

# Amphenol

SINESYSTEMS

## AT Series™ and AHD Series™ Connectors



INTERCONNECTING YOUR WORLD

## Who Are We?

We are Amphenol Sine Systems.

We are a global leader in providing you with interconnection options and solutions.

We fulfill the needs of Industrial, Factory Automation, Heavy Duty and Custom-design markets.

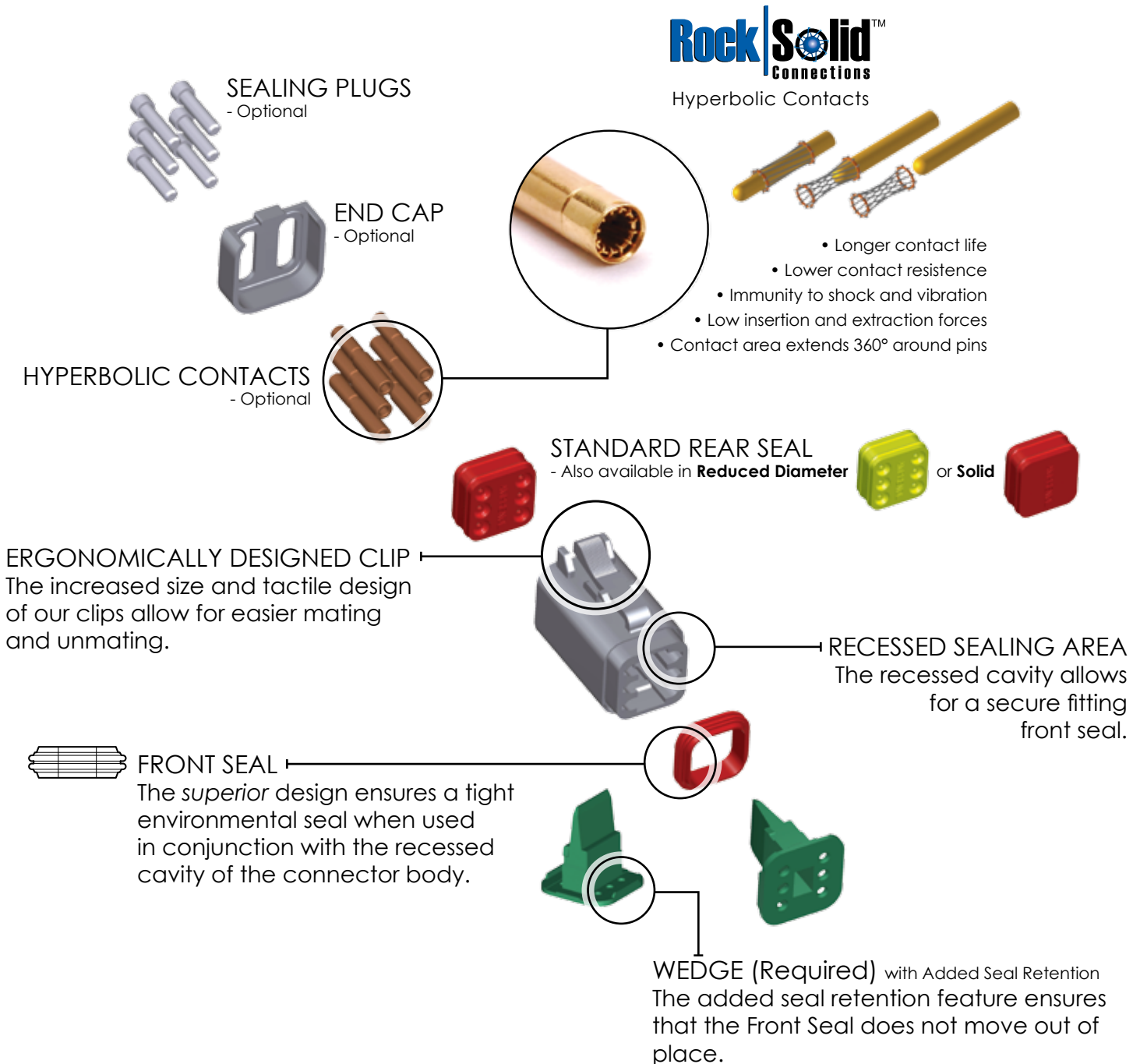
Amphenol Sine Systems, with its 42 year history, 325+ employees worldwide and 3 global facilities, draws on the extensive worldwide resources of Amphenol Corporation to find solutions for our customers. Our engineers design innovative combinations of industry standard connectors and application specific shielding components to create assembly systems that set the standards for performance, reliability, and cost effectiveness. Our engineering, materials, and manufacturing organizations meet the high standards imposed by ISO 9001 as well as many customer specific quality systems. Our performance has earned us ship to stock and world class performance awards from many major OEMs.



Amphenol Sine Systems is a division of **Amphenol Corporation** ([www.amphenol.com](http://www.amphenol.com)), one of the largest interconnect solution suppliers in the world. Amphenol Corporation supplies a wide range of product solutions worldwide. Amphenol Corporation, and all its subsidiaries, design, manufacture and market electrical, electronic and fiber-optic connectors, interconnect systems and coaxial and specialty cable. Amphenol has a diversified presence in high growth markets including: Information Technology and Data Communications Equipment, Mobile Devices, Mobile Networks, Broadband Communication, Military and Commercial Aerospace, Industrial and Automotive.

## What Are AT Series™ Connectors?

Amphenol Sine Systems AT Series™ connectors were designed as a high-performance, cost-effective solution to be used within the Heavy Equipment, Agricultural, Automotive, Military, Alternative Energy and other demanding interconnect architectures. The AT Series™ connectors contain superior environmental seals, seal retention capabilities and feature Amphenol Sine Systems RockSolid™ Contact technology. In addition, all of our AT Series™ connectors have been developed to be completely compatible with all other existing standard products industry-wide.



## AT Series™ Specifications

The connector design incorporates an integral latching system that ensures a definitive electrical and mechanical connection. Connector housings are manufactured with a thermoplastic material that is not only durable, but has excellent UV resistance, dielectric/mechanical properties and environmentally RoHS compliant. The sealing system is comprised of a front and rear silicone, multi-sealing, perimeter against environmental ingress. Contacts are derived from quality copper alloy to ensure an electrically-reliable connection. For applications demanding higher levels of performance, you can rely on our RockSolid™ contact technology.

### Performance Criteria

|                              |                                                                                                                                                                                       |
|------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CURRENT CAPACITY             | No. 16, 13 amps (max)                                                                                                                                                                 |
| WIRE RANGE                   | No 16 contacts will accept wire ranges of 14 thru 20 awg                                                                                                                              |
| TEMPERATURE                  | Operating temperature range: -55°C to +125°C at rated current                                                                                                                         |
| DIELECTRIC VALUE             | Meets or exceeds 1500 volts minimum                                                                                                                                                   |
| FLAME RESISTANCE             | All dielectric materials have a flammability rating of UL94 HB or better                                                                                                              |
| DROP TEST                    | Shall not become detached or loosened when placed at 750mm and dropped to concrete eight times                                                                                        |
| SHOCK                        | No latch disengagement or discontinuity shall be the result when subjected to 50 g's in each of three axis (X, Y & Z)                                                                 |
| VIBRATION                    | Continued continuity without degradation to mechanical or physical attributes following vibration. (max acceleration 20 g's at Sine sweep of 10-2000Hz)                               |
| CONNECTOR TERMINAL RETENTION | When subjected to a direct pull, size 14-20 achieves minimum pull-out force of 110 newtons                                                                                            |
| CONNECTOR RETENTION          | A mated connector subjected to a pulling force by the exiting wire bundle at 111 newtons times the number of contacts to a maximum of 444 newtons applying load for 30 seconds        |
| THERMAL SHOCK                | Subjected to 10 cycles at -55°C to +125°C with no cracking, chipping or other damage detrimental to the normal operation of the connector                                             |
| INSULATION RESISTANCE        | Insulation resistance at 25°C shall be greater than 20 megohms when 1000 VDC are applied                                                                                              |
| MATING CYCLE DURABILITY      | Following 100 cycles of connection engagement and disengagement, degradation either mechanical or electrical is not evident                                                           |
| CONTACT MILLIVOLT DROP       | No. 16 contacts with 16 awg conductor - *100 millivolt drop max at 13 amps test current                                                                                               |
| ULTRAVIOLET EFFECTS          | Test the mated connectors for 1000 hours per ASTM G 154 or ASTM G 153 with 20 hours UV and 4 hours of condensation for each cycle                                                     |
| WATER IMMERSION              | A mated connection, properly wired, placed in an oven at +125°C for 1 hour, then placed immediately in a depth of water of 1 meter for 4 hours without loss of electronic performance |

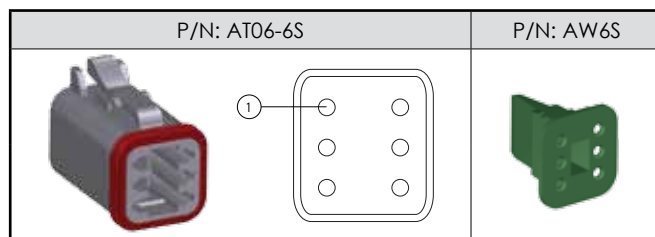
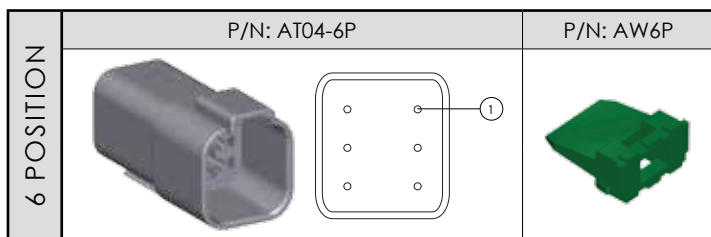
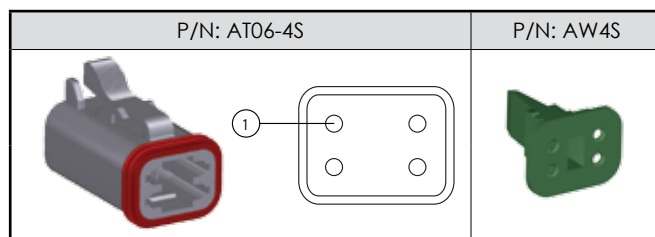
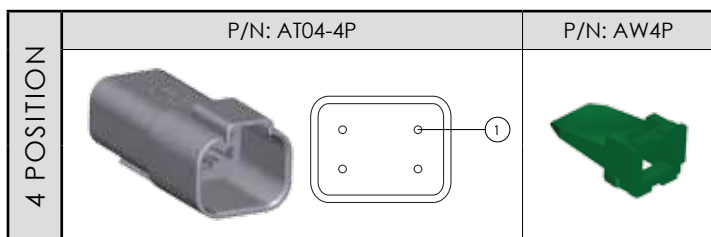
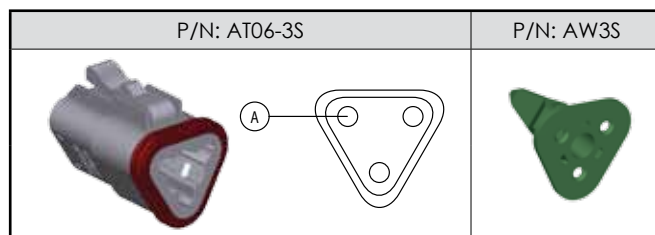
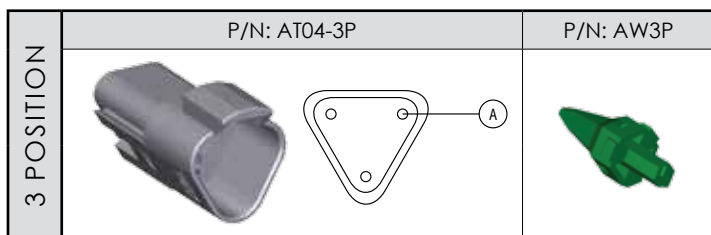
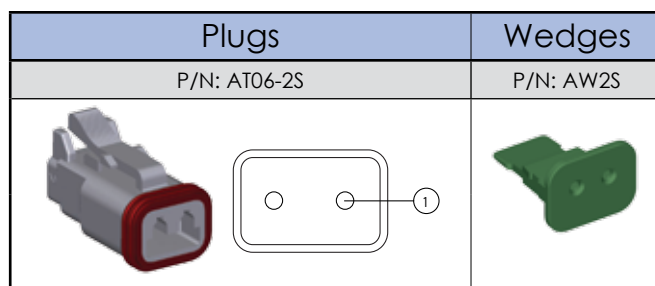
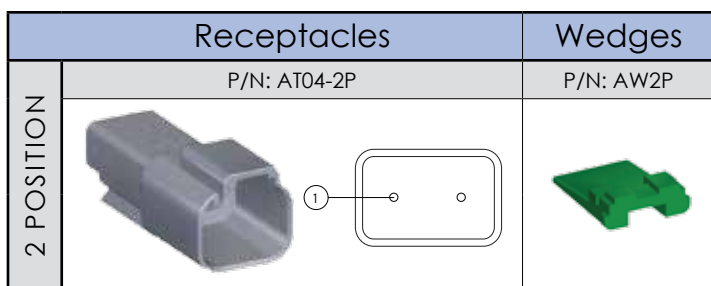
### Product Material

|                 |                                            |
|-----------------|--------------------------------------------|
| HOUSINGS        | Thermoplastic                              |
| SEALS           | Silicone Elastomer                         |
| SECONDARY LOCKS | Thermoplastic                              |
| CONTACTS        | Copper Alloy, Nickel Plated, Gold optional |



# AT Series™ Receptacles, Plugs And Wedges - 2, 3, 4 and 6 Position

Note: the views shown below are mating face views



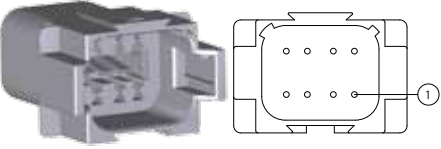
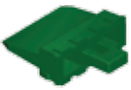
## AT Series™ Part Numbering Sequence

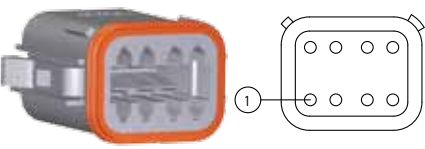
(excluding 18 Position Connector)

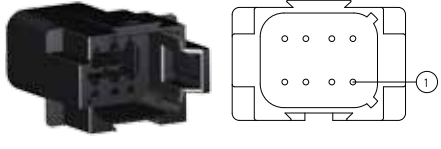
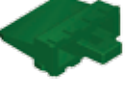
|           |                           |   |                                          |                       |                                      |   |                                                                                                                                                     |
|-----------|---------------------------|---|------------------------------------------|-----------------------|--------------------------------------|---|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| <u>AT</u> | <u>06</u>                 | - | <u>12</u>                                | <u>S</u>              | <u>A</u>                             | - | <u>XXXX</u>                                                                                                                                         |
| Amphenol  | 06 - Plug<br>04 - Recept. |   | # of Positions<br>2, 3, 4, 6<br>08 or 12 | S - Socket<br>P - Pin | Key Position<br>A, B, C, D<br>X1, X2 |   | Modifications<br>MMXX - Mixed Modification (Consult Sales Rep.)<br>RD01 - Reduced Diameter Seal<br>EC01 - End Cap<br>SS01 - Solid Seal with End Cap |

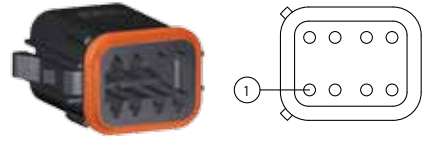
# AT Series™ Receptacles, Plugs and Wedges - 8 (A-D) Position

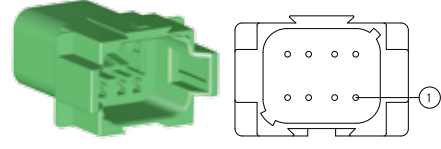
**Note:** The views shown below are Mating Face Views

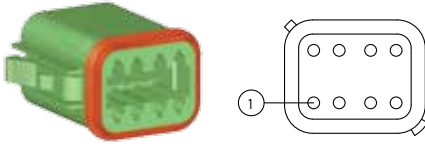
| Receptacles    |                                                                                   | Wedges                                                                            |
|----------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| 8 POSITION (A) | P/N: AT04-08PA                                                                    | P/N: AW8P                                                                         |
|                |  |  |

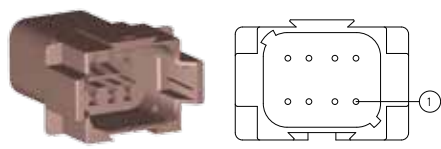
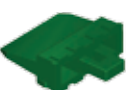
| Plugs          |                                                                                    | Wedges                                                                              |
|----------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| 8 POSITION (A) | P/N: AT06-08SA                                                                     | P/N: AW8S                                                                           |
|                |  |  |

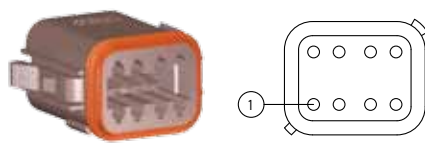
| Receptacles    |                                                                                   | Wedges                                                                            |
|----------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| 8 POSITION (B) | P/N: AT04-08PB                                                                    | P/N: AW8P                                                                         |
|                |  |  |

| Plugs          |                                                                                    | Wedges                                                                              |
|----------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| 8 POSITION (B) | P/N: AT06-08SB                                                                     | P/N: AW8S                                                                           |
|                |  |  |

| Receptacles    |                                                                                    | Wedges                                                                              |
|----------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| 8 POSITION (C) | P/N: AT04-08PC                                                                     | P/N: AW8P                                                                           |
|                |  |  |

| Plugs          |                                                                                     | Wedges                                                                                |
|----------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| 8 POSITION (C) | P/N: AT06-08SC                                                                      | P/N: AW8S                                                                             |
|                |  |  |

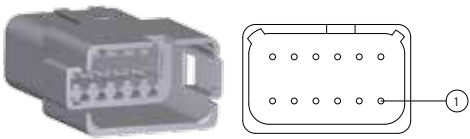
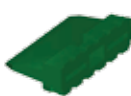
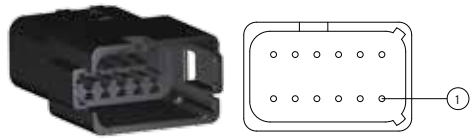
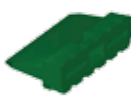
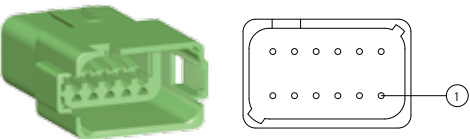
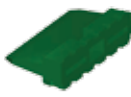
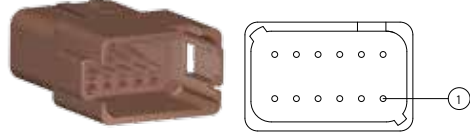
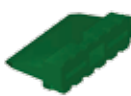
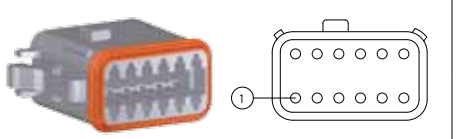
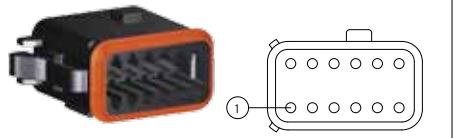
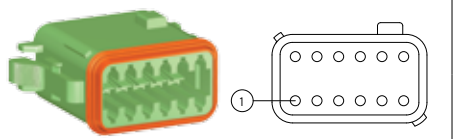
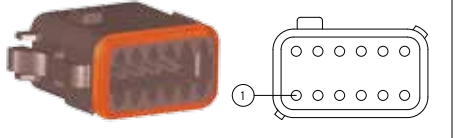
| Receptacles    |                                                                                     | Wedges                                                                              |
|----------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| 8 POSITION (D) | P/N: AT04-08PD                                                                      | P/N: AW8P                                                                           |
|                |  |  |

| Plugs          |                                                                                      | Wedges                                                                                |
|----------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| 8 POSITION (D) | P/N: AT06-08SD                                                                       | P/N: AW8S                                                                             |
|                |  |  |

| AT Series™ Part Numbering Sequence |                          |   |                                          |                       |                                      |                                                                                                                                                     |
|------------------------------------|--------------------------|---|------------------------------------------|-----------------------|--------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| (excluding 18 Position Connector)  |                          |   |                                          |                       |                                      |                                                                                                                                                     |
| <u>AT</u>                          | <u>06</u>                | - | <u>12</u>                                | <u>S</u>              | <u>A</u>                             | - <u>XXXX</u>                                                                                                                                       |
| Amphenol                           | 06 - Plug<br>04 - Recep. |   | # of Positions<br>2, 3, 4, 6<br>08 or 12 | S - Socket<br>P - Pin | Key Position<br>A, B, C, D<br>X1, X2 | Modifications<br>MMXX - Mixed Modification (Consult Sales Rep.)<br>RD01 - Reduced Diameter Seal<br>EC01 - End Cap<br>SS01 - Solid Seal with End Cap |

# AT Series™ Receptacles, Plugs and Wedges - 12 (A-D) Position

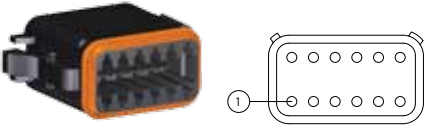
**Note:** The views shown below are Mating Face Views

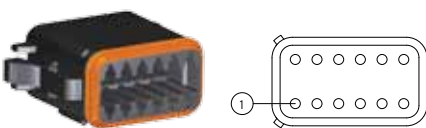
| Receptacles     |                                                                                      | Wedges                                                                                |
|-----------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| 12 POSITION (A) | P/N: AT04-12PA                                                                       | P/N: AW12P                                                                            |
|                 |     |      |
| 12 POSITION (B) | P/N: AT04-12PB                                                                       | P/N: AW12P                                                                            |
|                 |     |      |
| 12 POSITION (C) | P/N: AT04-12PC                                                                       | P/N: AW12P                                                                            |
|                 |    |    |
| 12 POSITION (D) | P/N: AT04-12PD                                                                       | P/N: AW12P                                                                            |
|                 |   |    |
| Plugs           |                                                                                      | Wedges                                                                                |
| 12 POSITION (A) | P/N: AT06-12SA                                                                       | P/N: AW12S                                                                            |
|                 |    |    |
| 12 POSITION (B) | P/N: AT06-12SB                                                                       | P/N: AW12S                                                                            |
|                 |    |    |
| 12 POSITION (C) | P/N: AT06-12SC                                                                       | P/N: AW12S                                                                            |
|                 |   |  |
| 12 POSITION (D) | P/N: AT06-12SD                                                                       | P/N: AW12S                                                                            |
|                 |  |  |

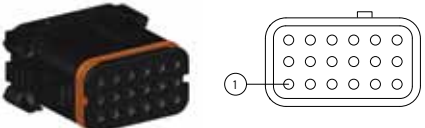
| AT Series™ Part Numbering Sequence |                          |   |                                          |                       |                                      |                                                                                                                                                     |
|------------------------------------|--------------------------|---|------------------------------------------|-----------------------|--------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| (excluding 18 Position Connector)  |                          |   |                                          |                       |                                      |                                                                                                                                                     |
| AT                                 | 06                       | - | 12                                       | S                     | A                                    | - XXXX                                                                                                                                              |
| Amphenol                           | 06 - Plug<br>04 - Recep. |   | # of Positions<br>2, 3, 4, 6<br>08 or 12 | S - Socket<br>P - Pin | Key Position<br>A, B, C, D<br>X1, X2 | Modifications<br>MMXX - Mixed Modification (Consult Sales Rep.)<br>RD01 - Reduced Diameter Seal<br>EC01 - End Cap<br>SS01 - Solid Seal with End Cap |

# AT Series™ Plugs, Wedges and Connectors - 12 and 18 Position

**Note:** The views shown below are Mating Face Views

| Plug             |                                                                                   | Wedge                                                                             |
|------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| 12 POSITION (X1) | P/N: AT06-12SX1                                                                   | P/N: AW12S                                                                        |
|                  |  |  |

| Plug             |                                                                                    | Wedge                                                                               |
|------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| 12 POSITION (X2) | P/N: AT06-12SX2                                                                    | P/N: AW12S                                                                          |
|                  |  |  |

| Plug (Fully assembled. Includes Wedge and End Cap) |                                                                                   |
|----------------------------------------------------|-----------------------------------------------------------------------------------|
| 18 POSITION                                        | P/N: AT16-18SB-K004                                                               |
|                                                    |  |

## AT Series™ Optional Modifications with Part Numbering Sequencing

|                       |                                             |                                                           |                                   |                                                    |
|-----------------------|---------------------------------------------|-----------------------------------------------------------|-----------------------------------|----------------------------------------------------|
| <u>AT</u><br>Amphenol | <u>XX</u> -<br>06 - Plug<br>04 - Receptacle | <u>XX</u><br># of Positions<br>2, 3, 4, 6<br>08, 12 or 18 | <u>X</u><br>S - Socket<br>P - Pin | <u>X</u> -<br>Key Position<br>A, B, C, D<br>X1, X2 |
| <u>AT</u><br>Amphenol | <u>XX</u> -<br>06 - Plug<br>04 - Receptacle | <u>XX</u><br># of Positions<br>2, 3, 4, 6<br>08, 12 or 18 | <u>X</u><br>S - Socket<br>P - Pin | <u>X</u> -<br>Key Position<br>A, B, C, D<br>X1, X2 |
| <u>AT</u><br>Amphenol | <u>XX</u> -<br>06 - Plug<br>04 - Receptacle | <u>XX</u><br># of Positions<br>2, 3, 4, 6<br>08, 12 or 18 | <u>X</u><br>S - Socket<br>P - Pin | <u>X</u> -<br>Key Position<br>A, B, C, D<br>X1, X2 |
| <u>AT</u><br>Amphenol | <u>XX</u> -<br>06 - Plug<br>04 - Receptacle | <u>XX</u><br># of Positions<br>2, 3, 4, 6<br>08, 12 or 18 | <u>X</u><br>S - Socket<br>P - Pin | <u>X</u> -<br>Key Position<br>A, B, C, D<br>X1, X2 |

|                                                                                                |                                                                                       |
|------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| <u>EC01</u><br><b>END CAP</b><br>• End Cap<br>• Standard Seal<br>(.088 - .145 range)           |   |
| <u>RD01</u><br><b>REDUCED DIAMETER</b><br>• Reduced Seal<br>(.053 - .120 range)                |  |
| <u>MM01</u><br><b>MIXED MODIFICATION</b><br>• End Cap<br>• Reduced Seal<br>(.053 - .120 range) |  |
| <u>SS01</u><br><b>SOLID SEAL</b><br>• End Cap<br>• Solid Seal                                  |  |

**Note:** All dimensions are in inches.



Customized Colors are available in a wide range allowing you complete control over your project. To the left is a sampling of the available colors. Contact a Sales Representative for more details.

# What are AHD Series™ Connectors?

Amphenol Sine Systems AHD Series™ Connectors 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.

Amphenol Sine Systems AHD Series™ Connectors offer both a smooth, non-sealing option for controlled applications, as well as an environmentally-sealed, threaded option for more demanding applications. The same applies for our DiagnosticGrade™ Cable Assemblies in that we provide both options for our customers.

## Features and Advantages

|                              |                                            |
|------------------------------|--------------------------------------------|
| INTEGRATED ALIGNMENT KEYS    | Tactile verification for blind mating      |
| STRONG THERMOPLASTIC HOUSING | Extended service life                      |
| OPERATING TEMPERATURE RANGE  | -55°C TO +125°C - Wide range compatibility |
| ECONOMICALLY SOUND           | Low overall cost                           |
| RoHS COMPLIANT               | Environmentally friendly                   |
| UL Approval                  | Certified and compliant                    |

## Performance Criteria

|                        |                                                                                                                                                           |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| CONTACT CURRENT RATING | <b>DiagnosticGrade™ / Military Style:</b> At +125°C, continuous, less thru wire: #12 contact = 25 amps max. current; #16 contact = 13 amps max. current   |
| PHYSICAL SHOCK         | <b>Military Style:</b> No locking, unmating or other unsatisfactory result after 50 g's in each of three mutually perpendicular planes.                   |
| DIELECTRICAL STRENGTH  | <b>DiagnosticGrade™ / Military Style:</b> 1500 volts minimum                                                                                              |
| VIBRATION              | <b>Military Style:</b> Maintains continuity and exhibits no mechanical or physical damage after vibration. (20 g's at 10-2000 Hz)                         |
| TEMPERATURE            | <b>DiagnosticGrade™ / Military Style:</b> Operating temperature range: -55°C TO +125°C at rated current.                                                  |
| INSULATION RESISTANCE  | <b>DiagnosticGrade™ / Military Style:</b> 1000 megohms minimum at 25°C.                                                                                   |
| DURABILITY             | <b>DiagnosticGrade™ / Military Style:</b> No electric or mechanical defects after 100 cycles of engagement and disengagement.                             |
| CORROSION RESISTANCE   | <b>DiagnosticGrade™ / Military Style:</b> Connectors show no evidence of corrosion after exposure to 48 hours of salt spray per MIL-STD 1344 method 1001. |

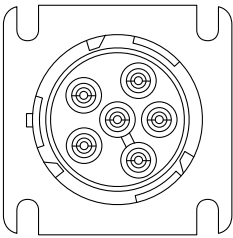
## Product Material

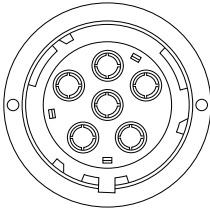
|          |                          |
|----------|--------------------------|
| HOUSINGS | Thermoplastic            |
| SEALS    | Silicone Elastomer       |
| CONTACTS | Copper Alloy/Gold plated |

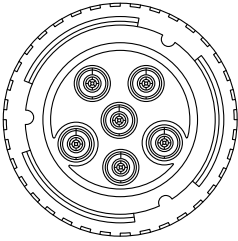


# AHD Series™ Receptacles, Plugs and Caps - 6 Pin

The AHD Series™ products listed below provide a quick connection between Amphenol Sine Systems 6 Pin products and equivalent industry 6 Pin products.

|                             |                                                                                   |                                                                                   |
|-----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Receptacle - Military Style |                                                                                   |                                                                                   |
| P/N: AHD10-6-12P-L          |                                                                                   |                                                                                   |
| 6 POSITION                  |  |  |

|                                                                                    |  |                                                                                     |
|------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------------|
| Smooth Shell Plug - DiagnosticGrade™                                               |  |                                                                                     |
| P/N: AHD16-6-12S (available w/out Rear Seal)                                       |  |                                                                                     |
|  |  |  |

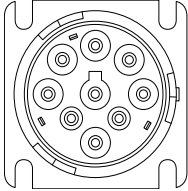
|                                    |                                                                                    |                                                                                    |
|------------------------------------|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
| Locking Ring Plug - Military Style |                                                                                    |                                                                                    |
| P/N: AHD16-6-12SB010               |                                                                                    |                                                                                    |
| 6 POSITION                         |  |  |

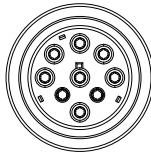
|                                                                                      |  |
|--------------------------------------------------------------------------------------|--|
| Receptacle Cap - Military Style                                                      |  |
| P/N: AHDC-16-6                                                                       |  |
|  |  |

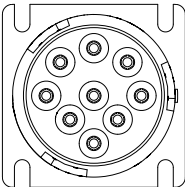


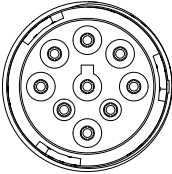
# AHD Series™ Receptacles and Plugs - 9 Pin (J1939)

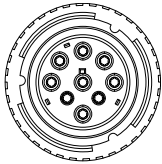
The AHD Series™ products listed below provide a quick connection between Amphenol Sine Systems 9 Pin products and equivalent industry 9 Pin products.

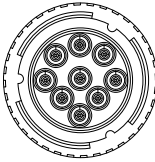
|                             |                                                                                   |                                                                                   |
|-----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Receptacle - Military Style |                                                                                   |                                                                                   |
| P/N: AHD10-9-1939P          |                                                                                   |                                                                                   |
| 9 POSITION                  |  |  |

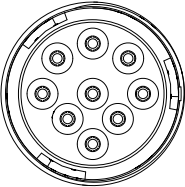
|                                                                                    |  |                                                                                     |
|------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------------|
| Smooth Shell Plug - DiagnosticGrade™                                               |  |                                                                                     |
| P/N: AHD17-9-1939S (available w/out Rear Seal)                                     |  |                                                                                     |
|  |  |  |

|                  |                                                                                    |                                                                                    |
|------------------|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
| Receptacle       |                                                                                    |                                                                                    |
| P/N: AHD10-9-96P |                                                                                    |                                                                                    |
| 9 POSITION       |  |  |

|                                                                                     |  |                                                                                      |
|-------------------------------------------------------------------------------------|--|--------------------------------------------------------------------------------------|
| In-line Receptacle                                                                  |  |                                                                                      |
| P/N: AHD14-9-1939P                                                                  |  |                                                                                      |
|  |  |  |

|                                    |                                                                                     |                                                                                     |
|------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Locking Ring Plug - Military Style |                                                                                     |                                                                                     |
| P/N: AHD16-9-1939S                 |                                                                                     |                                                                                     |
| 9 POSITION                         |  |  |

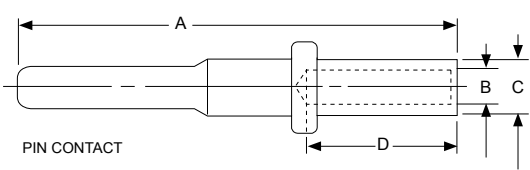
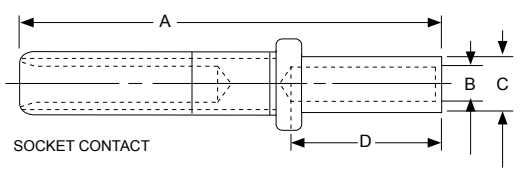
|                                                                                      |  |                                                                                       |
|--------------------------------------------------------------------------------------|--|---------------------------------------------------------------------------------------|
| Locking Ring Plug (Non J1939) - Military Style                                       |  |                                                                                       |
| P/N: AHD16-9-96S                                                                     |  |                                                                                       |
|  |  |  |

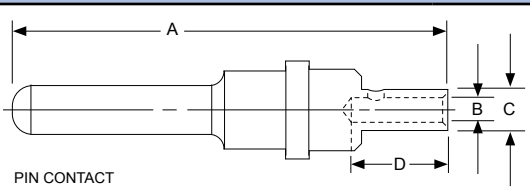
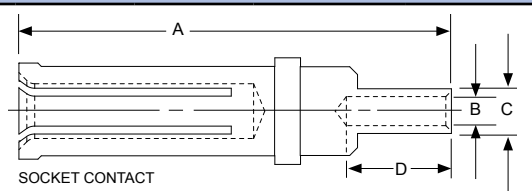
|                    |                                                                                     |                                                                                     |
|--------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| In-line Receptacle |                                                                                     |                                                                                     |
| P/N: AHD14-9-96P   |                                                                                     |                                                                                     |
| 9 POSITION         |  |  |

|                                                                                       |  |
|---------------------------------------------------------------------------------------|--|
| Receptacle Cap - Military Style                                                       |  |
| P/N: AHDC-16-9                                                                        |  |
|  |  |

## Pin Contacts, Socket Contacts and Tooling

The AHD Series™ products listed below provide a quick connection between Amphenol Sine Systems 6 Pin products and equivalent industry 6 Pin products. **Note:** All dimensions are in Inches.

| Military-Style Solid Crimp                                                                       |               |                                                                                                      |          |          |          |                     |                          |
|--------------------------------------------------------------------------------------------------|---------------|------------------------------------------------------------------------------------------------------|----------|----------|----------|---------------------|--------------------------|
| <br>PIN CONTACT |               | <br>SOCKET CONTACT |          |          |          |                     |                          |
| Part Numbers<br>(Fits AT Series™ and AHD Series™)                                                | Size/<br>Type | A<br>Max                                                                                             | B<br>Min | C<br>Max | D<br>Min | Wire Gauge<br>Range | Recomm'd<br>Strip Length |
| AT60-202-1631 (Gold)<br>AT60-202-16141 (Nickel)                                                  | 16 PIN        | .821                                                                                                 | .066     | .103     | .250     | 16 and 18           | .250-.312                |
| AT62-201-1631 (Gold)<br>AT62-201-16141 (Nickel)                                                  | 16 SOC        | .759                                                                                                 | .066     | .103     | .250     | 16 and 18           | .250-.312                |
| Part Numbers<br>(Fits AHD Series™ only)                                                          | Size/<br>Type | A<br>Max                                                                                             | B<br>Min | C<br>Max | D<br>Min | Wire Gauge<br>Range | Recomm'd<br>Strip Length |
| AT60-220-1231 (Gold)                                                                             | 12 PIN        | .821                                                                                                 | .098     | .151     | .250     | 12 and 14           | .250-.312                |
| AT62-210-1231 (Gold)                                                                             | 12 SOC        | .759                                                                                                 | .098     | .151     | .250     | 12 and 14           | .250-.312                |

| DiagnosticGrade™ - Solid Crimp                                                                    |               |                                                                                                       |          |          |          |                     |                          |
|---------------------------------------------------------------------------------------------------|---------------|-------------------------------------------------------------------------------------------------------|----------|----------|----------|---------------------|--------------------------|
| <br>PIN CONTACT |               | <br>SOCKET CONTACT |          |          |          |                     |                          |
| Part Numbers<br>(Fits AT Series™ and AHD Series™)                                                 | Size/<br>Type | A<br>Max                                                                                              | B<br>Min | C<br>Max | D<br>Min | Wire Gauge<br>Range | Recomm'd<br>Strip Length |
| 65-54756 (Gold)                                                                                   | 16 PIN        | .826                                                                                                  | .047     | .078     | .165     | 20                  | .250-.303                |
| 65-54757 (Gold)                                                                                   | 16 SOC        | .763                                                                                                  | .047     | .078     | .165     | 20                  | .250-.303                |
| Part Numbers<br>(Fits AHD Series™ only)                                                           | Size/<br>Type | A<br>Max                                                                                              | B<br>Min | C<br>Max | D<br>Min | Wire Gauge<br>Range | Recomm'd<br>Strip Length |
| 65-54749 (Gold)                                                                                   | 12 PIN        | .826                                                                                                  | .047     | .078     | .165     | 20                  | .250-.303                |
| 65-54748 (Gold)                                                                                   | 12 SOC        | .763                                                                                                  | .047     | .078     | .165     | 20                  | .250-.303                |



Listed below are quick reference illustrations for RockSolid™ and stamped and formed crimp options, as well as the Amphenol Sine Systems part numbers.

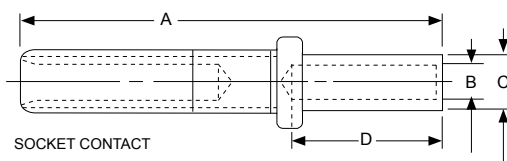


## Hyperbolic Contacts

- Longer contact life
- Lower contact resistance
- Immunity to shock and vibration
- Low insertion and extraction forces
- Contact area extends 360° around pins

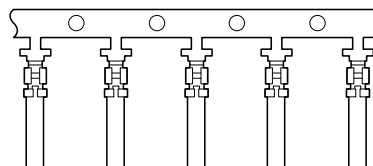
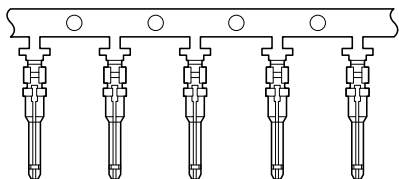


## RockSolid™ Gold Contacts



| Part Numbers<br>(Fits AT Series™ and AHD Series™) | Size/<br>Type | A<br>Max | B<br>Min | C<br>Max | D<br>Min | AWG Range | Recomm'd<br>Strip Length |
|---------------------------------------------------|---------------|----------|----------|----------|----------|-----------|--------------------------|
| 65-54942-14                                       | 16 SOC        | .759     | .073     | .106     | .250     | 14        | .250-.312                |
| 65-54942-16                                       | 16 SOC        | .759     | .068     | .103     | .250     | 16        | .250-.312                |
| 65-54942-20                                       | 16 SOC        | .759     | .048     | .078     | .172     | 20        | .250-.312                |

## Pins and Contacts - Size 16 (Stamped and Formed)



| Part Numbers | AWG Range | Recomm'd Strip Length | Material     | Part Numbers | AWG Range | Recomm'd Strip Length | Material |
|--------------|-----------|-----------------------|--------------|--------------|-----------|-----------------------|----------|
| AT60-14-0122 | 14-16     | .125 - .175           | Nickel       | AT62-14-0122 | 14-16     | .125 - .175           | Nickel   |
| AT60-14-0144 |           |                       | Gold         | AT62-14-0144 |           |                       | Gold     |
| AT60-16-0122 | Nickel    |                       | AT62-16-0122 | 16-18        | Nickel    |                       |          |
| AT60-16-0144 | Gold      |                       | AT62-16-0144 |              | Gold      |                       |          |
| AT60-16-0622 | 18-20     |                       | Nickel       | AT62-16-0622 | 18-20     |                       | Nickel   |
| AT60-16-0644 |           |                       | Gold         | AT62-16-0644 |           |                       | Gold     |

## Crimp Die (Stamped & Formed Contacts)

P/N: \*MFX 3950 (Size 16)

P/N: \*MFX 3953 (Size 16 and 20)

\*Consult the Factory for availability



## Sealing Plug (Size 16)

P/N: A114017



## Plug Assembly - Contact and Wedge Insertion



1. Grasp crimped contact approx. one inch behind the contact barrel.



2. Hold connector with rear grommet facing you.



3. Push contact straight into connector until a 'click' is felt. A slight tug will confirm placement.



4. Insert wedge into connector.



5. A 'click' will be felt when the wedge is fully installed.

## Plug Assembly - Contact and Wedge Removal



1. Remove wedge by inserting a flathead screwdriver head underneath the lip of the wedge.



2. Twist the flathead screwdriver until wedge 'pops' out of connector.



3. Use the same flathead screwdriver to remove contact inside connector.

### Optional - Contact and Wedge Removal Tool

P/N: ATRT-100



## Receptacle Assembly - Contact and Wedge Insertion



1. Grasp crimped contact approx. one inch behind the contact barrel.



2. Hold connector with rear grommet facing you.



3. Push contact straight into receptacle until a 'click' is felt. A slight tug will confirm placement.



4. Insert wedge into receptacle.



5. A 'click' will be felt when the wedge is fully installed.

## Receptacle Assembly - Contact and Wedge Removal



1. Remove wedge by inserting a hook into an opening of the wedge.



2. Pull until wedge 'pops' out of receptacle.



3. Remove wedge.

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