## Standards

NEC/(UL) Specification:	TC-ER
CSA AWM Specification:	AWM I/II A/B
Other Specification:	ODVA Cable V

## Applicable Environmental and Other Programs

EU Directive 2000/53/EC (ELV):	Yes
EU Directive 2011/65/EU (ROHS II):	Yes
EU Directive 2012/19/EU (WEEE):	Yes
EU Directive 2015/863/EU:	Yes
EU Directive Compliance:	EU Directive 2003/11/EC (BFR)
EU CE Mark:	Yes
EU RoHS Compliance Date (yyyy-mm-dd):	2005-10-13
CA Prop 65 (CJ for Wire & Cable):	Yes
MII Order #39 (China RoHS):	Yes

## Suitability

Suitability - Oil Resistance:	Yes
Suitability - Sunlight Resistance:	Yes

## Flammability, LSOH, Toxicity Testing

UL Flammability:	UL1685 UL Loading
CSA Flammability:	FT1

### Part Number

Plenum (Y/N):	No
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### Variants

Item #	Color	Footnote
7896A T5U1000	GRAY T5U	C
7896A T5U2000	GRAY T5U	C
7896A T5U500	GRAY T5U	C

Footnote:	C - CRATE REEL PUT-UP.
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### Product Notes

Notes:	Meter marks on jacket to aid users in installation. ODVA DeviceNet is an Open DeviceNet Vendor Association, Inc. trademark.
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