




Product: [7896A](#) 

DeviceBus®, 2 Pr #16+18 Str TC, PVC-NYL+PO Ins, IS+OA TC Brd, PVC Jkt, 600V TC-ER-LS

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Product Description

DeviceBus® for ODVA DeviceNet™, 2 Pair 16+18AWG (19x29+19x30) Tinned Copper, PVC-NYL+PO Insulation, Individual Beldfoil® & OA Tinned Copper Braid(65%) Shield, PVC Outer Jacket, 600V TC-ER-LS

Technical Specifications

Product Overview

Suitable Applications:	harsh environment, ODVA device-level communication, used with CIP (common Industrial Protocol) for control, configuration, and data collection between devices, such as sensors and actuators, and higher level devices such as PLC, and PC in industrial automation, bus topology, etc.
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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
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Insulation

Element	Material	Nominal Diameter
16	PVC/Nylon - Polyvinyl Chloride/Nylon Skin	0.101 in
18	PP - 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	Alum / Poly	Beldfoil®	100 %	TC - Tinned Copper	16

Outer Shield Material

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

Outer Jacket Material

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

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
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	1.6 ns/ft	64 %	18 AWG Pair Only

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
600 V 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
MII Order #39 (China RoHS):	Yes

Suitability

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

Flammability, LS0H, Toxicity Testing

UL Flammability:	UL1685 UL Loading
CSA Flammability:	FT1
UL voltage rating:	600 V RMS

Plenum/Non-Plenum

Plenum (Y/N):	No
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Part Number

Variants

Item #	Color	Putup Type	Length	UPC
7896A T5U500	Gray T5U	Reel	500 ft	612825190844
7896A T5U1000	Gray T5U	Reel	1,000 ft	612825190820
7896A T5U2000	Gray T5U	Reel	2,000 ft	612825190837

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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History

Update and Revision:	Revision Number: 0.339 Revision Date: 04-28-2020
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