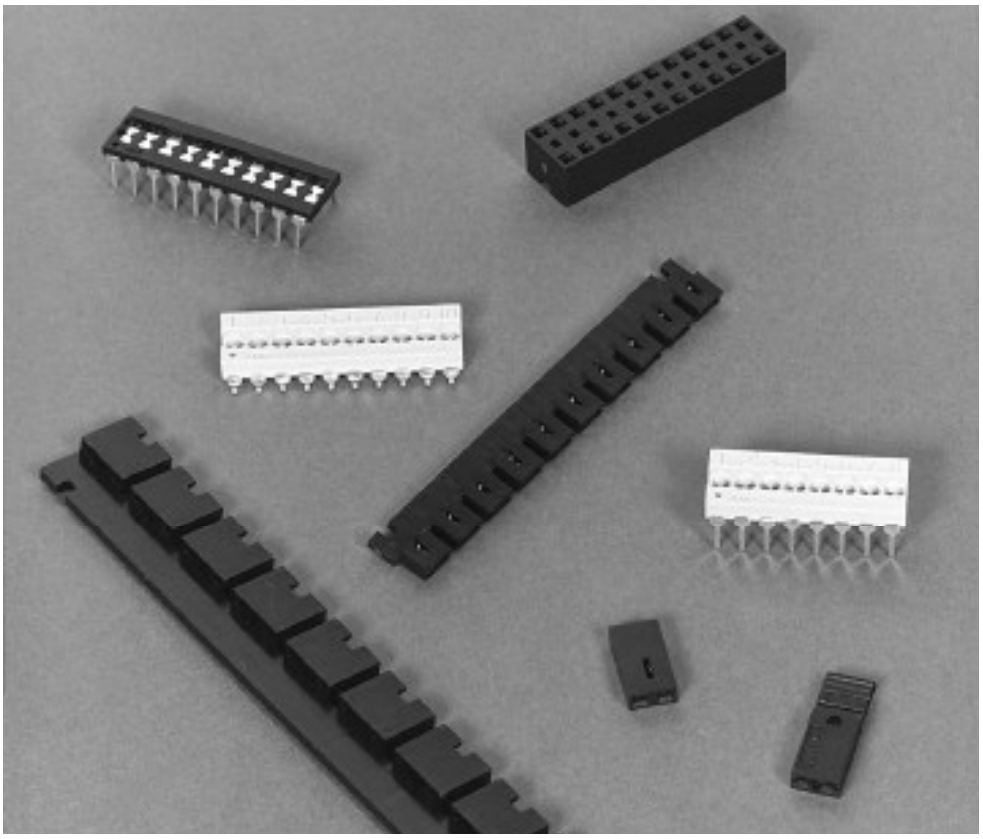
Shunts

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.

Catalog 1307819
Revised 6-04

www.tycoelectronics.com

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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]

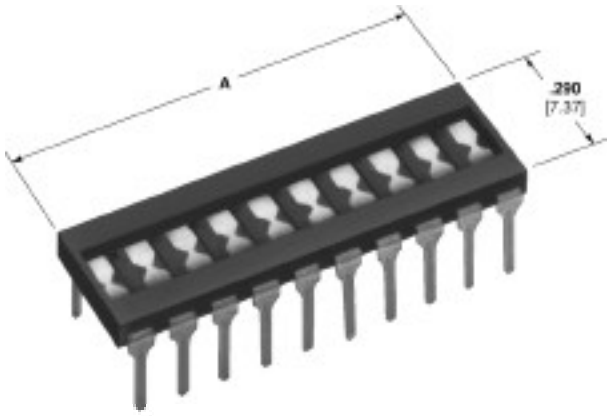
Lead Length — .140 [3.56] below mounting surface

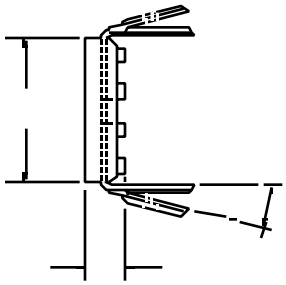
Housing Color — Black

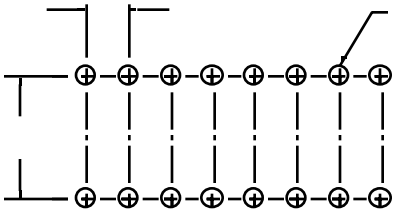
Programming Tool — See below

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.







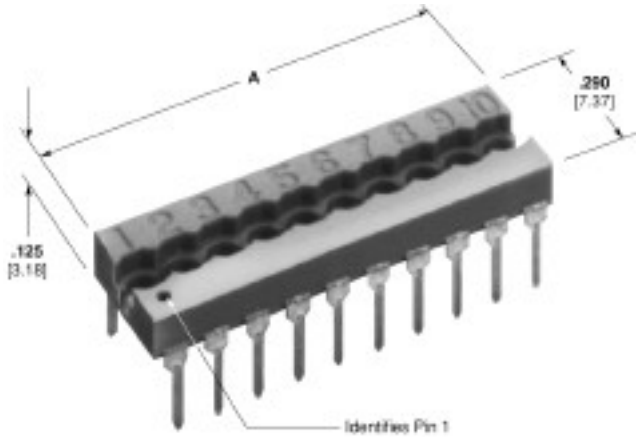
Machine Insertable Shunt
(Compatible with commercially available IC insertion equipment)

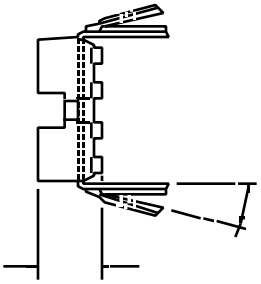
Contact Lead Spacing – .100 x .300 [2.54x7.62]

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 inch	Dimension A mm	Standard Shunt Standard Pressure	Machine Insertable Shunt
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	—

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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

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

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

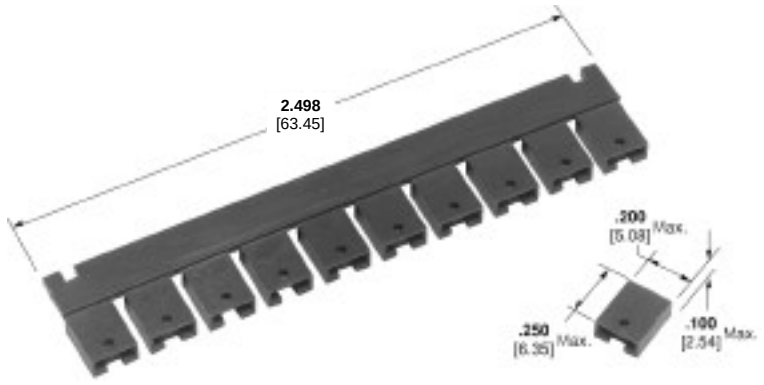
Housing – Nylon, UL 94V-0 rated

Contacts – Phosphor Bronze

Finish – .000030 [0.00076] nickel with gold inlay in the contact area or tin plate overall

2-Position, Low Profile Shunts

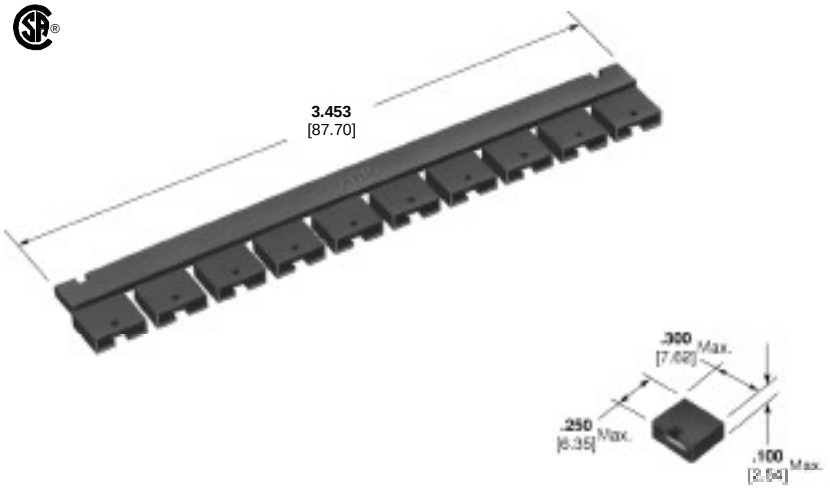
Economy Shunt
.100 [2.54] Centerline



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	—	—

[1]In contact area

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

[1]In contact area

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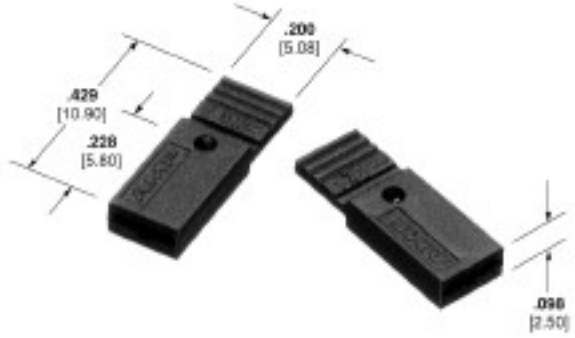
Post Shunts (Continued)

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

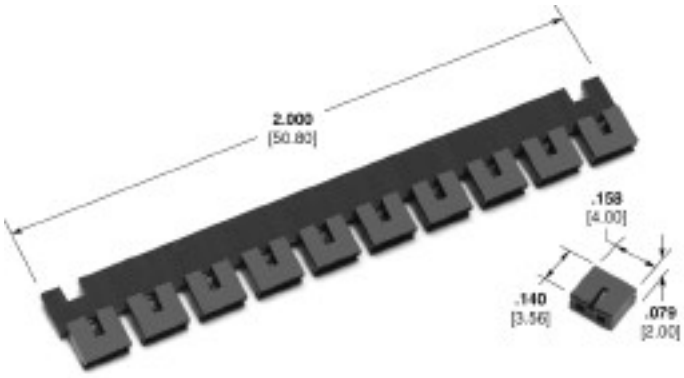
Handle Shunt
.100 [2.54] Centerline



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

[1]In contact area

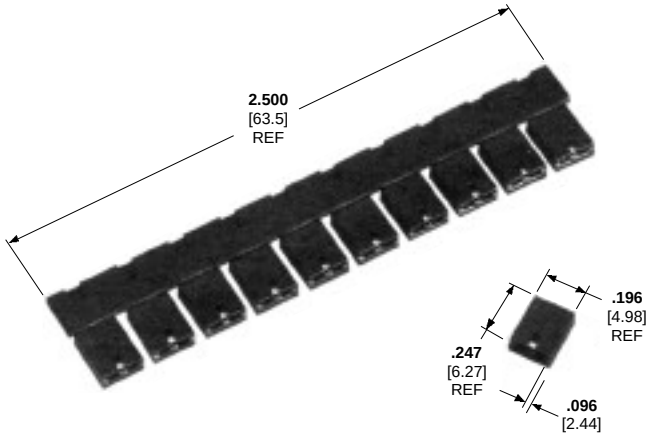
2 mm Mini-Shunt
.079 [2.00] Centerline



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

[1]In contact area

Dual Beam Shunt



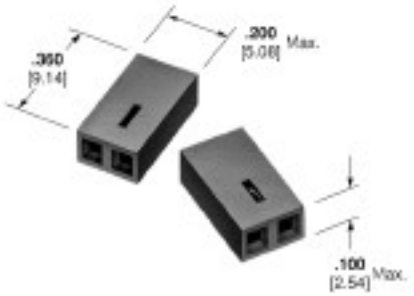
Configuration	Housing Color	Part Numbers		Type
		Gold Plate[1] .000015 [0.00038]	Gold Plate[1] .000030 [0.00076]	
Strip of 10	Black	390088-2	390088-1	Open Top
Strip of 10	Blue	390088-4	390088-3	Open Top
Strip of 10	Yellow	—	390088-5	Open Top

[1]In contact area

Post Shunts (Continued)

Tandem Spring Shunt

.100 [2.54] Centerline



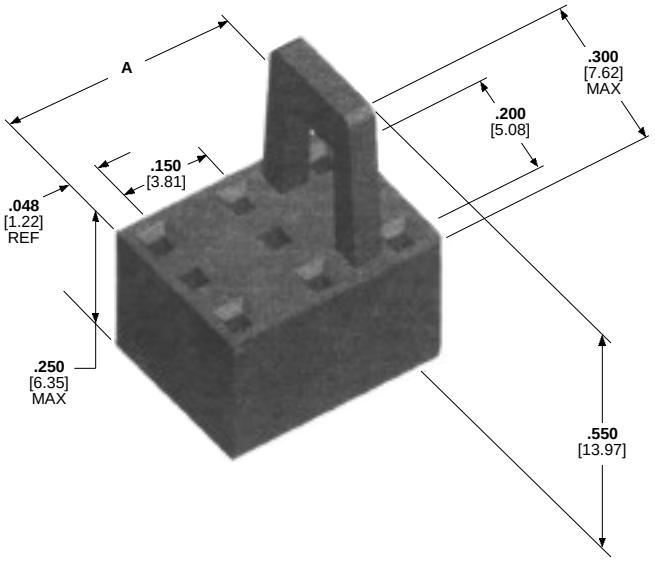
Housing Color	Part Numbers	
	Gold Inlay[1] .000030 [0.00076]	TinPlate .000100 [0.00254]
Black	530153-2	2-530153-2

[1]In contact area

Multiposition Shunts for.025 [0.64] Square Posts

.200 [5.08] Centerline

Housing – Glass-filled polyester
Contacts – Beryllium Copper
Finish – .000030 [.00076] gold in contact area over .000050 [.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

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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 10^{10} 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

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