

# Discrete Wire IDC



## 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: 150 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

<b>00</b>	<b>9175</b>	<b>00X</b>	<b>001</b>	<b>X</b>	<b>06</b>															
Prefix	Series	Number of Ways	Wire Gauge Size	Insulator Color	Plating Option															
		<table><tr><th>Code</th><th>No of Ways</th><th>Details</th></tr><tr><td>002</td><td>2</td><td>Page 2</td></tr><tr><td>003</td><td>3</td><td>Page 3</td></tr></table>	Code	No of Ways	Details	002	2	Page 2	003	3	Page 3	<table><tr><th>Code</th><th>Accepted Wire Gauge</th><th>Wire Insulation</th></tr><tr><td>001</td><td>28 Gauge Solid or Stranded 26 Gauge Solid or Stranded</td><td>Min Ø 0.70 Max Ø 1.00</td></tr></table>	Code	Accepted Wire Gauge	Wire Insulation	001	28 Gauge Solid or Stranded 26 Gauge Solid or Stranded	Min Ø 0.70 Max Ø 1.00	9 = UL White 8 = UL Black Special Order 1 = White 0 = Black Special Order	06 = Pure Tin all over
Code	No of Ways	Details																		
002	2	Page 2																		
003	3	Page 3																		
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Certification: UL File #E90723

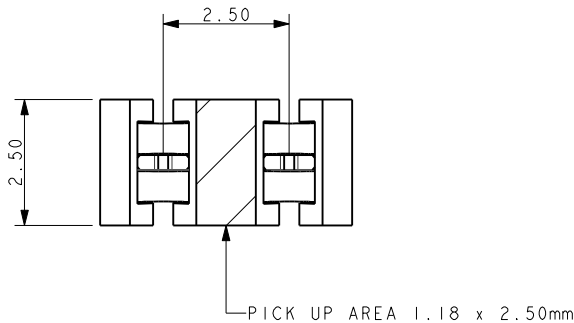
### CONNECTOR/TOOLING PART NUMBER MATRIX

SERIES 9175 IDC					HAND INSERTION TOOLING*			ACCESSORY CAPS	
AWG	Wire Insulation	Positions	Color	Part Number	Plastic (medium volume)	Metal (high volume)	Mass Termination	Though Wire	Wire Stop
26	Ø 0.7 - 1.0	2p	White	009175002001106	069175701601000	069175701701000	069175701701002	609175002010100	609175002010199
26	Ø 0.7 - 1.0	2p	Black	009175002001006	069175701601000	069175701701000	069175701701002	609175002010000	609175002010099
26	Ø 0.7 - 1.0	3p	White	009175003001106	069175701601000	069175701701000	069175701701003	609175003010100	609175003010199
26	Ø 0.7 - 1.0	3p	Black	009175003001006	069175701601000	069175701701000	069175701701003	609175003010000	609175003010099
28	Ø 0.7 - 1.0	2p	White	009175002001106	069175701601000	069175701701000	069175701701002	609175002010100	609175002010199
28	Ø 0.7 - 1.0	2p	Black	009175002001006	069175701601000	069175701701000	069175701701002	609175002010000	609175002010099
28	Ø 0.7 - 1.0	3p	White	009175003001106	069175701601000	069175701701000	069175701701003	609175003010100	609175003010199
28	Ø 0.7 - 1.0	3p	Black	009175003001006	069175701601000	069175701701000	069175701701003	609175003010000	609175003010099

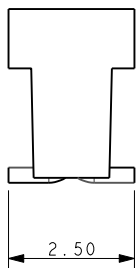
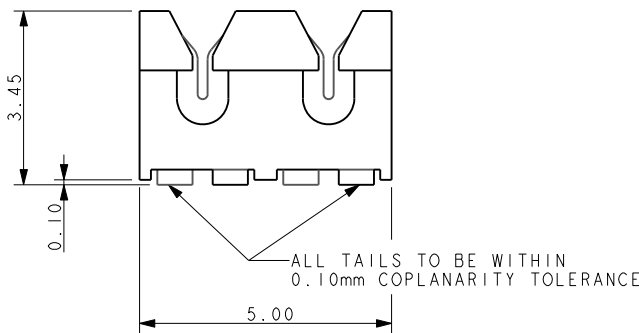
\* Hand Insertion Tooling - Universal Hand Tool 067000773001000; Consult Application Notes 201-01-124



### 26-28 AWG 2 WAY IDC CONNECTOR

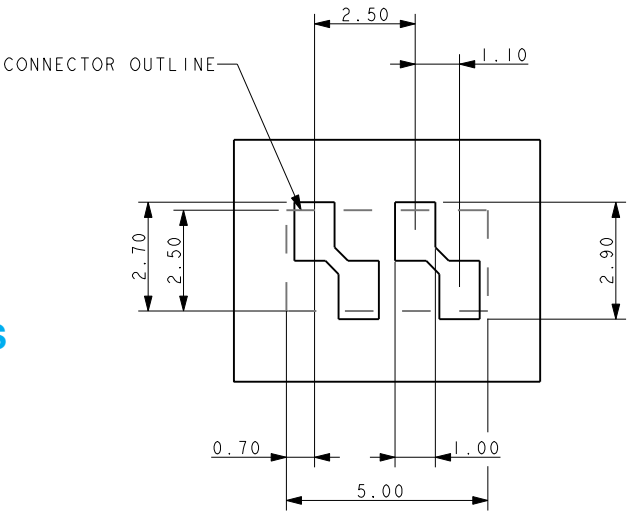


- NOTES:
1. CONNECTOR FOR IDC WIRE TO BOARD CONNECTION.
  2. CONTACT MATERIAL: PHOSPHOR BRONZE.  
INSULATION MATERIAL: HIGH TEMPERATURE NYLON 46.  
COLOR REFER TO PAGE 1.
  3. CONNECTOR DESIGNED TO ACCEPT 26 AND 28 GAUGE SOLID OR STRANDED WIRE.
  4. ALL DIMENSIONS FOR REFERENCE UNLESS OTHERWISE STATED.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



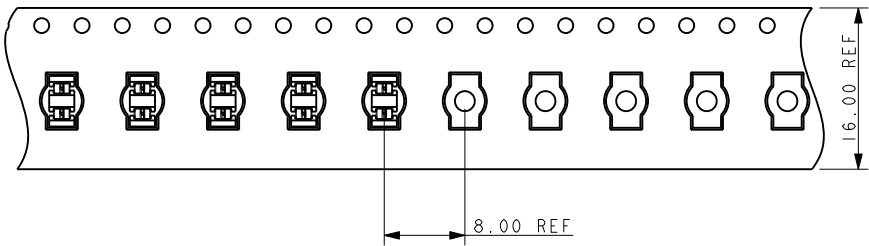
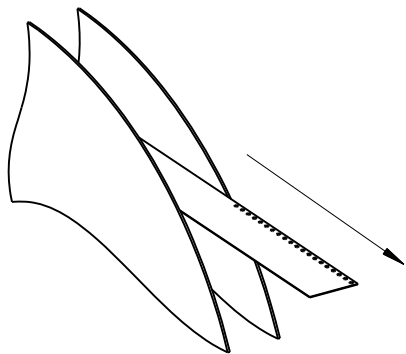
### SMT PCB LAYOUT

PURE TIN PADS



### PACKING DETAILS

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

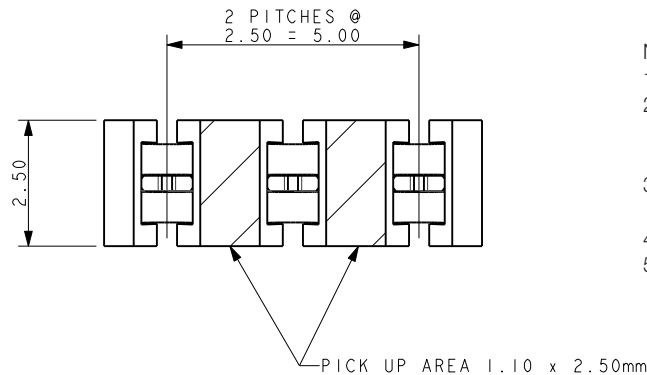


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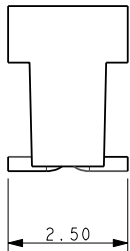
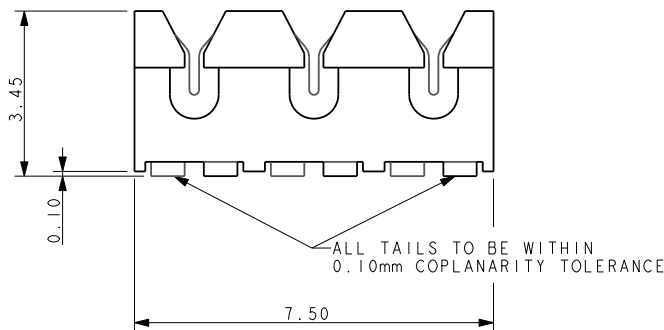


### 26-28 AWG 3 WAY IDC CONNECTOR



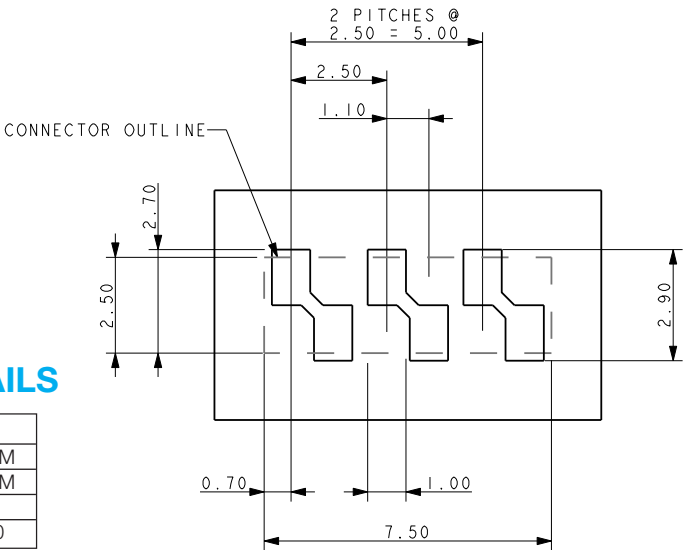
#### NOTES:

1. CONNECTOR FOR IDC WIRE TO BOARD CONNECTION.
2. CONTACT MATERIAL: PHOSPHOR BRONZE.  
INSULATION MATERIAL: HIGH TEMPERATURE NYLON 46.  
COLOR REFER TO PAGE 1.
3. CONNECTOR DESIGNED TO ACCEPT 26 AND 28 GAUGE SOLID OR STRANDED WIRE.
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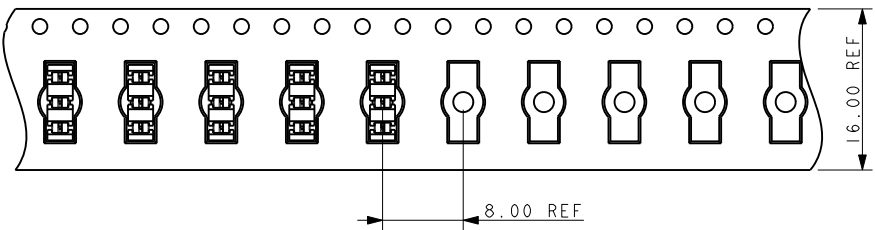
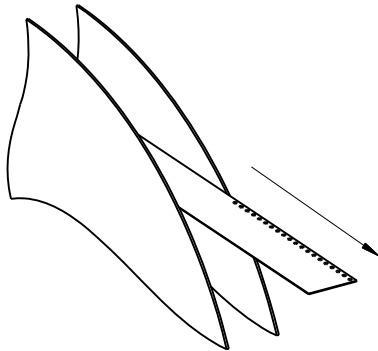
### SMT PCB LAYOUT

PURE TIN PADS

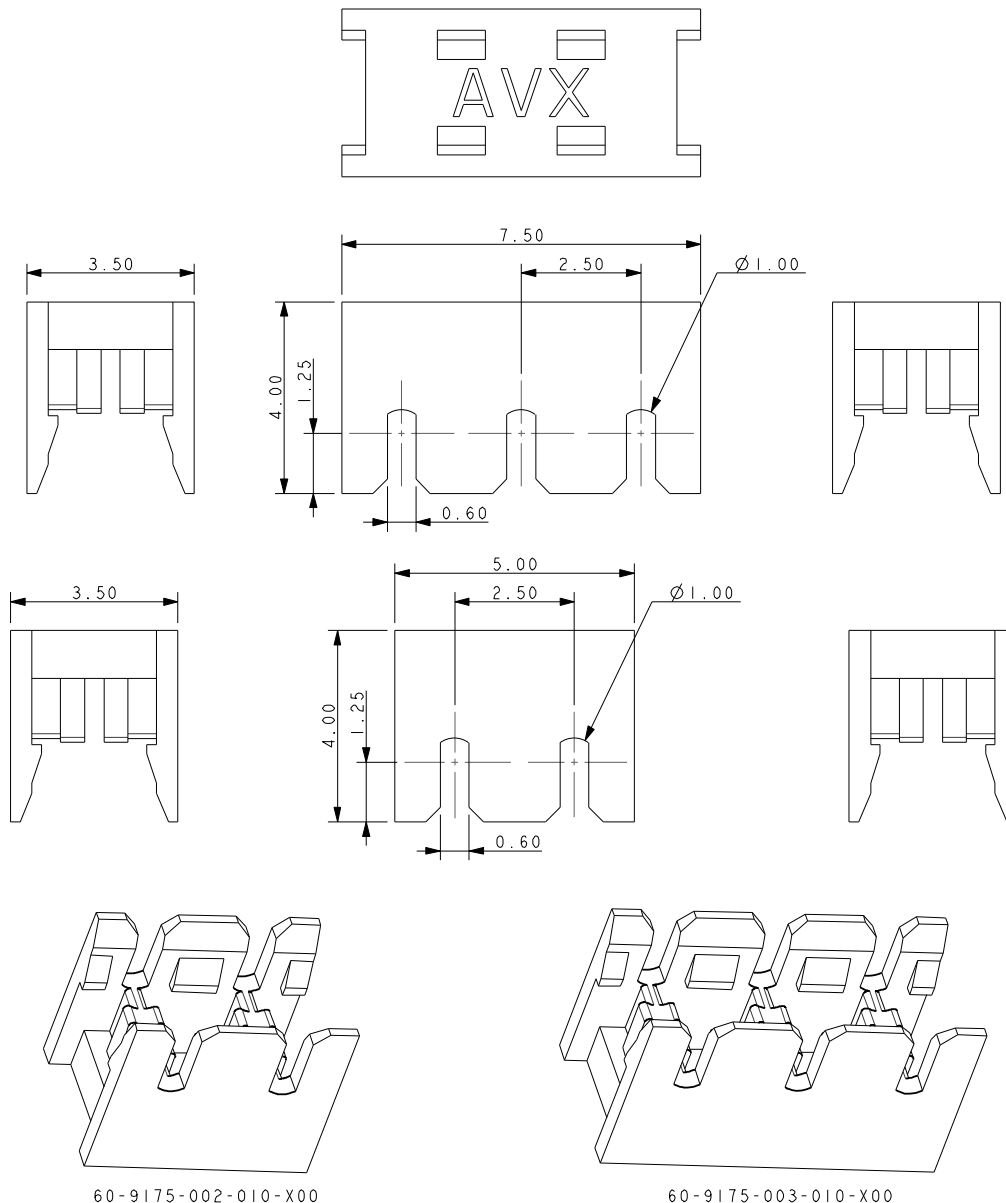


### PACKING DETAILS

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



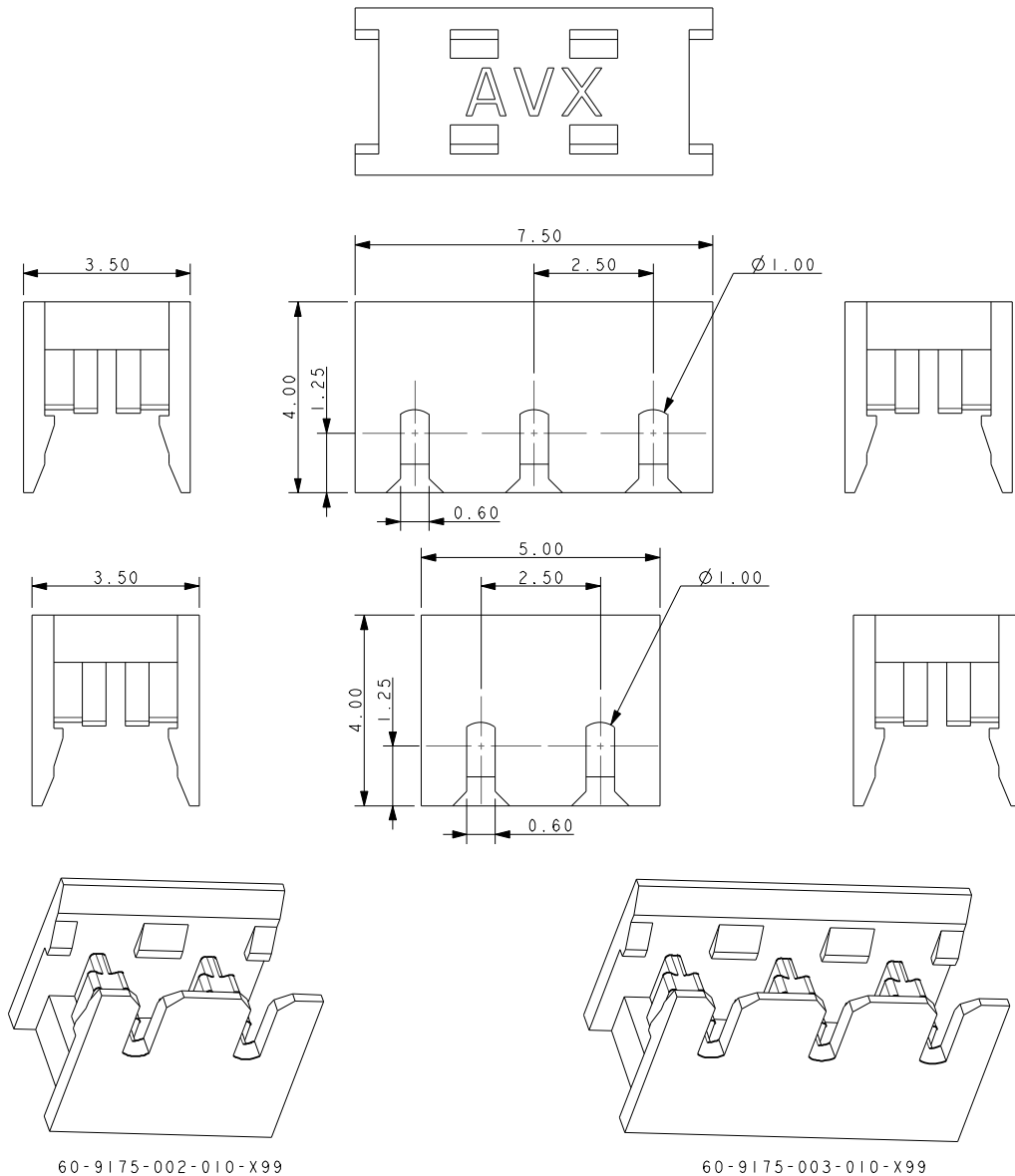
### 60-9175-00X-010-X00 ACCESSORY CAP – THROUGH WIRE



#### 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 1.
5. CAPS DESIGNED TO ACCOMMODATE WIRES WITH INSULATION UP TO 1.00MM DIAMETERS.
6. GENERAL TOLERANCE  $\pm 0.20$ .
7. PACKED IN BAGS, 1000 PIECES PER BAG.

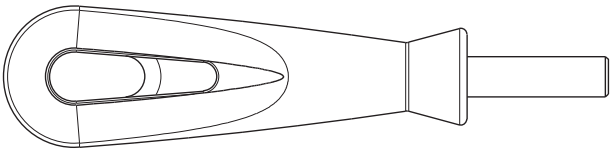
### 60-9175-00X-0XX-010-X99 ACCESSORY CAP – WIRE STOP



#### NOTES:

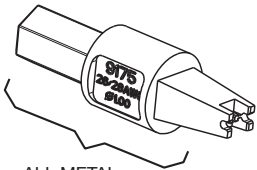
1. CAP FOR IDC WIRE TO BOARD CONNECTION, 2 AND 3 WAY, WIRE STOP.
2. WIRE STOP CAP FOR USE AT WIRE ENDS, STOP FACE PROTECTS THE WIRE ENDS.
3. FOR USE WITH STANDARD 9175 IDC CONNECTORS
4. CAP MATERIAL: GLASS FILLED NYLON 46, FOR COLORS SEE PAGE 1.
5. CAPS DESIGNED TO ACCOMMODATE WIRES WITH INSULATION UP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

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



#### UNIVERSAL HANDLE

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



ALL METAL

#### HIGH PRODUCTION Metal

Max Insulation Dia	Tool Part Number
Ø 1.00	06 9175 7017 01 000



METAL SHANK

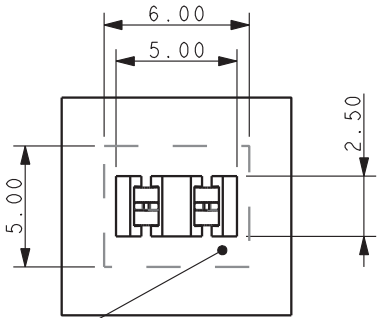
PLASTIC

#### MEDIUM PRODUCTION Metal/Plastic

Max Insulation Dia	Tool Part Number
Ø 1.00	06 9175 7016 01 000

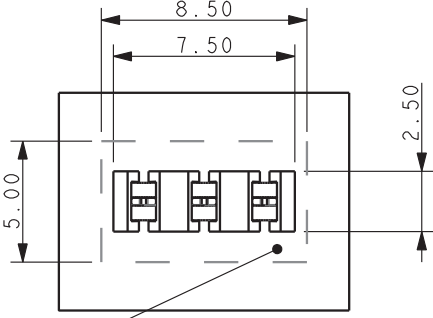
### CLEARANCE AREA ON PCB FOR HAND TOOLING

#### 2 WAY



AREA TO BE KEPT CLEAR FOR TOOLING

#### 3 WAY



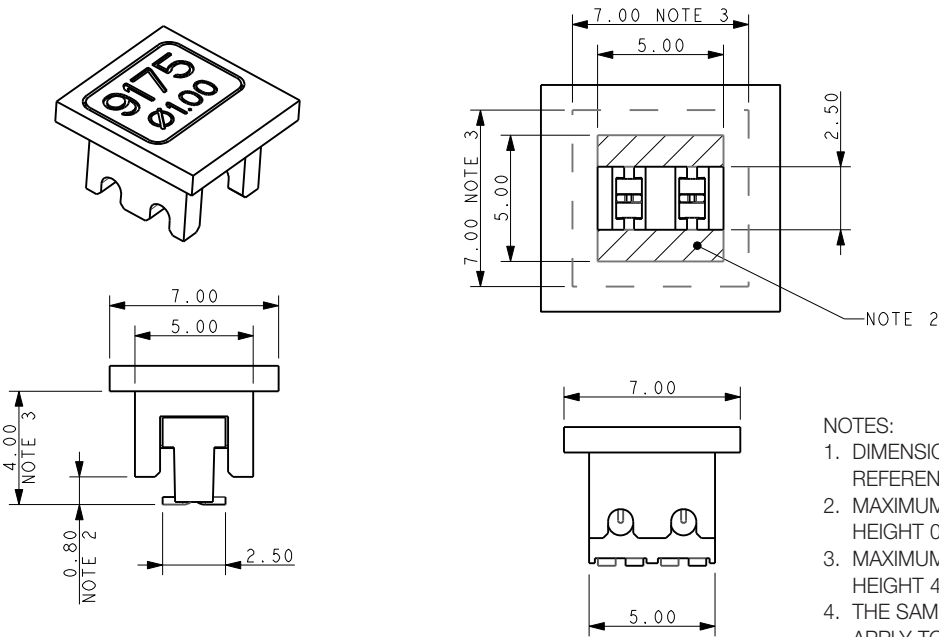
AREA TO BE KEPT CLEAR FOR TOOLING

### 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

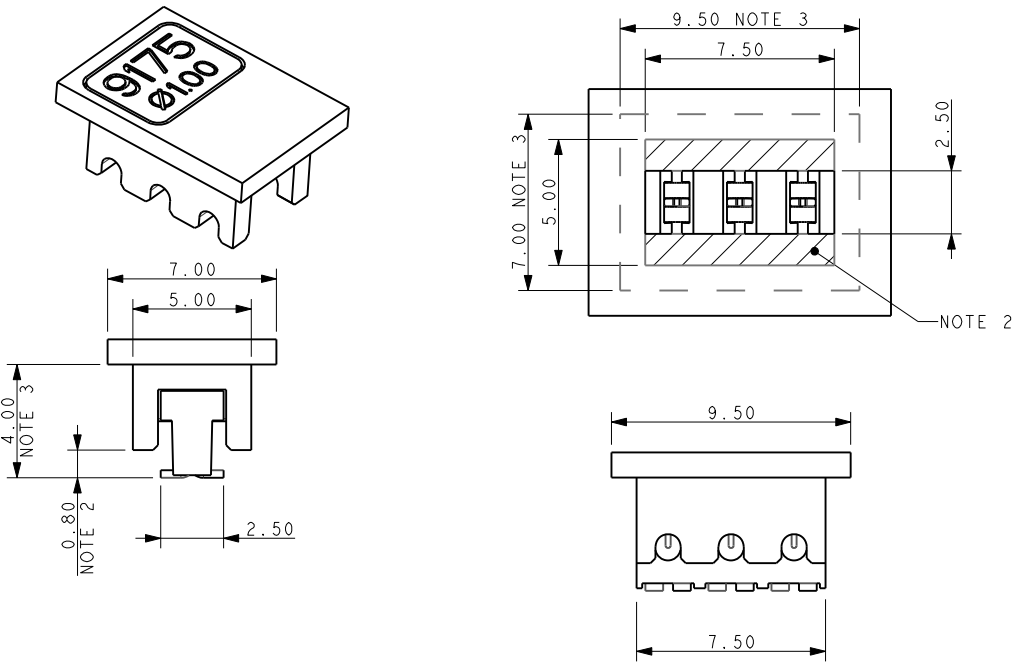


- NOTES:
1. DIMENSIONS SHOWN ARE REFERENCE DIMENSIONS.
  2. MAXIMUM COMPONENT HEIGHT 0.80MM IN THIS AREA.
  3. MAXIMUM COMPONENT HEIGHT 4.00MM IN THIS AREA.
  4. THE SAME RESTRICTIONS APPLY TO ALL WIRE INSULATION DIAMETERS.

#### 3 WAY TOOL

TOOL NUMBER 06-9175-7017-01-003

SKETCH SHOWS PCB RESTRICTED AREAS FOR ASSEMBLY TOOLING



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