

Product: 7896A

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

Request Sample

Product Description

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

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.

Construction Details

Conductor

Element	No. of Elements	Size	Stranding	Material
Power Pair(s)	1	16 AWG	19x29	TC - Tinned Copper
Data Pair(s)	1	18 AWG	19x30	TC - Tinned Copper

Insulation

Element	Material	Nom. Thickness	Nom. Insulation Diameter	Color Code	Notes
Power Pair(s)	PVC/Nylon - Polyvinyl Chloride + Nylon	0.022 in (0.56 mm)	0.101 in (2.57 mm)	Red & Black	
Data Pair(s)	PP - Polypropylene	0.033 in (0.84 mm)	0.182 in (4.62 mm)	Blue & White	Flame Retardant

Inner Shield

Element	Shield Type	Material	Coverage
Power Pair(s)	Tape	Bi-Laminate (Alum+Poly)	100%
Data Pair(s)	Tape	Bi-Laminate (Alum+Poly)	100%

Outer Shield

Shield Type	Material	Coverage	Drainwire Type
Braid	Tinned Copper (TC)	70%	16 AWG (19x29) TC

Outer Jacket

Material	Nom. Thickness	Nom. Diameter
PVC - Polyvinyl Chloride	0.060 in (1.5 mm)	0.525 in (13.3 mm)

Table Notes:	Jacket OD +/- 0.010
Overall Cable Diameter (Nominal):	0.525 in (13.3 mm)

Electrical Characteristics

Electricals

Element	Nom. Conductor DCR	Nom. Capacitance Cond-to-Cond	Nom. Characteristic Impedence	Nom. Velocity of Prop.	Max. Current
Power Pair(s)	4.9 Ohm/1000ft				8 Amps per Conductor at 25ºC
Data Pair(s)	6.9 Ohm/1000ft (23 Ohm/km)	14.7 pF/ft (48.2 pF/m)	120 Ohm	75%	

Nom. Outer Shield DCR:	1.8 Ohm/1000ft (5.9 Ohm/km)

High Frequency

Element	Frequency [MHz]	Max. Insertion Loss (Attenuation)	Max./Min. Input Impedance (unFitted) [Ohm]
Data Pair(s)	0.125	0.13 dB/100ft	120
	0.5	0.25 dB/100ft	
	1	0.40 dB/100ft	

Voltage

UL Voltage Rating
600 V (TC-ER)

Mechanical Characteristics

Temperature

UL Temperature	Operating	Installation
75°C Dry	-40°C to +75°C	-25°C To +75°C

Bend Radius

Stationary Min.	Installation Min.
5 in (130 mm)	5 in (130 mm)

Max. Pull Tension:	190 lbs (86 kg)
Bulk Cable Weight:	158 lbs/1000ft

Standards and Compliance

Environmental Suitability:	Indoor, Outdoor, Sunlight Resistance, Oil Resistance
Flammability / Reaction to Fire:	UL 1685 UL Loading, FT1
CPR Compliance:	CPR Euroclass: Eca
NEC / UL Compliance:	Article 336, TC-ER
AWM Compliance:	AWM I/II A/B
European Directive Compliance:	EU CE Mark, EU Directive 2015/863/EU (RoHS 2 amendment), EU Directive 2011/65/EU (RoHS 2), EU Directive 2012/19/EU (WEEE)
UK Regulation Compliance:	UKCA Mark
APAC Compliance:	China RoHS II (GB/T 26572-2011)
Other Standard Compliance(s):	ODVA Cable V

Product Notes

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

History

Update and Revision:	Revision Number: 0.591 Revision Date: 12-22-2023

Part Numbers

Variants

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

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