

## Series 9177-600



AVX developed the initial SMT discrete wire IDC connector 5 years ago for 26-28AWG AVX wires. Since then, we have seen this Wire-to-Board (WTB) contact technology spread to multiple wire gauges and multiple configurations; standard connectors, capped connectors and single contacts. All of which addresses specific application or cost parameters set forth by our customer in demanding industrial, transportation or commercial applications. The heart of the IDC connector is the true “gas tight” WTB termination that is achieved once the wire is inserted between the dual phosphor bronze contact tines. These opposing tines provide enough spring characteristics to allow the termination to remain stable over extreme levels of temperature, shock and vibration.

The new 9177-600 family of contacts incorporates all of the above mentioned capabilities. From low cost single contacts to fully integrated capped contacts. The unique feature of the 600 series is the fact that it was developed for Plated Through Hole (PTH) termination to the PCB. This addresses the rugged power type boards that have to handle larger wire gauges up to 12AWG and 15 Amps per contact of current. The PTH option provides robust PCB attachment and high current capabilities to replace older technology connectors or in most cases soldering stripped wires directly to the PCB.

### APPLICATIONS

- Industrial pumps, motors and driver boards
- Solar and alternative energy products
- Commercial electrical equipment
- Reference Product Specification & application notes 201-01-141/142

### FEATURES AND BENEFITS

- IDC contact provides a “gas tight” wire termination to the PCB to meet harsh industrial environments
- Simple, robust design offers a high performance solution to hand soldering large gauge wires to a PCB
- A single contact can handle up to 15A for high current applications with wire replacement up to 3 times
- The versatile family of IDC contact can accept 12-18AWG of stranded wires and can be tested for compliance with solid wires

### ELECTRICAL

- Current Rating: 15A
- Voltage Rating: 600 VAC

### ENVIRONMENTAL

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

### MECHANICAL

- Insulator Material: Nylon 46, UL94VO
- Contact Material: Phosphor Bronze
- Plating: Tin over Nickel
- Durability: Wires can be replaced up to 3 times

### HOW TO ORDER – CONTACT OPTIONS

70

Prefix

70 = Contact

9177

Series

001

Number of Ways

| Code | No of Ways | Details |
|------|------------|---------|
| 001  | 1          | Page 1  |

6XX

Wire Gauge Size

| Code | Accepted Wire Gauge |
|------|---------------------|
| 691  | 12 AWG Stranded     |
| 601  | 14 AWG Stranded     |
| 612  | 16 AWG Stranded     |
| 622  | 18 AWG Stranded     |

006

Plating Option

06 = Pure Tin all over

### HOW TO ORDER – CAP OPTIONS

60

Prefix

60 = Cap

9177

Series

001

Number of Ways

| Code | No of Ways | Details  |
|------|------------|----------|
| 001  | 1          | Page 4-5 |

6XX

Wire Insulation Diameter

| Code | Wire Insulation (AWG) | Diameter "A" |
|------|-----------------------|--------------|
| 627  | Ø 2.10 - 2.75         | 2.75         |
| 635  | Ø 2.75 - 3.50         | 3.50         |
| 642  | Ø 3.50 - 4.25         | 4.25         |

X

Color Options

| Code | Color | Application   |
|------|-------|---------------|
| 0    | Black | Special Order |
| 1    | White | Standard      |

XX

Assembly Options

| Code | Description  |
|------|--------------|
| 00   | Through Wire |
| 99   | With Stop    |

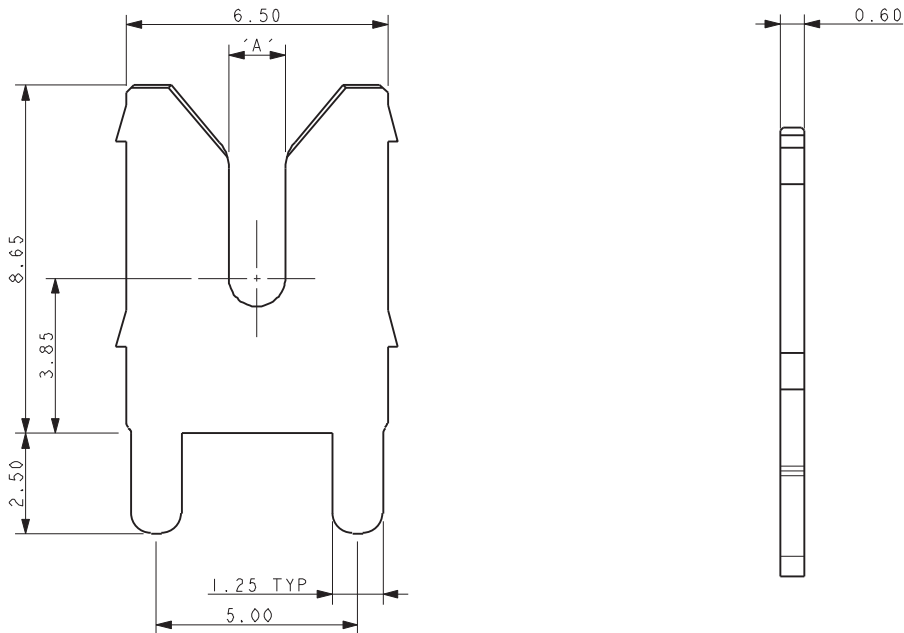


# IDC Integrated Cap

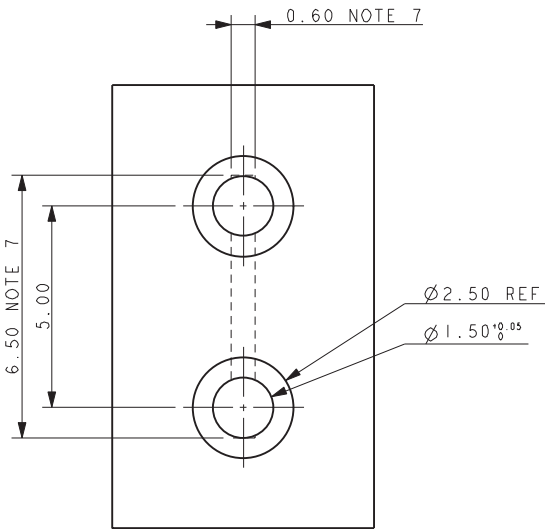
Series 9177-600



## 70-9177-001-6XX-006 CONTACT DETAILS



## PCB LAYOUT FOR CONTACT



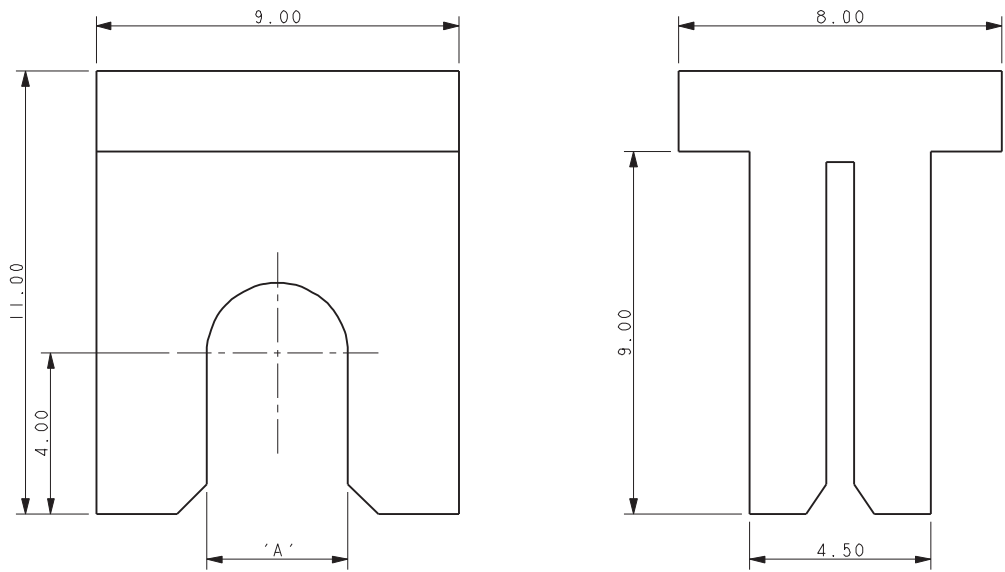
| Code | Accepted Wire Gauge | A    |
|------|---------------------|------|
| 691  | 12 AWG Stranded     | 1.50 |
| 601  | 14 AWG Stranded     | 1.10 |
| 612  | 16 AWG Stranded     | 0.82 |
| 622  | 18 AWG Stranded     | 0.72 |

- NOTES:
1. IDC CONTACT OT ACCEPT WIRES FROM 12 AWG TO 18 AWG.
  2. MATERIAL: PHOSPHOR BRONZE.
  3. PLATING PURE TIN OVER NICKEL.
  4. ALL DIMENSIONS  $\pm 0.20$  UNLESS SPECIFIED.
  5. PACKING IN BAGS, 800 PIECES PER BAG.
  6. PRODUCT SPECIFICATION REFER TO 201-01-141.
  7. OUTLINE OF CONTACT SEE PAGE 3 FOR ADDITIONAL CLEARANCE REQUIRED FOR WIRE INSERTION TOOL.
  8. FOR ASSEMBLY DETAILS REFER TO APPLICATION NOTES 201-01-142.



### ASSEMBLY TOOLING

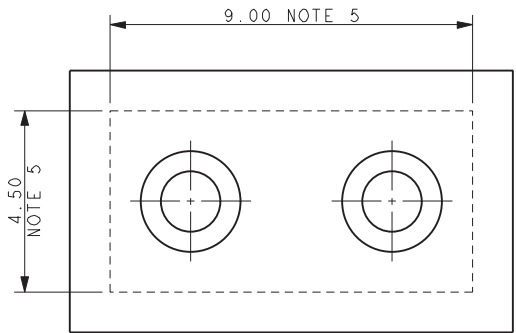
| Part Number         | Wire Insulation | A    |
|---------------------|-----------------|------|
| 06-9177-7021-01-000 | Ø 3.50 - 4.25   | 4.25 |
| 06-9177-7021-01-000 | Ø 3.50 - 4.25   | 4.25 |
| 06-9177-7021-01-000 | Ø 3.50 - 4.25   | 4.25 |



NOTES:

1. WIRE INSERTION TOOL 06-9177-7021-0X-000, FULL PART NUMBER REFER TO TABLE.
2. TOOL PART NUMBER DEPENDENT ON WIRE INSULATION DIAMETER NOT WIRE GAUGE OR CONTACT NUMBER.
3. ASSEMBLY DETAILS REFER TO APPLICATION NOTES 201-01-142
4. MATERIAL: TOOL STEEL.
5. SPACE REQUIRED ON PCB FOR TOOL. NO COMPONENTS IN THIS AREA.

### PCB CLEARANCE AREA FOR TOOL

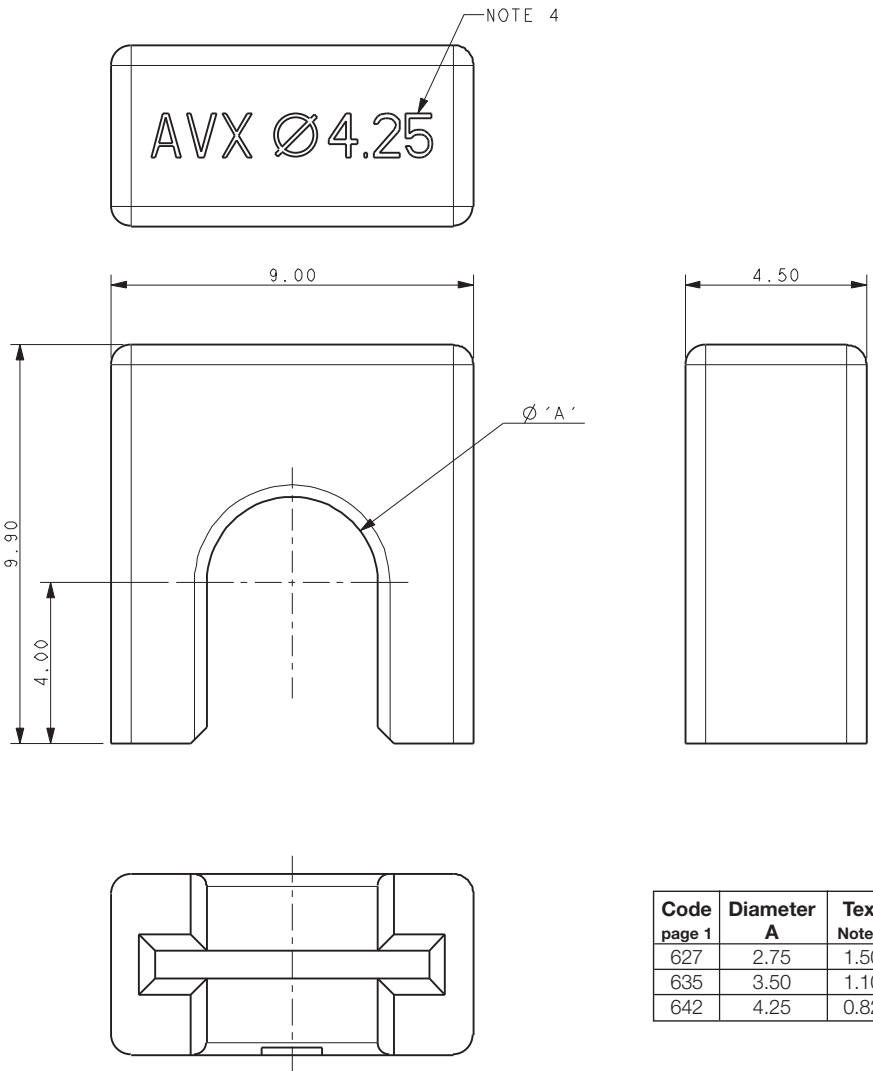


# IDC Integrated Cap

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## 60-9177-001-6XX-X00 1 WAY WIRE THROUGH CAP DETAILS



### NOTES:

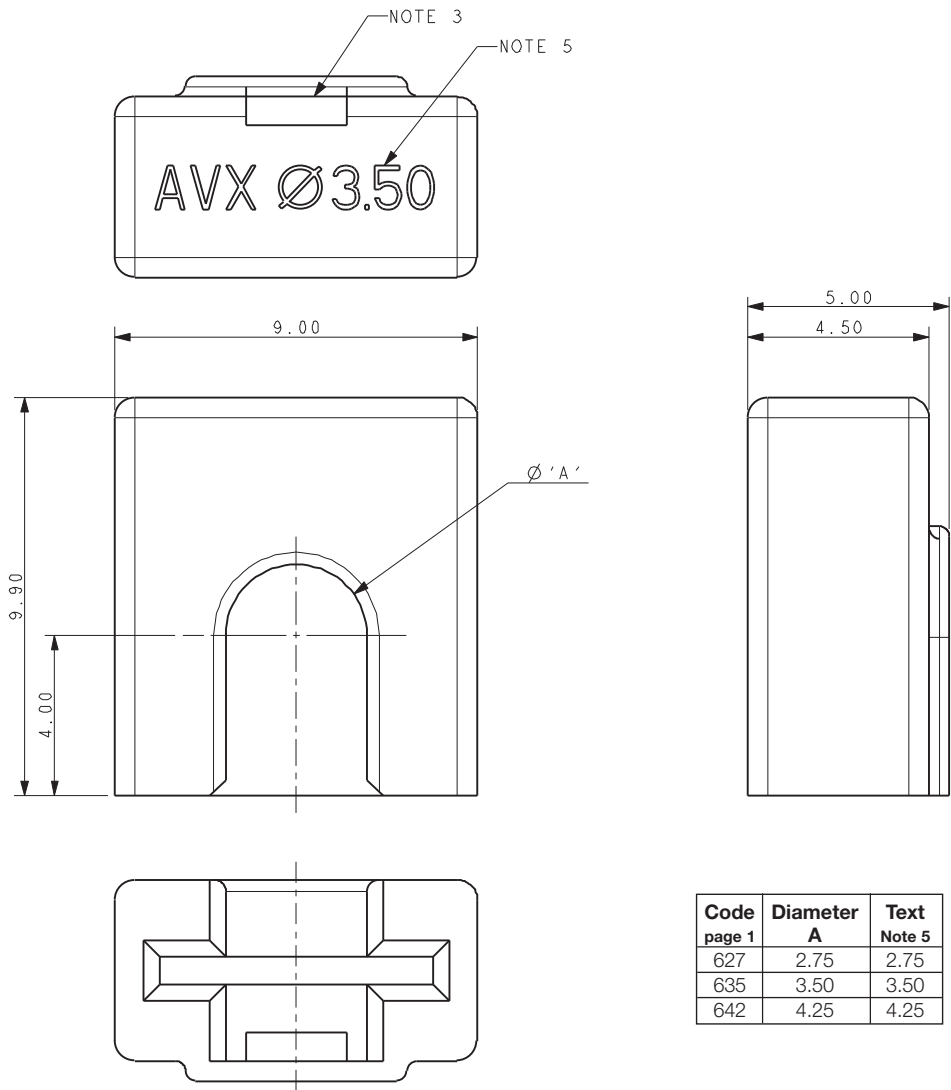
1. CAP FOR IDC WIRE TO BOARD CONNECTION, 1 WAY WITH THROUGH WIRE.
2. WIRE THROUGH CAP FOR ASSEMBLY AT ANY POSITION ON A WIRE.
3. CAP MATERIAL: GLASS FILLED NYLON 46, UL94 V-0. COLOR SEE PAGE 1.
4. CAP DESIGNED TO ACCOMMODATE WIRE INSULTATION.  
DIAMETERS 2.10MM TO 2.75MM, 2.75MM TO 3.50MM AND 3.50MM TO 4.25MM.
5. ALL DIMENSIONS  $\pm 0.20$  UNLESS STATED.
6. PACKED IN BAGS, QUANTITY 800 PIECES PER BAG.
7. PRODUCT SPECIFICATION REFER TO 201-01-141.
8. FOR ASSEMBLY DETAILS REFER TO APPLICATION NOTES 201-01-142.

# IDC Integrated Cap



Series 9177-600

## 60-9177-001-6XX-X99 1 WAY WIRE STOP CAP DETAILS



| Code<br>page 1 | Diameter<br>A | Text<br>Note 5 |
|----------------|---------------|----------------|
| 627            | 2.75          | 2.75           |
| 635            | 3.50          | 3.50           |
| 642            | 4.25          | 4.25           |

NOTES:

1. CAP FOR IDC WIRE TO BOARD CONNECTION, 1 WAY WITH WIRE STOP.
2. WIRE STOP FOR USE AT END OF WIRE.
3. SLOT TO CHECK WIRE POSITION BEFORE ASSEMBLY.
4. CAP MATERIAL: GLASS FILLED NYLON 46, UL94 V-0. COLOR SEE PAGE 1.
5. CAP DESIGNED TO ACCOMMODATE WIRE INSULATION.  
DIAMETERS 2.10MM TO 2.75MM, 2.75MM TO 3.50MM AND 3.50MM TO 4.25MM.
6. ALL DIMENSIONS  $\pm 0.20$  UNLESS STATED.
7. PACKED IN BAGS, QUANTITY 800 PIECES PER BAG.
8. PRODUCT SPECIFICATION REFER TO 201-01-141.
9. FOR ASSEMBLY DETAILS REFER TO APPLICATION NOTES 201-01-142.

