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## 1/4" ENCLOSED TELEPHONE JACKS



Series M11\*



Series MNS11\*



Series MS11\*



Series MN11\*

Compactly constructed jacks permit direct cross-patching with Switchcraft, WEco and MIL-type telephone plugs and patch cords. Series M Hi-D Jax® offer a choice of solder lugs or PC terminals. Both insulated and metal bushings can be specified, as well as .21" inside diameter sleeves for narrow plug fingers. Maximum contact resistance is .1 ohm. Springs are made of a special gold-plated copper alloy. Welded cross bar gold alloy contacts are available on special order.

### SERIES M-11\* HI-D JAX®

Two- and 3-conductor type mate with .25" diameter finger plugs. Tip and ring springs are gold-plated. Shunts (if used) have welded crossbar palladium contacts. Ring springs (where used with shunts) have welded crossbar palladium contacts. Tip springs (when used) do not have a contact welded to the spring. Bushing has 3/8-32-NEF-2 thread; locknut and flat washer for mounting are supplied.

### SERIES MN-11\* HI-D JAX®

Same as Series M-11\* except threaded bushing is molded thermoplastic for insulated mounting. Continuous sleeve contact assures positive sleeve connection without exposed metal on front of panel.

### SERIES M113 AND M114 HI-D JAX®

The versatile 3-conductor M113 and M114 feature springs which accept a wide variety of 1/4" plug designs. Self-aligning PC terminals allow for easier insertion into a printed circuit board. Also feature a metric thread mounting.

## SPECIFICATIONS

### MATERIALS

**Mounting Bushing:** Series M11\*, MS11\* - Nickel-plated copper alloy. Series MN11\*, MNS11\* - Molded thermoplastic.

**Housing:** Molded thermoplastic, UL 94V-0.

**Springs:** Copper alloy.

**Contacts (mil-type):** Tip and Ring Springs are gold-plated. Shuntsprings (where used) are welded crossbar palladium. Welded crossbar gold alloy contacts are available on special order.

**Contacts (commercial):** Tin-plated integral contacts.

**Sleeve Terminal:** Steel, tin-plated.

**Hardware:** Supplied with one **P10001** copper alloy, nickel-plated locknut and one **S10221** steel, nickel-plated washer.

## MECHANICAL

**Life:** 10,000 insertion/withdrawal cycles, minimum.

**Insertion/Withdrawal Forces:** Nominal plug retention on 2-conductor jack is .75 pounds with .5 pounds minimum. Nominal plug retention on 3-conductor jack is 2 pounds with 1.5 pounds minimum. With double tips, the nominal is 1.5 pounds and 1 pound minimum.

**Maximum Recommended Mounting Torque:** 6" -lb. for thermoplastic bushing.

**Mounting Torque (for Spring Lock PC Terminal):** 8" -pound for thermoplastic bushings.

## ELECTRICAL

**Contact Resistance:** .020 ohms maximum (initial), .050 ohms maximum (after humidity, durability exposure). Per MIL-STD-202E.

**Insulation Resistance:** 10,000 MΩ minimum (initial), 1,000 MΩ minimum (after humidity).

**Dielectric Withstanding Voltage:** 500 V, 60 Hz (rms) AC. Contact Rating: 0.25, 48 VDC make and break, 3A carry only.

## ENVIRONMENTAL

**Thermal Range:** -55°C to +85°C (non-operating); -20°C to +65°C (operating).

**Thermal Shock:** Per MIL-STD 202, method 107.

**Humidity:** Per MIL-STD 202, method 106.

**Salt Spray:** Per MIL-STD 202, method 101.

DIMENSIONS ARE FOR REFERENCE ONLY  $\frac{\text{Inch}}{(\text{mm})}$

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## 1/4" ENCLOSED TELEPHONE JACKS (CONTINUED)

**SERIES MS11\* HI-D JAX®**

3-conductor with .21" inside diameter sleeve. Mates with plugs having .206" diameter finger. Protects against accidental insertion of .25" diameter finger plugs. Gold-plated tip and ring springs. Welded crossbar palladium contacts on shunt springs standard. Bushing has 3/8-32-NEF-2 thread; locknut and flat washer for mounting are supplied.

◇ **SERIES MNS11\* HI-D JAX®**

Same as Series MS11\* except bushing is molded thermoplastic.

◇ **TWIN M11\* HI-D JAX®**

Two Series M11\* Hi-D Jax strapped on .625" centers. Mates with Switchcraft® Twin Plugs. 411, 412 and 413. MIL-type Littel-Plug® phone plugs, 420, 430 and 440 (2-conductor) and 482 and 483 (3-conductor) are also recommended for mating with this series.

**ORDERING INFORMATION**

Order by part number from table.

2-CONDUCTOR				
Part Number Solder Lugs	Part Number PC Terms	Description	Schematic**	Typical Mating Plug*
M111	—	.25" I.D. sleeve, metal bushing.	I	420
MN111	—	.25" I.D. sleeve, molded thermoplastic bushing.		
◇M112A	◇M112APC	.25" I.D. sleeve, metal bushing.	III	
MN112A	◇MN112APC	.25" I.D. sleeve, molded thermoplastic bushing.		
M113E	—	.25" I.D. sleeve, metal bushing.	IX	
MN113E	—	.25" I.D. sleeve, molded thermoplastic bushing.		

◇ Special Order only; contact Switchcraft.

\* Other mating plugs are contained in this plug section.

\*\* See pages 79 and 80.

3-CONDUCTOR				
Part Number Solder Lugs	Part Number PC Terms	Description	Schematic <sup>1</sup>	Typical Mating Plug <sup>2</sup>
M112B	M112BPC	.25" inch I.D. sleeve, metal bushing.	IV	482
ML112B	—	.25" inch I.D. sleeve, .375 inch long metal bushing.		
MN112B	MN112BPC	.25 inch I.D. sleeve, molded thermoplastic bushing.		
MNL112B	—	.25 inch I.D. sleeve, .375 inch long metal bushing.		
M113B	—	.25 inch I.D. sleeve, metal bushing.		
MN113B	MN113BPC	.25 inch I.D. sleeve, molded thermoplastic bushing.		
	M113BPC1M	.25 inch I.D. sleeve, molded thermoplastic bushing, metric hardware	482	

3-CONDUCTOR				
Part Number Solder Lugs	Part Number PC Terms	Description	Schematic <sup>1</sup>	Typical Mating Plug <sup>2</sup>
MNL113B	—	.25 inch I.D. sleeve, .375 inch long metal bushing.	VII	482
M114B	M114BPC	.25 inch I.D. sleeve, metal bushing.		XII
	M114BPC1M	.25 inch I.D. sleeve, metal bushing, metric hardware.		
MN114B	MN114BPC	.25 inch I.D. sleeve, molded thermoplastic bushing.	480, 484	

◇ Special order only; contact Switchcraft for price and delivery.

1 See schematics, pages 79 and 80.

2 Number(s) specified are not necessarily the only mating plug(s).

See Plugs Section.

DIMENSIONS ARE FOR REFERENCE ONLY  $\frac{\text{Inch}}{(\text{mm})}$

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### 1/4" ENCLOSED PHONE JACKS (continued)

#### HI-D® JAX 2- AND 3-CONDUCTOR



SERIES 11\*

PC TERMINAL VIEW

SERIES N11\*

Hi-D Jax® 2- and 3-conductor enclosed phone jacks are ideal for panel/chassis and PC board mounting. Unitized molded housing protects springs, provides mechanical and electrical reliability, minimizes leakage and provides low capacity between springs. Mounts on .625" minimum centers in rows or arrays. .25" or .21" inside diameter bushing types, metal or thermoplastic bushings (for insulated mounting). Insulated Hi-D Jax® jacks are specifically designed for in-circuit (insulated) mounting from mounting surface and have fully protected enclosed internal sleeve feature. Solder lugs or PC terminals may be selected.

#### MOUNTING

Jacks mount in a single .375" diameter hole on .625" minimum centers. Series 11\*, N11\*, NS11\* and S11\* mount in panels up to .156" thick. Series L11\* and NL11\* (long bushing) mount in panels up to .25" thick. Jacks with PC terminals mount on PC boards up to .094" thick. Formed "shoulders" on each terminal provide stable stand-off mount. Threaded bushing permits mechanical connection to equipment panel. Mounting hardware is supplied. Also available is a grounding spur bushing, which allows for positive grounding of the bushing to the chassis. Contact factory for details.

**SERIES 11\*** - 2- and 3-conductor types, threaded metal bushing .276" long. .25" inside diameter bushings.

**SERIES L11\*** - Same as Series 11\*, except bushing is .375" long for mounting in panels up to .25" thick.

**SERIES N11\*** - Same as Series 11\*, except bushing is molded thermoplastic for insulated mounting.

**SERIES NL11\*** - Same as Series N11\*, except bushing is .375" long for insulated mounting in panels up to .25" thick.

**SERIES S11\*** - Same as Series 11\*, except bushing has .21" inside diameter. Smaller diameter protects against accidental insertion of plugs with .25" diameter fingers.

◇**SERIES NS11\*** - (SPECIAL ORDER ONLY) - Same as Series N11\*, except bushing is .21" inside diameter.

**113BPC1M AND 114BPC1M** - Versatile, 3-conductor 113BPC1M and 114BPC1M feature springs which accept a wide variety of 1/4" plug designs. Self-aligning PC terminals allow for easier insertion into a printed circuit board. Also feature a metric thread mounting.

#### TWO CONDUCTOR PART NUMBERS

Solder Lug Part Number	PC Terminals Part Number	Description	Jack Schematic <sup>1</sup>	Typical Mating Plug <sup>2</sup>
111	111PC	Open circuit	I	250
N111	N111PC	Insulated bushing	I	250
NL111	-	.375" long insulated bushing	I	250
112A	112APC	Single closed circuit	III	250
L112A	◇L112APC	.375" long bushing	III	250
N112A	N112APC	Insulated bushing	III	250
NL112A	-	.375" long insulated bushing	III	250
113	113PC	Isolated "make" circuit	V	250
N113	-	Insulated bushing	V	250
◇113D	◇113DPC	Transfer circuit (1-C)	VI <sup>3</sup>	250
113E	113EPC	Isolated "break" circuit	IX	250

#### THREE CONDUCTOR PART NUMBERS

112B	112BPC	Double open circuit	IV	267
L112B	-	.375" long bushing	IV	267
N112B	N112BPC	Insulated bushing	IV	267
NL112B	-	.375" long bushing	IV	267
-	S112BPC	.210" inside diameter bushing	IV	S-267
113B	113BPC	Single closed circuit	VII	267
-	113BPC1M	Single closed circuit	VII	-
L113B	-	.375" long bushing	VII	267
N113B	N113BPC	Insulated bushing	VII	267
NL113B	-	.375" long bushing	VII	267
113F	113FPC	Ring circuit closed	XXVIII	267
114B	114BPC	Double closed circuit	XII	267
-	114BPC1M	Double closed circuit	XII	-
L114B	◇L114BPC	.375" long bushing	XII	267
N114B	N114BPC	Insulated bushing	XII	267
NL114B	NL114BPC	.375" long bushing	XII	267

1 Other circuits available; contact factory. Schematics pages 79 and 80.

2 See Plug Section for other options.

3 Two tip springs.

◇ Special order only. Contact Switchcraft.

**SPECIFYING NOTE:** Unless otherwise shown in "Description", jacks have .276" long threaded bushings with .25" inside diameter.

#### SPECIFICATIONS

##### MATERIAL

**Mounting Bushing:** Series 11\*, L11\*, S11\* - Nickel-plated copper alloy.

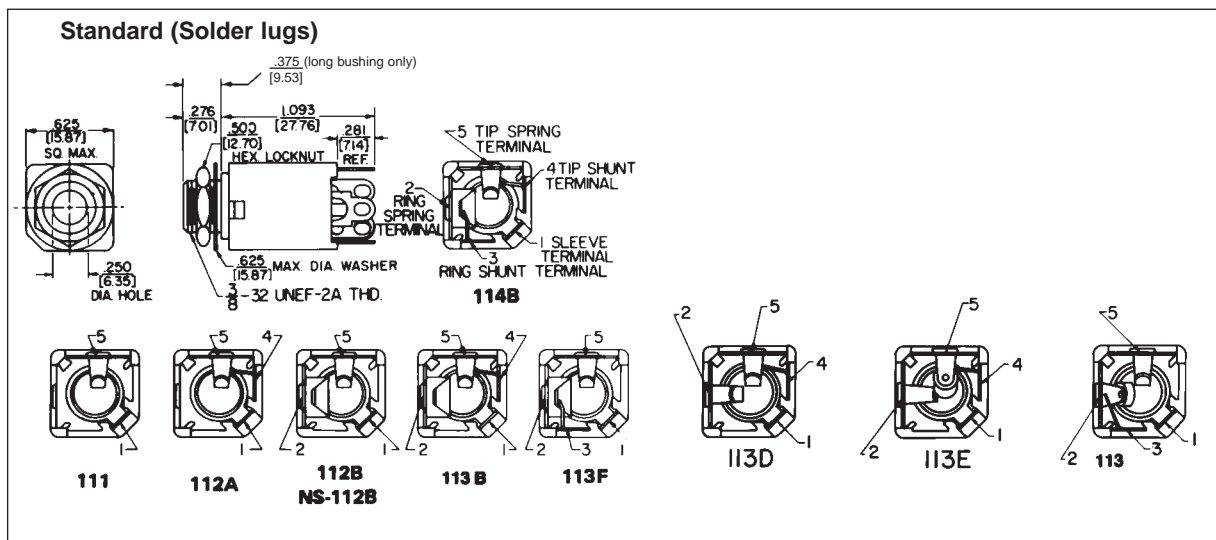
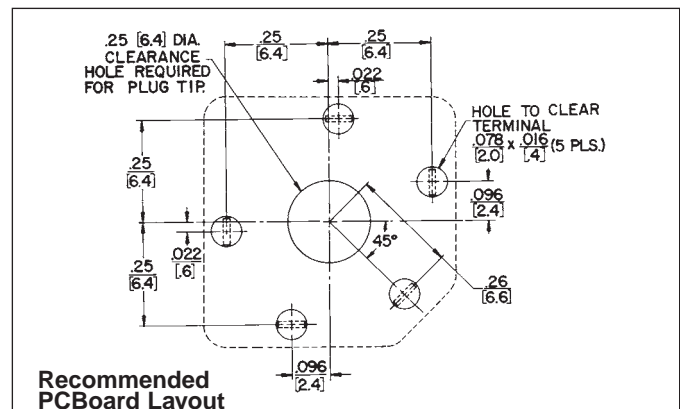
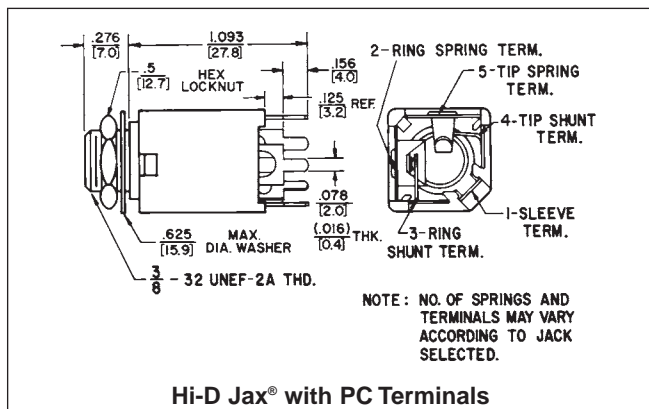
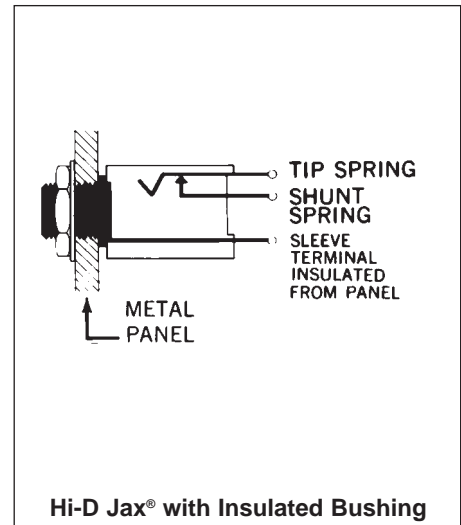
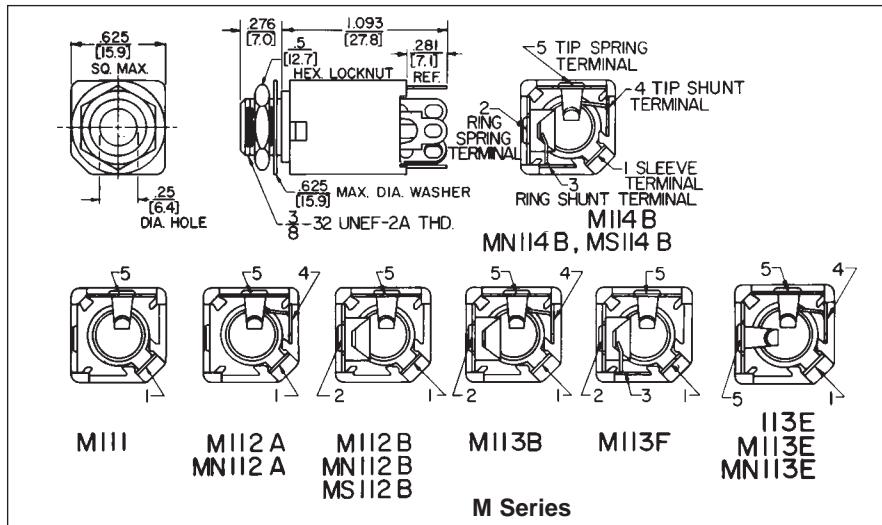
Series N11\*, NL11\*, NS11\* - Molded thermoplastic over nickel-plated copper alloy sleeve.

DIMENSIONS ARE FOR REFERENCE ONLY  $\frac{\text{Inch}}{(\text{mm})}$

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### 1/4" ENCLOSED PHONE JACKS (continued)

#### HI-D JAX® 2- AND 3-CONDUCTOR



DIMENSIONS ARE FOR REFERENCE ONLY Inch (mm)