



Positronic®

# PosiBand®

Unique contact technology that eliminates  
the weaknesses of the split-finger design

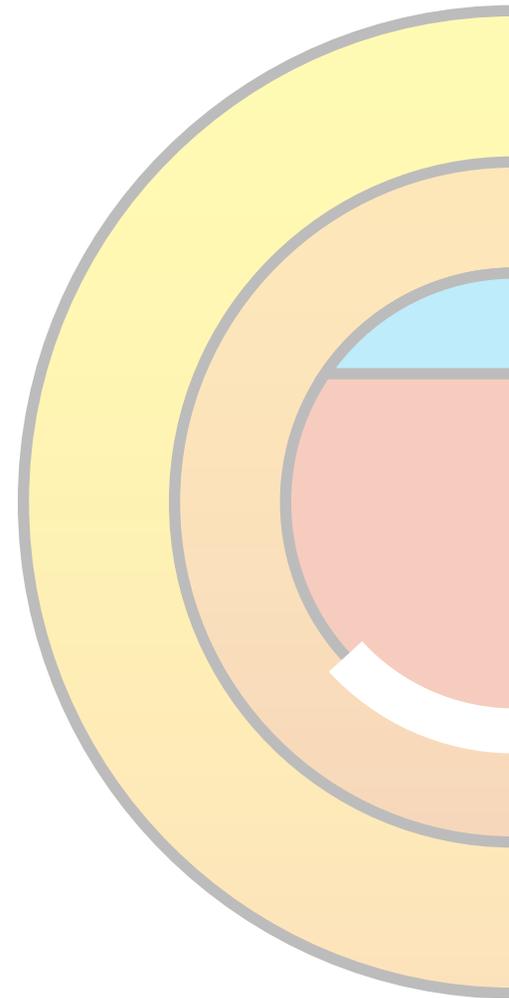
THE SCIENCE  
OF CERTAINTY®



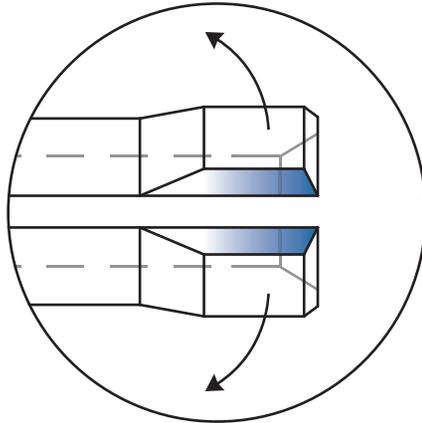


## What makes the PosiBand contact design an improvement?

- The PosiBand female contact configuration features a higher cross-sectional area of material compared to split-finger designs and a solid, unbroken ring at the entry point, which increases the mechanical robustness of the contact.
- PosiBand has greater surface engagement at the male and female contact interface, resulting in more consistent electrical performance.
- Resistance of size 22 contacts is 5 milliohms, maximum. Resistance of size 20 contacts is 4 milliohms, maximum. Low contact resistance offers opportunities to use size 22 and size 20 contacts for power.
- PosiBand has lower average insertion forces, resulting in greater ease in mating, especially in larger high density connectors. The average lower insertion force is accomplished while meeting or exceeding performance requirements.
- As the PosiBand external pressure element performs the mechanical action of the connection, the contact body material can be selected from a large spectrum of alloys featuring higher conductivity or superior crimp deformation properties, eliminating the need for further processing such as annealing.
- PosiBand is qualified under SAE AS3902 and MIL-DTL-24308 specifications. PosiBand is also qualified to the higher 40 gram contact separation test requirement of GSFC S-311-P4/08 and GSFC S-311-P4/10.



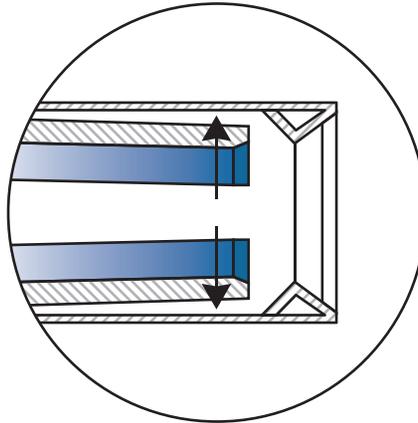
# Separation & Surface Engagement Summary



## Open Entry

Over-separation is **limited**  
by insulator cavity

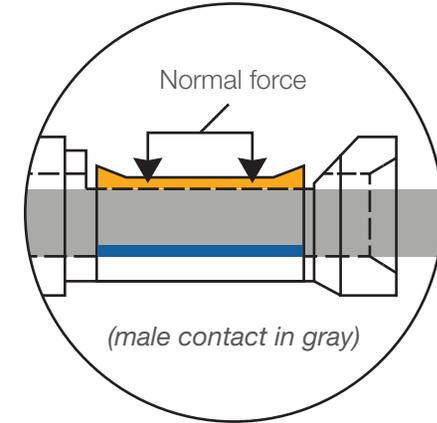
Surface engagement  
**concentrated** at the tip



## Closed Entry

Over-separation is  
**limited** by sleeve

Surface engagement  
**concentrated** at the tip



## PosiBand®

Over-separation is **eliminated**

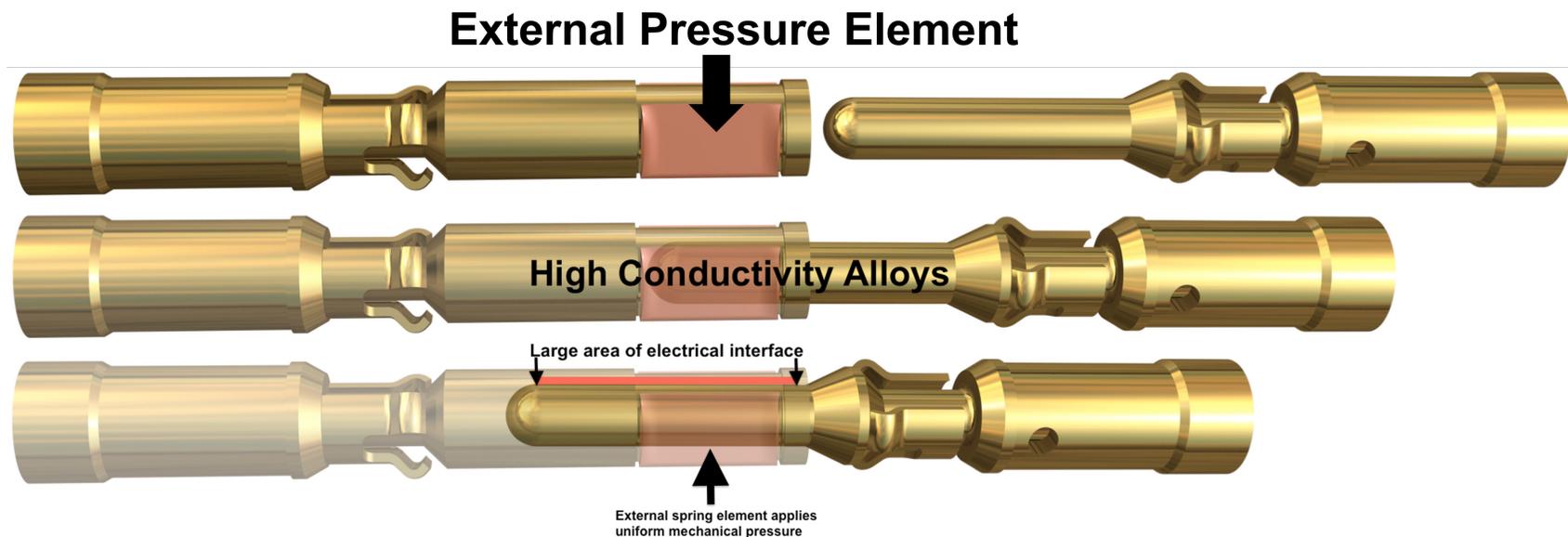
Surface engagement is  
**consistent** along the barrel

**Over separation results in reduced normal force  
and degradation of electrical performance.**



## The PosiBand Design

The PosiBand external pressure element design fully separates the mechanical action from the electrical action of the connection. The pressure element performs the mechanical action by applying a force pressing the male pin against the inner female cavity achieving electrical connection along a long line of direct contact. The length of the line of interface can be varied therefore allowing to optimize by design the interface resistance of the connection.





# PosiBand: A Closer Look

## PosiBand spring clip

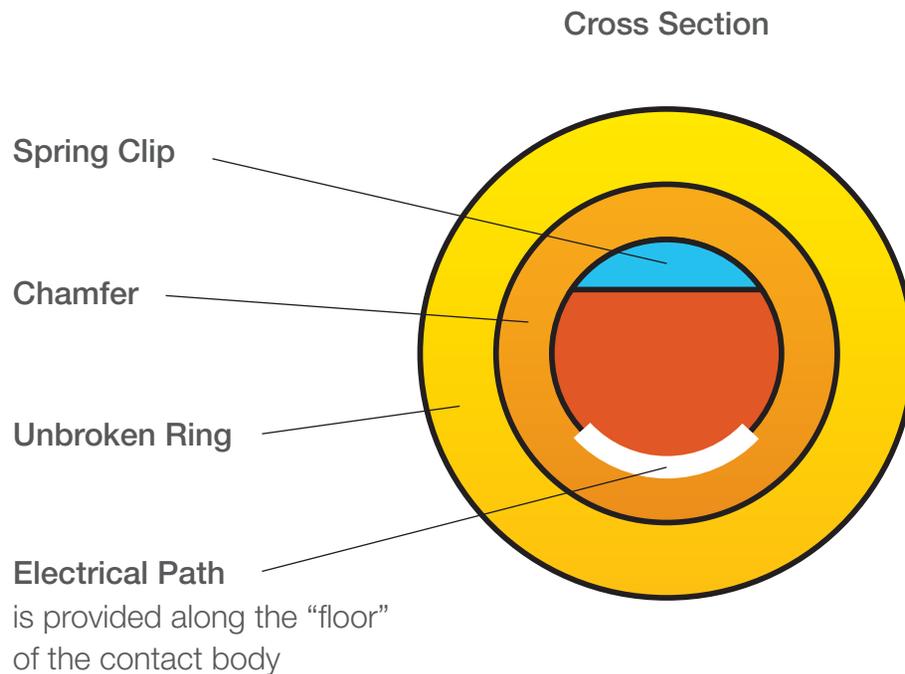
- Provides normal force on the male contact
- Spring tempered copper alloy
- Rugged and reliable
- Lower average insertion force...while meeting or exceeding performance requirements.
- Contact body does not require annealing



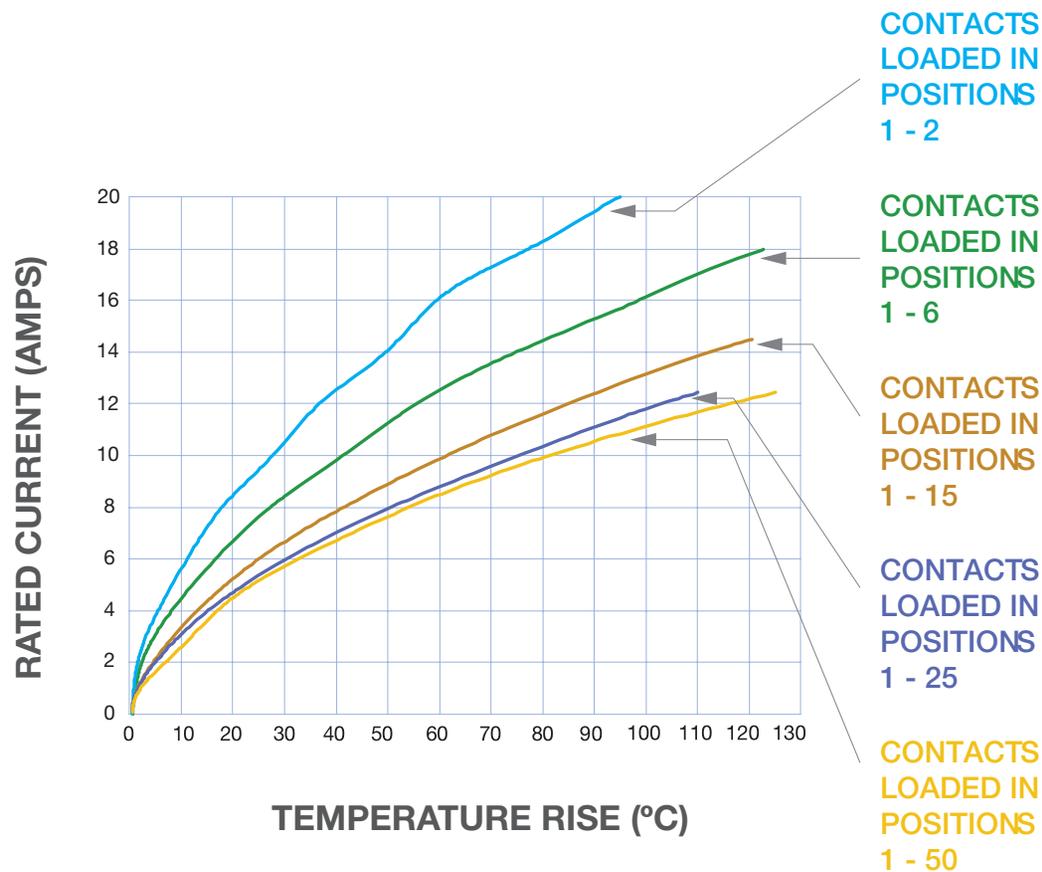


## PosiBand: A Closer Look

More electrical paths means less potential disruption due to vibration and corrosion



# Size 20 PosiBand® Temperature Rise Curve

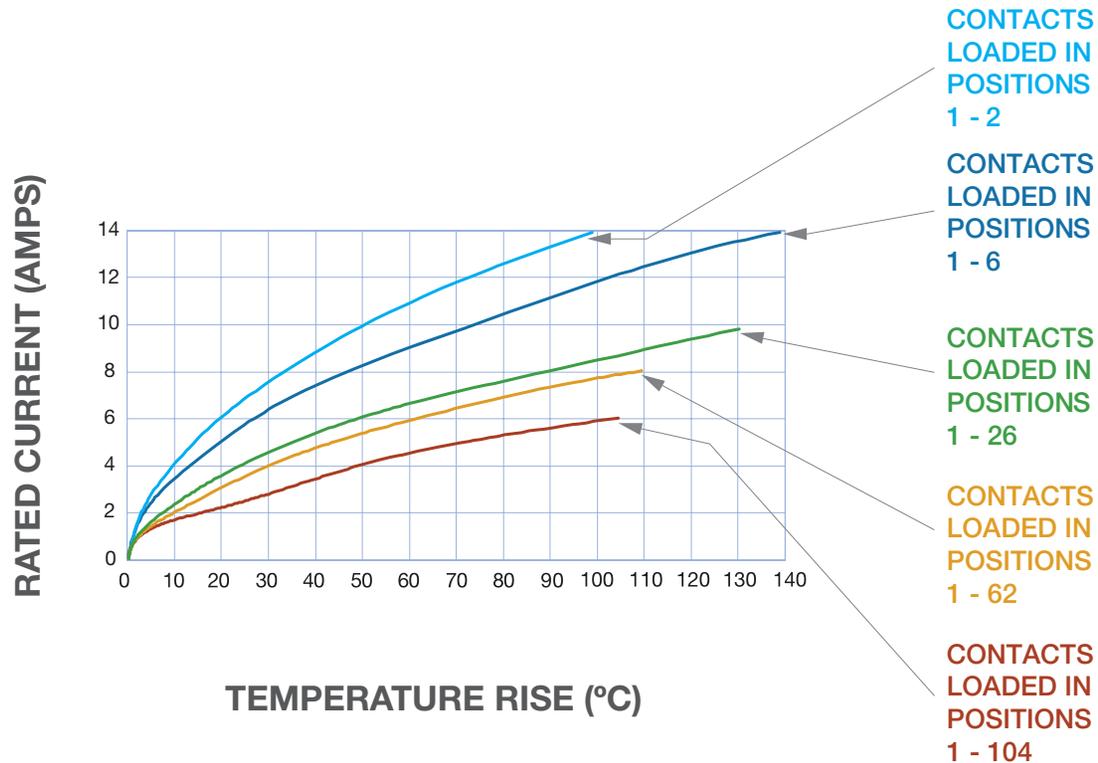


**Low initial contact resistance of 4 milliohms maximum**

**Current Capacity, per UL 1977:**

- 18 amps @ 2 contacts
- 14 amps @ 6 contacts
- 11 amps @ 15 contacts
- 10 amps @ 25 contacts
- 9 amps @ 50 contacts

# Size 22 PosiBand® Temperature Rise Curve



**Low initial contact resistance of 5 milliohms maximum**

**Current Capacity, per UL 1977:**

- 12 amps @ 2 contacts
- 10 amps @ 6 contacts
- 7.5 amps @ 26 contacts
- 6.5 amps @ 62 contacts
- 5.0 amps @ 104 contacts



## Here's what Engineers are saying

**“I believe the PosiBand causes less digging/scraping to male contacts than the split-finger design, most notably when the male contact is made of soft metal.”**

**“The PosiBand clip is shorter than the shrouded split-finger clip so it can fit in a more compact connector system.”**

**“Our report with resistance values after vibrations is very interesting, showing a significant reduction in resistance value consistently. Also, the plating (as associated with fretting) seems to have higher integrity after vibrations.”**