

# CAPPED IDC 18-24 AWG: 9176-700

## General Information



The 917X series of surface mount Insulation Displacement Connectors (IDC) were developed to meet the harsh requirements of automotive and industrial applications. This industry proven series of connectors provides a robust, reliable, and efficient method to connect individual wires ranging from 12 AWG to 30 AWG directly to a PCB. The single contact design can function as a standalone component. It provides our designers access to IDC technology in an easy-to-use form factor allowing them to bring power and signal to a PCB in a wide range of applications. These connectors have been tested to various levels of shock, vibration, and temperature cycling to prove their reliability and robustness.

The 9176-700 series moves beyond the technical and performance attributes of our previous IDC connectors and enhances the "User Friendliness" for terminating 18 to 24 AWG wires. The simplicity of inserting a wire into an SMT contact with the integrated retention / termination cap, provides a wire to board solution without soldering or special tools. The wire is inserted into the cap (no stripping required) and then pressed down to provide a secure "Gas Tight" termination.

### APPLICATIONS

- Connecting discrete wire components to a PCB
- Bringing power and signals onto a PCB
- Daisy chaining PCB's together to create a continuous string
- Applications Notes: refer to 201-01-140
- Specification: refer to 201-01-138

### FEATURES AND BENEFITS

- IDC contact provides a gas-tight connection to the PCB for long term reliability
- Plastic cap retains the contacts in position prior to automatic placement, then acts as the assembly tool to terminate the wires; no special tooling.
- Tested to various levels of shock, vibration, and temperature cycling for reliability.
- Identical contact and footprint pattern as our standard 9176-000 series for full backward compatibility and functionality
- The IDC contact reduces the total applied cost versus solder or crimp processes
- Connectors are available in two configurations for maximum flexibility; Through Wire and Wire Stop

### ELECTRICAL

- 10 Amps per Way (Dependant on Wire Size)
- Voltage Rating: 300 VAC (RMS) or DC equivalent
- 1-Way Voltage Rating: 600 VAC (RMS) or DC equivalent

### ENVIRONMENTAL

- Operating Temperature: -40°C to +125°C
- Storage Temperature: -40°C to +70°C

### MECHANICAL

- Insulator Material: Nylon UL94 V-0
- Contact Material: Phosphor Bronze
- Plating: Tin over Nickel

### HOW TO ORDER

**00** Prefix  
**9176** Series  
**00X** Number of Ways  
 001 = 1  
 002 = 2  
 003 = 3  
 004 = 4  
 005 = 5

**7XX** Wire Gauge Size  
**Capped - IDC Connector**

Code	Accepted Wire Gauge	Wire Insulation
701	18 AWG Stranded	Ø 1.6 - 2.1
711	20 AWG Solid and Stranded	Ø 1.6 - 2.1
722	22 AWG Solid and Stranded	Ø 1.1 - 1.6
732	24 AWG Solid and Stranded	Ø 1.1 - 1.6

**X** Insulator Color  
**All Sizes**  
 9 = White (Standard)  
 8 = Black

One Way Only (Special Order)  
 2 = Brown  
 3 = Blue  
 4 = Yellow  
 5 = Red  
 6 = Green  
 7 = Orange

**X** Cap Options

Code	Cap Option	Description	Detail
0	Through Wire	Allows wire to be terminated at any point	Pages 26 - 28
9	Wire Stop	Terminates end of wire End Protected by stop face	Pages 29 - 31

**6** Plating Option  
 6 = Pure Tin all over



Safety Standards: UL 1977-File #E90723

# CAPPED IDC 18-24 AWG: 9176-700

## 1-5 Position - Through-Wire



PART NUMBER CODE: 00-9176-00X-7XX-X X 6

NUMBER OF POSITIONS

CODE	DIM. C	DIM. D	TAPE WIDTH
001	4.0	N.A.	24
002	8.0	4.0	
003	12.0	8.0	
004	16.0	12.0	32
005	20.0	16.0	

0: NO WIRE STOP  
(See This Page)

9: WITH WIRE STOP  
(See Next Page)

WIRE SIZE

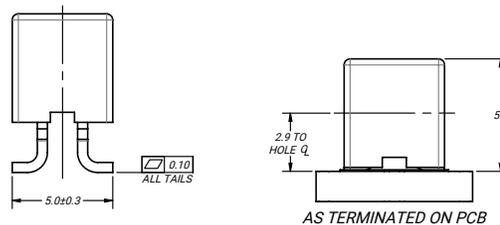
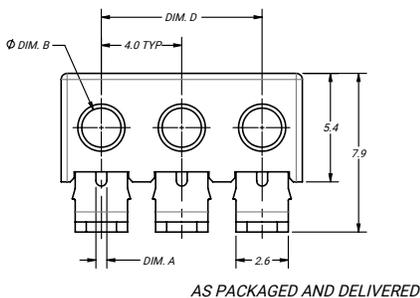
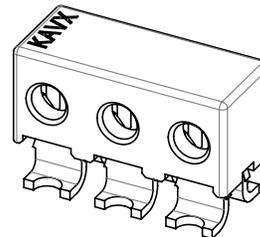
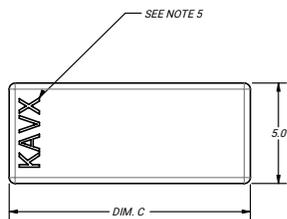
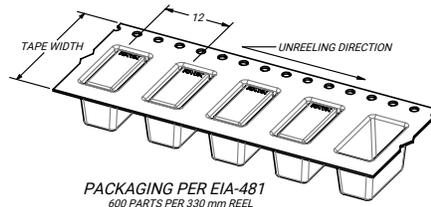
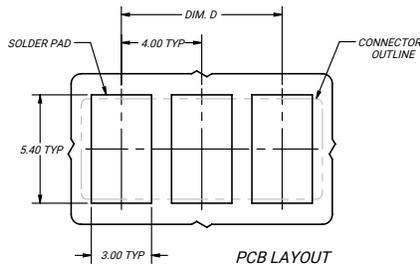
CODE	WIRE INSULATION	DIM. B	WIRE SIZE	DIM. A
701	Φ 1.6 - Φ 2.1	Φ 2.20	18 AWG STRANDED	0.74
702	Φ 1.1 - Φ 1.6	Φ 1.70	20 AWG SOLID AND STRANDED	0.60
711	Φ 1.6 - Φ 2.1	Φ 2.20		
712	Φ 1.1 - Φ 1.6	Φ 1.70	22 AWG SOLID AND STRANDED	0.47
721	Φ 1.6 - Φ 2.1	Φ 2.20		
722	Φ 1.1 - Φ 1.6	Φ 1.70	24 AWG SOLID AND STRANDED	0.37
731	Φ 1.6 - Φ 2.1	Φ 2.20		
732	Φ 1.1 - Φ 1.6	Φ 1.70		

HOUSING COLOR

CODE	COLOR	AVAILABILITY	UL APPROVED
0	BLACK	SPECIAL ORDER	NO
1	WHITE	SPECIAL ORDER	NO
2	BROWN	SPECIAL ORDER (1P ONLY)	YES
3	BLUE	SPECIAL ORDER (1P ONLY)	YES
4	YELLOW	SPECIAL ORDER (1P ONLY)	YES
5	RED	SPECIAL ORDER (1P ONLY)	YES
6	GREEN	SPECIAL ORDER (1P ONLY)	YES
7	ORANGE	SPECIAL ORDER (1P ONLY)	YES
8	BLACK	SPECIAL ORDER	YES
9	WHITE	STANDARD ALL SIZES	YES

### NOTES:

1. THROUGH-WIRE CONNECTOR FOR IDC TERMINATION ANYWHERE ALONG THE LENGTH OF A WIRE .
2. HOUSING MATERIAL: GLASS-FILLED, HIGH TEMP. NYLON; UL94V-0.
3. CONTACT MATERIAL: HIGH STRENGTH COPPER ALLOY WITH LEAD-FREE TIN OVER NICKEL PLATING.
4. FOR MORE INFORMATION, REFER TO KYOCERA AVX PRODUCT SPECIFICATION 201-01-138 OR 201-01-138UL, AND APPLICATION NOTES 201-01-140.
5. TEXT MAY READ "AVX" OR "KAVX."
6. UL REFERENCE E90723 (US AND CANADA).



# CAPPED IDC 18-24 AWG: 9176-700

## 1-5 Position - Wire-Stop

PART NUMBER CODE: **00-9176-00X-7XX-X X 6**

NUMBER OF POSITIONS

CODE	DIM. C	DIM. D	TAPE WIDTH
001	4.0	N.A.	24
002	8.0	4.0	
003	12.0	8.0	
004	16.0	12.0	32
005	20.0	16.0	

0: NO WIRE STOP  
(See Previous Page)

9: WITH WIRE STOP  
(See This Page)

WIRE SIZE

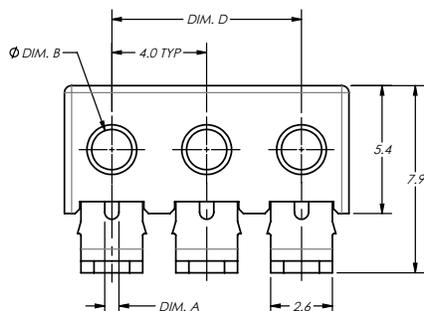
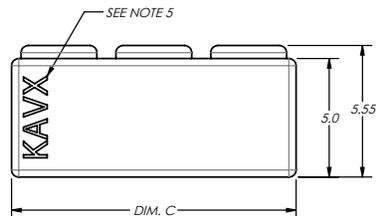
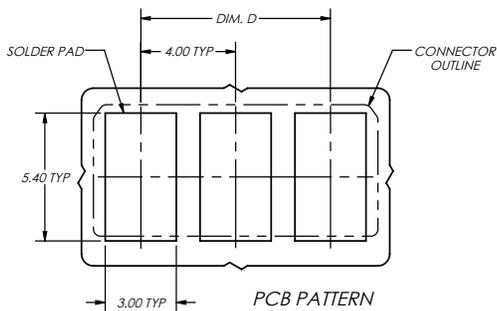
CODE	WIRE INSULATION	DIM. B	WIRE SIZE	DIM. A
701	Ø 1.6 - Ø 2.1	Ø 2.20	18 AWG STRANDED	0.74
702	Ø 1.1 - Ø 1.6	Ø 1.70		
711	Ø 1.6 - Ø 2.1	Ø 2.20	20 AWG SOLID AND STRANDED	0.60
712	Ø 1.1 - Ø 1.6	Ø 1.70		
721	Ø 1.6 - Ø 2.1	Ø 2.20	22 AWG SOLID AND STRANDED	0.47
722	Ø 1.1 - Ø 1.6	Ø 1.70		
731	Ø 1.6 - Ø 2.1	Ø 2.20	24 AWG SOLID AND STRANDED	0.37
732	Ø 1.1 - Ø 1.6	Ø 1.70		

HOUSING COLOR

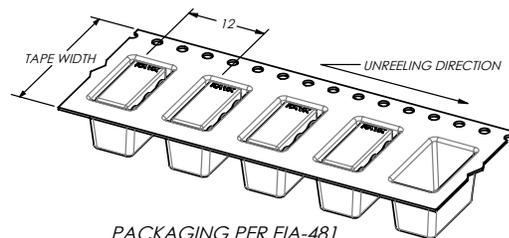
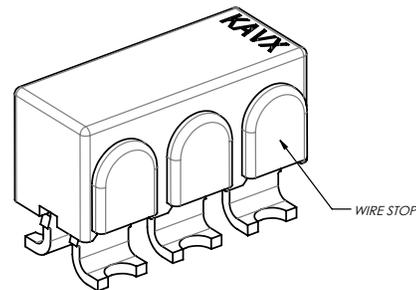
CODE	COLOR	AVAILABILITY	UL APPROVED
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1	WHITE	SPECIAL ORDER	NO
2	BROWN	SPECIAL ORDER (1P ONLY)	YES
3	BLUE	SPECIAL ORDER (1P ONLY)	YES
4	YELLOW	SPECIAL ORDER (1P ONLY)	YES
5	RED	SPECIAL ORDER (1P ONLY)	YES
6	GREEN	SPECIAL ORDER (1P ONLY)	YES
7	ORANGE	SPECIAL ORDER (1P ONLY)	YES
8	BLACK	SPECIAL ORDER	YES
9	WHITE	STANDARD ALL SIZES	YES

### NOTES:

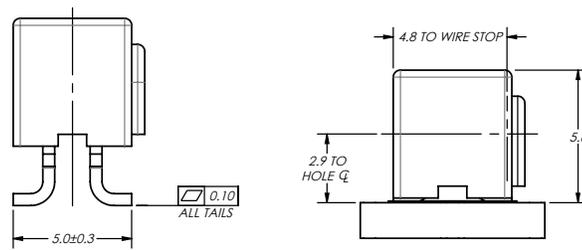
1. WIRE-STOP CONNECTOR FOR IDC TERMINATION. THE WIRE STOP PROTECTS THE END OF THE WIRE.
2. HOUSING MATERIAL: GLASS-FILLED, HIGH TEMP. NYLON; UL94V-0.
3. CONTACT MATERIAL: HIGH STRENGTH COPPER ALLOY WITH LEAD-FREE TIN OVER NICKEL PLATING.
4. FOR MORE INFORMATION, REFER TO KYOCERA AVX PRODUCT SPECIFICATION 201-01-138 OR 201-01-138UL, AND APPLICATION NOTES 201-01-140.
5. TEXT MAY READ "AVX" OR "KAVX."
6. UL REFERENCE E90723 (US AND CANADA).



AS PACKAGED AND DELIVERED



PACKAGING PER EIA-481  
600 PARTS PER 330 mm REEL

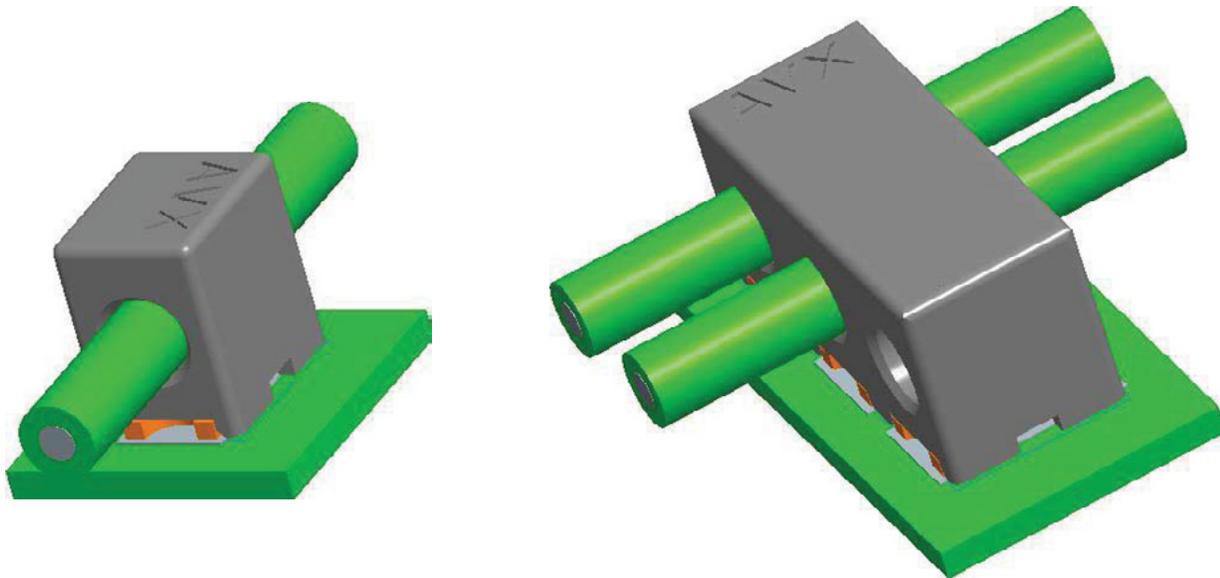


AS TERMINATED ON PCB

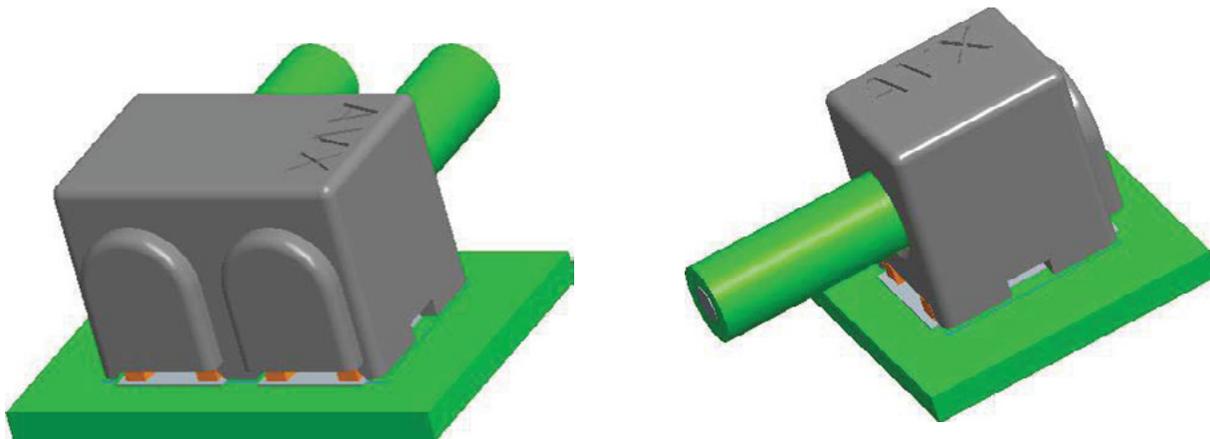
# CAPPED IDC 18-24 AWG: 9176-700

## Assembly - Through Wire and Wire Stop

### 18-24 AWG ASSEMBLED CAPPED IDC CONNECTORS



TYPICAL THROUGH WIRE ASSEMBLY



TYPICAL WIRE STOP ASSEMBLY