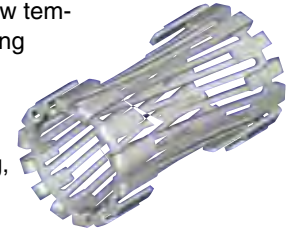


RADSOK® technology is based upon a stamped and formed flat grid, uniquely twisted into a hyperbolic geometry to provide robust, high density contact to the mating pin contact. Most pin and socket technologies rely upon spring (beam element) properties of the contact elements, which tend to weaken over time. Unlike most other pin and socket solutions, the RADSOK® also utilizes the tensile strength properties of the flat, high conductivity alloy grid. This provides the high normal forces required for conductivity while also providing large conductive surface area. Correspondingly low voltage drop and low temperature rise are also achieved while maintaining low insertion forces.

The RADSOK® (RADial SOcket) High Amperage, Low Insertion Force Electrical Terminal provides value to your purchasing, engineering, quality and manufacturing objectives.



RADSOK® CONTACT FEATURES:

- Socket cylinder within female contact has several equally spaced longitudinal beams twisted into a hyperbolic shape.
- As male pin is inserted, axial members in the female half deflect, imparting high current flow across the connection with minimal voltage loss.
- The hyperbolic, stamped grid configuration ensures a large, coaxial, face-to-face surface area engagement.
- Ideal for crimp termination applications requiring repeated mating cycles and high current with a low milli-volt drop.



Amphe-Power 5015 connector with insert pattern 28-5 with (2) size 4 RADSOK® sockets and standard contacts.



Standard RADSOK® socket contacts for Amphe-Power® connectors are available in sizes 0, 4, 8 and 12 crimp or solder. Specific sizes can often be produced more economically than other fastening solutions. Amphenol can tailor the contact design to exact customer needs. See page 569 for more information about Amphe-Power Connectors.

ePower Industrial Series

For high voltage and high amperage applications (200A to 500A), 2 to 3 pole applications, Amphenol ePower connectors feature RADSOK® technology. This connector can replace up to three conventional connectors. Features include:

- All aluminum shell with RADSOK® contacts plus 2 HVIL circuits
- IP67 rating, IP2X on pin and socket
- Integrated EMI shielding
- Push/pull coupling with locking screw
- 5.7mm - 14mm RADSOK® contacts, crimp or busbar termination
- Available in 200A and 400A models with 2 or 3 poles
- Eight different keyway position options to eliminate mismatching



Amphenol Mil-Power Connectors 38999 with RADSOK® High Amperage Contacts

- 6 layouts available:
 - Shell size 21 with 4 size 8 RADSOK®
 - Shell size 25 with 4 size 4 RADSOK®
 - Shell size 25 with 1 size 0 RADSOK®
 - Shell size 25 with 2 size 4 RADSOK®
 - Shell size 33 with 2 size 1/0 RADSOK®
 - Shell size 37 with 3 size 1/0 RADSOK®
- Increased current capacity (50% more than standard power)
- Reduced insertion force
- More reliable coupling mechanism (Tri-Start) coupling
- Alternative to cadmium finishes



38999

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| III |
| HD |
| Dualok |
| II |
| I |
| SJT |
| Accessories |
| Aquacon |
| Herm/Seal |
| PCB |

| |
|----------------------------|
| HIGH SPEED |
| Fiber Optics |
| Contacts Connectors Cables |

EMI Filter
Transient

26482
Matrix 2

83723 III
Matrix | Pyle

26500
Pyle

5015
Crimp Rear Release Matrix

22992
Class 1

Back-Shell's

Options
Others

38999

- III
- HD
- Dualok
- II
- I
- SJT
- Accessories
- Aquacon
- Herm/Seal
- PCB

HIGH SPEED

- Fiber Optics
- Contacts
- Connectors
- Cables

EMI Filter Transient

26482 Matrix 2

83723 III Matrix | Pyle

26500 Pyle

5015 Crimp Rear Release Matrix

22992 Class I

Back-Shells

Options Others

• HIGH RELIABILITY

Unique RADSOK® design and construction technology create an electrical contact interface that exceeds typical interconnect requirements. Applications in aerospace, medical, industrial, automotive, mining, offshore, and other harsh environments depend on high reliability of the Amphenol RADSOK® technology.

• LOW CONTACT ENGAGEMENT/SEPARATION FORCES

The hyperbolic lamella socket contact construction distributes normal forces over a high percentage of the mating pin surface. This creates a smooth, even engagement effort. This force distribution also contributes to excellent performance in vibration applications with resistance to typical fretting corrosion.

• LOW CONTACT RESISTANCE

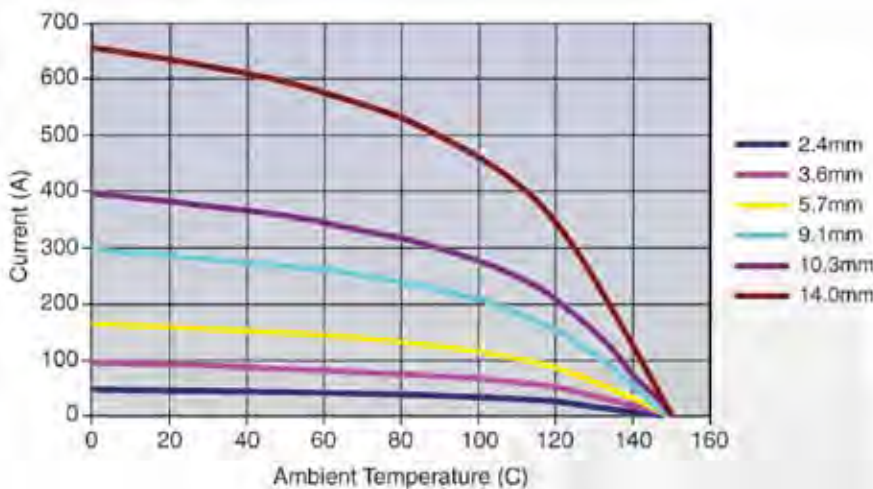
The large interface area between the socket lamella and pin surface result in very low contact resistance, enabling the RADSOK® contacts' high current ratings compared to traditional power contact designs.

• HIGH MATING CYCLE DURABILITY

RADSOK® contacts with typical silver plating finishes have demonstrated survival of 20,000 mating cycles. Specialized plating and contact lubricants can extend cycle life to 200,000 matings or higher. Even with continuous exposure to harsh environmental abuse (salt, sand, and high humidity), RADSOK® contacts have been tested to maintain low contact resistance beyond 10,000 mating cycles.

RADSOK® Derating Chart – Temperature vs. Current

Based on single conductors in free air. Wire cross-section same size as pin contact cross-sectional area.



For more information on RADSOK® products from Amphenol: www.amphenol-industrial.com and www.radsok.com
Contact Amphenol Aerospace Operations, Sidney, NY (Phone: 607-563-5011) or Amphenol Power Solutions, Fraser, MI (Phone: 586-294-7400)



The Amphenol® RADSOK® Solution to Bring more Power to the Board... Three High Amperage Products:

PowerBlok™

Provides a high current single-point connection of up to 70 Amps to the PCB, utilizing the custom 3.0mm RADSOK® design.

RADSERT™

Provides high power to board interconnect in a small package. The RADSERT™ brings power to the board from busbars below the board and all of the board components.

PGY™

An orthogonal card edge connector series is available in 3.6mm and 5.7mm contact sizes. The 5.7mm is the highest current board level product rated to 120 amperes.

Amphenol's RADSOK® solution offers many options for high current single-point connections to printed circuit boards. The compact footprint design can supply up to 120 Amp to the board which preserves surface area and provides more flexibility in board design.

Standard and Custom-Developed Solutions

- In addition to the various standard sizes of RADSOK® components, custom-developed solutions are also available. Amphenol has the global design, engineering and manufacturing resources to provide RADSOK® sockets pressed into busbars, crimped to cables, assembled into connectors, assembled into customer or Amphenol designed specialized electrical devices, or as stand-alone components. Amphenol also manufactures a full compliment of mating pin contacts for any application.
- Steady-state current capacities for standard RADSOK® products range from 50 amps to over 1000 amps.
- Standard contact plating is typically Silver (Ag) although many other plating specifications may be used for your application.
- Amphenol connectors with RADSOK® contacts are offered with a variety of positive-locking features that ensure and maintain fully-mated connections.
- Sealing (Sealtac™) and high voltage hot break options are available within the RADSOK® itself or within a very wide range of IP rated connector housings to provide environmental protection to the contact area.

The Wide Variety of RADSOK® Applications include:

- Replacement of ring terminals (lugs) on threaded studs
- High current PCBs
- Communication towers
- Backplane power
- Uninterrupted power supplies
- Fuel cell connectors
- AC inductive drive motors
- Power distribution modules
- Busbar terminations (plug-in hardware/modules)
- “Pluggable” breakers
- Battery terminals
- Contacts with RADSOK® technology give 50% more ampacity.
- RADSOK® contacts can be designed to fit any housing
- Combinations of RADSOK® and high speed copper contacts in the same interconnect package

Amphenol operates quality systems that are certified to ISO9001:2000 by third party registrars.



38999

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22992 Class 1

Back-Shells

Options Others