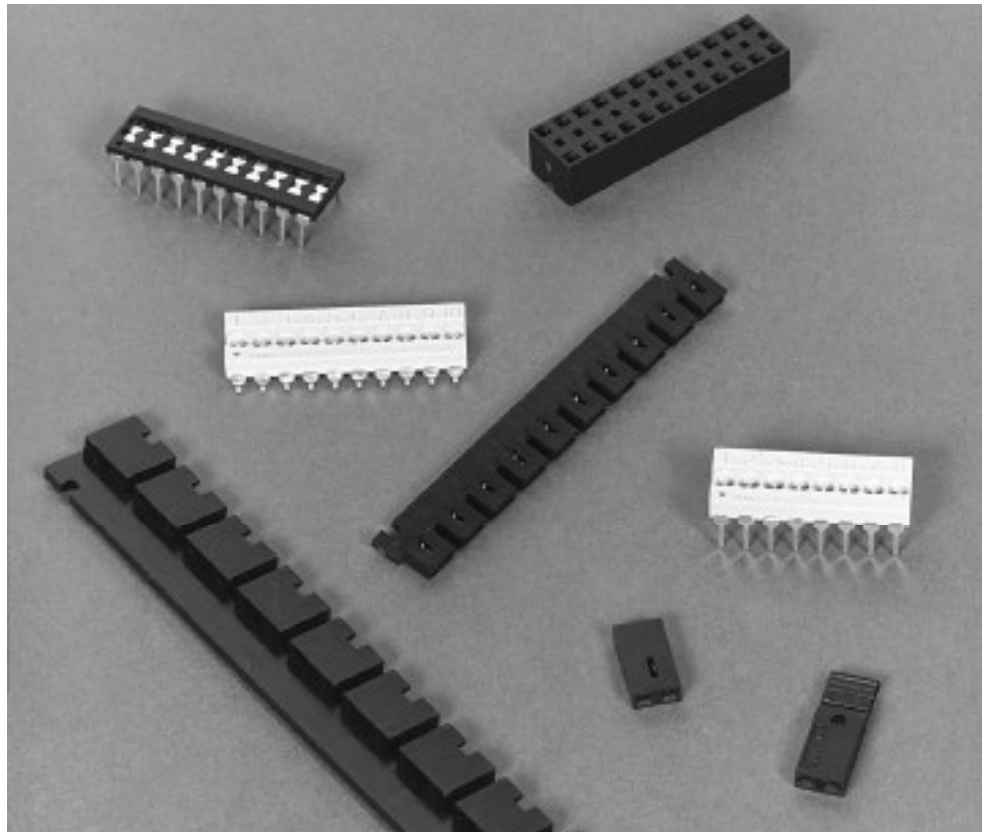


Shunts

Product Facts

- 7600 Series Programmable Shunts use conventional .100 x .300 [2.54x7.62] DIP leg spacing
- Post Shunts are used to common pairs of .025 [0.64] square posts, .025 [0.64] diameter round posts and .022 x .026 [0.56 x 0.66] formed posts



Tyco Electronics offers a variety of high quality shunts for low cost manual programming. AMP 7600 Series Programmable Shunts are designed on the standard .100 x .300 [2.54 x 7.62] DIP spacing.

AMP DIP Shunts are a highly reliable, low cost means of manually programming various types of electrical/electronic equipment. The shunt consists of a series of conductive straps packaged in a DIP configuration. The straps can be retained intact for a closed circuit or broken with a hand tool to produce an open circuit.

AMP Post Shunts mate with any common pairs of square, rectangular and round posts. Post shunts come in two-position low profile, 2 mm miniature, tandem spring, dual beam, and multiposition versions.

Among the options available are choices of gold or tin plating, beryllium copper or phosphor bronze contact material and shunts with 94V-0 rated housing spaces on .079 [2.00], .100 [2.54] and .200 [5.08] centers with the low profile series requiring only .250 [6.35] clearance from the pc board.

All AMP shunts feature one-piece construction for high reliability. All have high normal forces for excellent electrical continuity. For added reliability, Tandem Spring and Dual Beam Shunts have two points of contact in each receptacle.

Dual In-Line Package (DIP) Shunts — 7600 Series

**Standard Shunt
Standard Pressure**

Material and Finish:

Housing — Glass-filled polyester, UL 94V-0 rated

Contacts — Brass

Finish — Selectively plated .000100 min. tin/lead on solder area over .000050 min. nickel on entire contact

Contact Lead Spacing — .100 x .300 [2.54x7.62]

Lead Length — .140 [3.56] below mounting surface

Housing Color — Black

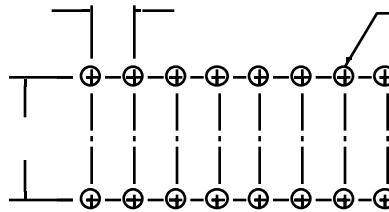
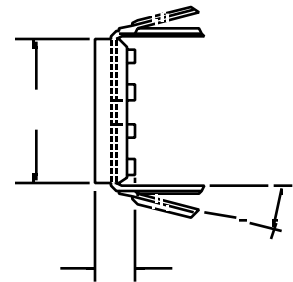
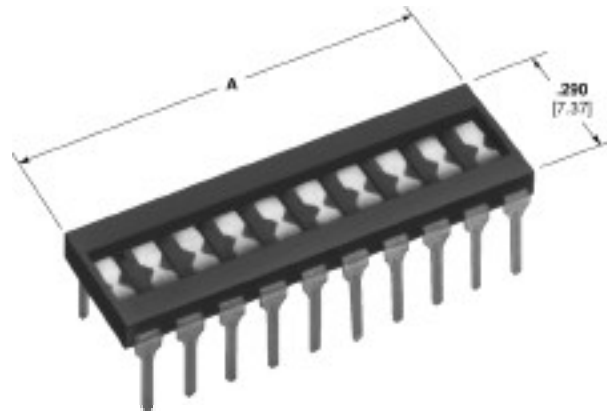
Programming Tool — See below

Programming Hand Tool

Part No. 435862-1



This tool provides a reliable means of programming DIP shunts. It is rugged, light-weight and dependable. No special skills are required to use this tool.



Machine Insertable Shunt

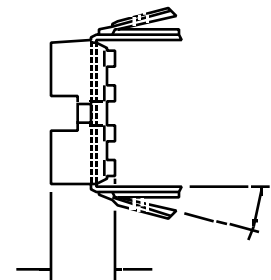
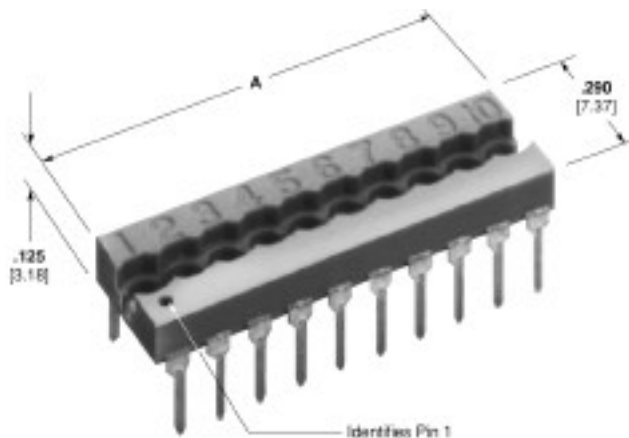
(Compatible with commercially available IC insertion equipment)

Contact Lead Spacing — .100 x .300 [2.54x7.62]

Lead Length — .140 [3.56] below mounting surface

Housing Color — Gray

Programming Tool — None required (5 to 10 lbs. [22.2 to 44.4N] required to manually program each shunt position)



| No. of Positions | Dimension A | | Standard Shunt Standard Pressure | Machine Insertable Shunt |
|------------------|-------------|-------|----------------------------------|--------------------------|
| | inch | mm | | |
| 4 | .400 | 10.16 | 435704-4 | — |
| 6 | .600 | 15.24 | 435704-6 | — |
| 7 | .700 | 17.78 | 435704-7 | — |
| 8 | .800 | 20.32 | 435704-8 | 436860-7 |
| 9 | .900 | 22.86 | 435704-9 | — |
| 10 | 1.000 | 25.40 | 1-435704-0 | — |
| 12 | 1.200 | 30.48 | 1-435704-2 | — |

Post Shunts

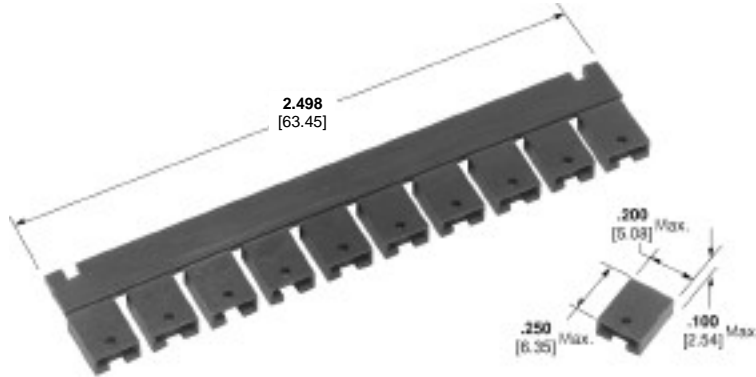
Product Facts

- One-piece contact construction
- High normal forces
- 94V-0 rated housings
- Gold inlay, gold plate or tin plate over nickel
- Stackable
- Those post shunts indicated are recognized under the component program of Underwriters Laboratories Inc., File No. E28476 and certified by the Canadian Standards Association File No. LR 7189



2-Position, Low Profile Shunts

Economy Shunt
.100 [2.54] Centerline



| Configuration | Housing Color | Part Numbers | | | |
|---------------|---------------|---|---|-----------------------------------|------------------------------------|
| | | Gold Plate ¹ .000015 [0.00038] | Gold Flash ¹ .000005 [0.00013] | Tin Plate .000100 [0.00254] | Gold Plate .000030 [0.00076] |
| Strip of 10 | Blue | 382811-2 | — | — | — |
| Strip of 10 | Black | 382811-6 | 382811-8 | 382811-5 | 2-382811-0 |
| Strip of 10 | Red | 382811-9 | — | — | — |
| Loose Piece | Black | 1-382811-6 | 1-382811-8 | — | — |

¹In contact area

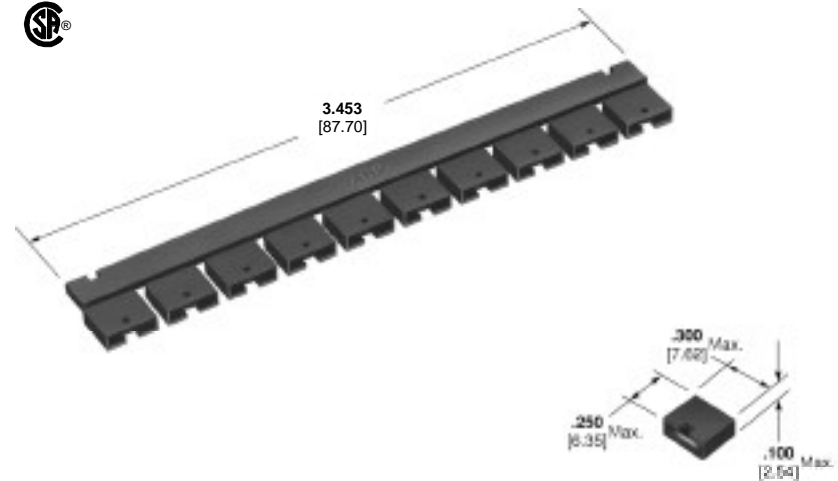
Tandem Spring Shunts

- Two points of contact provide extra reliability
- Shunts accept posts as short as .175 [4.45]; posts bottom at .330 [8.38]

2mm Mini Shunts

- Stackable on 2mm contact centerline
- Low profile
- Available in strips of 10

Standard Housing Shunt
.200[5.08] Centerline



| Configuration | Housing Color | Part Numbers | | |
|---------------|---------------|---|---|-----------------------------------|
| | | Gold Plate ¹ .000015 [0.00038] | Gold Plate ¹ .000030 [0.00076] | Tin Plate .000100 [0.00254] |
| Strip of 10 | Black | 531230-2 | 531230-3 | 531230-1 |

¹In contact area

Material and Finish – Low Profile, Multiposition and 2mm Shunts

Housing – Glass-filled thermoplastic, UL 94V-0 rated
Contacts – Beryllium copper or phosphor bronze
Finish – .000050 [0.00127] nickel with gold plate in contact area or tin plate overall

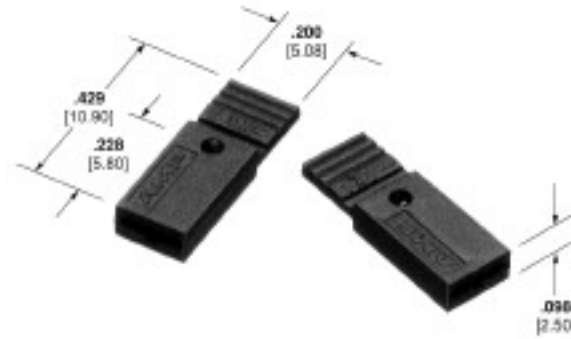
Material and Finish – Tandem Spring Shunts

Housing – Nylon, UL 94V-0 rated
Contacts – Phosphor Bronze
Finish – .000030 [0.00076] nickel with gold inlay in the contact area or tin plate overall

Post Shunts (Continued)

2-Position, Low Profile Shunts (Novo)
(Continued)

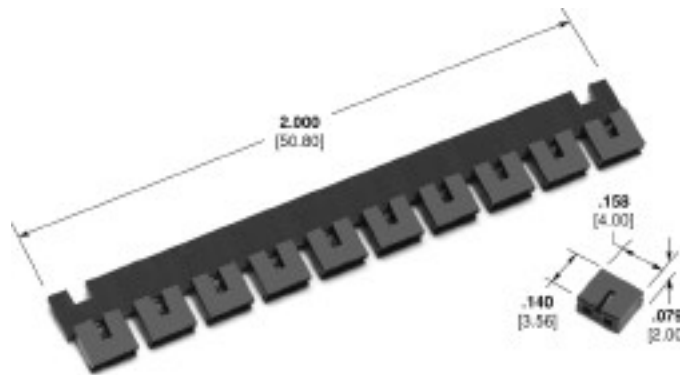
Handle Shunt
.100 [2.54] Centerline



| Housing Color | Loose Piece Part Numbers | | | | Type |
|---------------|---|---|---|-----------------------------------|------------|
| | Gold Plate ¹ .000015 [0.00038] | Gold Plate ¹ .000030 [0.00076] | Gold Plate ¹ .000050 [0.00127] | Tin Plate .000100 [0.00254] | |
| Black | 881545-1 | 881545-2 | 881545-3 | 881545-4 | Open Top |
| Black | 880584-1 | 880584-2 | 880584-3 | 880584-4 | Closed Top |

¹In contact area

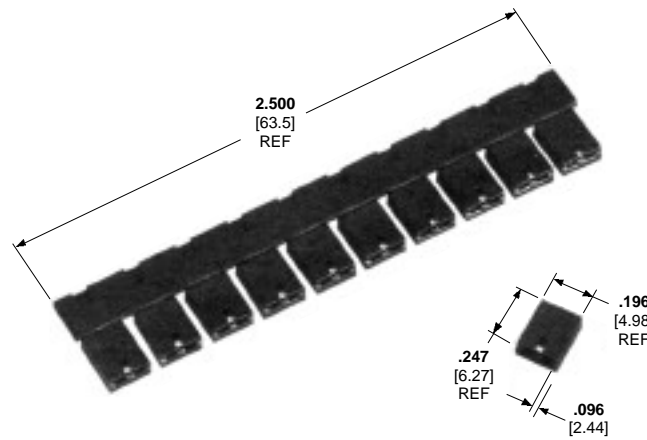
2 mm Mini-Shunt
.079 [2.00] Centerline



| Configuration | Housing Color | Part Numbers | |
|---------------|---------------|---|---|
| | | Gold Plate ¹ .000015 [0.00038] | Gold Plate ¹ .000030 [0.00076] |
| Strip of 10 | Black | 382575-2 | 382575-3 |

¹In contact area

Dual Beam Shunt



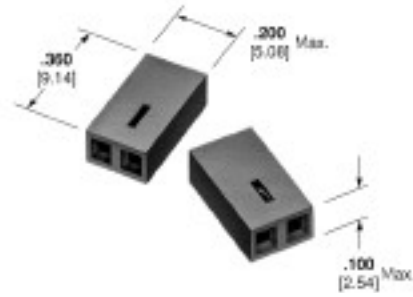
| Configuration | Housing Color | Part Numbers | | Type |
|---------------|---------------|---|---|----------|
| | | Gold Plate ¹ .000015 [0.00038] | Gold Plate ¹ .000030 [0.00076] | |
| Strip of 10 | Black | 390088-2 | 390088-1 | Open Top |
| Strip of 10 | Blue | 390088-4 | 390088-3 | Open Top |
| Strip of 10 | Yellow | — | 390088-5 | Open Top |

¹In contact area

Post Shunts (Continued)

Tandem Spring Shunt

.100 [2.54] Centerline



| Housing Color | Part Numbers | |
|---------------|-------------------------|----------------------|
| | Gold Inlay ¹ | TinPlate |
| | .000030 [0.00076] | .000100 [0.00254] |
| Black | 530153-2 | 2-530153-2 |

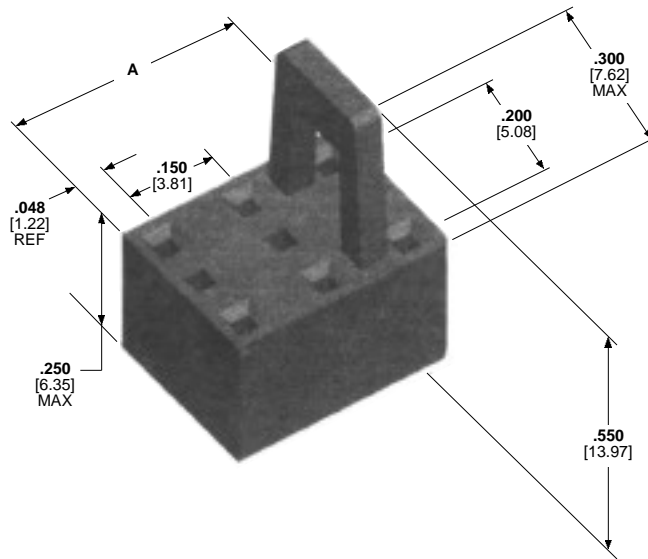
¹In contact area

Multiposition Shunts for .025 [0.64] Square Posts

.200 [5.08] Centerline



Housing – Glass-filled polyester
Contacts – Beryllium Copper
Finish – .000030 [0.00076] gold in contact area over .000050 [0.00127] nickel on entire contact
Current Rating – 2.5 amps



| Size | Dimension A | | Housing Color | Part Number |
|------|-------------|-------|---------------|-------------|
| | inch | mm | | |
| 2x2 | .246 | 6.25 | Black | 390102-1 |
| 2x2 | .246 | 6.25 | Red | 390102-3 |
| 2x3 | .396 | 10.01 | Black | 390102-2 |

Performance Specifications

Dual In-Line Package (DIP) Shunts – 7600 Series

Current Rating:

Standard pressure— 2 amperes for +20°C rise above ambient (one conductor per shunt)
Machine insertable —1 ampere for +20°C rise above ambient (one conductor per shunt)

Insulation Resistance: 1x 10¹⁰ ohms min. at 100 VDC

Dielectric Withstanding Voltage: 500 VDC min.

Capacitance: 2 picofarads max. between adjacent straps

Temperature Rating: -55°C to +105°C

Terminal Strength (Bend Test): Two 45° bend cycles per MIL-STD-202, Method 211, Condition B

Solder Bridging:

Cut straps can be reconnected by solder bridging. Solder bridging recommendations are:

- Use low temperature solder (60/40 tin/lead)
- Use solder tip approximately 1/32 [0.79] in diameter
- Do not let solder tip come in contact with plastic material

Post Shunts

Current Rating:

3 amperes max. unless otherwise noted

Temperature Rating: -65°C to +105°C (gold) -40°C to +85°C (tin)

Technical Documents

Various technical documents are available for your use:

Product Specifications describe technical performance characteristics and verification tests. They are intended for the Design, Component and Quality Engineer.

| | |
|-----------|------------------------------------|
| 108-7533 | Dual In-Line Package (DIP) Shunts |
| 108-1445 | 2mm Mini Shunt |
| 108-1476 | Economy Shunt, Multiposition Shunt |
| 108-1674 | Dual Beam Shunt |
| 108-9057 | Low Profile Shunt |
| 108-9062 | Tandem Spring Shunt |
| 108-37006 | Novo Shunt with Handle |

Application Specifications describe requirements for using the product in its intended application and/or crimping information. They are intended for the Packaging and Design Engineer and the Machine Setup Person.

| | |
|----------|--|
| 114-1045 | Tandem Spring Shunt |
| 114-1054 | Dual In-Line Package (DIP) Shunts |
| 114-1059 | Economy Shunt, Dual Beam Shunt, Low Profile Shunt, Multiposition Shunt |
| 114-1074 | 2mm Mini Shunt |

Instruction Sheets provide instructions for assembling or applying the product. They are intended for the Manufacturing Assembler or Operator.

| | |
|----------|---|
| 408-7768 | Dual In-Line Package (DIP) Shunts |
| 408-3208 | Tandem Spring Shunt |
| 408-3230 | Economy Shunt, Dual Beam Shunt, Low Profile Shunt |
| 408-3251 | Multiposition Shunt |
| 408-3276 | 2mm Mini Shunt |