# **General Information**





#### **GENERAL DESCRIPTION**

AVX industrial/transportation grade insulation displacement connectors (IDC) have been proven in the market for over ten years. Providing a very simple one-step termination process, these connectors proved a robust wire-to-board (WTB) termination in harsh applications.

The 9176-800 series has been developed specifically for 22-26AWG discrete wires in size critical applications. By reducing the "Z" axis height by 1.0mm and the overall volume by up to 50%, this new package size is an ideal choice in space constrained applications over previous IDC connectors. In addition, an expanded size range is available starting from a 1 position up to 4 positions in each wire gauge. The entire range provides new packaging solutions in industrial, medical and transportation applications such as smart metering, LED lighting, industrial controls and portable monitoring and measurement devices.

#### **APPLICATIONS**

- · Connecting discrete wires and components to a PCB
- Bringing power and signals onto a PCB
- · Daisy chaining or interconnecting PCB's together
- Application Notes: Refer to 201-01-216

#### **FEATURES AND BENEFITS**

- Redundant and fatigue resistant phosphor bronze material provides a gas tight, cold welded connection to the wire
- IDC connectors can be potted or over molded to encapsulate electronic modules and provide environmental protection
- The 1p version is available in industry standard colors to match individual wires for error free wire termination

#### **ELECTRICAL**

• Current Rating: 22AWG: 7 amps

24AWG: 6 amps 26AWG: 5 amps 28AWG: 4 amps 30AWG: 3 amps

Voltage Rating: 1p: 600V

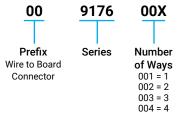
2p-4p: 100V

Durability: 1 Cycle

#### **MECHANICAL**

- · Insulator Material: Glass-Filled Nylon 46; UL94V0
- · Contact Material: Phosphor Bronze
- · Plating: Lead-Free Tin Over Nickel

#### **HOW TO ORDER**



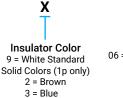


**ENVIRONMENTAL** 

-40°C to +125°C

· Operating Temperature:

Time Gaage Size					
Code	Accepted Wire Guage	Maximum Wire Isulation Diameter	UL Approved		
853	22AWG Solid and Stranded	1.40	Approved		
863	24AWG Solid and Stranded	1.40	Approved		
873	26AWG Solid and Stranded	1.40	Approved		
883	28AWG Solid and Stranded	0.80 to 1.40	Approved		
884	28AWG Solid and Stranded	0.80	Approved		
893	30AWG Solid and Stranded	0.80 to 1.40	Approved		
894	30AWG Solid and Stranded	0.80	Approved		



4 = Yellow 5 = Red 6 = Green 7 = Orange 8 = Black

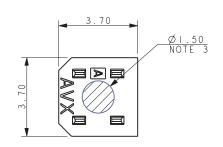


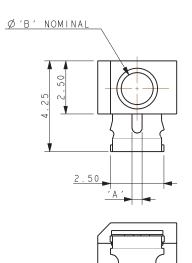
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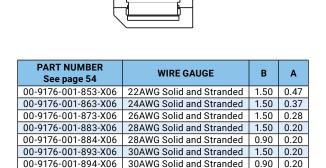
# 1 Position

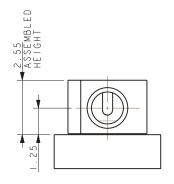


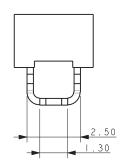
# 00-9176-001-8XX-X06 1 WAY









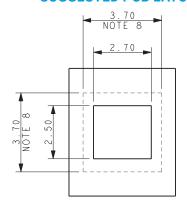


#### NOTES:

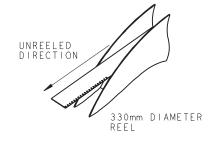
- 1. 1 WAY CONNECTOR FOR IDC WIRE TO BOARD CONNECTOR.
- 2. CONTACT/CAP TO MATCH 22AWG TO 26AWG STRANDED AND SOLID WIRE, MAXIMUM INSULATOR 1.40 DIAMETER
- 3. FLAT FACE ON TOP OF CAP TO AID PICK AND PLACE ASSEMBLY.
- 4. FOR FULL PRODUCT SPECIFICATION REFER TO AVX SPEC 201-01-215.
- 5. ASSEMBLY PROCEDURE, REFER TO APPLICATION NOTES 201-01-216.
- 6. GENERAL TOLERANCE ±0.20 UNLESS STATED.
- 7. PACKED IN TAPE AND REEL, QUANTITY PER REEL 1700.
- 8. CONNECTOR OUTLINE.
- 9. CONTACT MATERIAL: TIN PLATED COPPER ALLOY.
- 10. INSULATOR MATERIAL: HIGH TEMPERATURE NYLON, GLASS FILLED. UL94 V-0, COLOR REFER TO PAGE 54.
- 11. UL REFERENCE E90723 (US AND CANADA).

**PACKING DETAILS** 

## **SUGGESTED PCB LAYOUT**



# 

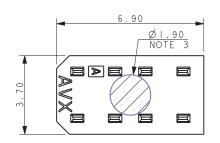


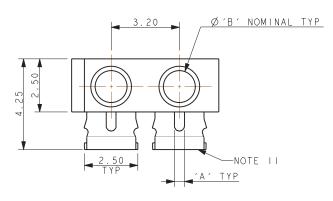


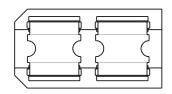
# 2 Position



# 00-9176-001-8XX-X06 2 WAY

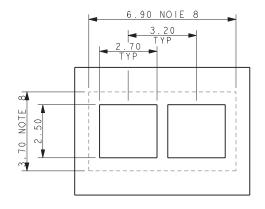


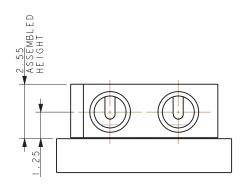


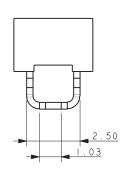


PART NUMBER See page 54	WIRE GAUGE	В	A
00-9176-002-853-X06	22AWG Solid and Stranded	1.50	0.47
00-9176-002-863-X06	24AWG Solid and Stranded	1.50	0.37
00-9176-002-873-X06	26AWG Solid and Stranded	1.50	0.28
00-9176-002-883-X06	28AWG Solid and Stranded	1.50	0.20
00-9176-002-884-X06	28AWG Solid and Stranded	0.90	0.20
00-9176-002-893-X06	30AWG Solid and Stranded	1.50	0.20
00-9176-002-894-X06	30AWG Solid and Stranded	0.90	0.20

#### **SUGGESTED PCB LAYOUT**



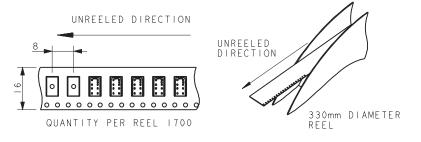




#### NOTES:

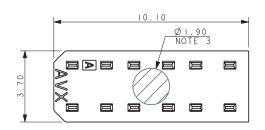
- 1. 2 WAY CONNECTOR FOR IDC WIRE TO BOARD CONNECTOR.
- 2. CONTACT/CAP TO MATCH 22AWG TO 26AWG STRANDED AND SOLID WIRE, MAXIMUM INSULATOR 1.40 DIAMETER
- 3. FLAT FACE ON TOP OF CAP TO AID PICK AND PLACE ASSEMBLY.
- 4. FOR FULL PRODUCT SPECIFICATION REFER TO AVX SPEC 201-01-215.
- 5. ASSEMBLY PROCEDURE, REFER TO APPLICATION NOTES 201-01-216.
- 6. GENERAL TOLERANCE ±0.20 UNLESS STATED.
- 7. PACKED IN TAPE AND REEL, QUANTITY PER REEL 1700.
- 8. CONNECTOR OUTLINE.
- 9. CONTACT MATERIAL: TIN PLATED COPPER ALLOY.
- 10. INSULATOR MATERIAL: HIGH TEMPERATURE NYLON, GLASS FILLED. UL94 V-0, COLOR REFER TO PAGE 54.
- 11. UL REFERENCE E90723 (US AND CANADA).

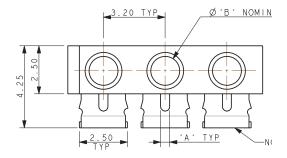
## **PACKING DETAILS**

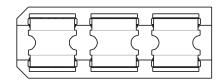




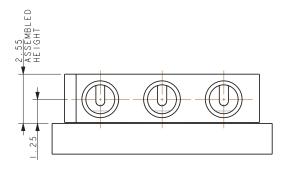
# 00-9176-001-8XX-X06 3 WAY

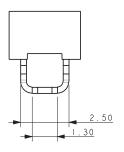






PART NUMBER See page 54	WIRE GAUGE	В	A
00-9176-003-853-X06	22AWG Solid and Stranded	1.50	0.47
00-9176-003-863-X06	24AWG Solid and Stranded	1.50	0.37
00-9176-003-873-X06	26AWG Solid and Stranded	1.50	0.28
00-9176-003-883-X06	28AWG Solid and Stranded	1.50	0.20
00-9176-003-884-X06	28AWG Solid and Stranded	0.90	0.20
00-9176-003-893-X06	30AWG Solid and Stranded	1.50	0.20
00-9176-003-894-X06	30AWG Solid and Stranded	0.90	0.20

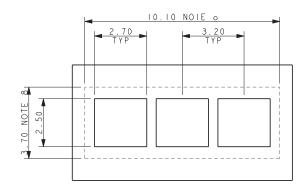




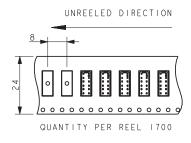
#### NOTES:

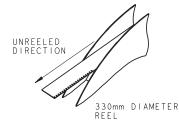
- 1. 3 WAY CONNECTOR FOR IDC WIRE TO BOARD CONNECTOR.
- 2. CONTACT/CAP TO MATCH 22AWG TO 26AWG STRANDED AND SOLID WIRE, MAXIMUM INSULATOR 1.40 DIAMETER
- 3. FLAT FACE ON TOP OF CAP TO AID PICK AND PLACE ASSEMBLY.
- 4. FOR FULL PRODUCT SPECIFICATION REFER TO AVX SPEC 201-01-215.
- 5. ASSEMBLY PROCEDURE, REFER TO APPLICATION NOTES 201-01-216.
- $6. \ \ \mbox{GENERAL TOLERANCE $\pm 0.20$ UNLESS STATED}.$
- 7. PACKED IN TAPE AND REEL, QUANTITY PER REEL 1700.
- 8. CONNECTOR OUTLINE.
- 9. CONTACT MATERIAL: TIN PLATED COPPER ALLOY.
- 10. INSULATOR MATERIAL: HIGH TEMPERATURE NYLON, GLASS FILLED. UL94 V-0, COLOR REFER TO PAGE 54.
- 11. UL REFERENCE E90723 (US AND CANADA).

## SUGGESTED PCB LAYOUT



#### **PACKING DETAILS**

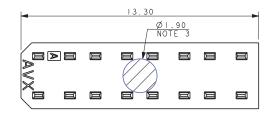


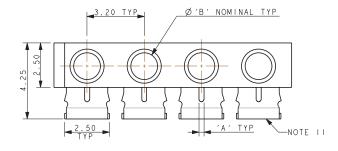


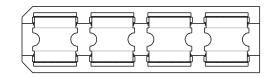
# 4 Position



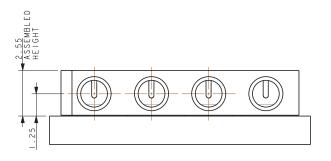
# 00-9176-001-8X3-X06 4 WAY

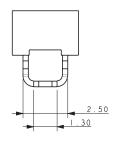






PART NUMBER See page 54	WIRE GAUGE	В	A
00-9176-004-853-X06	22AWG Solid and Stranded	1.50	0.47
00-9176-004-863-X06	24AWG Solid and Stranded	1.50	0.37
00-9176-004-873-X06	26AWG Solid and Stranded	1.50	0.28
00-9176-004-883-X06	28AWG Solid and Stranded	1.50	0.20
00-9176-004-884-X06	28AWG Solid and Stranded	0.90	0.20
00-9176-004-893-X06	30AWG Solid and Stranded	1.50	0.20
00-9176-004-894-X06	30AWG Solid and Stranded	0.90	0.20

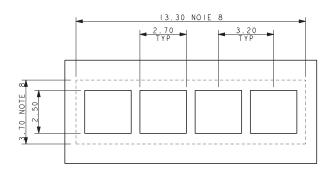




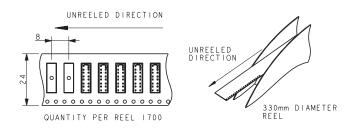
#### NOTES:

- 1. 4 WAY CONNECTOR FOR IDC WIRE TO BOARD CONNECTOR.
- 2. CONTACT/CAP TO MATCH 22AWG TO 26AWG STRANDED AND SOLID WIRE, MAXIMUM INSULATOR 1.40 DIAMETER
- 3. FLAT FACE ON TOP OF CAP TO AID PICK AND PLACE ASSEMBLY.
- 4. FOR FULL PRODUCT SPECIFICATION REFER TO AVX SPEC 201-01-215.
- $5. \ \ \mathsf{ASSEMBLY} \ \mathsf{PROCEDURE}, \mathsf{REFER} \ \mathsf{TO} \ \mathsf{APPLICATION} \ \mathsf{NOTES} \ \ \mathsf{201-01-216}.$
- 6. GENERAL TOLERANCE ±0.20 UNLESS STATED.
- 7. PACKED IN TAPE AND REEL, QUANTITY PER REEL 1700.
- 8. CONNECTOR OUTLINE.
- 9. CONTACT MATERIAL: TIN PLATED COPPER ALLOY.
- 10. INSULATOR MATERIAL: HIGH TEMPERATURE NYLON, GLASS FILLED. UL94 V-0, COLOR REFER TO PAGE 54.
- 11. UL REFERENCE E90723 (US AND CANADA).

## **SUGGESTED PCB LAYOUT**

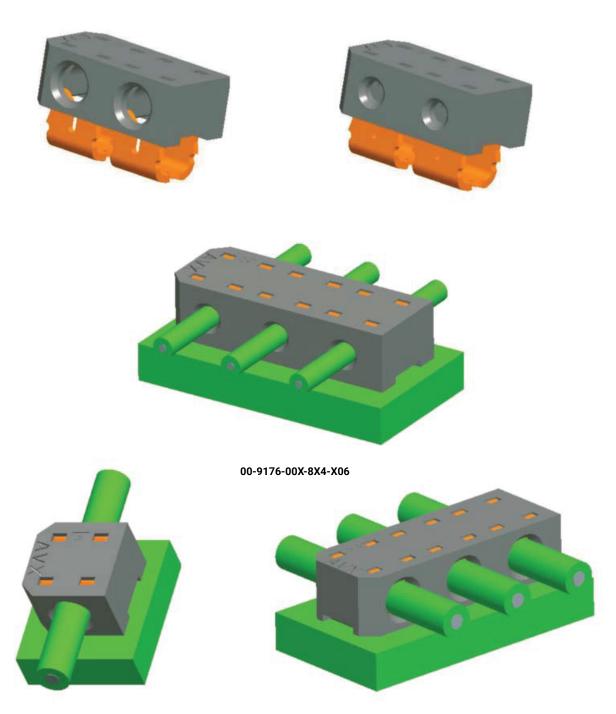


#### **PACKING DETAILS**





## **CONNECTOR DETAILS**



00-9176-00X-8X3-X06

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