

BINDING POSTS

DEFINITION: A binding post is a versatile connector that allows a temporary or semi-permanent connection between electronic devices or circuits.

CONNECTION OPTIONS: Most binding posts allow the following attachment options:

- 1) Top insertion of banana plug,
- 2) Alligator clip inserted through top jack hole,
- 3) Spade lug positioned over stud and fastened by tightening the head,
- 4) Wire inserted through cross hole and held by head,
- 5) Standard .080 phone tip can be inserted in cross hole and held by head,
- 6) Wire wrapped around stud and fastened by tightening head.

SAFETY FEATURES: Typical Smith binding posts feature the following advantages:

- Insulating material is high-temperature, flame-retardant Polycarbonate, with a UL continuous-usage temperature of 220°F (110°C), and UL Flammability rating of 94 V-O.
- Restricted head-opening prevents contact with live metal parts, even with the head screwed back. Positive internal captivation does not allow the head to be removed, even with excessive torque.
- Recessed and insulated banana-jack opening will not allow contact with the metal stud, even with the head screwed down. Diameter of the opening will enclose the metal portions of most banana plugs when pushed home in the jack.
- Positive, double-keyed insulating washers prevent rotation of the stud or body when tightened into a keyed panel hole.

CONSTRUCTION FEATURES: Smith binding posts are the industry standard due to the following innovative concepts:

- The contact surface clamp washer, against which the wire or lug is clamped by the head, is an integral part of the stud, and not a force-fitted separate washer. This avoids possible electrolytic corrosion across the mating faces due to current through the interface and subsequent increase in noise, galvanic EMF, and resistance.
- The cross-hole is drilled at right angles to a key-flat on the clamp washer in the Screw Machine, assuring absolute angular alignment of the finished post to the keyed flat in the instrument panel. Press-on base washers can have as much as five or ten degrees of angular mis-alignment.
- The behind-panel back-up insulating washer is made of solid plastic, rather than being a duplicate base washer with a metal insert. Besides reducing unnecessary cost, the flash-over voltage of the installed post is increased due to increased insulation between the stud and the panel.
- A flat metal washer is provided as a bearing surface for the nut against the back-up washer. This washer can be used without the insulating back-up washer, if it is desired to ground the post to the panel.
- All posts are supplied kit-packaged individually in a sealed bag. This maintains the integrity of the part set, and also does away with the need to disassemble the post before assembling it on the panel. Separable panel insulating washers allow the use of combinations of head and washer colors, if desired, as a special option.

Posts are supplied with two nuts, so that an auxiliary solder lug can be clamped between them if removal of the post from the circuit is desired after wiring. Alternatively, wire can be wrapped around the solder turret supplied on the post stud, and soldered permanently into the circuit.

MATERIALS: All binding posts are machined from solid brass. Mounting nuts and washers are also brass.

FINISHES: MIL-Spec and certain other posts are supplied in Gold Plate in accordance with the requirements of the specifications. In all instances where Gold is plated on brass, a barrier of Nickel is provided to prevent migration. Excellent appearance and solderability are also provided by pure Tin plating on alternative versions of these posts, with lower cost. This is a bright, acid Tin, 99% pure, and NOT a solder plating. Where solderability of the post is not a requirement, bright Nickel plating is provided for maximum corrosion protection. Plastic parts are provided with a low-luster, semi-matte finish for a modern appearance on contemporary instruments.

BINDING POSTS

DESIGN & APPLICATION FEATURES: Where only a simple, grounded, single-wire connection is to be made to a panel or chassis, the metal compression type posts are recommended (part numbers 159, 136). The screw-and-knob type require that the wire be wrapped around the screw (part numbers 110, 265, 266), while the captive head types only require that the wire strand be inserted in a hole prior to tightening the head (part numbers 1481, 1482). Rapid insertion and removal can be facilitated using the spring-loaded post styles (part numbers 2802, 2803, 2804).

Where a grounded connection is required, but a variety of plugs, tips, or wires may be used, the metal-head, multiple-use binding posts are ideal. The hex/octagon styles offer a variety of sizes and current ranges (part numbers 1835, 137), while the fluted metal head posts match the premium line of insulated posts in sizes and appearance (part number 1519). They are Gold-plated for performance and appearance.

For lowest cost in insulated binding posts, fluted head posts are the choice (part number 1480). The thread is molded as an integral part of the head, reducing cost but maintaining quality. Versions are offered to ground the post directly to the panel, to ground the post with an insulated panel top-washer for matching to other posts, or to fully insulate the post with a plastic back-up washer.

Our premium quality insulated binding posts feature Brass threaded inserts in the head, separable washer construction, and a variety of head styles, stud sizes, mounting space requirements, and metal finishes. High current posts are available in both hex and fluted heads, whereas the thinner styles offer narrow fluted heads for space efficiency; (part numbers 257, 1517, 459). Both of these types are made in military specification style in the Gold-plated versions. Tin-plated posts have all the features of the MIL-Spec posts with the bright solderable pure Tin plating for greater economy. A sub-miniature post is offered to fit sub-miniature banana plugs and miniature alligator clips and spade lugs; (part number 3015).

The line of dual binding posts offer all features and economies of the single posts, but with the added convenience of pre-mounting on exact 3/4" or 1/2" centers on a common panel insulator; (part numbers 209, 269, 1477, 1813, 1814, 3016).

TABLE A

RATINGS FOR BINDING POSTS

All current Ratings are 60 Hz RMS, and are for 110°C temperature rise over ambient, long term. Voltage Ratings are 60 Hz at sea level. Capacitance is to a 1/8" aluminum panel, component mounted as recommended. All ratings are working, and do not represent maximum values.

THREAD SIZE OF STUD	#4	#6	#8	#10	5/16 Plastic
CURRENT (AMPS)	5	15	15	30	15
VOLTAGE (KV)	1	1	1	2	5
CAPACITANCE (pF)	2.5	3	4.5	5	3.5

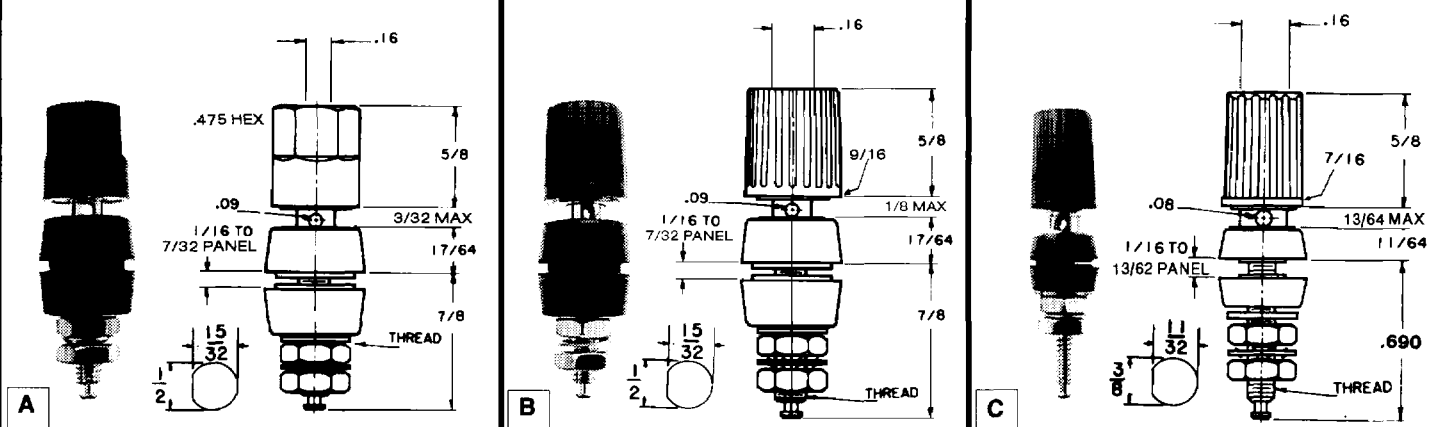
MATERIAL SPECIFICATIONS

BRASS: Free-matching leaded brass, per QQ-B-626, Comp. 360, 1/2 hard.
GOLD: Gold plated, per MIL-G-45204, 5 micro-inch over 50 micro-inch hard nickel strike.
NICKEL: Nickel plate, per QQ-N-290, 200 micro-inch.
TIN: Tin plate, per MIL-T-10727, 200 micro-inch Bright Acid Tin.

PLASTICS

TYPE	SPECIFICATIONS	CONTINUOUS TEMPERATURE	FLAMMABILITY RATING - UL
NYLON - TYPE 6/6	ASTM-D4066	185°F	94 V-2
POLYCARBONATE	UL-94	220°F	94 V-0
A.B.S.	L-P-1183	160°F	94 HB
PHENOLIC	—	220°F	94 HB

INSULATED BINDING POSTS



HEAD: Molded Lexan Polycarbonate, hex or fluted. Captivated to prevent loss.
BODY: Brass, Gold or Tin plated.
WASHERS: Molded Polycarbonate, completely insulates post from panel. Keyed to panel and body to prevent rotation.
MOUNTING: Mounts in 3/8" or 1/2" round or 'D' hole for anti-rotation. (see diagram).
USE WITH: Phone tip plug, (.080"), spade lug (1/4"), standard banana plug, alligator clip, or wire to #14
CIRCUIT: Wrap wire around solder turret or to solder lug between nuts. (Lug not supplied)
RATING: See Table A, page 28.
COLORS: Insulating washers match head color. When ordering, add color number as suffix to part number.
 -101 White -102 Red-103 Black -104 Green
 -105 Blue -107 Yellow -113 Gray

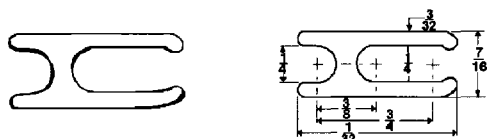
PART NO	ILLUS.	HEAD SHAPE	POST THREAD	PLATING
257	A	HEX	10-32	Gold
257N			8-32	Gold
899			10-32	Tin
899N			8-32	Tin
459	B	FLUTED	10-32	Gold
459N			8-32	Gold
799			10-32	Tin
799N			8-32	Tin
1275	C	FLUTED	6-32	Tin
1275N			8-32	Tin
1517			6-32	Gold
1514			8-32	Gold

Part numbers below - ONLY

PART NO./COLOR

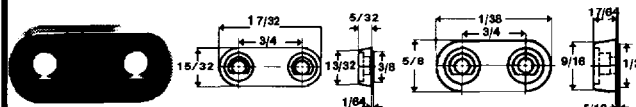
1514-102
 1514-103
 257-102
 257-103
 459-102
 459-103

UL Recognized (UL-1244)



SHORTING LINK DUAL BINDING POST
 Constructed of Spring Brass, Nickel-plated, 1/32" thick

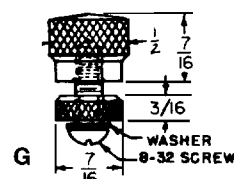
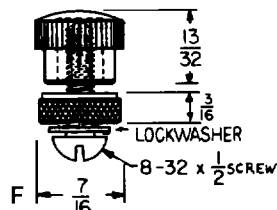
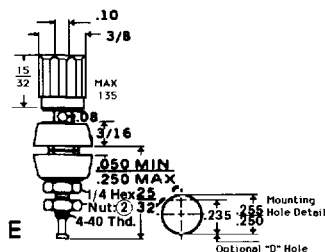
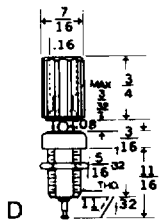
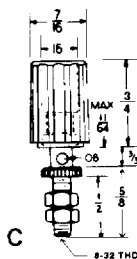
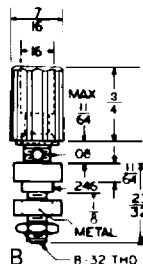
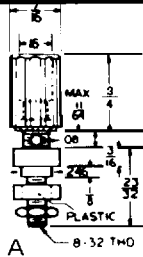
PART NO.	USE WITH	RATING AMPS
1828	269 style posts (3/4" centers)	20



BASE INSULATORS - Constructed of molded Polycarbonate

PART NO.	ILLUS.	MOUNTING HOLE DIAMETER	USE WITH
1814-5	J	3/8	Converts 1517 Style to Dual Posts
207	K	1/2	Converts 257 Style to Dual Posts

INSULATED BINDING POSTS



HEAD: Molded Lexan Polycarbonate, fluted shape. Captivated to prevent loss.
BODY: Brass - Nickel plated.
WASHERS: Molded Polycarbonate, completely insulates post from panel, or Brass - Nickel plated.
MOUNTING: Mounts in panel hole. (See listing).
USE WITH: Phone tip plug, (.080"), spade lug (1/4"), standard banana plug, alligator clip, or wire to #14 AWG.
WIRING: Wrap wire around solder turret or to solder lug between nuts. (Lug not supplied)
RATING: See Table A, page 28.
COLORS: When ordering, add color number as suffix to part number.
 -102 Red -103 Black

PART NO.	ILLUS.	MOUNTING HOLE	WASHER
1480	A	1/4	Insulating
1481	B	1/4	Grounding
1482	C	11/16	None

HEAD: Molded Lexan Polycarbonate, fluted shape. Captivated to prevent loss.
BODY: Brass Tin plated.
WASHERS: Molded Polycarbonate, threaded body, completely insulates post from panel. Keyed to body and panel to prevent rotation.
MOUNTING: 1463 - 5/16" round hole. 1464 - D Hole.
USE WITH: Phone tip plug, (.080"), spade lug (#10), standard banana plug, alligator clip, or wire to #14 AWG.
WIRING: Wrap wire around solder turret.
RATING: See Table A, page 28.
COLORS: When ordering, add color number as suffix to part number.
 -101 White -102 Red -103 Black -104 Green
 -105 Blue -107 Yellow -113 Gray

PART NO.	ILLUS.	MOUNTING HOLE
1463	D	5/16" Round Hole
1464	D	

MINIATURE BINDING POST

HEAD: Molded Lexan Polycarbonate, fluted shape. Gold plated Brass insert.
BODY: Brass, Gold plated.
WASHERS: Molded nylon with Gold-plated Brass insert.
MOUNTING: Mounts in panel hole. (See listing).
USE WITH: Phone tip plug, (.080"), spade lug (1/4"), miniature banana plug, alligator clip, or wire to #18 AWG.
WIRING: Wrap wire around solder turret or to solder lug between nuts. (Lug not supplied)
RATING: See Table A, page 28.
COLORS: When ordering, add color number as suffix to part number.
 -101 White -102 Red -103 Black -104 Green -107 Yellow

PART NO.	ILLUS.
3015	E

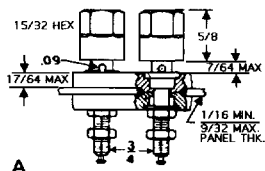
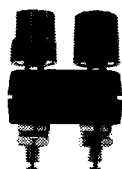
KNOB-TYPE BINDING POST

HEAD: Molded Plastic or Brass, Nickel-plated.
BODY: 8-32 round head, machine screw.
WASHERS: Brass, Nickel plated.
MOUNTING: #8 (11/64") screw clearance hole.
USE WITH: #8 spade lug or wire to #14 AWG.
WIRING: Wrap wire around solder turret or to solder lug between nuts. (Lug not supplied)
RATING: See Table A, page 28.
COLORS: Head available in:
 -102 Red -103 Black (Add color number as suffix to part number).

PART NO.	ILLUS.	HEAD MATERIAL
265	F	ABS
110	G	BRASS

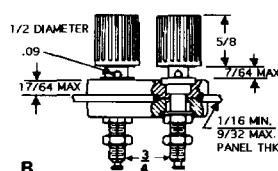
INSULATED DUAL BINDING POSTS

Hex Plastic Head



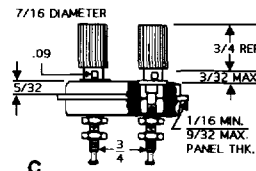
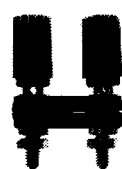
A

Fluted Plastic Head



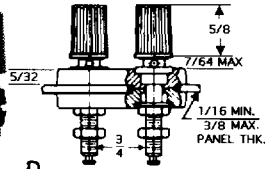
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Fluted Plastic Head



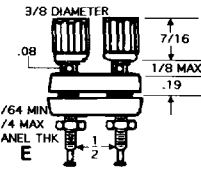
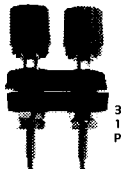
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Fluted Plastic Head



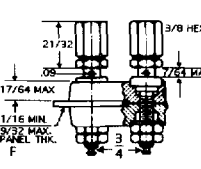
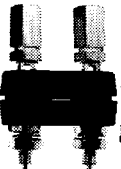
D

Miniature Gold Plated



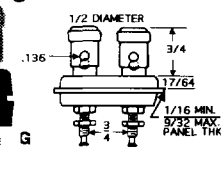
E

Nickel Plated Brass Heads



F

Spring Loaded



G

HEAD: Molded Lexan Polycarbonate, hex or fluted shape. Captivated to prevent loss.
(Style 209 & 1807 are Nickel-plated brass).

BODY: Brass, Tin-plated. Part #3016 is Brass, Gold-plated.

WASHERS: Molded Polycarbonate completely insulates posts from panel.

MOUNTING: Dual holes. Spacing and dimensions - see diagram.

USE WITH: Phone tip plug, (.080"), spade lug (1/4"), standard banana plug, alligator clip, or wire to #14 AWG, and shorting links.

WIRING: Wrap wire around solder turret or to solder lug between nuts. (Lug not supplied)

RATING: See Table A, page 28.

COLORS: Insulating washers black. Head colors as listed:

PART NO.	ILLUS.	MOUNTING POST THREAD	MOUNTING HOLE	HEAD SHAPE	HEAD COLORS
269 BB 269RR 269 RB	A	10-32	1/2	Hex	Black-Black Red-Red Red-Black
1808 BB 1808 RR 1808 RB		8-32			Black-Black Red-Red Red-Black
1813 BB 1813 RR 1813 RB		10-32			Black-Black Red-Red Red-Black
1812 BB 1812 RR 1812 RB	B	8-32		Fluted	Black-Black Red-Red Red-Black
1477 BB 1477 RR 1477 RB		6-32			Black-Black Red-Red Red-Black
1810 BB 1810 RR 1810 RB		8-32			Black-Black Red-Red Red-Black
1814 BB 1814 RR 1814 RB	D	6-32	Black-Black Red-Red Red-Black		
1809 BB 1809 RR 1809 RB		8-32	Black-Black Red-Red Red-Black		
3016 BB 3016 RR 3016 RB			Black-Black Red-Red Red-Black		
209 1807	F	10-32 8-32	1/2	Brass Hex	Nickel
2713 BB 2713 RR 2713 RB	G	8-32		Round Brass With Plastic Insert	Black-Black Red-Red Red-Black

METAL BINDING POSTS

STANDARD TYPE BINDING POSTS

HEAD: Brass. Shape and plating per table.
BODY: Brass. Plating per table.
WASHERS: Brass or Polycarbonate as shown
MOUNTING: See diagram.
USE WITH: Phone tip plug, (.080"), spade lug (1/4"), standard banana plug, alligator clip, or wire to #14 AWG.
WIRING: Wrap wire around solder turret or to solder lug between nuts. (Lug not supplied)
RATING: See Table A, page 28.
COLORS: Insulated post has black washer.

PART NO.	ILLUS.	HEAD SHAPE	HEAD PLATING	BODY PLATING	POST THREAD
1519	A	Fluted	Gold	Gold	6-32
1835	B	Hex	Nickel	Tin	10-32
137	C	Octagon	Nickel	Tin	8-32

SPRING-LOADED BINDING POSTS ML-P-55149/8

HEAD: Brass. Nickel-plated.
BODY: Brass. Nickel-plated.
WASHERS: Molded Nylon.
MOUNTING: Mounts in 5/16" hole in panels from 1/16" to 1/8" thickness.
INSULATION: Silicon rubber cap. 'O' ring waterproof seal on panel.
APPLICATION: Spring loaded push cap tightly grips wire in side slot.
WIRING: Wrap wire around solder turret or to solder lug between nuts (Lug not supplied).
RATING: See Table A, page 28.
COLORS: Available in -102 Red or -103 Black

PART NO.	ILLUS.	COLOR	MIL. SPEC TYPE
1837-102	D	Red	PB 08NA02
1837-103		Black	PB 08NA01

SPRING-LOADED BINDING POSTS

HEAD: Brass. Nickel-plated. Except 2810 which is Gold Plated
 Insulated top cap.
BODY: Brass. Nickel-plated. Except 2810 which is Gold Plated
MOUNTING: Mounts in #6 (9/64") clearance hole.
USE WITH: Phone tip plug up to 1/8" diameter or to wire to #12 AWG.
WIRING: Wrap wire around solder turret or to solder lug under screw. (Screw lug not supplied)
RATING: See Table A, page 28.
COLORS: Available in -102 Red or -103 Black

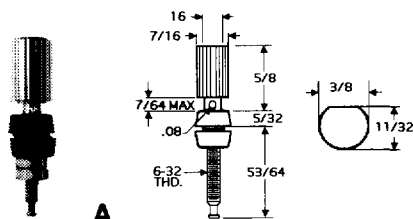
PART NO.	ILLUS.	STUD LENGTH
2802	E	3/8"
2803		1/2"
2804		3/4"
2809	F	6-32 THREAD

PART NO.	ILLUS.	STUD LENGTH
2810AA	G	6-32 THREAD
2810		6-32 THREAD

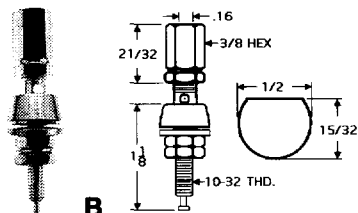
KNOB-TYPE BINDING POST

HEAD: Brass. Nickel-plated.
BODY: Brass. Nickel-plated.
MOUNTING: Mounts in #6 (9/64") clearance hole.
USE WITH: Phone tip plug (.080") or wire to #14 AWG.
 #136 also accepts standard banana plug.
WIRING: Solder lug under mounting screw. (Not supplied)
RATING: See Table A, page 28.

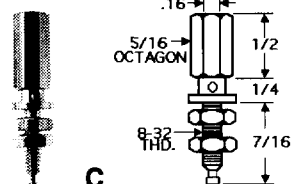
PART NO.	ILLUS.
159	H
136	J



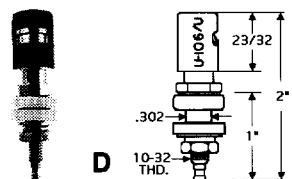
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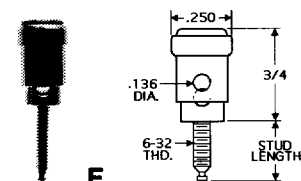
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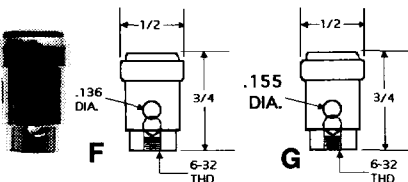
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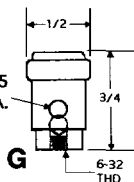
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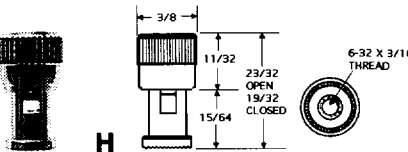
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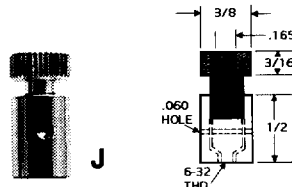
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