

# Single Poke Home Contact: Wire-To-Board

## Series 70-9296



The Industrial and Solid State Lighting markets continue to look for new products which will reduce size and cost without jeopardizing performance. The new dual-beam boxed contact system from AVX surface mounts to a PCB and provides a simple and reliable wire termination without soldering of the wire. The unique contact design integrates several key features within the stamping to facilitate SMT pickup, wire guidance, high force retention and easy wire removal. Combined, these features provide all of the benefits of a full function connector, without the added cost of the insulator and labor.

This family of 4mm, 3mm, 2mm and 1.7mm closed box contacts accept either solid or stranded wires ranging from 12AWG to 28AWG with current ratings up to 20Amps. Once the contacts are soldered onto the PCB, wires need to be stripped to length (twisted if stranded) and inserted into the open end of the box contact. As the wires are pushed in, upper and lower tines guide the wire down the center of the contact deflecting the right and left contact tines until the wire reaches the wire stop. Wires can be removed by twisting the wire out and or using a small blade removal tool to help release some of the contact force.

### APPLICATIONS

- Industrial/Ruggedized Wire-to-Board applications
- Replace hard soldering of wire to a PCB
- Reference Product Specification 201-01-143
- Reference Application Notes 201-01-150

### FEATURES AND BENEFITS

- Dual Beam box contact provides maximum mechanical stability and wire retention
- Tape and reel packaged for automated SMT placement
- Staged current rating based on AWG, maximum is 20A (12AWG)
- Increased functionality with the single contact placement ability; multiple contacts and/or specific individual locations

### ELECTRICAL

- Voltage Rating: Based on placement distance
- Current Rating: See Matrix Below

### ENVIRONMENTAL

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

### MECHANICAL

- Contact Material: Phosphor Bronze
- Contact Plating: Tin over Nickel
- Durability 5 Cycles

### HOW TO ORDER

**70**  
Prefix  
70 = Contact

**9296**  
Series

**001**  
Number of Ways  
001= 1

**00X**  
Contact Size

| Code | Contact Size  | Wire Gauge | Max Insulation       |
|------|---------------|------------|----------------------|
| 017  | 1.7mm Contact | 22-26 AWG  | 1.3mm Ø (See page 6) |
| 002  | 2mm Contact   | 24-28 AWG  | 1.5mm Ø (See page 6) |
| 003  | 3mm Contact   | 18-26 AWG  | 2.5mm Ø              |
| 004  | 4mm Contact   | 12-20 AWG  | 3.4mm Ø              |

**006**  
Plating Option  
Tin all over



### CURRENT RATING

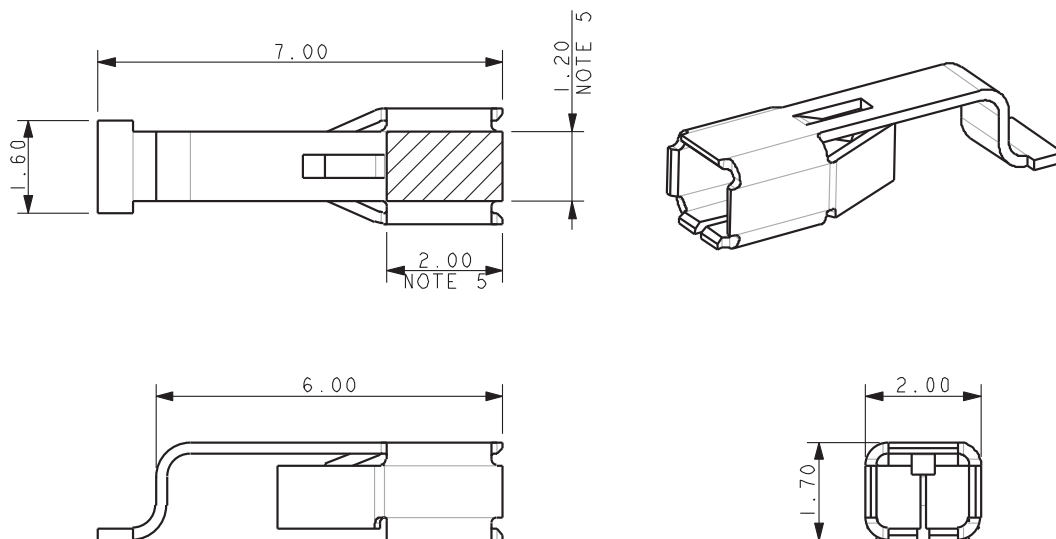
| Size  | Part Number     | 12AWG | 14AWG | 16AWG | 18AWG | 20AWG | 22AWG | 24AWG | 26AWG | 28AWG |
|-------|-----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 4mm   | 709296001004006 | 20A   | 16A   | 14A   | 12A   | 10A   |       |       |       |       |
| 3mm   | 709296001003006 |       |       |       | 12A   | 10A   | 8A    | 7A    | 5A    |       |
| 2mm   | 709296001002006 |       |       |       |       |       | 8A    | 7A    | 5A    | 4A    |
| 1.7mm | 709296001017006 |       |       |       |       |       | 8A    | 7A    | 5A    |       |



# Single Poke Home Contact: Wire-To-Board **AVX**

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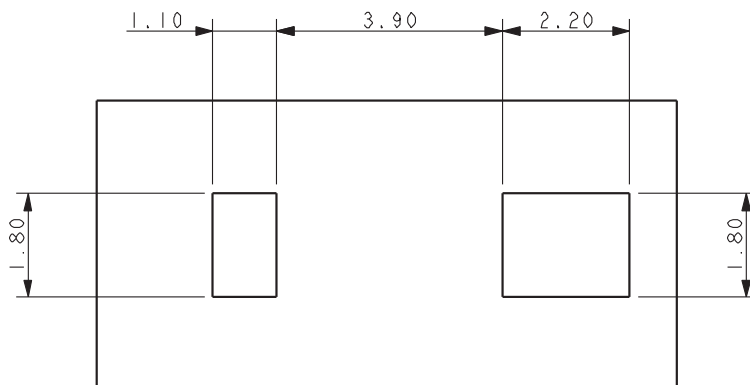
## 70-9296-001-017-006 1.7MM POKE HOME CONTACT



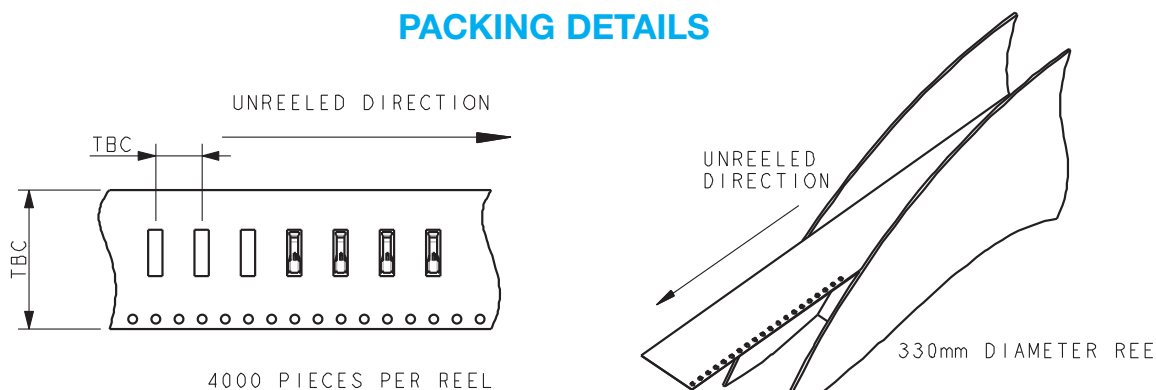
### NOTES:

1. FOR FURTHER INFORMATION REFER TO ELCO SPECIFICATION 201-01-143 AND APPLICATION NOTES 201-01-150.
2. MATERIAL: TIN PLATED PHOSPHOR BRONZE.
3. PACKING IN TAPE AND REEL, 4000 PIECES PER REEL.
4. FOR WIRE TRIM DETAILS REFER TO PAGE 6.
5. AREA AVAILABLE FOR PICK AND PLACE.

## SUGGESTED PCB LAYOUT



## PACKING DETAILS

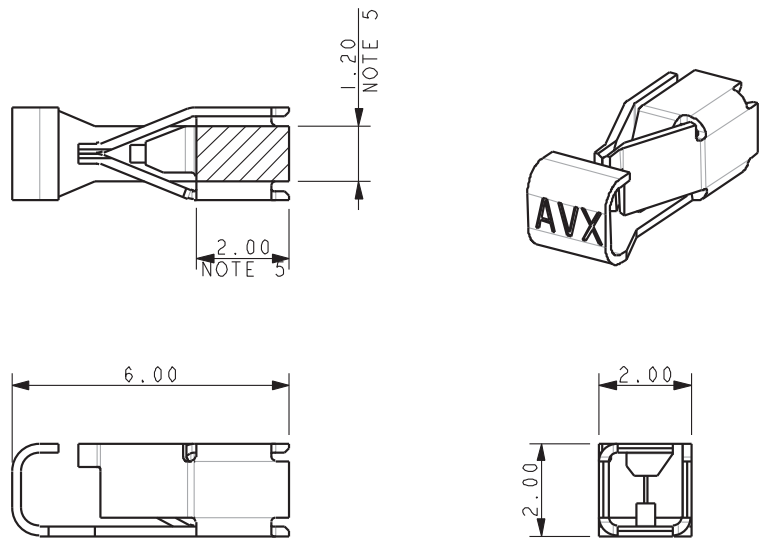


# Single Poke Home Contact: Wire-To-Board



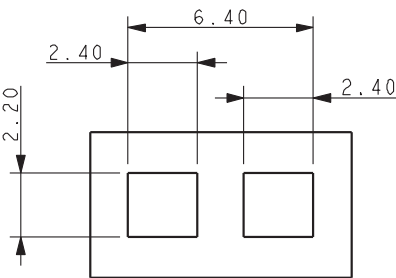
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## 70-9296-001-002-006 2MM POKE HOME CONTACT

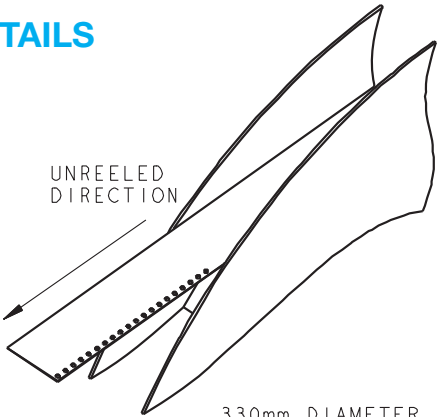
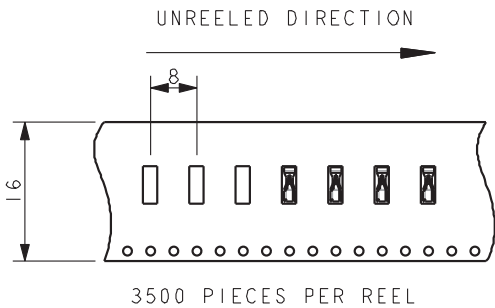


- NOTES:
1. FOR FURTHER INFORMATION REFER TO ELCO SPECIFICATION 201-01-143 AND APPLICATION NOTES 201-01-150.
  2. MATERIAL: TIN PLATED PHOSPHOR BRONZE.
  3. PACKING IN TAPE AND REEL, 3500 PIECES PER REEL.
  4. FOR WIRE TRIM DETAILS REFER TO PAGE 6.
  5. AREA AVAILABLE FOR PICK AND PLACE.

## SUGGESTED PCB LAYOUT



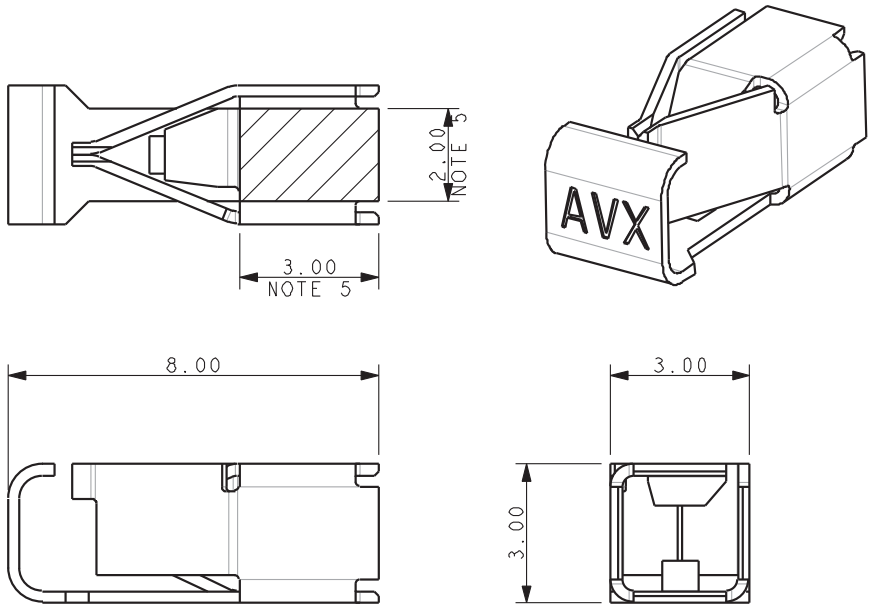
## PACKING DETAILS



# Single Poke Home Contact: Wire-To-Board

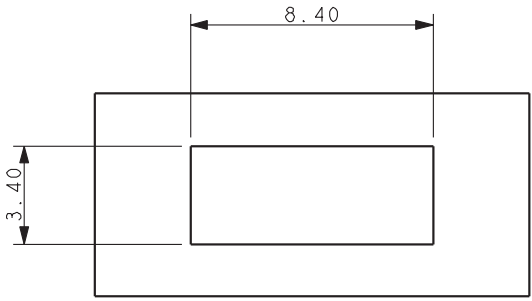
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## 70-9296-001-003-006 3MM POKE HOME CONTACT

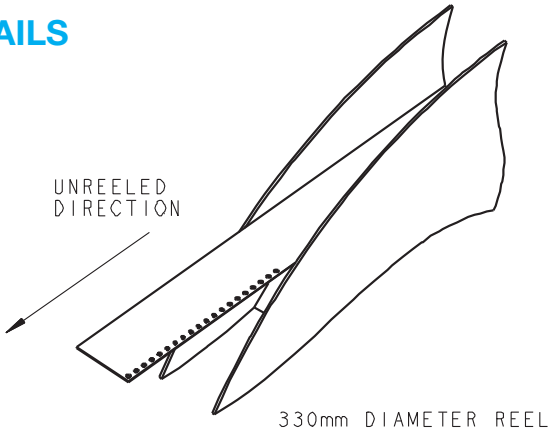
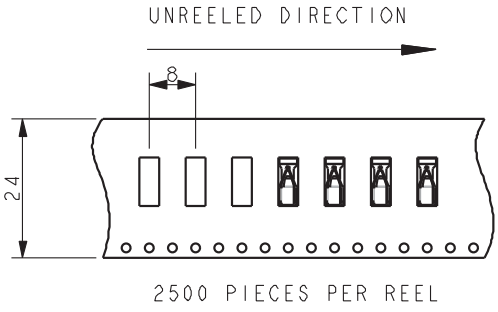


- NOTES:
- 1. FOR FURTHER INFORMATION REFER TO ELCO SPECIFICATION 201-01-143 AND APPLICATION NOTES 201-01-150.
  - 2. MATERIAL: TIN PLATED PHOSPHOR BRONZE.
  - 3. PACKING IN TAPE AND REEL, 2500 PIECES PER REEL.
  - 4. FOR WIRE TRIM DETAILS REFER TO PAGE 6.
  - 5. AREA AVAILABLE FOR PICK AND PLACE.

## SUGGESTED PCB LAYOUT



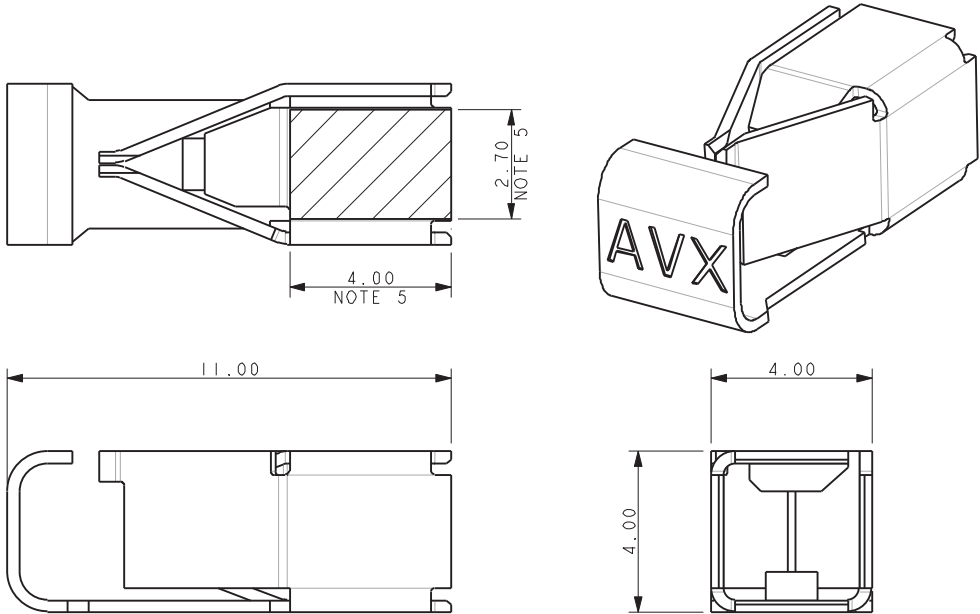
## PACKING DETAILS



# Single Poke Home Contact: Wire-To-Board

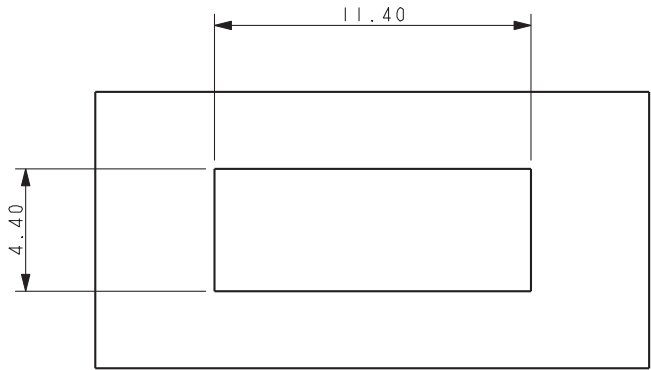
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## 70-9296-001-004-006 4MM POKE HOME CONTACT

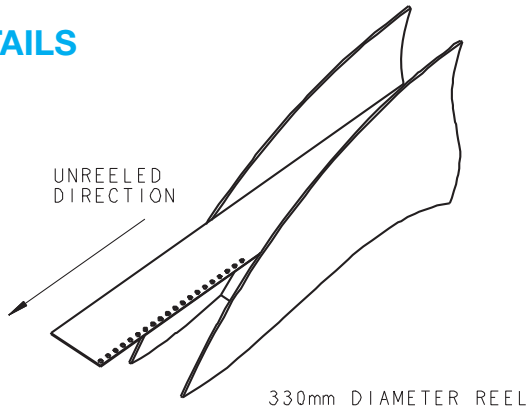
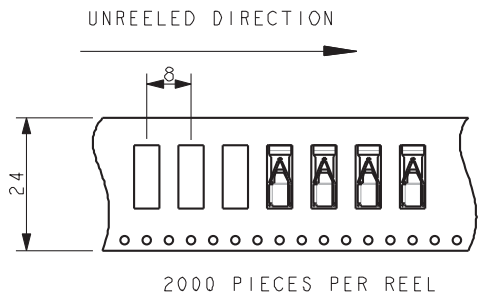


- NOTES:
1. FOR FURTHER INFORMATION REFER TO ELCO SPECIFICATION 201-01-143 AND APPLICATION NOTES 201-01-150.
  2. MATERIAL: TIN PLATED PHOSPHOR BRONZE.
  3. PACKING IN TAPE AND REEL, 2000 PIECES PER REEL.
  4. FOR WIRE TRIM DETAILS REFER TO PAGE 6.
  5. AREA AVAILABLE FOR PICK AND PLACE.

## SUGGESTED PCB LAYOUT



## PACKING DETAILS



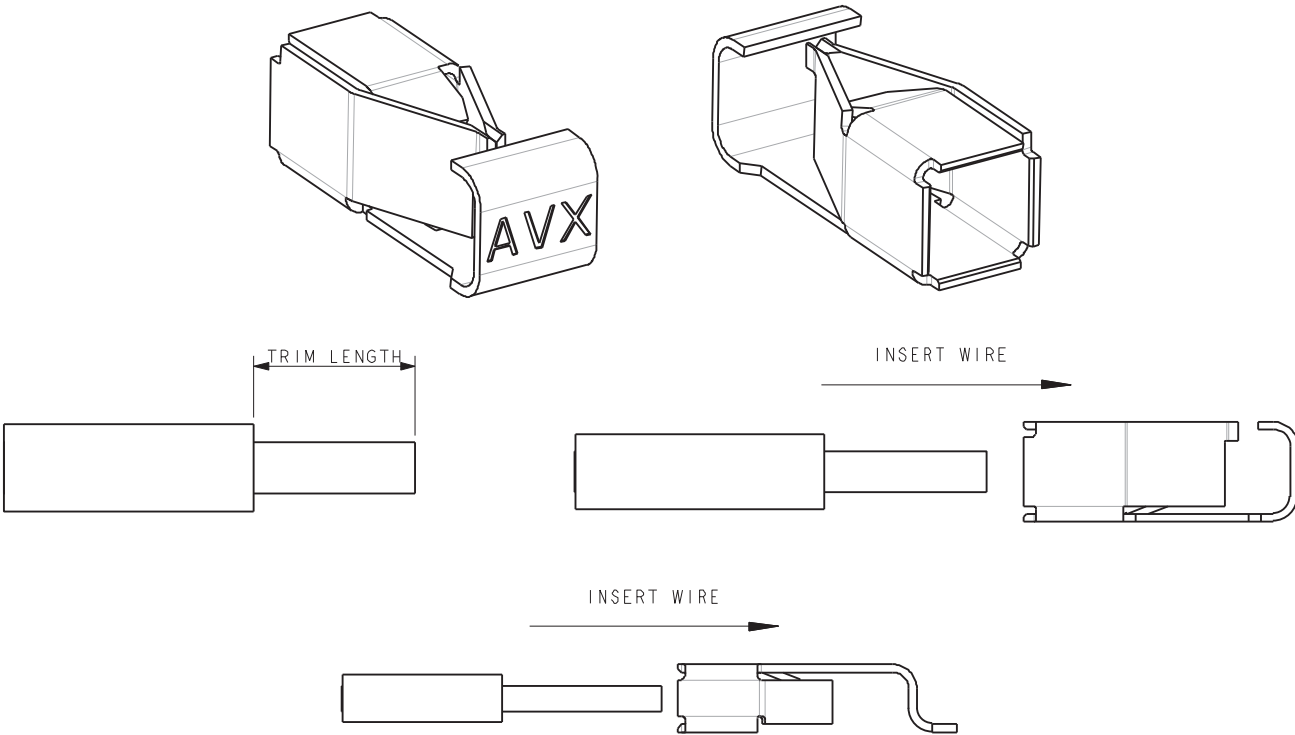
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## CONNECTOR ASSEMBLY

FOR FULL DETAILS REFER TO APPLICATION NOTES 201-01-150

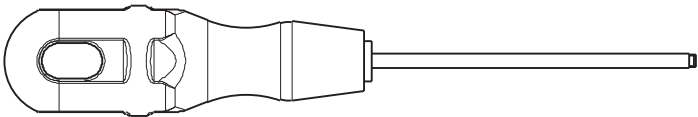


| CONTACT             | WIRE SIZE              | INSULATOR DIAMETER | TRIM LENGTH  |
|---------------------|------------------------|--------------------|--------------|
| 70-9206-001-004-006 | 12AWG and 14AWG        | Max 3.4mm          | 6.5 ± 0.5mm  |
| 70-9296-001-004-006 | 16AWG, 18AWG and 20AWG | Max 2.5mm          | 5.5 ± 0.5mm  |
| 70-9296-001-003-006 | 18AWG to 25AWG         | Max 2.5mm          | 3.5 ± 0.5mm  |
| 70-9296-001-002-006 | 22AWG to 28AWG         | Max 1.5mm          | 3.5 ± 0.5mm  |
| 70-9296-001-002-006 | 22AWG to 28AWG         | 1.5mm to 2.0mm     | 5.5 ± 0.5mm* |
| 70-9296-001-017-006 | 22AWG to 26AWG         | Max 1.3mm          | 4.0 ± 0.5mm  |
| 70-9296-001-017-006 | 22AWG to 26AWG         | 1.3mm to 1.7mm     | 6.0 ± 0.5mm* |

\* Wire insulation butts on end of contact

## CONTACT OPENING TOOL

06-9296-7001-01-000



TOOL TO OPEN THE CONTACT TO INSERT/WITHDRAW WIRE.  
REFER TO APPLICATION NOTES 201-01-150.