



# A Series™ Family

## Heavy Duty, Multi-Pin, Plastic or Metal Connectors, Cable Assemblies and Accessories



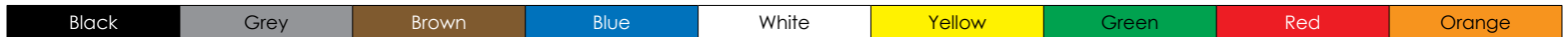
Amphenol Sine Systems' ever-growing **A Series™ Family** of sealed, heavy-duty, multi-pin plastic and metal connectors are made up of 16+ core product lines. The connectors within this Family have been developed as a high-performance, cost-effective solution for use with Heavy Equipment, Agricultural, Automotive, Military, Alternate Energy, and other demanding interconnect architectures. The A Series™ Family bridges the gap between controlled and harsh environmental conditions to keep you connected.

### Key Features (Depending on Series)

- Plastic or Metal Housing Body Options
- IP Ratings Range of IP65-69K
- Wide Range of Accessories and Modifications Available
- Cable Assembly Options
- Customized Solutions Available
- Compatible with existing standard products industry-wide

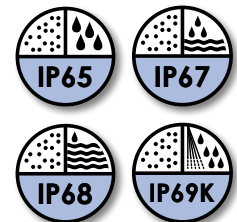
**Potential Applications:** Heavy Equipment, Agricultural, Automotive, Military, Alternate Energy, and other demanding interconnect architectures

### Custom Color Modifications



### A Series™ - Specifications Overview (See individual Series for exact specs)

|                             |  |
|-----------------------------|--|
| IP Rating Range             | IP65, IP67, IP68, IP69K (in mated condition)   |
| Max. Current Amperage Range | 7.5A - 180A  |
| Operating Temperature Range | -40°C to +150°C  |
| Coupling System Types       | Integrated Latch, Integrated Locking Lever, Circular Bayonet, Coupling Ring, Jackscrews                    |
| Housing Body Types          | Thermoplastic or Metal   |
| Contact Types               | Stamped & Formed, Machined, RADSOK®  |
| RoHS Compliant              | <b>RoHS</b> ALL materials meet the requirements of the European Directive. (See website for documentation) |



## A Series™ Custom

In addition to our standard products within the **A Series™ Family**, we can design, engineer and manufacture custom connectors and/or cable assemblies to your exact customer specifications and produce large or small quantities, all to the highest standards, delivered on-time and in-specification, all with a significant cost-savings over the competition. By combining locally based Program Management & Engineering, along with the associated cost advantages derived from manufacturing in our low-cost production centers in North America and Asia, our Team will work with you to design the most cost-efficient and reliable interconnect system available.



Standard products. Custom solutions  
Customer Service +1 800 394 7732


A Series™ - Product Line Overviews

| Product Line  | Image   | Overview  |
|---|---|---|
|  <b>ATSeries™</b>                      |    | Our <b>AT Series™ Connectors</b> are designed as an IP68/69K rated (mated), high-performance, cost-effective, thermoplastic solution with superior environmental seals, seal retention capabilities and are designed for use with 14-22AWG with size 16 contacts handling up to 13A. <b>Also available in our BoardLock™, SR01/SR02 Strain Relief, StructurePlus™, HYPERBUSS™ and PanelMate™ Series of connectors.</b> In addition, all of our AT Series™ connectors have been developed to be compatible with all other existing standard products industry-wide. <b>Also available in AT Series™ Cable Assemblies.</b>  |
|  <b>ATSeries™ Cable Assemblies</b>      |    | Available in 2, 3, 4, 6, 8 and 12 position Plugs and Receptacles with single-ended cordset standard lengths of 1, 2, 4, 5 and 10 Meters. Contact Customer Service for custom cable length options.<br><br>Our <b>AT Series™ Cable Assemblies</b> feature our StructurePlus™ AT design, an engineered, one-piece, solid body construction specifically designed for cable assembly operations. The added connector structure results in enhanced connection integrity that is an essential component for connecting cable in harsh environments  |
|  <b>ATM Series™</b>                    |    | Our <b>ATM Series™ Connectors</b> , specifically designed for smaller AWG applications, are designed as an IP68/69K rated (mated), high-performance, cost-effective, thermoplastic solution with superior environmental seals, seal retention capabilities and are designed for use with 16-22AWG with size 20 contacts handling up to 7.5A. <b>Also available in our BoardLock™, SF01 Snap-Fit Caps, SR01 Strain Relief, StructurePlus™, HYPERBUSS™ and PanelMate™ Series of connectors.</b> In addition, all of our ATM Series™ connectors have been developed to be completely compatible with all other existing standard products industry-wide.<br><br><b>Also available in ATM Series™ (High Temperature) option.</b> (Increased Operating Temperature of -55°C to +150°C) |
|  <b>ATP Series™</b>                   |   | Our <b>ATP Series™ Connectors</b> are designed as an IP67 rated (mated), high-performance, cost-effective, thermoplastic solution with superior environmental seals, seal retention capabilities and are designed for use with 10-14AWG with size 12 contacts handling up to 25A. <b>Also available in our BoardLock™, StructurePlus™, HYPERBUSS™ and PanelMate™ Series of connectors.</b> In addition, all of our ATP Series™ connectors have been developed to be completely compatible with all other existing standard products industry-wide   |
|  <b>AHD Series™</b>                  |  | Our <b>AHD Series™ Connectors</b> were developed in response to the overwhelming need for an economic alternative to today's existing diagnostic product options. Designed specifically as a cost-conscious, reliable alternative, intermateable to industry standard 6 and 9 pin connectors, the AHD Series™ is ideal for any situation where either controlled and/or uncontrolled environmental conditions exist. AHD Series™ Connectors offer both a smooth, non-sealing option for controlled applications, as well as an environmentally-sealed, IP67 rated (in mated condition) threaded option for more demanding applications.   |
|  <b>ATHD Series™</b>                 |  | Our <b>ATHD Series™ Connectors</b> provide an IP68/69K rated (mated), environmentally sealed connection system and viable solution to field splices and terminals in harsh environments. Safety features include an integral latch to prevent inadvertent disconnect and an audible click, tactile feel provide circuit confirmation. The rugged circular housings can be used as an in-line, BoardLock™ ATFDH or easy-to-install sealed flange mount connection system for heavy-duty applications. <b>Also available in ATHD Series™ Cable Assemblies.</b>  |
|  <b>ATHD Series™ Cable Assemblies</b> |  | Available in Single Position Plugs and Receptacles (Size #8 and #12) Single-ended cordset standard lengths of 1, 2, 4, 5 and 10 Meters. Contact Customer Service for custom cable length options.<br><br>Our <b>ATHD Series™ Cable Assemblies</b> feature our StructurePlus™ ATHD design, an engineered, one-piece, solid body construction specifically designed for cable assembly operations. The added connector structure results in enhanced connection integrity that is an essential component for connecting cable in harsh environments.  |
|  <b>ARB Series™</b>                  |  | Our <b>ARB Series™ Connectors</b> are an IP68/69K (in mated condition) rated, rectangular, thermoplastic, heavy-duty, environmentally-sealed, connector series where high pin-counts are required in situations with controlled and/or uncontrolled environmental conditions such as bulkhead applications.   |

A Series™ - Product Line Overviews, cont.

| Product Line  | Image   | Overview  |
|---|---|---|
|  <b>ARC Series™</b>  |    | Our <b>ARC Series™ Connectors</b> are a rugged, heavy-duty, environmentally-sealed, rectangular connector series where high pin-counts are required in situations with controlled and/or uncontrolled environmental conditions. Amphenol Sine Systems ARC Series™ Connectors are currently available as In-Line Plugs and Flange Mount Receptacles.   |
|  <b>ATS Series™</b>  |    | Our <b>ATS Series™ Superior Seal Connectors</b> are a high-performance, IP67/69K rated (in mated condition), rectangular, thermoplastic, cost-effective solution for harsh environmental applications with superior seals and seal retention capabilities. The connector design incorporates an integral latching system that ensures a definitive electrical and mechanical connection. Receptacles are available in both 90° right angle and 180° straight pin PCB options, as well as traditional in-line options, and have been developed to be compatible with existing standard products industry-wide. |
|  <b>ATV Series™</b>  |    | Our <b>ATV Series™ Connectors</b> further expands the proven reliability of the AT Series™ with a compact 18 position sealed flange design. The durable, thermoplastic housings feature built-in contact sealing to eliminate individual wire-sealing grommets, while an integral interfacial seal protects mated connectors. The ATV Series™, rated at IP67/69K (mated), is perfectly suited to on and off highway applications, marine, industrial, and agriculture markets in harsh environments.  |
|  <b>ARMORIPX™</b>    |    | Our <b>Armor IPX™ Family of Sealed Enclosures</b> provides superior protection for printed circuit boards and electronic control modules in harsh environments and off-road applications. Available in two (2) sizes, as well as three (3) different material types: Clear or Black Thermoplastic, or Ultem® (Transparent Amber). Simplified installation is accomplished via a rugged tandem through-hole design for ease of mounting and includes optional environmental venting.   |
|  <b>BoardLock™</b> |  | Our <b>BoardLock™ Connectors</b> combines flanged or flangeless, 180° straight or 90° right angle pin-oriented, wire-to-board versatility with the proven reliability of the A Series™ environmentally-sealed thermoplastic connection system with a maximum current rating up to 100A. Featuring a compact, durable, low-profile and lightweight design, perfect for power or data signal applications. All BoardLock™ product lines accept A Series™ components and are compatible with other industry standard mating connectors. All BoardLock™ variations are IP68 rated (mated).                        |
|  <b>DuraLok™</b>   |  | Our <b>DuraLok™ Connectors</b> are a high-density, heavy-duty, IP67 rated (mated), environmentally-sealed connector series available in both Plugs and Receptacles, with three (3) keying options (A, B and C). The robust, integrated locking lever, built directly into the plug housing, ensures a secure mating with the receptacle every time. Featuring a robust, integrated locking lever, built directly into the plug housing, that ensures a secure mating with the receptacle every time.  |
|  <b>DuraMate™</b>  |  | Our <b>DuraMate™ Family</b> of environmentally-sealed, multi-pin, heavy duty, plastic (AHDP) or metal (AHDM/AHDBM) circular connectors provide an economical, quick-connect, bayonet-locking system manufactured to withstand the challenges and complexities of harsh-environment, off-road applications. Our ISOBUS products specifically meet ISO 11783 standards (for control and communications between tractors, implements and software) for agricultural applications.  |
|  <b>HydroNet™</b>  |  | Our <b>HydroNet™ Multi-Hub Adapters and Cables</b> provide flexible and increased reliability when connecting multiple devices to NMEA 2000 networks. The HydroNet™ features two 4 pin AT interfaces and adapts devices to field proven, sealed, and serviceable electrical connections. The adapters are sealed to IP68/69K and are ideal for harsh environments.  |
|  <b>HYPERBUSS™</b> |  | Our <b>HYPERBUSS™ Family of Receptacle Connectors</b> are IP68 rated (mated), high-performance, cost-effective solutions used in a variety of interconnect applications where a common "bussed" electrical pathway is required. They contain superior environmental seals and seal retention capabilities.  |

A Series™ - Product Line Overviews, cont.

| Product Line  | Image   | Overview   |
|---|---|--|
|  <b>MagnaMate™</b>            |    | <p>Our <b>MagnaMate™ ATHP Series Connectors</b> are a rugged, thermoplastic, power connector series featuring the surety and high-performance contact technology of RADSOK®. Designed for various "xEV" applications, MagnaMate™ ATHP is IP67 rated (mated) and available in single or two-pole housings with rated current from 20A to 180A. MagnaMate™ ATHP includes optional integrated HVIL safety features and EMI shielding protection which can withstand temperatures ranging from -40°C to +130°C.</p>  |
|  <b>PanelMate™</b>           |    | <p>Our <b>PanelMate™ Family of Receptacles</b> are engineered with a one-piece, sealed, flanged design for rapid and secure mounting. Their durable, high-temperature, silicone, facial seal provides a barrier of protection from lubricating oils, hydraulic fluids and fossil fuels to withstand the challenges and complexities of harsh environment applications. Also available in a two-piece, sonically-welded, flange design for applications requiring an externally operated connection with 4 pass through holes. All PanelMate™ product lines accept A Series™ components and are compatible with other in-dustry standard mating connectors.</p> |
|  <b>Structure+™</b>          |    | <p>Our <b>StructurePlus™ Family</b> of overmold compatible connectors are an engineered, one-piece, solid body construction and are specifically designed for cable assembly operations requiring custom molding or shrink tube requirements. The added connector structure results in enhanced connection integrity that is an essential component for connecting cable in harsh environments.</p>  |
|  <b>SpeedSplice™</b>          |    | <p>Our <b>SpeedSplice™</b> product is our field-serviceable splicing solution which can be used to repair damaged electrical connections. Made of silicone rubber with an IP67 rating, our SpeedSplice™ houses an environmentally-sealed, mated pair of contacts, with an Integrated Contact Retention System, ensuring your repairs will withstand harsh environmental conditions. For use with A Series™ Common Contacts in Size 12 &amp; 16 Machined/Stamped &amp; Formed. Available in individual piece or as a Kit.</p>   |
|  <b>ASeries™ Contacts</b>   |  | <p>Amphenol Sine Systems is your trusted component source for precision connector contacts designed for increased reliability and reduced cost. Our A Series™ contacts are readily available in a wide variety of materials and plating combinations and can be supplied with a number of different contact types.</p>   |
|  <b>ASeries™ Boots</b>      |  | <p>Our <b>A Series™ Boots</b> provide an optional protective backshell covering for harsh environmental and industrial applications in -28°C to +100°C conditions. For use with AT, ATM and ATP Series™ connectors that do not include an endcap or shrinkboot strain relief. The boots come in 3 different colors (Yellow, Black and Grey) and are made of high-quality Plastisol.</p>  |
|  <b>ASeries™ Caps</b>       |  | <p>Our <b>A Series™ Caps</b> are a low-cost alternative to using standard connectors with sealing plugs and provide an optional protective covering for harsh environmental and industrial applications. Fully sealed protective plug &amp; receptacle caps are NOW available for the ATM/ATP Series™ as well as our traditional AT Series™ in Black. All caps are IP68 rated (1M of Water for 24 Hrs).</p>  |
|  <b>ASeries™ Clips</b>      |  | <p>Our <b>A Series™ Clips</b> provide an optional method for mounting a variety of our receptacles to our plug connectors, and are available in stainless steel, steel with zinc-plating, and plastic. Available in numerous configurations, our mounting clips are compatible with existing industry-standard connectors.</p>   |
|  <b>ASeries™ Backshells</b> |  | <p>Our <b>A Series™ Backshells</b>, available in AT, ATM and ATP options (except those with an end cap or shrink boot modification), quickly and securely snap onto standard AT, ATM and ATP plugs and receptacles and provide a higher IP level of protection and allow securely attached convoluted tubing.</p>  |