AVX Wire-to-Board Connectors



Version 11.11



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INSULATION DISPLACEMENT CONNECTORS (IDC) WIRE TO BOARD (WTB)

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NOTICE: Specifications are subject to change without notice. Contact your nearest AVX Sales Office for the latest specifications. All statements, information and data given herein are believed to be accurate and reliable, but are presented without guarantee, warranty, or responsibility of any kind, expressed or implied. Statements or suggestions concerning possible use of our products are made without representation or warranty that any such use is free of patent infringement and are not recommendations to infringe any patent. The user should not assume that all safety measures are indicated or that other measures may not be required. Specifications are typical and may not apply to all applications.



Series 9175





The 917X series of surface mount Insulation Displacement Connectors (IDC) were developed to meet the harsh automotive and industrial market applications for connecting individual wires directly to a PCB ranging from 14 AWG to 28 AWG. This industry proven contact system has been tested to automotive levels of shock, vibration, and temperature cycling to prove their reliability and robustness. The simplicity of inserting a wire into the connector with a small tool allows a wide range of devices to be connected to the PCB without soldering. In SSL applications specifically, these connectors are used to bring power and signal onto the PCB or are used to daisy chain multiple boards together in a long string. While the IDC contact provides a gas-tight connection to conductor of the wire, the housing has been designed to grab the insulation of the wire to provide a positive strain relief even in the harshest conditions. In case of repair, the wires can be removed and replace up to three times.

The 9175 series accepts 26 AWG to 28 AWG wires with an insulation diameter ranging from 0.7mm to 1.0mm. These single contact connectors support a 1 amp current rating and have a split SMT tail design to provide maximum stability on the PCB. Available in a 2p and 3p configuration, these connectors can be end stackable for higher pin counts.

APPLICATIONS

- Connecting discrete wire components directly to the PCB
- Bringing power and signals onto a PCB
- Daisy chaining PCB's together to create a continuous string of boards
- Application Notes: refer to 201-01-124

FEATURES AND BENEFITS

- IDC contact provides a gas-tight connection to the PCB for long term reliability
- · Connector housing captures the wire insulation for positive strain relief
- Tested to automotive levels on shock, vibration and temperature cycling for reliability
- Low and high volume assembly tools to match production volumes
- Reduced total applied cost versus solder or crimp processes
- High temperature insulator capable to 260 degrees C reflow soldering processes

ELECTRICAL

• Current Rating: 1 Amp / Contact

Voltage Rating: 125 VAC

ENVIRONMENTAL

• Operating Temperature: -40°C to +125°C

001

MECHANICAL

• Insulator Material: Nylon 46: UL94V0

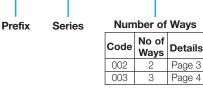
• Contact Material: Phosphor Bronze

• Plating: Tin over Nickel

• Durability: 3 Cycles

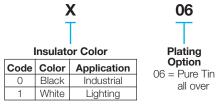
HOW TO ORDER 9175

00



00X

Wire Gauge Size Code Accepted Wire Details Wire Gauge Insulation Page 3 001 28 Gauge Solid or Stranded Min Ø 0.70 26 Gauge Solid or Stranded Max Ø 1.00 Page 4



Certification: UL File #E320991

CONNECTOR/TOOLING PART NUMBER MATRIX

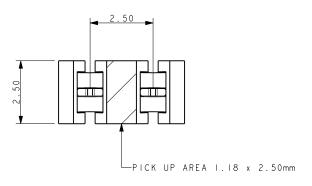
SERIES 9175 IDC					HAND INSERTION TOOLING*			ACCESSORY CAPS	
AWG	Wire Insulation	Positions	Color	Part Number	Plastic (medium volume)	Metal (high volume)	Mass Mass Termination	Though Wire	Wire Stop
26	Ø 1.0	2р	White	009175002001106	1	069175701701000	069175701701002	609175002010100	609175002010199
26	Ø 1.0	2p	Black	009175002001006	069175701601000	069175701701000	069175701701002	609175002010000	609175002010099
26	Ø 1.0	3р	White	009175003001106	069175701601000	069175701701000	069175701701003	609175003010100	609175003010199
26	Ø 1.0	3р	Black	009175003001006	069175701601000	069175701701000	069175701701003	609175003010000	609175003010099
28	Ø 0.7	2p	White	009175002001106	069175701601000	069175701701000	069175701701002	609175002010100	609175002010199
28	Ø 0.7	2p	Black	009175002001006	069175701601000	069175701701000	069175701701002	609175002010000	609175002010099
28	Ø 0.7	3р	White	009175003001106	069175701601000	069175701701000	069175701701003	609175003010100	609175003010199
28	Ø 0.7	Зр	Black	009175003001006					609175003010099
		* Ha	and Inser	tion Tooling - Unive	rsal Hand Tool 0670	00773001000; Cons	ult Application Note	es 201-01-124	



Series 9175

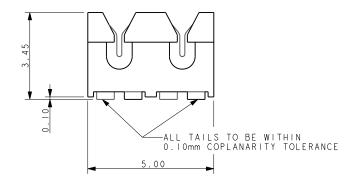


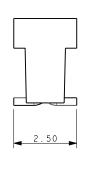
26-28 AWG 2 WAY IDC CONNECTOR



NOTES:

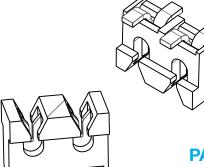
- 1. CONNECTOR FOR IDC WIRE TO BOARD CONNECTION.
- 2. CONTACT MATERIAL: PHOSPHOR BRONZE. INSULATION MATERIAL: HIGH TEMPERATURE NYLON 46. COLOR REFER TO PAGE 2.
- 3. CONNECTOR DESIGNED TO ACCEPT 26 AND 28 GAUGE SOLID OR STRANDED WIRE.
- 4. ALL DIMENSIONS FOR REFERENCE UNLESS OTHERWISE STATED.
- 5. FOR FULL PRODUCT SPECIFICATION REFER TO ELCO SPEC 201-01-100.

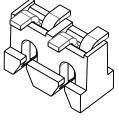




SMT PCB LAYOUT

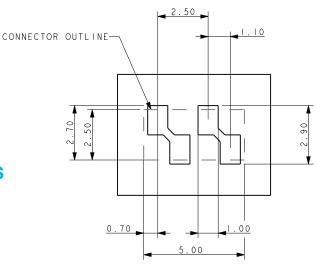
PURE TIN PADS

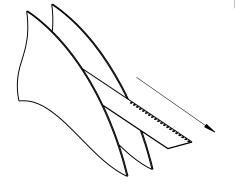


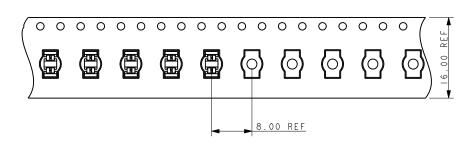


PACKING DETAILS

REEL QTY	2000
LEADER	500MM
TRAILER	500MM
REEL / BOX	7
PACK QTY	14000





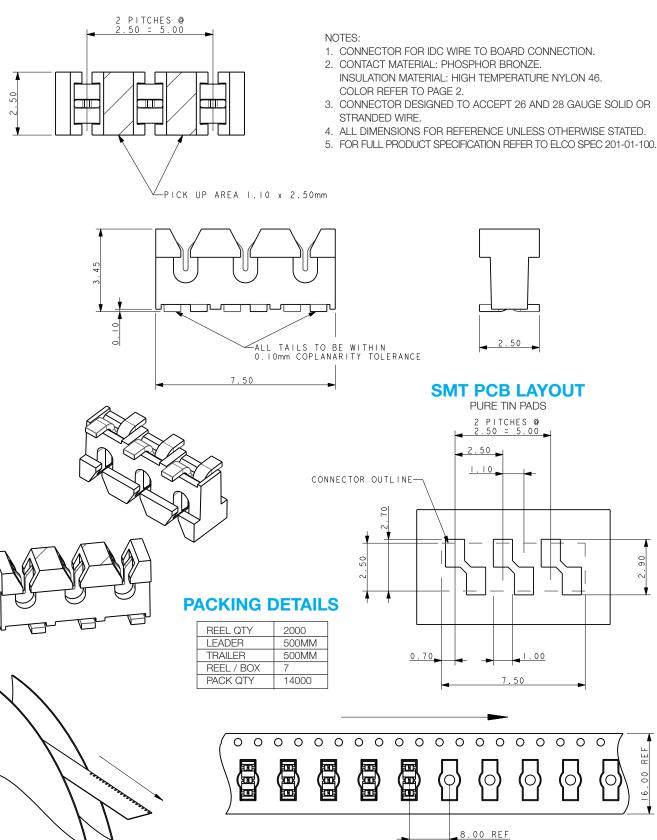




Series 9175



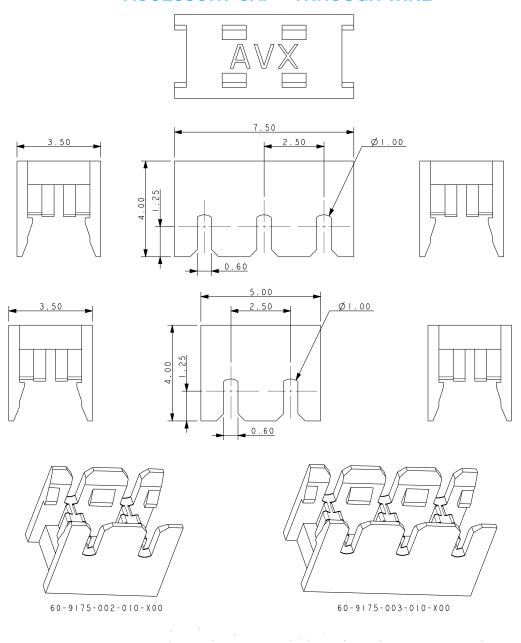
26-28 AWG 3 WAY IDC CONNECTOR







60-9175-00X-010-X00 ACCESSORY CAP – THROUGH WIRE



NOTES

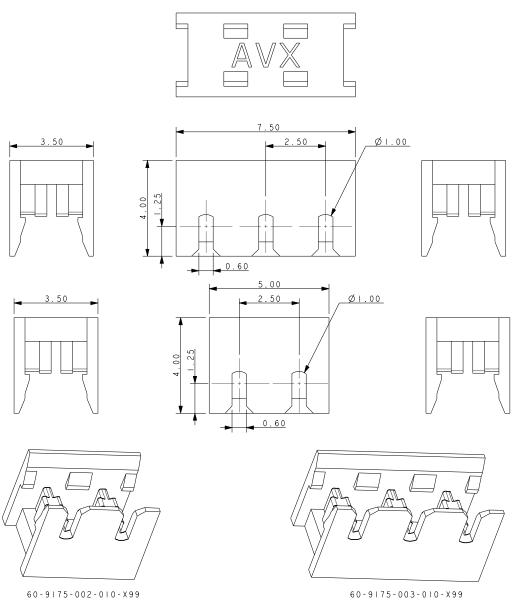
- 1. CAP FOR IDC WIRE TO BOARD CONNECTION, 2 AND 3 WAY, THROUGH WIRE.
- 2. THROUGH WIRE CAP CAN BE USED AT ANY POSTION ALONG A WIRE.
- 3. FOR USE WITH STANDARD 9175 IDC CONNECTORS
- 4. CAP MATERIAL: GLASS FILLED NYLON 46, FOR COLORS SEE PAGE 2.
- 5. CAPS DESIGNED TO ACCOMMODATE WIRES WITH INSULATION UP TO 1.00MM DIAMETERS.
- 6. GENERAL TOLERANCE ±0.20.
- 7. PACKED IN BAGS, 1000 PIECES PER BAG.







60-9175-00X-0XX-010-X99 ACCESSORY CAP – WIRE STOP



NOTES

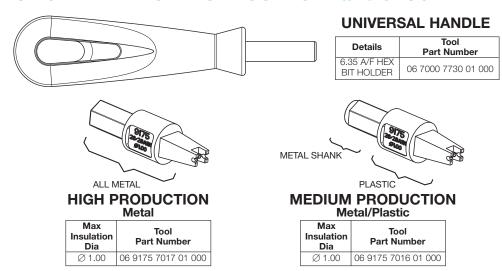
- 1. CAP FOR IDC WIRE TO BOARD CONNECTION, 2 AND 3 WAY, WIRE STOP.
- 2. WIRE STOP CAP FOR USE AT WIRE ENDS, STOP FACE PROTECTS THE WIRE ENDS.
- 3. FOR USE WITH STANDARD 9175 IDC CONNECTORS
- 4. CAP MATERIAL: GLASS FILLED NYLON 46, FOR COLORS SEE PAGE 2.
- 5. CAPS DESIGNED TO ACCOMMODATE WIRES WITH INSULATION UP TO 1.00MM DIAMETERS.
- 6. GENERAL TOLERANCE ±0.20.
- 7. PACKED IN BAGS, 1000 PIECES PER BAG.



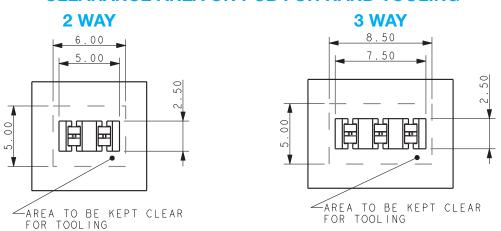




HAND INSERTION TOOLING SINGLE WIRE INSERTION TOOL FOR 26/28 GAUGE WIRE



CLEARANCE AREA ON PCB FOR HAND TOOLING



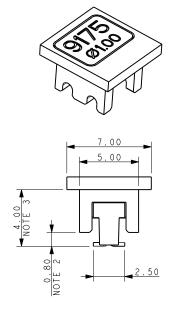


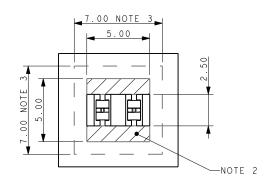


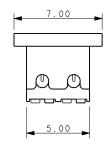
INSERTION TOOLING REQUIRES HAND PRESS WITH FLAT ROCK PLATES

2 WAY TOOL

TOOL NUMBER 06-9175-7017-01-002 SKETCH SHOWS PCB RESTRICTED AREAS FOR ASSEMBLY TOOLING





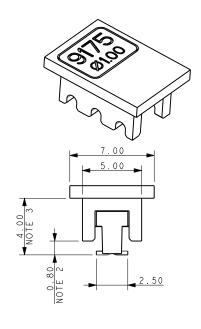


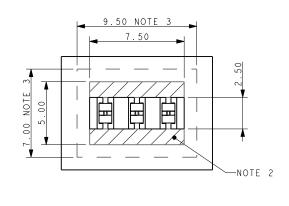
NOTES:

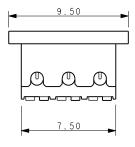
- 1. DIMENSIONS SHOWN ARE REFERENCE DIMENSIONS.
- 2. MAXIMUM COMPONENT HEIGHT 0.80MM IN THIS AREA.
- 3. MAXIMUM COMPONENT HEIGHT 4.00MM IN THIS AREA.
- 4. THE SAME RESTRICTIONS APPLY TO ALL WIRE INSULATION DIAMETERS.

3 WAY TOOL

TOOL NUMBER 06-9175-7017-01-003
SKETCH SHOWS PCB RESTRICTED AREAS FOR ASSEMBLY TOOLING



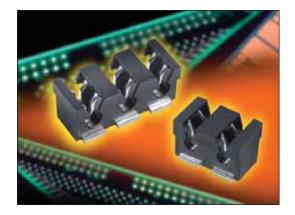






Series 9176





The 917X series of surface mount Insulation Displacement Connectors (IDC) were developed to meet the harsh automotive and industrial market applications for connecting individual wires directly to a PCB ranging from 14 AWG to 28 AWG. This industry proven contact system has been tested to automotive levels of shock, vibration, and temperature cycling to prove their reliability and robustness. The simplicity of inserting a wire into the connector with a small tool allows a wide range of devices to be connected to the PCB without soldering. In SSL applications specifically, these connectors are used to bring power and signal onto the PCB or are used to daisy chain multiple boards together in a long string. While the IDC contact provides a gas-tight connection to conductor of the wire, the housing has been designed to grab the insulation of the wire to provide a positive strain relief even in the harshest conditions. In case of repair, the wires can be removed and replace up to three times.

The 9176 series accepts 18 AWG to 24 AWG wires with an insulation diameter ranging from 1.1mm to 2.1mm. These dual contact connectors support a 10 amp current rating with two large SMT solder tails per wire to provide maximum stability on the PCB. Available in 1p-3p configuration, these connectors can be end stackable for higher pin counts. The 9176 series also comes with optional locking strain relief caps that act as the termination tool for severe vibration applications.

APPLICATIONS

- Connecting discrete wire components directly to the PCB
- Bringing power and signals onto a PCB
- Daisy chaining PCB's together to create a continuous string of boards
- Application Notes: refer to 201-01-124

FEATURES AND BENEFITS

- IDC contact provides a gas-tight connection to the PCB for long term reliability
- Connector housing captures the wire insulation for positive strain relief
- Tested to automotive levels on shock, vibration and temperature cycling for reliability
- Low and high volume assembly tools to match production volumes
- Reduced total applied cost versus solder or crimp processes
- Optional thru and end caps lock in place to provide maximum strain relief
- High temperature insulator capable to 260°C reflow soldering processes

ELECTRICAL

Current Rating: 10 Amp / Contact

• Voltage Rating: 250 VAC

ENVIRONMENTAL

• Operating Temperature: -40°C to +125°C

MECHANICAL

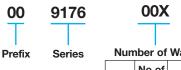
• Insulator Material: Nylon 46: UL94V0

Contact Material: Phosphor Bronze

• Plating: Tin over Nickel

• Durability: 3 Cycles

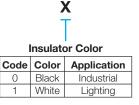
HOW TO ORDER



Number of Ways		
Code	No of Ways	Details
001	1	Page 11
002	2	Page 12
003	3	Page 13



Code	Accepted Wire Gauge	Wire Insulation	Cap Code Pages 13-14
001	18 Gauge Stranded		021
011	20 Gauge Stranded	Ø 1.6-2.1	021
022	22 Gauge Stranded	Ø 1.1-1.6	016
032	24 Gauge Stranded	Ø 1.1-1.6	016





Certification: UL File #E320991





Series 9176



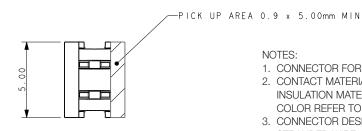
CONNECTOR/TOOLING PART NUMBER MATRIX

		SERIES 9	176 IDC		HANI	D INSERTION TOOL	ING*	ACCESSO	ORY CAPS
AWG	Wire Insulation	Positions	Color	Part Number	Plastic (medium volume)	Metal (high volume)	Mass Termination	Through Wire	Wire Stop
18	Ø 1.6 - 2.1	1p	White	009176001001106	069176701601000	069176701701000	N/A	609176001021100	609176001021199
18	Ø 1.6 - 2.1	1p	Black	009176001001006	069176701601000	069176701701000	N/A	609176001021000	609176001021099
18	Ø 1.6 - 2.1	2р	White	009176002001106	069176701601000	069176701701000	069176701701002	609176002021100	609176002021199
18	Ø 1.6 - 2.1	2р	Black	009176002001006	069176701601000	069176701701000	069176701701002	609176002021000	609176002021099
18	Ø 1.6 - 2.1	3р	White	009176003001106	069176701601000	069176701701000	069176701701003	609176003021100	609176003021199
18	Ø 1.6 - 2.1	3р	Black	009176003001006	069176701601000	069176701701000	069176701701003	609176003021000	609176003021099
20	Ø 1.6 - 2.1	1p	White	009176001011106	069176701601000	069176701701000	N/A	609176001021100	609176001021199
20	Ø 1.6 - 2.1	1p	Black	009176001011006	069176701601000	069176701701000	N/A	609176001021000	609176001021099
20	Ø 1.6 - 2.1	2p	White	009176002011106	069176701601000	069176701701000	069176701701002	609176002021100	609176002021199
20	Ø 1.6 - 2.1	2р	Black	009176002011006	069176701601000	069176701701000	069176701701002	609176002021000	609176002021099
20	Ø 1.6 - 2.1	3р	White	009176003011106	069176701601000	069176701701000	069176701701003	609176003021100	609176003021199
20	Ø 1.6 - 2.1	3р	Black	009176003011006	069176701601000	069176701701000	069176701701003	609176003021000	609176003021099
22	Ø 1.1 - 1.6	1p	White	009176001022106	069176701602000	069176701702000	N/A	609176001016100	609176001016199
22	Ø 1.1 - 1.6	1p	Black	009176001022006	069176701602000	069176701702000	N/A	609176001016000	609176001016099
22	Ø 1.1 - 1.6	2p	White	009176002022106	069176701602000	069176701702000	069176701702002	609176002016100	609176002016199
22	Ø 1.1 - 1.6	2p	Black	009176002022006	069176701602000	069176701702000	069176701702002	609176002016000	609176002016099
22	Ø 1.1 - 1.6	3р	White	009176003022106	069176701602000	069176701702000	069176701702003	609176003016100	609176003016199
22	Ø 1.1 - 1.6	3р	Black	009176003022006	069176701602000	069176701702000	069176701702003	609176003016000	609176003016099
24	Ø 1.1 - 1.6	1p	White	009176001032106	069176701602000	069176701702000	N/A	609176001016100	609176001016199
24	Ø 1.1 - 1.6	1p	Black	009176001032006	069176701602000	069176701702000	N/A	609176001016000	609176001016099
24	Ø 1.1 - 1.6	2p	White	009176002032106	069176701602000	069176701702000	069176701702002	609176002016100	609176002016199
24	Ø 1.1 - 1.6	2p	Black	009176002032006	069176701602000	069176701702000	069176701702002	609176002016000	609176002016099
24	Ø 1.1 - 1.6	3р	White	009176003032106	069176701602000	069176701702000	069176701702003	609176003016100	609176003016199
24	Ø 1.1 - 1.6	3р	Black	009176003032006	069176701602000	069176701702000	069176701702003	609176003016000	609176003016099
		* H	and Inser	tion Tooling - Unive	rsal Hand Tool 0670	00773001000; Cons	ult Application Note	es 201-01-124	

Series 9176

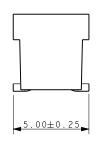


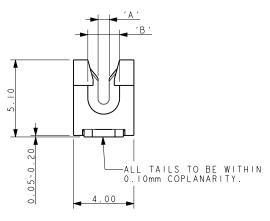
18-24 AWG 1 WAY IDC CONNECTOR

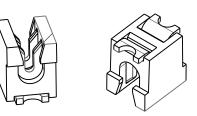


NOTES:

- 1. CONNECTOR FOR IDC WIRE TO BOARD CONNECTION.
- 2. CONTACT MATERIAL: PHOSPHOR BRONZE. INSULATION MATERIAL: HIGH TEMPERATURE NYLON 46. COLOR REFER TO PAGE 9.
- 3. CONNECTOR DESIGNED TO ACCEPT BETWEEN 24 AND 18 GAUGE STRANDED WIRE.
- 4. ALL DIMENSIONS FOR REFERENCE UNLESS OTHERWISE STATED.
- 5. FOR FULL PRODUCT SPECIFICATION REFER TO ELCO SPEC 201-01-106 AND APPLICATION NOTES 201-01-124.
- 6. FOR PCB SPACE RESTRICTED BY WIRE ASSEMBLY TOOLING REFER TO PAGE 16.
- 7. FOR HAND WIRE ASSEMBLY TOOLING REFER TO PAGE 16.



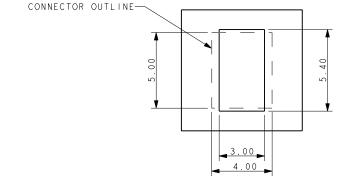




Code	Accepted Wire Gauge	Α	Wire Insulation	В
001	18 Gauge Stranded	0.72	Ø 1.6-2.1	2.1
011	20 Gauge Stranded	0.60	Ø 1.6-2.1	2.1
022	22 Gauge Stranded	0.47	Ø 1.1-1.6	1.6
032	24 Gauge Stranded	0.37	Ø 1.1-1.6	1.6

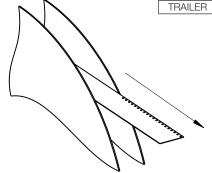
SMT PCB LAYOUT

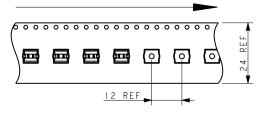
PURE TIN PADS



PACKING DETAILS

REEL QTY	1000
LEADER	480MM
TRAILER	120MM



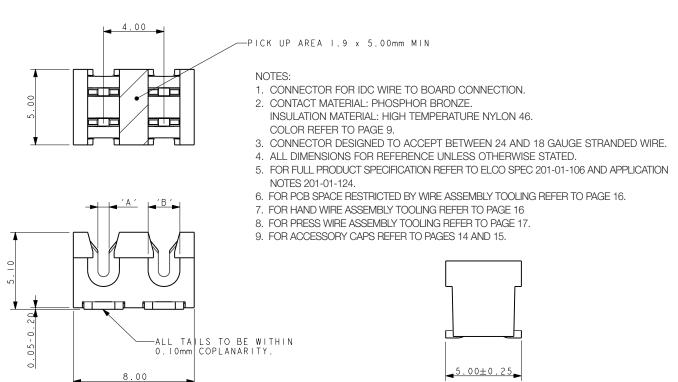


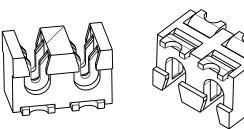


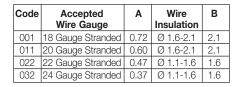
Series 9176



18-24 AWG 2 WAY IDC CONNECTOR

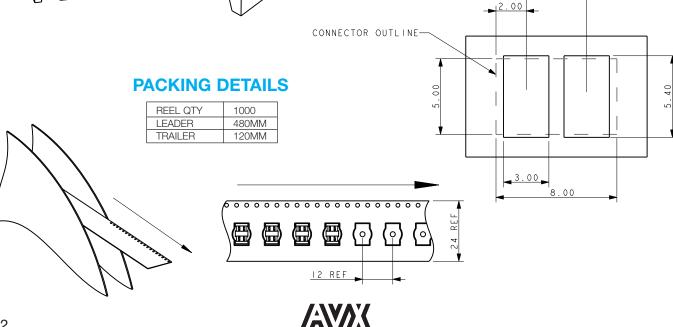






SMT PCB LAYOUT

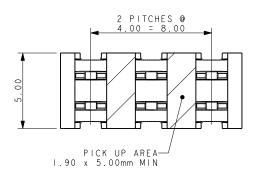
PURE TIN PADS



Series 9176

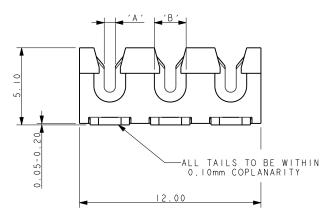


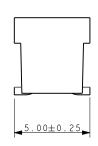
18-24 AWG 3 WAY IDC CONNECTOR



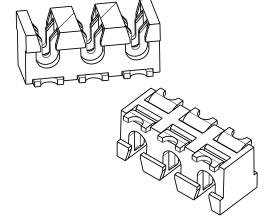
NOTES:

- 1. CONNECTOR FOR IDC WIRE TO BOARD CONNECTION.
- CONTACT MATERIAL: PHOSPHOR BRONZE. INSULATION MATERIAL: HIGH TEMPERATURE NYLON 46. COLOR REFER TO PAGE 9.
- 3. CONNECTOR DESIGNED TO ACCEPT BETWEEN 24 AND 18 GAUGE STRANDED WIRE.
- 4. ALL DIMENSIONS FOR REFERENCE UNLESS OTHERWISE STATED.
- FOR FULL PRODUCT SPECIFICATION REFER TO ELCO SPEC 201-01-106 AND APPLICATION NOTES 201-01-124.
- 6. FOR PCB SPACE RESTRICTED BY WIRE ASSEMBLY TOOLING REFER TO PAGE 16.
- 7. FOR HAND WIRE ASSEMBLY TOOLING REFER TO PAGE 16
- 8. FOR PRESS WIRE ASSEMBLY TOOLING REFER TO PAGE 17.
- 9. FOR ACCESSORY CAPS REFER TO PAGES 14 AND 15.



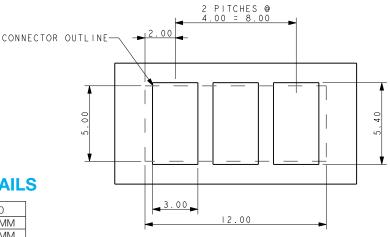


Code	Accepted Wire Gauge	Α	Wire Insulation	В
001	18 Gauge Stranded	0.72	Ø 1.6-2.1	2.1
011	20 Gauge Stranded	0.60	Ø 1.6-2.1	2.1
022	22 Gauge Stranded	0.47	Ø 1.1-1.6	1.6
032	24 Gauge Stranded	0.37	Ø 1.1-1.6	1.6



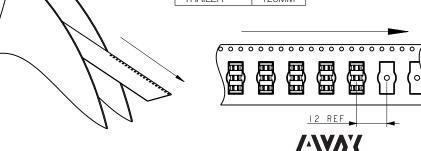
SMT PCB LAYOUT

PURE TIN PADS



PACKING DETAILS

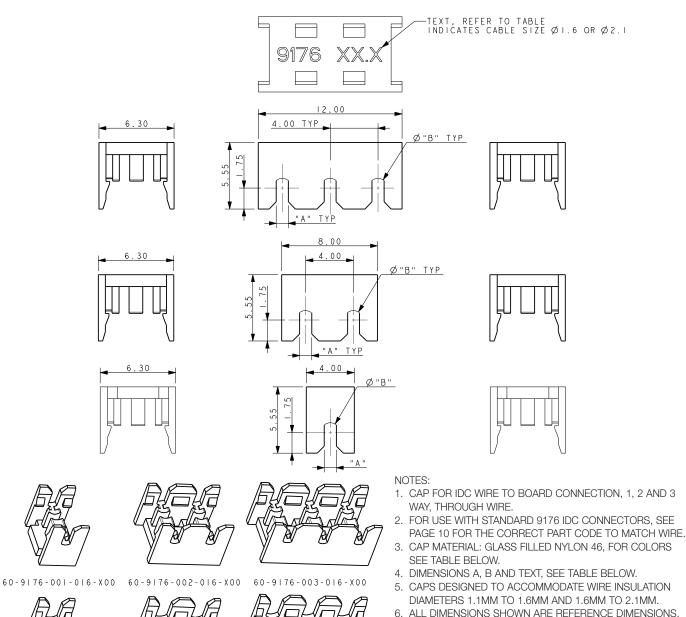
REEL QTY	1000
LEADER	480MM
TRAILER	120MM







60-9176-00X-0XX-X00 **ACCESSORY CAP - THROUGH WIRE**



016 | 1.60 (22-24) 1.00 021 2.10 (18-20)

Color	X00
Black	000
White	100

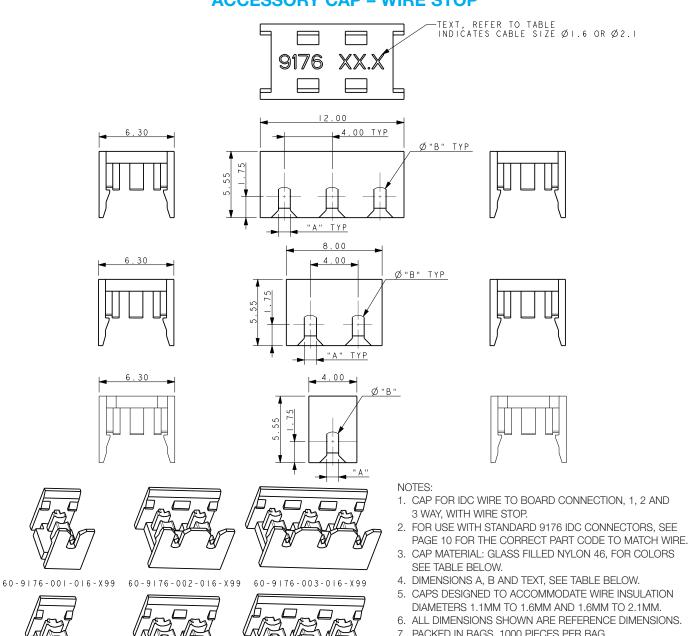
Code Slot A (AWG) Diameter B Text 9176 Ø1.6 9176 Ø2.1

7. PACKED IN BAGS, 1000 PIECES PER BAG.

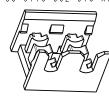


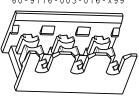


60-9176-00X-0XX-X99 **ACCESSORY CAP - WIRE STOP**









60-9176-001-021-X99 60-9176-002-021-X99 60-9176-003-021-X99

- 2. FOR USE WITH STANDARD 9176 IDC CONNECTORS, SEE
- 3. CAP MATERIAL: GLASS FILLED NYLON 46, FOR COLORS
- 5. CAPS DESIGNED TO ACCOMMODATE WIRE INSULATION
- 6. ALL DIMENSIONS SHOWN ARE REFERENCE DIMENSIONS.
- 7. PACKED IN BAGS, 1000 PIECES PER BAG.

Code	Slot A (AWG)	Diameter B	Text
016	1.60 (22-24)	1.00	9176 Ø1.6
021	2.10 (18-20)	1.50	9176 Ø2.1

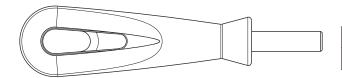
Color	X99
Black	099
White	199





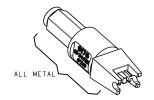


HAND INSERTION TOOLING FOR SINGLE 18/24 GAUGE WIRE



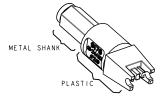
UNIVERSAL HANDLE

Details	Tool Part Number		
6.35 A/F HEX BIT HOLDER	06 7000 7730 01 000		



HIGH PRODUCTION Metal

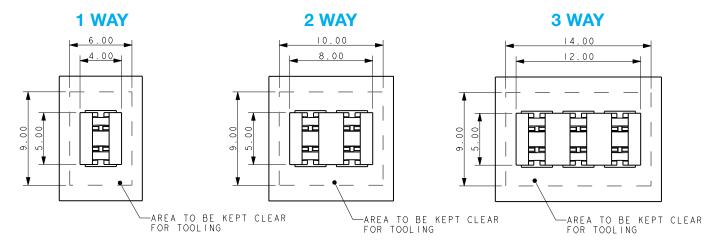
Max Insulation Dia (AWG)	Tool Part Number		
2.10 (18-20)	06 9176 7017 01 000		
1.60 (22-24)	06 9176 7017 02 000		



MEDIUM PRODUCTION Metal/Plastic

Max Insulation Dia (AWG)	Tool Part Number		
2.10 (18-20)	06 9176 7016 01 000		
1.60 (22-24)	06 9176 7016 02 000		

CLEARANCE AREA ON PCB FOR HAND TOOLING



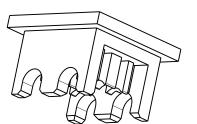


Series 9176

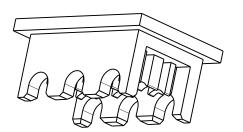


INSERTION TOOLING REQUIRES HAND PRESS WITH FLAT ROCK PLATES

2 WAY



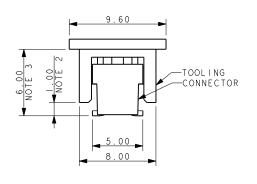


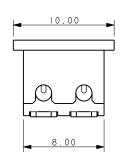


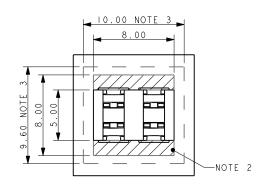
HIGH PRODUCTION Metal

No. of Ways	Max Insulation Dia (AWG)	Tool Part Number
2	2.10 (18-20)	06 9176 7017 01 002
2	1.60 (22-24)	06 9176 7017 02 002
3	2.10 (18-20)	06 9176 7017 01 003
0	1.60 (22-24)	06 9176 7017 02 003

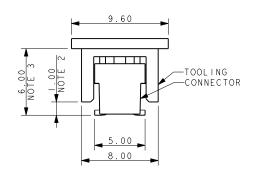
2 WAY

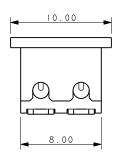


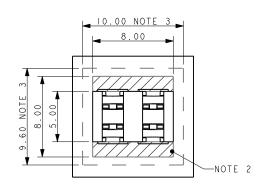




3 WAY







NOTES:

- 1. DIMENSIONS SHOWN ARE REFERENCE DIMENSIONS.
- 2. MAXIMUM COMPONENT HEIGHT 1.00MM IN THIS AREA.
- 3. MAXIMUM COMPONENT HEIGHT 6.00MM IN THIS AREA.
- 4. THE SAME RESTRICTIONS APPLY TO ALL WIRE INSULATION DIAMETERS
- 5. 2 AND 3 WAY TOOLS ONLY, FOR USE UNDER HAND PRESS WITH FLAT PLATES.
- 6. FOR HAND TOOLING REFER TO PAGE 16.







The 917X series of surface mount Insulation Displacement Connectors (IDC) were developed to meet the harsh automotive and industrial market applications for connecting individual wires directly to a PCB ranging from 14 AWG to 28 AWG. This industry proven contact system has been tested to automotive levels of shock, vibration, and temperature cycling to prove their reliability and robustness. This new single contact was developed as a standalone component to enhance the application uses with the IDC technology. The simplicity of inserting a wire into an SMT contact with a small tool or optional retention / termination cap allows a wide range of devices to be connected to the PCB without soldering. In SSL applications specifically, these contacts are used to bring power and signal onto the PCB or are used to daisy chain multiple boards together in a long string. While the IDC contact provides a gas-tight connection to conductor of the wire, the optional cap provides a positive strain relief even in the harshest conditions. In case of repair, the wires can be removed and replace up to three times.

The single 9176-400 series contact and cap accepts 22 AWG to 24 AWG wires with an insulation diameter ranging from 1.0mm to 1.5mm. These dual beam contacts support a 6 amp current rating with a large SMT solder base to provide maximum stability on the PCB. The optional locking strain relief cap acts as the termination tool for severe vibration applications.

APPLICATIONS

- Connecting discrete wire components directly to the PCB
- Bringing power and signals onto a PCB
- Daisy chaining PCB's together to create a continuous string of boards
- Application notes: refer to 201-01-124

FEATURES AND BENEFITS

- IDC contact is supplied in T&R pockets for standard SMT placement
- IDC contact provides a gas-tight connection to the PCB for long term reliability
- Optional termination cap provides additional strain relief for severe environments
- Tested to automotive levels on shock, vibration and temperature cycling for reliability
- Reduced total applied cost versus solder or crimp processes
- Individual contacts can be located anywhere on the PCB based on specific application

ELECTRICAL

- Current Rating: 6 Amps/Contact
- Voltage Rating: Dependant on component proximity

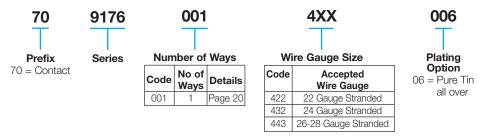
ENVIRONMENTAL

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

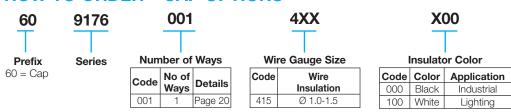
MECHANICAL

- Insulator Material: Nylon 46: UL94V0
- Contact Material: Phosphor Bronze
- Plating: Tin over Nickel
- Durability: 3 Cycles

HOW TO ORDER - CONTACT OPTIONS



HOW TO ORDER - CAP OPTIONS



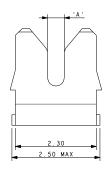


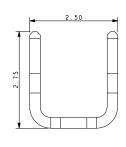


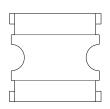
Series 9176-400

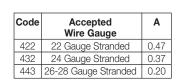


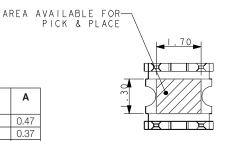
CONTACT DETAILS





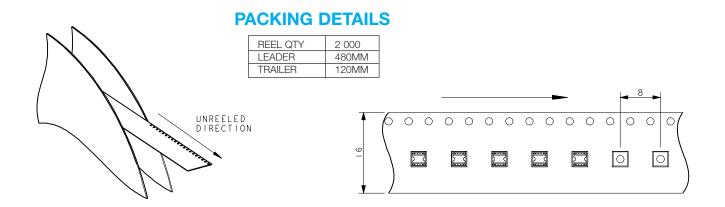






NOTES:

- 1. CONNECTOR FOR IDC WIRE TO BOARD CONNECTION.
- 2. CONTACT MATERIAL: PHOSPHOR BRONZE.
- 3. CONTACT PLATING: PURE TIN.
- 4. CONNECTOR DESIGNED TO ACCEPT BETWEEN 22 AND 28 GAUGE STRANDED WIRE. SEE TABLE.
- 5. ALL DIMENSIONS FOR REFERENCE UNLESS OTHERWISE STATED.
- 6. FOR FULL PRODUCT SPECIFICATION REFER TO ELCO SPEC 201-01-126 AND APPLICATION NOTES 201-01-124.
- 7. SMT PCB LAYOUT, REFER TO PAGE 20.
- 8. PACKING IN TAPE AND REEL, QUANTITY 2000 PER REEL.
- 9. WHEN REQUIRED, MATCHING CAP DETAILS ON DRAWING 60-9176-001-4XX-X06S.
- 10. ASSEMBLY TOOLING ON PAGE 21 FOR WIRE INTO CONTACT.



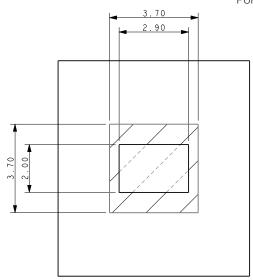


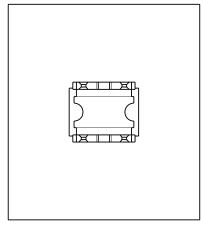


22-24 AWG IDC WIRE TO BOARD CONNECTOR SINGLE CONTACT

SMT PCB LAYOUT

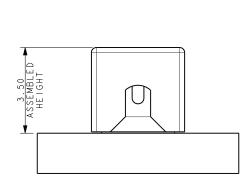
PURE TIN PADS

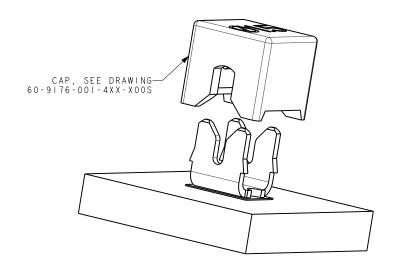




ORIENTATION OF CONTACT ON PAD

ASSEMBLED/INSTALLED PRODUCTS





NOTES:

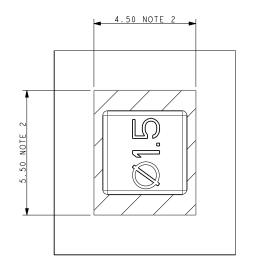
- 1. CONNECTOR CAN BE USED WITH CONTACT ONLY OR WITH OPTIONAL CAP.
- 2. OUTLINE OF CAP WHEN USED.
- 3. FOR FULL PRODUCT SPECIFICATION REFER TO ELCO SPEC 201-01-106 AND APPLICATION NOTES 201-01-124.
- 4. DIMENSIONS SHOWN ARE REFERENCED DIMENSIONS.
- 5. ASSEMBLY TOOLING FOR WIRE INTO CONTACT SEE PAGE 21.







ASSEMBLY TOOLING – CAP NOT USED WIRE INTO CONTACT

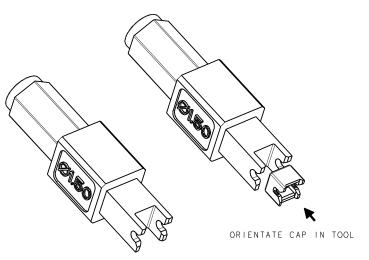


NOTES:

- 1. ASSEMBLY TOOLING FOR CAP.
- 2. MINIMUM AREA OF PCB TO BE KEPT CLEAR OF COMPONENTS, TACKS PERMISSIBLE.
- 3. WIRE AND CAP INSERTED IN ONE OPERATION.
- 4. REFER TO APPLICATION NOTE 201-01-124 FOR FURTHER INFORMATION.

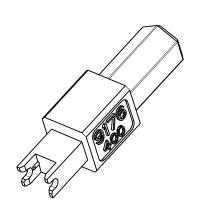
PLASTIC TOOL - LOW/MEDIUM VOLUME

06-9176-7023-01-000



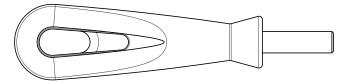
METAL TOOL - HIGH VOLUME

06-9176-7024-01-000



UNIVERSAL HANDLE

06 7000 7730 01 000



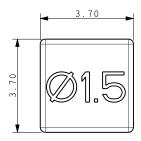
CONNECTOR/TOOLING PART NUMBER MATRIX

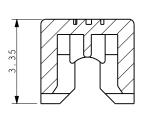
	SERIES 9176-400 IDC			HAND INSERTION TOOLING*		ACCESSORY CAPS		
AWG	Wire	Positions Part Number	Part Number		Metal	Cap Application	White	Black
	Insulation			(medium volume)	(high volume)	Tool		
22	Ø 1.0 - 1.5	1p	709176001422006	069176702201000	069176702101000	069176702301000	609176001415100	609176001415000
24	Ø 1.0 - 1.5	1p	709176001432006	069176702201000	069176702101000	069176702301000	609176001415100	609176001415000
26	Ø 0.7 - 1.0	1p	709176001443006	069176702201000	069176702101000	069176702301000	609176001415100	609176001415000
28	28 Ø 0.7 - 1.0 1p 709176001443006		069176702201000	069176702201000 069176702101000 069176702301000 60917600141		609176001415100	609176001415000	
	* Hand Ir	sertion To	ooling and Cap App	lication - Universal	Hand Tool 0670007	73001000; Consult A	Application Notes 20	01-01-124

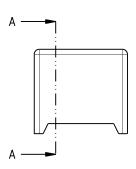


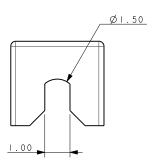


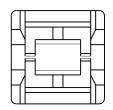
CAP DETAILS











NOTES

- 1. CAP FOR IDC WIRE TO BOARD CONNECTION.
- 2. CAP MATERIAL: GLASS FILLED NYLON 46, COLOR SEE PAGE 18.
- 3. CAPS DESIGNED TO ACCOMMODATE WIRE INSULATION DIAMETERS 1.0MM TO 1.5MM.
- 4. ALL DIMENSIONS FOR REFERENCE UNLESS OTHERWISE STATED.
- $5. \ \ \mathsf{FOR} \ \mathsf{FULL} \ \mathsf{PRODUCT} \ \mathsf{SPECIFICATION} \ \mathsf{REFER} \ \mathsf{TO} \ \mathsf{ELCO} \ \mathsf{SPEC} \ \mathsf{201-01-106}, \ \mathsf{APPLICATION} \ \mathsf{NOTES} \ \mathsf{201-01-124}.$
- 6. PACKING IN BAGS, QUANTITY 2000 PER BAG.
- 7. FOR INSTALATION DETAILS REFER TO DRAWING 70-9176-001-4XX-006S.



Series 9176-500





The 917X series of surface mount Insulation Displacement Connectors (IDC) were developed to meet the harsh automotive and industrial market applications for connecting individual wires directly to a PCB ranging from 14 AWG to 28 AWG. This industry proven contact system has been tested to automotive levels of shock, vibration, and temperature cycling to prove their reliability and robustness. This new single contact was developed as a standalone component to enhance the application uses with the IDC technology. The simplicity of inserting a wire into an SMT contact with a small tool or optional retention / termination cap allows a wide range of devices to be connected to the PCB without soldering. In SSL applications specifically, these contacts are used to bring power and signal onto the PCB or are used to daisy chain multiple boards together in a long string. While the IDC contact provides a gas-tight connection to conductor of the wire, the optional cap provides a positive strain relief even in the harshest conditions. In case of repair, the wires can be removed and replace up to three times.

The single 9176 series contact and cap accepts 18 AWG to 24 AWG wires with an insulation diameter ranging from 1.1mm to 2.1mm. These dual beam contacts support a 10 amp current rating with a large SMT solder base to provide maximum stability on the PCB. The optional locking strain relief cap acts as the termination tool for severe vibration applications.

APPLICATIONS

- Connecting discrete wire components directly to the PCB
- Bringing power and signals onto a PCB
- Daisy chaining PCB's together to create a continuous string of boards
- Application notes: refer to 201-01-124

FEATURES AND BENEFITS

- IDC contact is supplied in T&R pockets for standard SMT placement
- IDC contact provides a gas-tight connection to the PCB for long term reliability
- Optional termination cap provides additional strain relief for severe environments
- · Tested to automotive levels on shock, vibration and temperature cycling for reliability
- Reduced total applied cost versus solder or crimp processes
- Individual contacts can be located anywhere on the PCB based on specific application

ELECTRICAL

- Current Rating: 10 Amps/Contact
- Voltage Rating: Dependant on component proximity

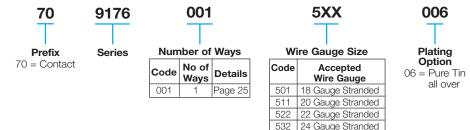
ENVIRONMENTAL

• Operating Temperature: -40°C to +125°C

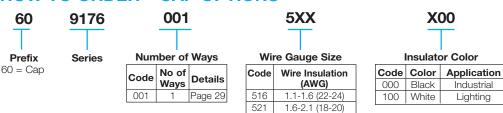
MECHANICAL

- Insulator Material: Nylon 46: UL94V0
- Contact Material: Phosphor Bronze
- Plating: Tin over Nickel
- Durability: 3 Cycles

HOW TO ORDER - CONTACT OPTIONS



HOW TO ORDER - CAP OPTIONS





CONNECTOR/TOOLING PART NUMBER MATRIX

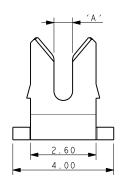
	SERIES 9176-500 IDC			HAND INSERTION TOOLING*		ACCESSORY CAPS		
AWG	Wire Insulation	Positions	Part Number	Plastic (medium volume)	Metal (high volume)	Cap Application Tool	White	Black
18	Ø 1.6 - 2.1	1p	709176001501006	,	, ,		609176001521100	609176001521000
20	Ø 1.6 - 2.1	1p	709176001511006	069176702001000	069176701901000	069176701801000	609176001521100	609176001521000
22	Ø 1.1 - 1.6	1p	709176001522006	069176702002000	069176701902000	069176701801000	609176001516100	609176001516000
24	24 Ø 1.1 - 1.6 1p 709176001532006			069176702002000	069176701902000	069176701801000	609176001516100	609176001516000
	* Hand Insertion Tooling and Cap Application - Universal Hand Tool 067000773001000; Consult Application Notes 201-01-124							

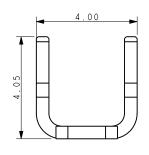


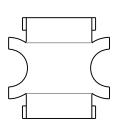
Series 9176-500

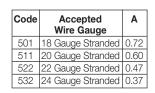


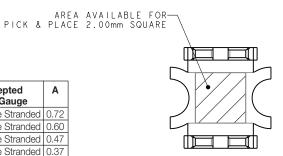
CONTACT DETAILS





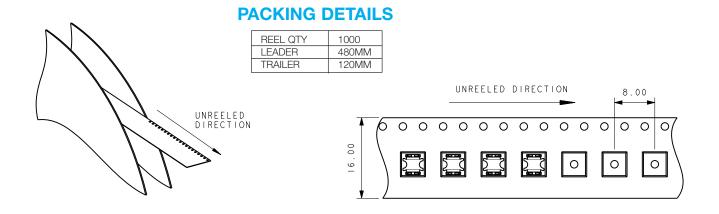






NOTES:

- 1. CONNECTOR FOR IDC WIRE TO BOARD CONNECTION.
- 2. CONTACT MATERIAL: PHOSPHOR BRONZE.
- 3. CONTACT PLATING: PURE TIN.
- 4. CONNECTOR DESIGNED TO ACCEPT BETWEEN 18 AND 24 GAUGE STRANDED WIRE. SEE TABLE.
- 5. ALL DIMENSIONS FOR REFERENCE UNLESS OTHERWISE STATED.
- 6. FOR FULL PRODUCT SPECIFICATION REFER TO ELCO SPEC 201-01-106 AND APPLICATION NOTES 201-01-124.
- 7. SMT PCB LAYOUT, REFER TO PAGE 25.
- 8. PACKING IN TAPE AND REEL, QUANTITY 1000 PER REEL.
- 9. WHEN REQUIRED, MATCHING CAP DETAILS ON DRAWING 60-9176-001-5XX-X00S.
- 10. ASSEMBLY TOOLING ON PAGE 26 (WITH CAP AND WITHOUT CAP).





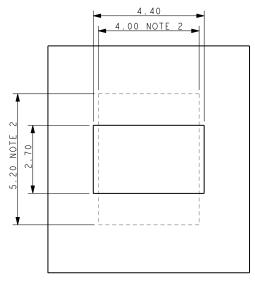


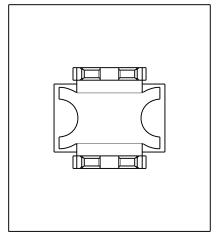


18-24 AWG IDC WIRE TO BOARD CONNECTOR SINGLE CONTACT

SMT PCB LAYOUT

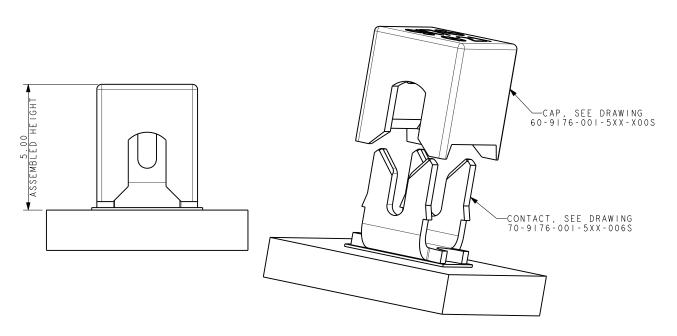
PURE TIN PADS





ORIENTATION OF CONTACT ON PAD

ASSEMBLED/INSTALLED PRODUCTS



NOTES

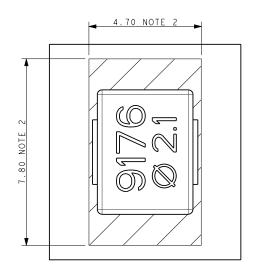
- 1. CONNECTOR CAN BE USED WITH CONTACT ONLY OR WITH OPTIONAL CAP.
- 2. OUTLINE OF CAP WHEN USED.
- 3. FOR FULL PRODUCT SPECIFICATION REFER TO ELCO SPEC 201-01-106 AND 201-01-124.
- 4. DIMENSIONS SHOWN ARE REFERENCED DIMENSIONS.
- 5. ASSEMBLY TOOLING ON PAGE 26 (WITH CAP AND WITHOUT CAP).



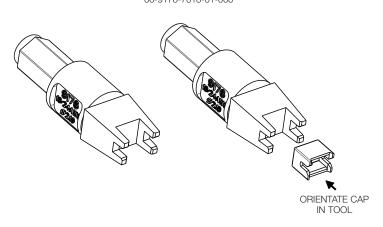
Series 9176-500



ASSEMBLY TOOLING - CAP USED



CAP APPLICATION TOOL 06-9176-7018-01-000

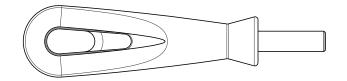


NOTES:

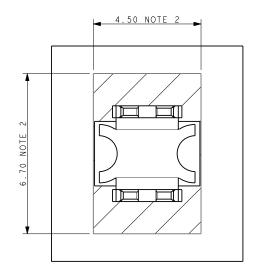
- 1. ASSEMBLY TOOLING FOR CAP.
- 2. AREA OF PCB TO BE KEPT CLEAR OF COMPONENTS, TACKS PERMISSIBLE.
- 3. WIRE AND CAP INSERTED IN ONE OPERATION.
- 4. REFER TO APPLICATION NOTE 201-01-124 FOR FURTHER INFORMATION.
- 5. REFER BELOW WHEN CONTACT USED WITHOUT CAP.

UNIVERSAL HANDLE

06 7000 7730 01 000



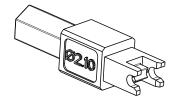
ASSEMBLY TOOLING - CAP NOT USED WIRE ONTO CONTACT



- 1. ASSEMBLY TOOLING FOR CONTACT ONLY, NO CAP USED.
- 2. MINIMUM AREA OF PCB TO BE KEPT CLEAR OF COMPONENTS, TRACK PERMISSIBLE.
- 3. REFER TO TABLE FOR CORRECT TOOL/WIRE COMBINATION.
- 4. REFER TO APPLICATION NOTE 201-01-124 FOR FURTHER INFORMATION.

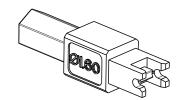
2.1 WIRE (18-20 AWG)

06-9176-7019-01-000 06-9176-7020-01-000

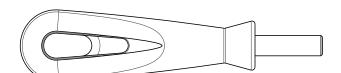


1.6 WIRE (22-24 AWG) 06-9176-7019-02-000

06-9176-7020-02-000



UNIVERSAL HANDLE



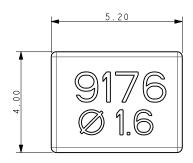
Wire Guage	Wire Insulation ø	Metal Tool High Volume	Plastic Tool Small to Medium Volume	Handle
22-24 AWG	1.10 to 1.60	06-9176-7019-02-000	06-9176-7020-02-000	06-7000-7730-01-000
18-20 AWG	1.60 to 2.10	06-9176-7019-01-000	06-9176-7020-01-000	06-9176-7730-01-000

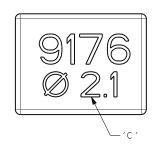


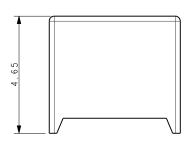
Series 9176-500

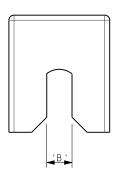


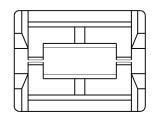
CAP DETAILS











Code	Insulator Diameter (AWG)	В	Text C
516	1.1 to 1.6 (22-24)	1.00	Ø 1.6
521	1.6 to 2.1 (18-20)	1.50	Ø 2.1

NOTES:

- 1. CAP FOR IDC WIRE TO BOARD CONNECTION.
- 2. CAP MATERIAL: GLASS FILLED NYLON 46, COLOR SEE PAGE 23.
- 3. CAPS DESIGNED TO ACCOMMODATE WIRE INSULATION DIAMETERS 1.1MM TO 2.1MM.
- 4. ALL DIMENSIONS FOR REFERENCE UNLESS OTHERWISE STATED.
- 5. FOR FULL PRODUCT SPECIFICATION REFER TO ELCO SPEC 201-01-106, APPLICATION NOTES 201-01-124.
- 6. PACKING IN BAGS, QUANTITY 1000 PER BAG.
- 7. FOR INSTALATION DETAILS REFER TO DRAWING 70-9176-001-XX-006S.

Series 9177





The 917X series of surface mount Insulation Displacement Connectors (IDC) were developed to meet the harsh automotive and industrial market applications for connecting individual wires directly to a PCB ranging from 14 AWG to 28 AWG. This industry proven contact system has been tested to automotive levels of shock, vibration, and temperature cycling to prove their reliability and robustness. The simplicity of inserting a wire into the connector with a small tool allows a wide range of devices to be connected to the PCB without soldering. In SSL applications specifically, these connectors are used to bring power and signal onto the PCB or are used to daisy chain multiple boards together in a long string. While the IDC contact provides a gas-tight connection to conductor of the wire, the housing has been designed to grab the insulation of the wire to provide a positive strain relief even in the harshest conditions. In case of repair, the wires can be removed and replace up to three times.

The 9177 series accepts 14 AWG to 20 AWG wires with an insulation diameter ranging from 2.75mm to 4.25mm. These dual contact connectors support a 15 amp current rating with two large SMT solder tails per wire to provide maximum stability on the PCB. Available in 1p-3p configuration, these connectors can be end stackable for higher pin counts.

APPLICATIONS

- Connecting discrete wire components directly to the PCB
- · Bringing power and signals onto a PCB
- Daisy chaining PCB's together to create a continuous string of boards
- Application Notes: refer to 201-01-124

FEATURES AND BENEFITS

- IDC contact provides a gas-tight connection to the PCB for long term reliability
- Connector housing captures the wire insulation for positive strain relief
- Tested to automotive levels on shock, vibration and temperature cycling for reliability
- Low and high volume assembly tools to match production volumes
- Reduced total applied cost versus solder or crimp processes
- High temperature insulator capable to 260°C reflow soldering processes

ELECTRICAL

· Current Rating: 15 Amp / Contact

Voltage Rating: 600 VAC

ENVIRONMENTAL

• Operating Temperature: -40°C to +125°C

MECHANICAL

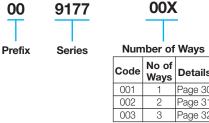
• Insulator Material: Nylon 46: UL94V0

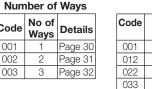
• Contact Material: Phosphor Bronze

• Plating: Tin over Nickel

• Durability: 3 Cycles

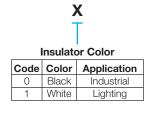
HOW TO ORDER





Wire Gauge Size Accepted Wire Wire Gauge Insulation 14 AWG Ø 4.25 16 AWG Ø 3.50 Ø 3.50 18 AWG 20 AWG Ø 2.75

00X







Certification: UL File #E320991



Series 9177



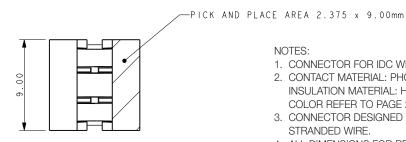
CONNECTOR/TOOLING PART NUMBER MATRIX

		SERIES 9	HAND INSERT	ION TOOLING*			
AWG	Wire Insulation	Positions	Color	Part Number	Plastic (low volume)	Metal (high volume)	
14	Ø 4.25	1p	White	009177001001106	069177701601001	069177701701001	
14	Ø 4.25	1p	Black	009177001001006	069177701601001	069177701701001	
14	Ø 4.25	2p	White	009177002001106	069177701601002	069177701701002	
14	Ø 4.25	2p	Black	009177002001006	069177701601002	069177701701002	
14	Ø 4.25	3р	White	009177003001106	069177701601003	069177701701003	
14	Ø 4.25	3р	Black	009177003001006	069177701601003	069177701701003	
16	Ø 3.50	1p	White	009177001012106	069177701602001	069177701702001	
16	Ø 3.50	1p	Black	009177001012006	069177701602001	069177701702001	
16	Ø 3.50	2p	White	009177002012106	069177701602002	069177701702002	
16	Ø 3.50	2p	Black	009177002012006	069177701602002	069177701702002	
16	Ø 3.50	3р	White	009177003012106	069177701602003	069177701702003	
16	Ø 3.50	3р	Black	009177003012006	069177701602003	069177701702003	
18	Ø 3.50	1p	White	009177001022106	069177701602001	069177701702001	
18	Ø 3.50	1p	Black	009177001022006	069177701602001	069177701702001	
18	Ø 3.50	2p	White	009177002022106	069177701602002	069177701702002	
18	Ø 3.50	2р	Black	009177002022006	069177701602002	069177701702002	
18	Ø 3.50	3р	White	009177003022106	069177701602003	069177701702003	
18	Ø 3.50	3р	Black	009177003022006	069177701602003	069177701702003	
20	Ø 2.75	1p	White	009177001033106	069177701603001	069177701703001	
20	Ø 2.75	1p	Black	009177001033006	069177701603001	069177701703001	
20	Ø 2.75	2р	White	009177002033106	069177701603002	069177701703002	
20	Ø 2.75	2р	Black	009177002033006	069177701603002	069177701703002	
20	Ø 2.75	3р	White	009177003033106	069177701603003	069177701703003	
20	Ø 2.75	3р	Black	009177003033006	069177701603003	069177701703003	
* Insertion Tooling - Requires Hand Press with Flat Rock Plates; Consult Application Notes 201-01-12							

Series 9177

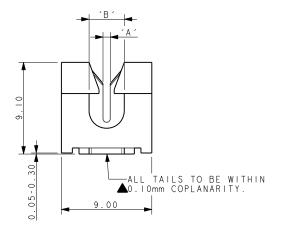


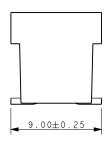
14-20 AWG 1 WAY IDC CONNECTOR



NOTES:

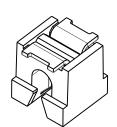
- 1. CONNECTOR FOR IDC WIRE TO BOARD CONNECTION.
- 2. CONTACT MATERIAL: PHOSPHOR BRONZE. INSULATION MATERIAL: HIGH TEMPERATURE NYLON 46. COLOR REFER TO PAGE 28.
- 3. CONNECTOR DESIGNED TO ACCEPT BETWEEN 14 AND 20 GAUGE STRANDED WIRE.
- 4. ALL DIMENSIONS FOR REFERENCE UNLESS OTHERWISE STATED.
- 5. FOR FULL PRODUCT SPECIFICATION REFER TO ELCO SPEC 201-01-109.
- 6. FOR PCB SPACE RESTRICTED BY ASSEMBLY TOOLING REFER TO PAGE 33.





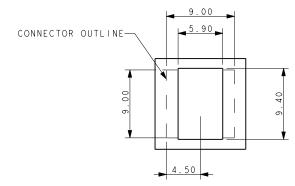
Code	Accepted Wire Gauge	Α	Wire Insulation	В
001	14 Gauge Stranded	1.10	Ø 4.25 max	4.25
012	16 Gauge Stranded	0.82	Ø 3.50 max	3.50
022	18 Gauge Stranded	0.72	Ø 3.50 max	3.50
033	20 Gauge Stranded	0.60	Ø 2.75 max	2.75





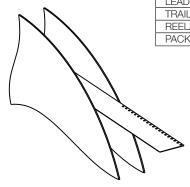
SMT PCB LAYOUT

PURE TIN PADS

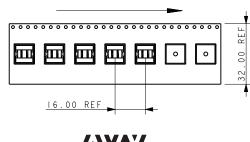


PACKING DETAILS

REEL QTY	400
LEADER	500MM
TRAILER	400MM
REEL/BOX	4
PACK QTY	1600



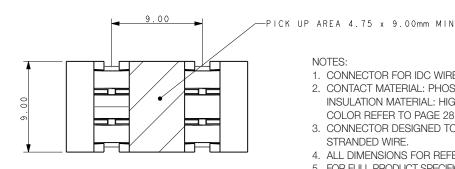
30



Series 9177

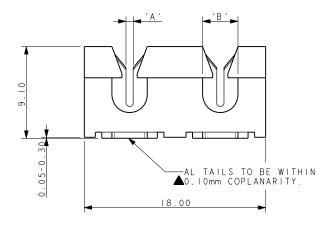


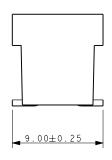
14-20 AWG 2 WAY IDC CONNECTOR



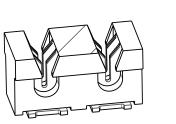
NOTES:

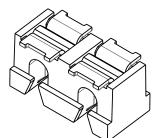
- 1. CONNECTOR FOR IDC WIRE TO BOARD CONNECTION.
- 2. CONTACT MATERIAL: PHOSPHOR BRONZE. INSULATION MATERIAL: HIGH TEMPERATURE NYLON 46. COLOR REFER TO PAGE 28.
- 3. CONNECTOR DESIGNED TO ACCEPT BETWEEN 14 AND 20 GAUGE STRANDED WIRE.
- 4. ALL DIMENSIONS FOR REFERENCE UNLESS OTHERWISE STATED.
- 5. FOR FULL PRODUCT SPECIFICATION REFER TO ELCO SPEC 201-01-109.
- 6. FOR PCB SPACE RESTRICTED BY ASSEMBLY TOOLING REFER TO PAGE 33.





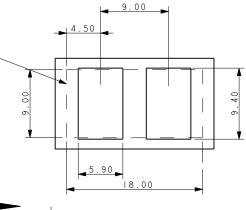
Code	Accepted Wire Gauge	Α	Wire Insulation	В
001	14 Gauge Stranded	1.10	Ø 4.25 max	4.25
012	16 Gauge Stranded	0.82	Ø 3.50 max	3.50
022	18 Gauge Stranded	0.72	Ø 3.50 max	3.50
033	20 Gauge Stranded	0.60	Ø 2.75 max	2.75





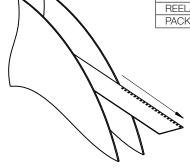
SMT PCB LAYOUT

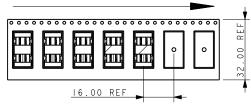
PURE TIN PADS



PACKING DETAILS

REEL QTY	400
LEADER	500MM
TRAILER	400MM
REEL/BOX	4
PACK QTY	1600





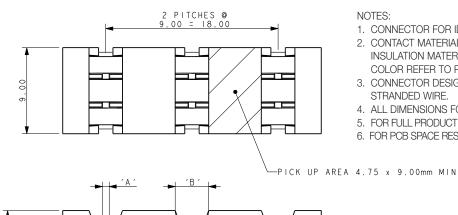
CONNECTOR OUTLINE-



Series 9177

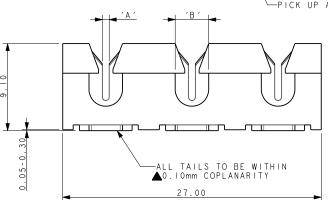


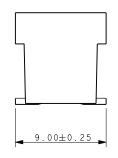
14-20 AWG 3 WAY IDC CONNECTOR



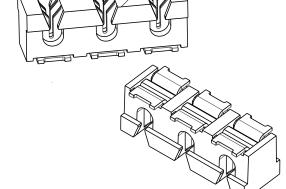
NOTES:

- 1. CONNECTOR FOR IDC WIRE TO BOARD CONNECTION.
- 2. CONTACT MATERIAL: PHOSPHOR BRONZE. INSULATION MATERIAL: HIGH TEMPERATURE NYLON 46. COLOR REFER TO PAGE 28.
- 3. CONNECTOR DESIGNED TO ACCEPT BETWEEN 14 AND 20 GAUGE STRANDED WIRE.
- 4. ALL DIMENSIONS FOR REFERENCE UNLESS OTHERWISE STATED.
- 5. FOR FULL PRODUCT SPECIFICATION REFER TO ELCO SPEC 201-01-109.
- 6. FOR PCB SPACE RESTRICTED BY ASSEMBLY TOOLING REFER TO PAGE 33.



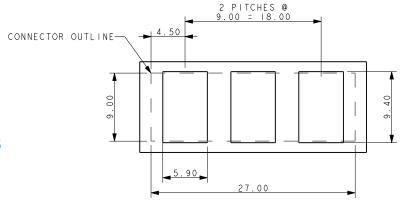


Code		Α	Wire	В
	Wire Gauge		Insulation	
001	14 Gauge Stranded	1.10	Ø 4.25 max	4.25
012	16 Gauge Stranded	0.82	Ø 3.50 max	3.50
022	18 Gauge Stranded	0.72	Ø 3.50 max	3.50
033	20 Gauge Stranded	0.60	Ø 2.75 max	2.75



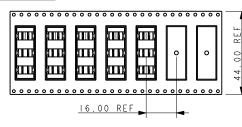
SMT PCB LAYOUT

PURE TIN PADS



PACKING DETAILS

		·
	PACK QTY	1600
	REEL/BOX	4
	TRAILER	400MM
. \	LEADER	500MM
	REEL QTY	400



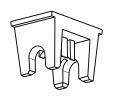


Series 9177



INSERTION TOOLING - REQUIRES HAND PRESS WITH FLAT ROCK PLATES

1 WAY







HIGH PRODUCTION Metal

No. of Ways	Max Insulation Dia (AWG)	Tool Part Number
	4.25 (14)	06 9177 7017 01 001
1	3.50 (16-18)	06 9177 7017 02 001
	2.75 (20)	06 9177 7017 03 001
	4.25 (14)	06 9177 7017 01 002
2	3.50 (16-18)	06 9177 7017 02 002
	2.75 (20)	06 9177 7017 03 002
	4.25 (14)	06 9177 7017 01 003
3	3.50 (16-18)	06 9177 7017 02 003
	2.75 (20)	06 9177 7017 03 003

MEDIUM PRODUCTION Plastic

No. of Ways	Max Insulation Dia (AWG)	Tool Part Number
	4.25 (14)	06 9177 7016 01 001
1	3.50 (16-18)	06 9177 7016 02 001
	2.75 (20)	06 9177 7016 03 001
	4.25 (14)	06 9177 7016 01 002
2	3.50 (16-18)	06 9177 7016 02 002
	2.75 (20)	06 9177 7016 03 002
3	4.25 (14)	06 9177 7016 01 003
	3.50 (16-18)	06 9177 7016 02 003
	2.75 (20)	06 9177 7016 03 003

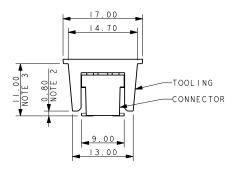
The assembly tooling restricts the available space/component heights on the PCB.

For details see below.

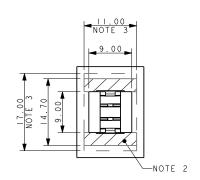
NOTES

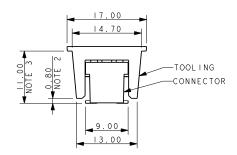
- 1. ALL DIMENSIONS FOR REFERENCE DIMENSIONS.
- 2. MAXIMUM COMPONENT HEIGHT 0.80MM IN THIS AREA.
- 3. MAXIMUM COMPONENT HEIGHT 11.00 MM IN THIS AREA.
- 4. THE SAME RESTRICTIONS APPLY TO ALL WIRE INSULATION DIAMETERS.

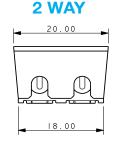
INSERTION TOOLING - PCB RESTRICTED AREAS FOR ASSEMBLY TOOLING

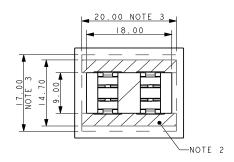


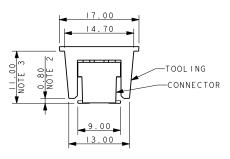


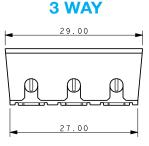


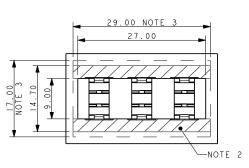














Series 9276



The new 9276 series connector provides a quick and reliable wire-toboard termination in a sleek 2.5mm pitch SMT package for a broad range of industrial and commercial markets. With almost every product on the market today having to deal with a small number of discrete wires to connect components to a board, the 9276 series connectors meets this challenge by simply stripping the wire and inserting them into the connector. This makes the connector very termination friendly within the factory as well as in the field by electrical installers. Developed for harsh industrial and Solid State Lighting (SSL) applications, the connector was designed with a high spring force Beryllium Copper upper spring contact to accept a wide range (18-24 AWG solid or stranded) of wire to meet multiple applications with a single connector. By incorporating a dualcontact design we were able to maximize current rating (6 Amps) and minimize PCB space. For example, the 4p connector has a footprint of 90 sq-mm while competing products are 160 sq-mm. The dual-contact design also provides two solder points for each wire eliminating the need for external anchor tabs. AVX provides a small insertion / extraction tool which will allow the wires to easily be replaced up to 5 times.

APPLICATIONS

- Connecting discrete wire components directly to the
- Bringing power and signals onto a PCB
- Daisy chaining PCB's together to create a continuous string of boards
- Application notes; refer to 201-01-127

FEATURES AND BENEFITS

- Simple strip, insert and removal design
- SMT RoHS termination to the PCB with minimal footprint
- Accepts 18-24AWG Solid and Stranded wires
- Expanded size offering to maximize application potential; 1, 2, 3, 4, 6 & 8 positions
- High spring force top contact provides a lance type retention to capture and retain the wire
- · Available in standard white and optional black color

ELECTRICAL

• Current Rating: 6 Amps / Contact

Voltage Rating: 250v AC

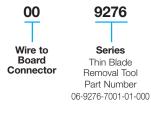
ENVIRONMENTAL

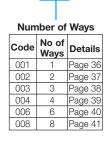
• Operating Temperature: -40°C to +125°C

MECHANICAL

- Insulator Material: Glass-Filled Nylon 46; UL94V0
- Contact Material: Beryllium Copper / Phosphor Bronze
- Plating: Tin over Nickel
- Replaceability: 5 Cycles

HOW TO ORDER



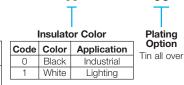


00X





21



X



06



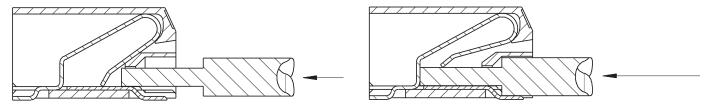




WIRE ASSEMBLY FOR FURTHER DETAILS REFER TO APPLICATION NOTES 201-01-127



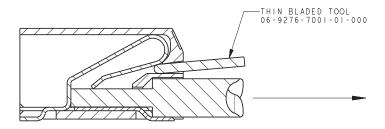
TRIM INSULATION. DO NOT CRUSH CENTER OF WIRE. STRANDED WIRES TWISTED TOGETHER BEFORE INSERTION. CHECK ALL STANDS OF WIRE ARE CORRECTLY ALIGNED AFTER THE INSULATION IS REMOVED.



PUSH WIRE INTO HOLE IN FRONT OF CONNECTOR DO NOT BEND CONNECTOR

CONTINUED TO PUSH WIRE UNTIL STOP IS REACHED.

WIRE EXTRACTION

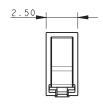


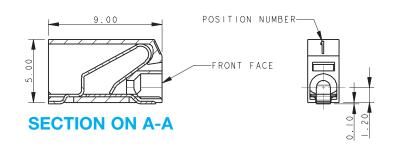
PUSH BLADE (NOT SHARP) INTO SLOT ABOVE WIRE. WHEN WIRE IS FREE, PULL TO EXTRACT.

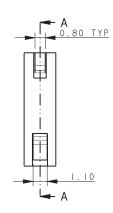


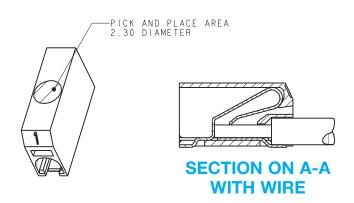


1 WAY WIRE TO BOARD CONNECTOR



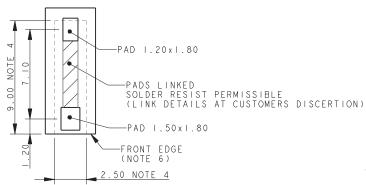


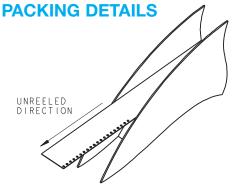


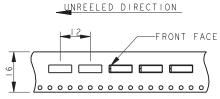


NOTES:

- 1. 9276 ONE WAY CONNECTOR, REFER TO ELCO SPECIFICATION 201-01-125 AND APPLICATION NOTES 201-01-127 FOR FURTHER DETAILS
- 2. INSULATOR MATERIAL: NYLON 46, GLASS FILLED, UL94 V-0, COLOR REFER TO PAGE 34.
- 3. CONTACT MATERIAL: COPPER ALLOY, 0.20MM THICK, TIN PLATED.
- 4. OUTLINE OF CONNECTOR.
- 5. WIRE ASSEMBLY / EXTRACTION, REFER TO PAGE 35.
- 6. FRONT FACE OF CONNECTOR CAN BE IN LINE WITH EDGE OF PCB.
- 7. PACKING TAPE AND REEL, QUANTITY 1000 PER REEL.





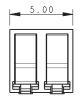


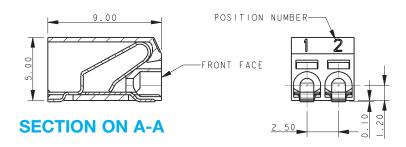


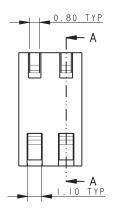


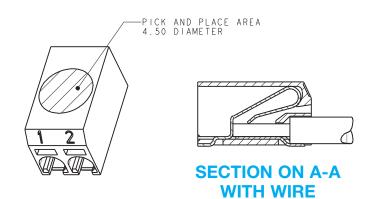


2 WAY WIRE TO BOARD CONNECTOR



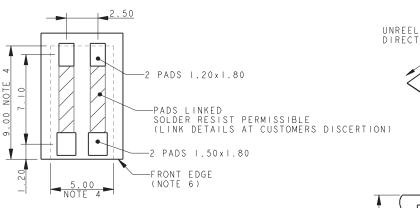


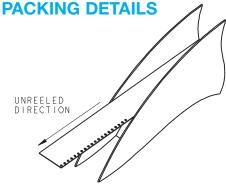


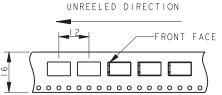


NOTES:

- 1. 9276 TWO WAY CONNECTOR, REFER TO ELCO SPECIFICATION 201-01-125 AND APPLICATION NOTES 201-01-127 FOR FURTHER DETAILS
- 2. INSULATOR MATERIAL: NYLON 46, GLASS FILLED, UL94 V-0, COLOR REFER TO PAGE 34.
- 3. CONTACT MATERIAL: COPPER ALLOY, 0.20MM THICK, TIN PLATED.
- 4. OUTLINE OF CONNECTOR.
- 5. WIRE ASSEMBLY / EXTRACTION, REFER TO PAGE 35.
- 6. FRONT FACE OF CONNECTOR CAN BE IN LINE WITH EDGE OF PCB.
- 7. PACKING TAPE AND REEL, QUANTITY 1000 PER REEL.





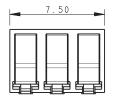


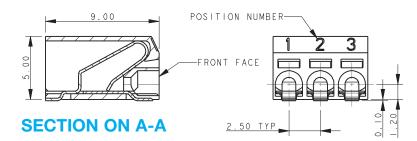


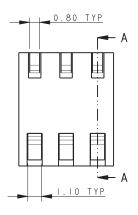


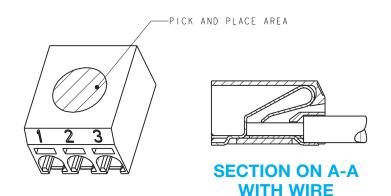


3 WAY WIRE TO BOARD CONNECTOR





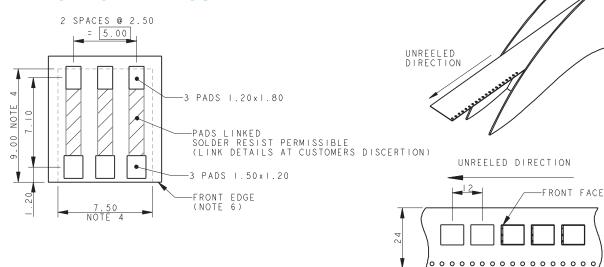




PACKING DETAILS

NOTES:

- 1. 9276 THREE WAY CONNECTOR, REFER TO ELCO SPECIFICATION 201-01-125 AND APPLICATION NOTES 201-01-127 FOR FURTHER DETAILS
- 2. INSULATOR MATERIAL: NYLON 46, GLASS FILLED, UL94 V-0, COLOR REFER TO PAGE 34.
- 3. CONTACT MATERIAL: COPPER ALLOY, 0.20MM THICK, TIN PLATED.
- 4. OUTLINE OF CONNECTOR.
- 5. WIRE ASSEMBLY / EXTRACTION, REFER TO PAGE 34.
- 6. FRONT FACE OF CONNECTOR CAN BE IN LINE WITH EDGE OF PCB.
- 7. PACKING TAPE AND REEL, QUANTITY 1000 PER REEL.

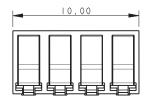


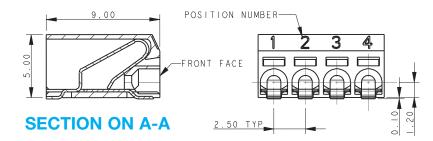


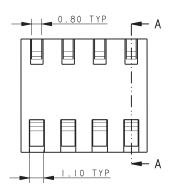


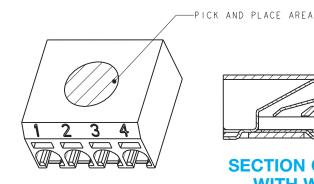


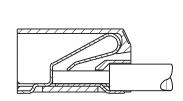
4 WAY WIRE TO BOARD CONNECTOR









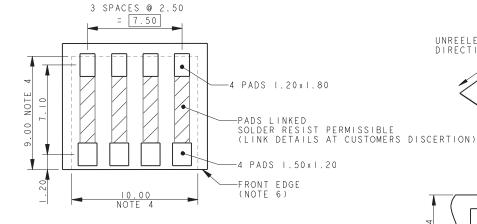


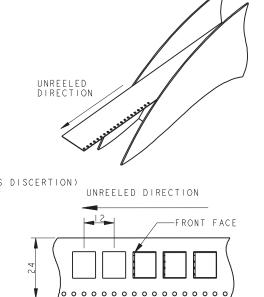
SECTION ON A-A WITH WIRE

NOTES:

- 1. 9276 FOUR WAY CONNECTOR, REFER TO ELCO SPECIFICATION 201-01-125 AND APPLICATION NOTES 201-01-127 FOR FURTHER DETAILS
- 2. INSULATOR MATERIAL: NYLON 46, GLASS FILLED, UL94 V-0, COLOR REFER TO PAGE 34.
- 3. CONTACT MATERIAL: COPPER ALLOY, 0.20MM THICK, TIN PLATED.
- 4. OUTLINE OF CONNECTOR.
- 5. WIRE ASSEMBLY / EXTRACTION, REFER TO PAGE 35.
- 6. FRONT FACE OF CONNECTOR CAN BE IN LINE WITH EDGE OF PCB.
- 7. PACKING TAPE AND REEL, QUANTITY 1000 PER REEL.

4 WAY PCB BOARD LAYOUT





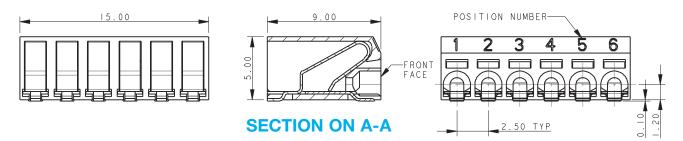
PACKING DETAILS

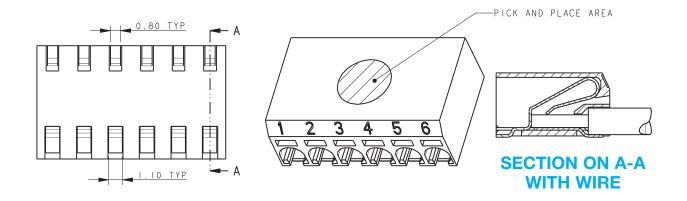






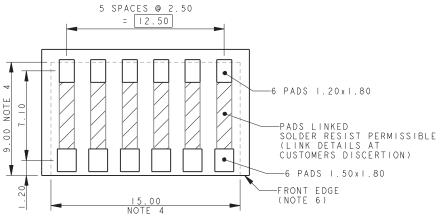
6 WAY WIRE TO BOARD CONNECTOR

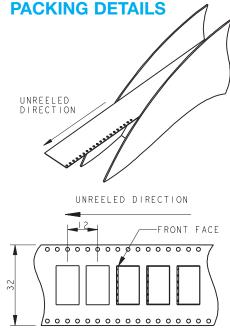




NOTES:

- 1. 9276 SIX WAY CONNECTOR, REFER TO ELCO SPECIFICATION 201-01-125 AND APPLICATION NOTES 201-01-127 FOR FURTHER DETAILS
- 2. INSULATOR MATERIAL: NYLON 46, GLASS FILLED, UL94 V-0, COLOR REFER TO PAGE 34.
- 3. CONTACT MATERIAL: COPPER ALLOY, 0.20MM THICK, TIN PLATED.
- 4. OUTLINE OF CONNECTOR.
- 5. WIRE ASSEMBLY / EXTRACTION, REFER TO PAGE 35.
- 6. FRONT FACE OF CONNECTOR CAN BE IN LINE WITH EDGE OF PCB.
- 7. PACKING TAPE AND REEL, QUANTITY 1000 PER REEL.



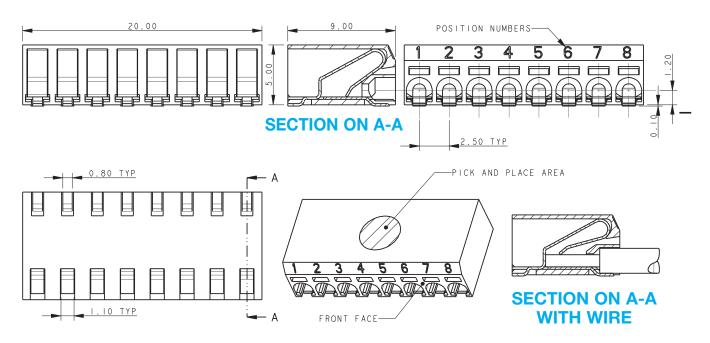




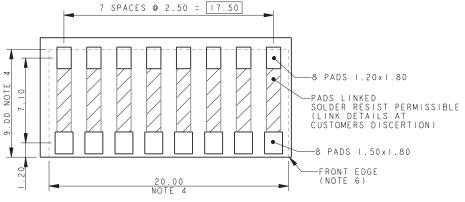


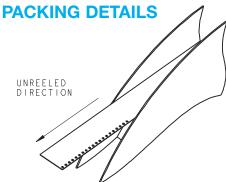


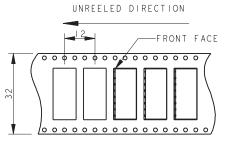
8 WAY WIRE TO BOARD CONNECTOR



- 1. 9276 EIGHT WAY CONNECTOR, REFER TO ELCO SPECIFICATION 201-01-125 AND APPLICATION NOTES 201-01-127 FOR FURTHER DETAILS
- 2. INSULATOR MATERIAL: NYLON 46, GLASS FILLED, UL94 V-0, COLOR REFER TO PAGE 34.
- 3. CONTACT MATERIAL: COPPER ALLOY, 0.20MM THICK, TIN PLATED.
- 4. OUTLINE OF CONNECTOR.
- 5. WIRE ASSEMBLY / EXTRACTION, REFER TO PAGE 35.
- 6. FRONT FACE OF CONNECTOR CAN BE IN LINE WITH EDGE OF PCB.
- 7. PACKING TAPE AND REEL, QUANTITY 1000 PER REEL.







Discrete Wire-to-Board Connectors **For Harsh Environments**



Series 9176; Insulation Displacement



FEATURES AND BENEFITS

- IDC contact provides a gas-tight connection to the PCB for long term reliability
- · Connector housing captures the wire insulation for positive strain relief
- Tested to automotive levels on shock, vibration and temperature cycling for reliability
- Low and high volume assembly tools to match production volumes
- Reduced total applied cost versus solder or crimp
- Optional thru and end caps lock in place to provide maximum strain relief
- High temperature insulator capable to 260°C reflow soldering processes
- · Available in standard white and optional black color

The 917X Series of surface mount Insulation Displacement Connectors (IDC) were developed to meet the harsh automotive and industrial market applications for connecting individual wires ranging from 14 AWG to 28 AWG directly to a PCB. This industry proven contact system has been tested to automotive levels of shock, vibration, and temperature cycling to prove its reliability and robustness. The simplicity of inserting a wire into the connector with a small tool allows a wide range of devices to be connected to the PCB without soldering. In SSL applications specifically, these connectors are used to bring power and signal onto the PCB or are used to daisy chain multiple boards together in a long string. While the IDC contact provides a gas-tight connection to conductor of the wire, the housing has been designed to grab the insulation of the wire to provide a positive strain relief even in the harshest conditions. In case of repair, the wires can be removed and replace up to three times.

The 9176 Series accepts 18 AWG to 24 AWG wires with an insulation diameter ranging from 1.1mm to 2.1mm. These dual contact connectors support a 10 amp current rating with two large SMT solder tails per wire to provide maximum stability on the PCB. Available in 1p-3p configuration, these connectors can be end stackable for higher pin counts. The 9176 Series also comes with optional locking strain relief caps that act as the termination tool for severe vibration applications.

ELECTRICAL

- Current Rating: 10 Amp / Contact
- Voltage Rating: 250 VAC

ENVIRONMENTAL

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

Series 9276; Poke-Home

The new 9276 Series connector provides a quick and reliable wire-to-board termination in a sleek 2.5mm pitch SMT package for a broad range of industrial and commercial markets. With almost every product on the market today having to deal with a small number of discrete wires to connect components to a board, the 9276 Series connectors meets this challenge by simply stripping the wire and inserting them into the connector. This makes the connector very termination friendly within the factory as well as in the field by electrical installers. Developed for harsh industrial and Solid State Lighting (SSL) applications, the connector was designed with a high spring force Beryllium Copper upper spring contact to accept a wide range (18-24 AWG solid or stranded) of wire to meet multiple applications with a single connector. By incorporating a dual-contact design we were able to maximize current rating (6 Amps) and minimize PCB space. For example, the 4p connector has a footprint of 90 sq-mm while competing products are 160 sq-mm. The dual-contact design also provides two solder points for each wire eliminating the need for external anchor tabs. AVX provides a small insertion / extraction tool which will allow the wires to easily be replaced up to 5 times.

ELECTRICAL

- Current Rating: 6 Amps / Contact
- Voltage Rating: 250v AC

ENVIRONMENTAL

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



FEATURES AND BENEFITS

- Simple strip, insert and removal design
- SMT RoHS termination to the PCB with minimal footprint
- Accepts 18-24AWG Solid and Stranded wires
- Expanded size offering to maximize application potential; 1, 2, 3, 4, 6 & 8 positions
- High spring force top contact provides a lance type retention to capture and retain the wire
- Available in standard white and optional black color

AMERICAS

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AVX Northwest, WATel: 360-699-8746

AVX Midwest, IN Tel: 317-861-9184

AVX Mid/Pacific, CA Tel: 408-988-4900

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AVX Southwest, CA Tel: 949-859-9509

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