

SSMB/SSLB/SSMC Microminiature Connectors

Introduction

SSMB (snap-on mating), **SSLB** (slide-on mating), and **SSMC** (screw-on mating) microminiature connectors from AEP can be the answer you're looking for in your applications that are short on space but need to be long on performance.

Although SSMB and SSMC connectors are about a third smaller than SMB and SMC connectors, AEP's design skills and materials engineering make them remarkably rugged—in most cases, even more reliable than their larger counterparts. For example, AEP's SSMB

connectors have been tested to over 1,000 mating cycles (twice the MIL-spec requirement) without loss of performance. And because they are included in MIL-PRF-39012, you don't have to take the risk of using a proprietary design—AEP's SSMB and SSMC connectors are fully intermateable with other manufacturers' parts.

The superior electrical characteristics of SSMB and SSMC connectors (see page 7) even makes them an alternative to much larger SMA connectors in many applications.

In this catalog, you'll find such innovative and useful configurations as:

- P.C. board receptacles with pretinned legs and contacts (see page 4 for more information);
- Surface-mountable P.C. board receptacles, in top and edge mount types (see page 4 for more information);
- P.C. board cable terminations, for easy, permanent attachment of cable to P.C. boards without the need to pigtail cable braid (see page 29);
- Vibration-proof, float mounted SSLB plugs, ideal for use in rack-and-panel applications with multiple connector pairs (see page 5 for more information)

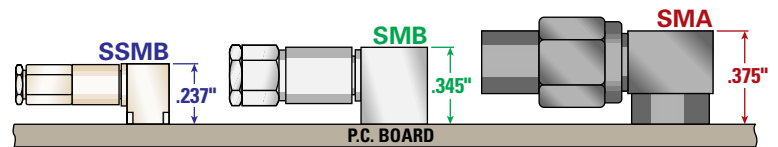
All SSMB, SSLB, and SSMC connectors are gold-plated for superior electrical and environmental performance.

Save yourself time, money, and trouble—call the experts at AEP for complete cable assemblies using SSMB, SSLB, and SSMC connectors. With experience in producing thousands of microminiature cable assemblies for such demanding applications as SINCGARS (the U.S. Army's primary tactical field radio system), AEP can provide you with complete, tested, guaranteed cable assemblies—flexible or semi-rigid; any size, any quantity.

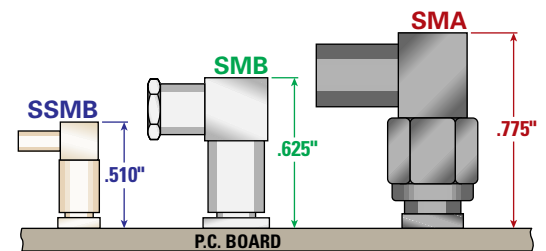
HOW THEY STACK UP:

(mated pairs)

Right angle PCB receptacle and straight cable plug



Straight PCB receptacle and right angle cable plug



(SSMC series offers similar space savings vs. SMC and SMA)



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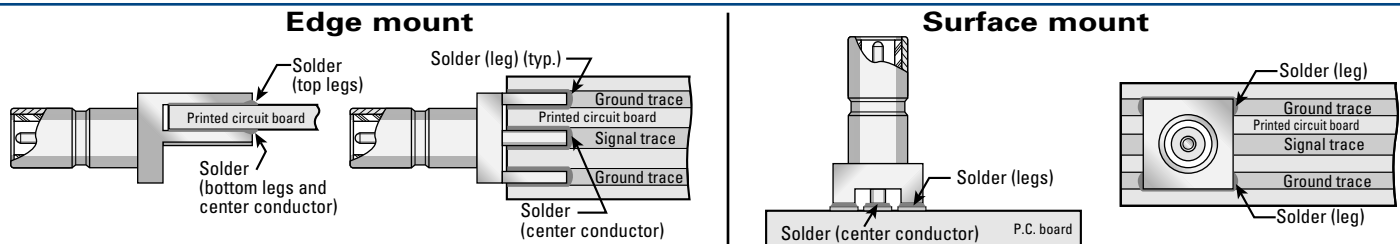
SSMB/SSLB/SSMC Features and Options

Surface Mount P.C. Board Receptacles

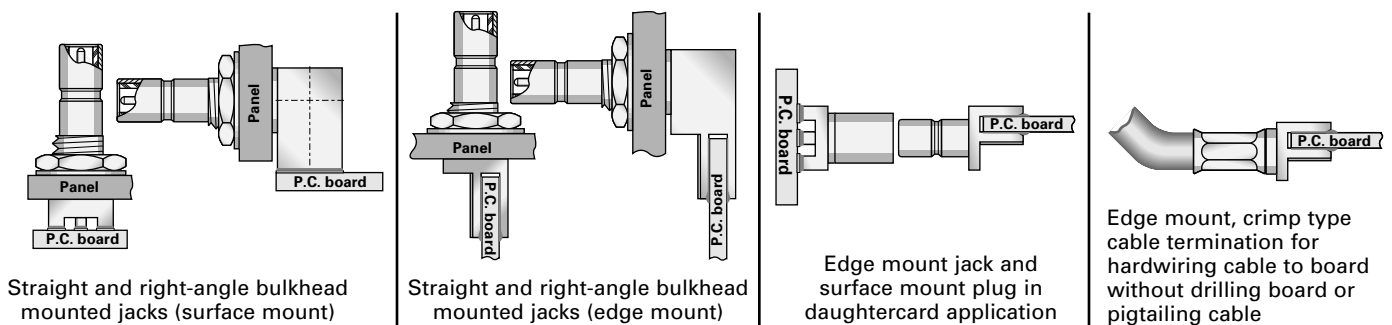
AEP SSMB and SSMC surface-mount P.C. board receptacles are available in surface mount and edge mount types (see below). when mounted, they withstand torque, shear, and pull forces greatly in excess of standard mating and unmating forces. Tape-and-reel packaging is available for surface-mount versions.

AEP surface-mount P.C. board receptacles meet all interface requirements of MIL-STD-348, and appropriate performance requirements of MIL-PRF-39012. Most configurations can also be furnished with pretinned legs (see bottom of this page) for convenient, reliable assembly.

Edge-mount types in this catalog are designed for .031" thick P.C. boards, but they are readily available for boards up to .045" thick. Connectors for thicker boards can be supplied by special order.

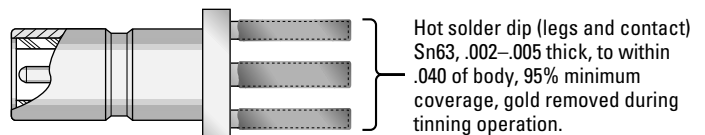


Combining AEP's surface-mount technology with various body styles and interfaces can provide an almost unlimited variety of configurations—these are just a few examples.



P.C. Board Receptacles with Pretinned Legs and Contacts

AEP pretinned P.C. board receptacles are shipped with a tightly-controlled layer of solder on the legs and center conductor, eliminating gold embrittlement in solder joints. Nickel-plated connectors with pretinned legs have the solderability of gold or silver-plated connectors at lower cost.

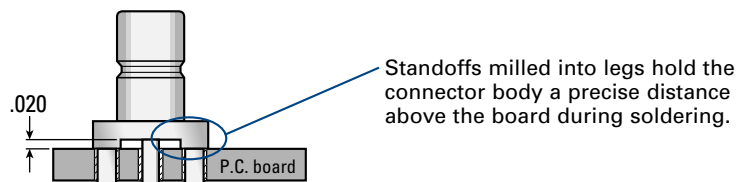


Computer-controlled, automated solder-dipping equipment and custom fixturing ensure precise, consistent coverage to AEP standard specification (see above), or customer-specified requirements.

Tinned areas meet the solderability requirements of MIL-STD-202, Method 208 after eight hours steam aging. Pretinned legs are available on most P.C. board receptacles in this catalog—see product pages for part numbers.

P.C. Board Receptacles with Standoff Legs

AEP P.C. board receptacles with stepped legs raise the connector body above the board surface, allowing free flow of cleaning solutions and air, as well as providing space for visual inspection.



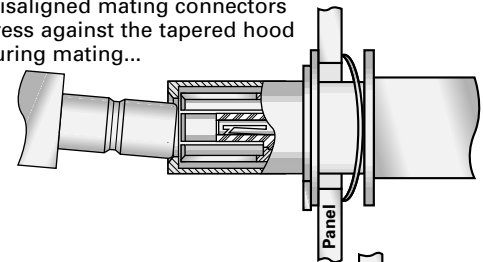
SSMB/SSLB/SSMC Features and Options

Vibration-Proof Float Mounted Plugs (see page 17)

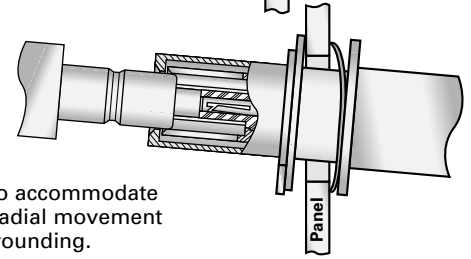
AEP's vibration-proof float mounted plugs (SSLB series only) use a tempered spring washer within the mounting system for reliable grounding between the connector and the panel under vibration. Mounting integrity is augmented by the Truarc retaining ring, which provides almost 360° of contact within its retaining groove, as opposed to the 10–20° of contact typical of C-ring or E-ring retaining clips. This makes it virtually impossible to dislodge the connectors from their panel mountings under any conditions of mechanical stress.

This system, combined with closed-end mating hoods and inner female contacts, allows the connectors a wide range of float while mating without damage to the connectors. Their reliability has been proven through thousands of hours of flight time in avionics systems over the past ten years without a single field failure.

Misaligned mating connectors press against the tapered hood during mating...



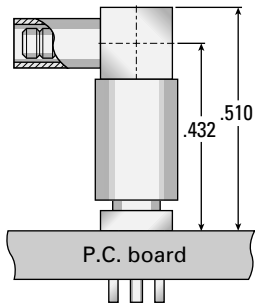
...and the hood guides the float-mounted connector into alignment for proper mating, while the spring washer deflects to accommodate the angular and radial movement with no loss of grounding.



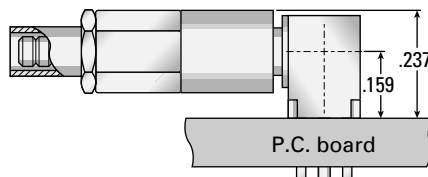
Mated-Pair Dimension Examples

The examples below illustrate working dimensions for some common connector pair applications (SSMB and SSLB series connectors). Multiple pairs can be placed on spacing as close as .200" centerlines.

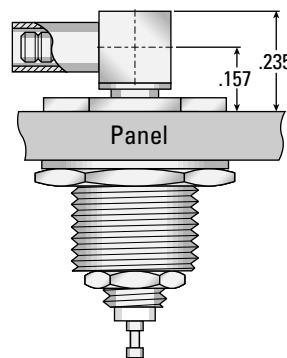
Mated pairs of SSMC connectors have similar envelope dimensions, but additional space should be allowed on all axes for wrench access when mating.



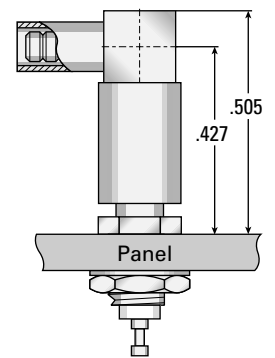
Right angle cable plug (7405 series) and straight P.C. board jack receptacle (7209 series)



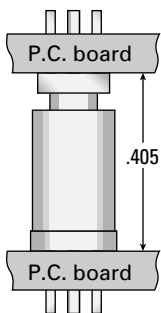
Straight cable plug (7202 series) and right angle P.C. board jack receptacle (7210 series)



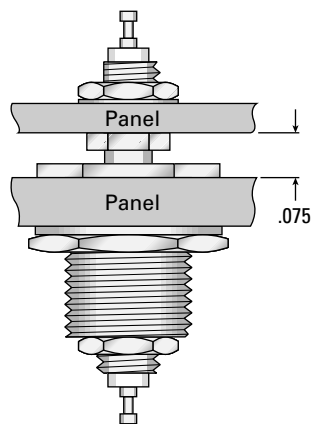
Right angle cable jack (7441 series) and recessed bulkhead jack receptacle (7496 series)



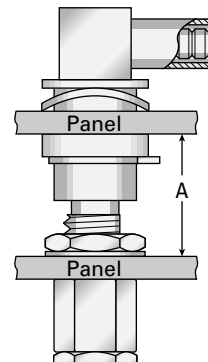
Right angle cable plug (7405 series) and straight bulkhead jack receptacle (7219 series)



Straight P.C. board plug (7225 series) and straight P.C. board jack (7209 series)



Straight bulkhead jack receptacle (7219 series) and recessed bulkhead jack receptacle (7496 series)



Right angle float-mounted cable plug (7335 series) and straight bulkhead cable jack (7303 series):

Panel Thickness	'A'
.050"	.360
.093"	.274