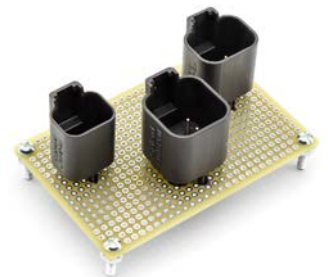


# A Series

## Thermoplastic Connectors

Standard products.  
Custom solutions.





# We Are Amphenol

## Global Interconnect Solution Supplier

For over 80 years Amphenol has enjoyed success as the interconnection technology provider of choice for industry leading companies around the world. Our organization works with leading manufacturers across a wide range of applications - including Energy Generation & Distribution, Transportation, Heavy Equipment, Factory Automation, Wireless Outdoor, Information Technology and Data Communications Equipment, Mobile Devices, Mobile Networks, Broadband Communication, Military and Commercial Aerospace, Industrial, Automotive and Chip Card Readers - enabling smarter, faster and better technologies to connect products to customer solutions.

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 9001:2008 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.

We are one of the largest interconnect solution suppliers in the world and supply a wide range of product solutions globally. The industrial market footprint of Amphenol covers more than 30 countries.



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# Standard products. Custom solutions.

Our A Series™ product lines, which include AT, ATP, ATM and AHD Series™, have key placement in all areas of Heavy Duty Equipment, Agriculture, Marine, Automotive, Military, Alternative Energy and other demanding interconnect applications. Based on our superior build quality, high-performance capabilities and having been developed to be compatible with all other existing standard products industry-wide, our A Series™ products are perfect alternatives for you.

We can custom design, engineer and manufacture 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.



# Features and Benefits

## Plastic Rectangular & Circular Connectors

Amphenol's plastic rectangular & circular connectors encompass a wide range of products serving a variety of industries

## High Performance / Cost Effective

We can custom design, engineer and manufacture 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.

## Industry Standard

Our superior built quality, high-performance connectors have been developed to be compatible with all other existing standard products industry-wide

## Environmental

A Series connectors span the gap between controlled environments to harsh conditions. Rated IP67+

## Standards

A Series connectors are tested to perform to the highest industry standards. See performance standards for more information.



# A Series™ Amphenol Transportation

## Typical Applications



AUTOMOTIVE



HEAVY EQUIPMENT



AGRICULTURE



POWER GENERATION



MARINE



Diagnostics



MINING



MASS TRANSIT



RAILWAY



MOBILE EQUIPMENT



HARSH ENVIRONMENT

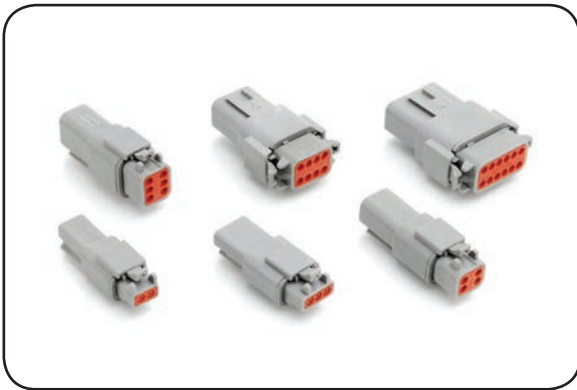


WATER RESISTANT

# A Series Amphenol Transportation

## Product Overview

Amphenol's A Series™ connectors encompass a wide range of products serving a variety of industries. With applications in Heavy Duty, Transportation, Marine, Diagnostic, Military, Alternative Energy and Agricultural industries, as well as spanning the gap between controlled to harsh environmental conditions, our A Series™ connectors keep you connected with confidence. While our mission is to always provide the best economic alternatives to today's existing standard connector markets, it is through our constant efforts to improve on those standard products that truly display our innovative product designs.



### ATM Series™ See page 21 2, 3, 4, 6, 8 and 12 positions available

- 16-22AWG, 7.5A, Size 20
- High-performance, cost-effective
- Superior environmental seal retention
- Compatible with existing standard products industry-wide.



### AT Series™ See page 41 2, 3, 4, 6, 8 and 12 positions available

- 14-20AWG, 13A, Size 16
- High-performance, cost-effective
- Superior environmental seal retention
- RockSolid™ Contact technology (optional)
- Compatible with existing standard products industry-wide



### ATP Series™ See page 87 2 and 4 position available

- 10-14AWG, 25A, Size 12
- High-performance, cost-effective
- Superior environmental seal retention capabilities
- Compatible with existing standard products industry-wide



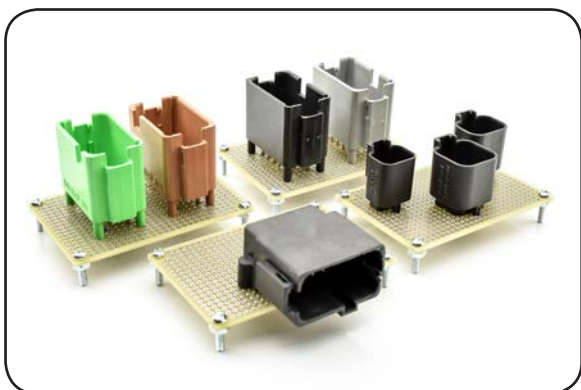
# Standard Products. Custom Solutions.



## Panel | Mate™ See page 81

2, 3, 4, 6, 8 and 12 Position / Size 16, 13A  
13 Position / Size 12, 25A; Size 16, 13A

- large mounting options
- Mates with AT/ATP Series Plugs
- Harsh environment applications



## Boardlock™ See page 75

2, 3, 4, 6, 8 and 12 Position / Size 16, 13A  
13 Position / Size 12, 25A; Size 16, 13A

- Environmentally sealed thermoplastic connection system
- Perfect for power or data signal applications
- Compatible with existing standard products industry-wide



## AHD Series™ See page 105

6 and 9 positions available

- 6 position: 10-14AWG, 25A, Size 12
- 9 position: 14-20AWG, 13A, Size 16
- High-performance, cost-effective
- Ideal for controlled/uncontrolled environmental conditions
- Compatible with existing standard products industry-wide



## DuraMate™ See page 127

Available in Size 24 with 7, 19, 21, 23, 27, 29, 31 and 47 Position Insert Arrangements and Size 18 with 14 Positions

- 2,3,4,6,8,12 and 13 Positions Size 16 / 13A
- 14-20AWG, 13A, Size 16
- Polarized for proper mating of connector halves
- High density signal and mixed power insert configurations
- High Current configurations incorporating RADSOK contacts.

## Product Overview (con't)



**Multi | Mate™** See page 179  
Trunk (Size 12, 25A Max) and  
Drop (Size 16, 13A Max),  
or  
Trunk (Size 16, 13A Max) and  
Drop (Size 16, 13A Max)

- Overmolded "Plug & Play" connections for power, signal and data
- Mates with AT/ATP Series Plugs
- Heavy-duty applications



**HydroNet™** See page 175  
Two 4 Pin AT/DT Interfaces

- Multi-Hub Adapter
- Provides flexibility and reliability when connecting multiple devices to NMEA 2000 network
- Powers the NMEA network in a rugged compact and environmentally sealed package



**Magna | Mate™** See page 183  
2 Positions Heavy Duty High Power Connector

- Designed to withstand the extreme conditions
- Features Amphenol's RADSOK contact technology
- Constructed of heavy-duty thermoplastic
- Able to withstand extreme vibration and mechanical shock
- IP67 and IP69k rated



**ATC Series™** See page 121  
Cylindrical, Thermoplastic, Harsh Environment,  
Power Connector

- Jam nut and square flange mounting styles solution
- Quick mating and unmating reverse bayonet coupling
- Environmentally sealed



**ATHD Series™** See page 125  
1 Positions Heavy Duty High Power Connector

- Size 8 crimp contacts are rated to 70A with RADSOK technology
- Size 12 crimp contacts are rated to 35A with RADSOK technology
- Constructed of heavy-duty thermoplastic

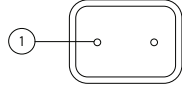
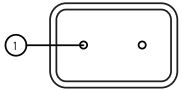
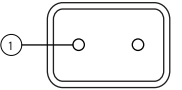

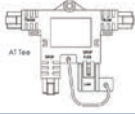
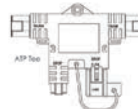
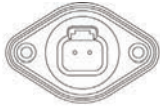
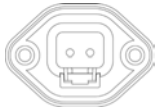
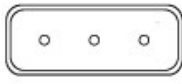
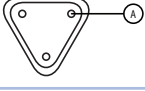
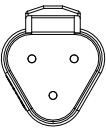
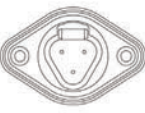
# Custom Cable and Assemblies

Custom Cable Assemblies are available for any application, and carry with them the capabilities of being overmolded in any size or length necessary. We have many specialized configurations. For more information, please contact a Sales Representative at 1-800-394-7732.



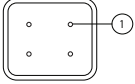
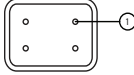
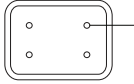

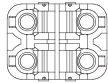

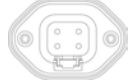
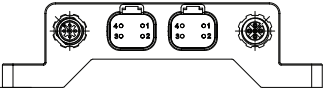
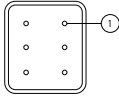
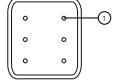
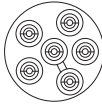
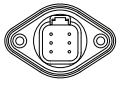
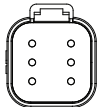
# Insert Arrangements - Faceviews

# 2-3 Positions

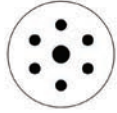
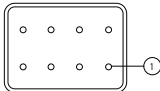
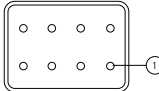
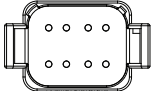

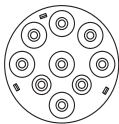

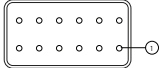
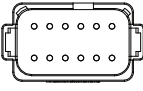
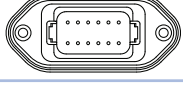
| No. of Positions | Series  |   |  |       |                      |
|------------------|---|---|--|-------|----------------------|
|                  | ATM   | AT  | ATP  | AHD   | AHDP<br>Dura   Mate™ |
| Contact Size(s)  | 20  | 16  | 12   | 12,16 | 12,16,20             |
| 2 POSITIONS      |    |    |    |       |                      |
|                  | STANDARD<br>2 POSITIONS / 7.5A<br>page 26   | STANDARD<br>2 POSITIONS / 13A<br>page 46  | STANDARD<br>2 POSITIONS / 25A<br>page 92   |       |                      |
|                  |   |    |  |       |                      |
|                  |   | BOARDLOCK<br>2-13 POSITIONS / 13A<br>page 77  |  |       |                      |
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|                  |   | MULTIMATE<br>2,4 POSITIONS / 13A, 25A<br>page 181                                   | MULTIMATE<br>2,4 POSITIONS / 13A, 25A<br>page 181                                    |       |                      |
|                  |   |  |  |       |                      |
|                  | PANELMATE<br>2-13 POSITIONS / 13A<br>page 81  | PANELMATE<br>2,4,13 POSITION / 16A,<br>25A page 99                                  |  |       |                      |
| 3 POSITIONS      |  |  |  |       |                      |
|                  | STANDARD<br>3 POSITIONS / 7.5A<br>page 27   | STANDARD<br>3 POSITIONS / 13A<br>page 47  |  |       |                      |
|                  |   |  |  |       |                      |
|                  |   | BOARDLOCK<br>2-13 POSITIONS / 13A<br>page 77  |  |       |                      |
|                  |  |   |  |       |                      |
|                  | PANELMATE<br>2-13 POSITIONS / 13A<br>page 81  |   |  |       |                      |

# Insert Arrangements - Faceviews

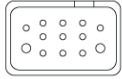
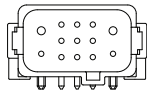
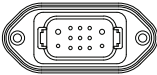
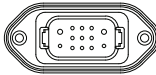
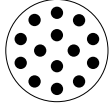
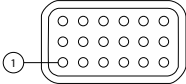



# 4-6 Positions

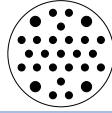


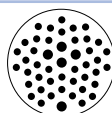
|                  |   | Series  |   |  |   |                      |
|------------------|---|---|---|--|---|----------------------|
| No. of Positions |   | ATM   | AT  | ATP  | AHD   | AHDP<br>Dura   Mate™ |
| Contact Size     |   | 20  | 16  | 12   | 12,16   | 12,16,20             |
| 4 POSITIONS      |    |    |   |  |   |                      |
|                  |   | STANDARD<br>4 POSITIONS / 7.5A<br>page 28   | STANDARD<br>4 POSITIONS / 13A<br>page 48  | STANDARD<br>4 POSITIONS / 25A<br>page 93   |   |                      |
|                  |   |   |    |  |   |                      |
|                  |   |   | BOARDLOCK<br>2-13 POSITIONS / 13A<br>page 77  |  |   |                      |
|                  |   |   |   |  |   |                      |
|                  |   |   | MULTIMATE<br>2.4 POSITIONS / 13A, 25A<br>page 181                                   |  |   |                      |
|                  |   |   |  |  |   |                      |
|                  |   | PANELMATE<br>2-13 POSITIONS / 13A<br>page 81  | PANELMATE<br>2.4,13 POSITIONS / 13A,<br>25A page 99                                 |  |   |                      |
|                  |   |  |   |  |   |                      |
|                  |   | HYDRONET<br>4 POSITIONS AT NEEMA<br>ADAPTER on page 177                             |   |  |   |                      |
| 6 POSITIONS      |  |  |   |  |  |                      |
|                  |   | STANDARD 6 POSITIONS<br>7.5A on page 29   | STANDARD 6 POSITIONS<br>13A on page 49  |  | STANDARD 6 POSITIONS<br>25A on page 110   |                      |
|                  |   |   |  |  |   |                      |
|                  |   |   | PANELMATE<br>6 POSITIONS / 13A<br>on page 49  |  |   |                      |
|                  |   |  |   |  |   |                      |
|                  |   | BOARDLOCK<br>2-13 POSITIONS / 13A<br>page 77  |   |  |   |                      |




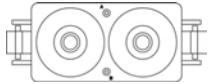
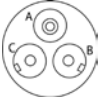
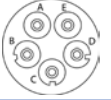

| No. of Positions | Series  |   |     |   |   |
|------------------|---|---|-----|---|---|
|                  | ATM   | AT  | ATP | AHD   | AHDP<br>Dura   Mate™  |
| Contact Size     | 20  | 16  | 12  | 12,16   | 12,16,20  |
| 7 POSITIONS      |   |   |     |   |  |
|                  |   |   |     |   | DURAMATE<br>7 POSITIONS / 25A,80A<br>page 133                                       |
| 8 POSITIONS      |    |    |     |   |   |
|                  | STANDARD<br>8 POSITIONS / 7.5A<br>page 30   | STANDARD<br>8 POSITIONS / 13A<br>page 50  |     |   |   |
|                  |   |    |     |   |   |
|                  |   | BOARDLOCK<br>2-13 POSITIONS / 13A<br>page 77  |     |   |   |
|                  |   |  |     |   |   |
|                  |   | PANELMATE<br>2-13 POSITIONS / 13A<br>page 81  |     |   |   |
| 9 POSITIONS      |   |   |     |  |   |
|                  |   |   |     | STANDARD<br>9 POSITIONS / 13A on<br>page 111  |   |
| 12 POSITIONS     |  |  |     |   |   |
|                  | STANDARD<br>12 POSITIONS / 7.5A<br>page 32  | STANDARD<br>12 POSITIONS / 13A<br>page 52   |     |   |   |
|                  |   |  |     |   |   |
|                  |   | BOARDLOCK<br>2-13 POSITIONS / 13A<br>page 77  |     |   |   |
|                  |   |  |     |   |   |
|                  |   | PANELMATE<br>2-13 POSITIONS / 13A<br>page 81  |     |   |   |



| No. of Positions | Series                                       |   |  |       |   |
|------------------|--|---|--|-------|---|
|                  | ATM  | AT  | ATP  | AHD   | AHDP<br>Dura   Mate™  |
| Contact Size     | 20   | 16  | 12   | 12,16 | 12,16,20  |
| 13 POSITIONS     |  |    |  |       |   |
|                  |  | STANDARD<br>13 POSITIONS / 13A<br>page 54   |  |       |   |
|                  |  |    |  |       |   |
|                  |  | BOARDLOCK<br>2-13 POSITION / 13A,25A<br>page 77                                     |  |       |   |
|                  |  |    |  |       |   |
|                  | PANELMATE<br>2-13 POSITIONS / 13A<br>page 81 | PANELMATE<br>2,4,13 POSITIONS / 16A,<br>25A, page 99                                |  |       |   |
| 14 POSITIONS     |  |   |  |       |  |
|                  |  |   |  |       | DURAMATE<br>14 POSITIONS / 13A<br>page 135  |
| 18 POSITIONS     |  |  |  |       |   |
|                  |  | STANDARD<br>18 POSITIONS / 13A<br>page 54   |  |       |   |
| 19 POSITIONS     |  |   |  |       |  |
|                  |  |   |  |       | DURAMATE<br>14 POSITIONS / 13A<br>page 135  |
| 21 POSITIONS     |  |   |  |       |  |
|                  |  |   |  |       | DURAMATE<br>21 POSITIONS / 25A,13A<br>page 147  |
| 23 POSITIONS     |  |   |  |       |  |
|                  |  |   |  |       | DURAMATE<br>23 POSITIONS /13A<br>page 151   |

| No. of Positions | Series |    |     |       |   |
|------------------|--------|----|-----|-------|---|
|                  | ATM    | AT | ATP | AHD   | AHDP<br>Dura   Mate™  |
| Contact Size     | 20     | 16 | 12  | 12,16 | 12,16,20  |
| 27 POSITIONS     |        |    |     |       | <br>DURAMATE<br>27 POSITIONS / 25A,13A<br>page 153       |
| 29 POSITIONS     |        |    |     |       | <br>DURAMATE<br>29 POSITIONS<br>7.5A,13A,25A<br>page 155 |
| 31 POSITIONS     |        |    |     |       | <br>DURAMATE<br>31 POSITIONS / 13A<br>page 159           |
| 47 POSITIONS     |        |    |     |       | <br>DURAMATE<br>47 POSITIONS /<br>7.5A,13A<br>page 165 |

# High Power & Standard Insert Arrangements - Faceviews 1-9 POSITIONS

| No. of Positions          | Series  |   |   |
|---------------------------|---|---|---|
|                           | MAGNA MATE  | ATC   | ATHD  |
| Contact Size(s)           | 3.6mm, 6mm, 8mm   | 16  | 8,12  |
| 1 POSITIONS<br>High Power |   |   |  <p>ATHD<br/>1 POSITION / 25A, 35A,<br/>60A, 70A<br/>page 125</p> |
|                           |  <p>MAGNAMATE<br/>2 POSITIONS / 86A, 120A,<br/>180A<br/>page 183</p> |   |   |
| 3 POSITIONS               |   |  <p>ATC<br/>3 POSITIONS / 13A<br/>page 121</p>   |   |
|                           |   |  <p>ATC<br/>5 POSITIONS / 13A<br/>page 121</p> |   |
| 5 POSITIONS               |   |  <p>ATC<br/>9 POSITIONS / 13A<br/>page 121</p> |   |
|                           |   |   |   |
| 9 POSITIONS               |   |   |   |

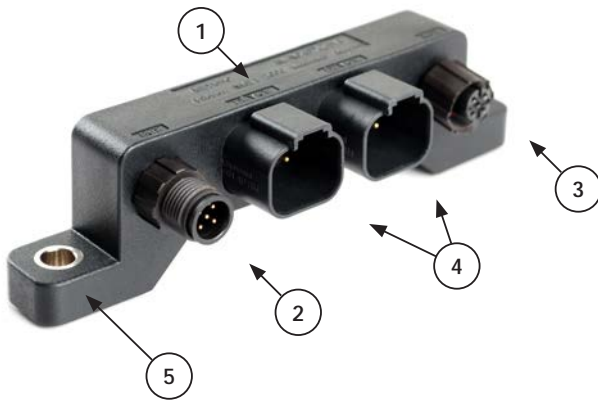
Introducing

# Hydro|Net™

- Provides OEM's flexibility and increased reliability when connecting multiple devices to NMEA 2000 network
- Two 4 pin AT/DT interfaces easily adapts devices to field proven, sealed, and serviceable electrical connections
- Powers the NMEA network in a rugged, compact, and environmentally sealed package
- Factory assembled for true Plug and Play capability
- Reduces the need to modify or assemble NMEA connections onto cables
- Allows for customized and built-to-length electrical harnesses eliminating costly coils of unused cable

## Feature & Benefits

- Factory assembled part for simplified mounting
- Environmentally-sealed to IP67 rating
- Rugged thermoplastic overmold (UL94-V0) ①
- Micro NMEA - Male ② and Female ③
- 2 - Four (4) position receptacles (AT/DT) with gold pins ④
- Stainless steel inserts for mounting ⑤



See page 177 for more information

# Connector Solutions

We Are Amphenol

## Series Overview

### ATM™ SERIES

|                         |      |    |
|-------------------------|------|----|
| 2 POSITIONS             | 7.5A | 26 |
| 3 POSITIONS             | 7.5A | 27 |
| 4 POSITIONS             | 7.5A | 28 |
| 6 POSITIONS             | 7.5A | 29 |
| 8 POSITIONS             | 7.5A | 30 |
| 8 POSITIONS- B,C,D KEYS | 7.5A | 31 |
| 12 POSITIONS            | 7.5A | 32 |
| 12 POSITIONS-B,C,D KEYS | 7.5A | 33 |
| STRAIN RELIEF           | 7.5A | 34 |

### AT™ SERIES

|                              |          |    |
|------------------------------|----------|----|
| 2 POSITIONS                  | 13A      | 46 |
| 3 POSITIONS                  | 13A      | 47 |
| 4 POSITIONS                  | 13A      | 48 |
| 6 POSITIONS                  | 13A      | 49 |
| 8 POSITIONS                  | 13A      | 50 |
| 8 POSITIONS- B,C,D           | 13A      | 51 |
| 12 POSITIONS                 | 13A      | 52 |
| 12 POSITIONS- B,C,D,X        | 13A      | 53 |
| 13 POSITIONS                 | 13A, 25A | 54 |
| 18 POSITIONS                 | 13A      | 55 |
| STRAIN RELIEF                | 13A      | 56 |
| REDUCED DIA. SEALS           | 13A      | 58 |
| END CAPS                     | 13A      | 62 |
| END CAPS + REDUCED DIA. SEAL | 13A      | 64 |
| SOLID REAR SEAL              | 13A      | 66 |
| LED OPTIONS                  | 13A/12 V | 68 |
| COVERS                       | 13A      | 70 |
| J-1939                       | 13A      | 71 |
| ADAPTER                      | 13A      | 72 |
| CUSTOM                       |          | 74 |

### AT Board | Lock™

|                |     |    |
|----------------|-----|----|
| 2-13 POSITIONS | 13A | 77 |
|----------------|-----|----|

### AT Panel | Mate™

|                |     |    |
|----------------|-----|----|
| 2-13 POSITIONS | 13A | 81 |
|----------------|-----|----|

### ATP™ SERIES

|                    |     |    |
|--------------------|-----|----|
| 2 POSITIONS        | 25A | 92 |
| 4 POSITIONS        | 25A | 93 |
| END CAPS           | 25A | 94 |
| REDUCED DIA. SEALS | 25A | 95 |

### ATP Panel | Mate™

|                  |          |    |
|------------------|----------|----|
| 2,4,13 POSITIONS | 16A, 25A | 99 |
|------------------|----------|----|

### AHD™ SERIES

|             |     |     |
|-------------|-----|-----|
| 6 POSITIONS | 25A | 110 |
| 9 POSITIONS | 13A | 111 |

# Connector Solutions (con't)

## ATC™ SERIES

|             |     |     |
|-------------|-----|-----|
| RECEPTACLES | 13A | 121 |
|-------------|-----|-----|

## ATHD™ SERIES

|            |        |     |
|------------|--------|-----|
| CONNECTORS | 35-70A | 125 |
|------------|--------|-----|

## Dura | Mate™

|              |              |     |
|--------------|--------------|-----|
| 7 POSITIONS  | 25A,80A      | 131 |
| 14 POSITIONS | 13A          | 135 |
| 9 POSITIONS  | 100A,60A,25A | 137 |
| 18 POSITIONS | 60A, 25A,13A | 139 |
| 18 POSITIONS | 60A, 25A,13A | 141 |
| 19 POSITIONS | 25A,13A      | 143 |
| 21 POSITIONS | 25A,13A      | 147 |
| 23 POSITIONS | 13A          | 149 |
| 27 POSITIONS | 25A,13A      | 153 |
| 29 POSITIONS | 7.5A,13A,25A | 155 |
| 31 POSITIONS | 13A          | 159 |
| 35 POSITIONS | 7.5A,13A     | 161 |
| 35 POSITIONS | 7.5A,13A     | 163 |
| 47 POSITIONS | 7.5A,13A     | 165 |
| ACCESSORIES  |              | 171 |

## Hydro | Net™

|             |                 |     |
|-------------|-----------------|-----|
| 4 POSITIONS | AT NMEA ADAPTER | 177 |
|-------------|-----------------|-----|

## Multi | Mate™

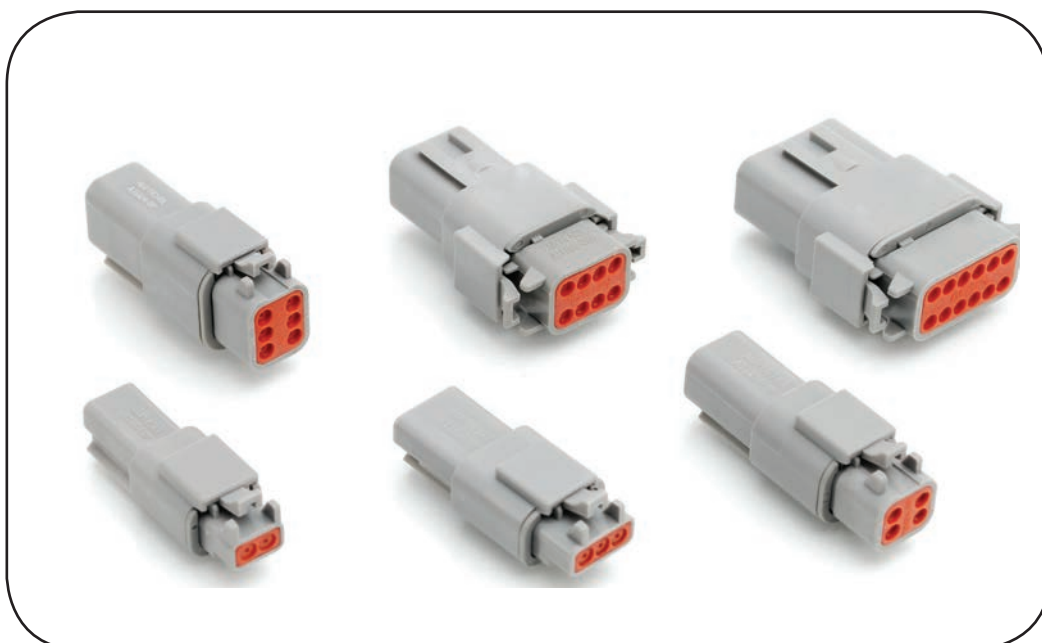
|               |          |     |
|---------------|----------|-----|
| 2,4 POSITIONS | 13A, 25A | 181 |
|---------------|----------|-----|

## Magna | Mate™

|                |      |     |
|----------------|------|-----|
| Overview       |      | 185 |
| 2 POSITIONS    | 180A | 186 |
| 2 POSITIONS    | 180A | 187 |
| Contacts       |      | 190 |
| Technical Data |      | 191 |
| 2 POSITIONS    | 86A  | 195 |



# ATM | Series™



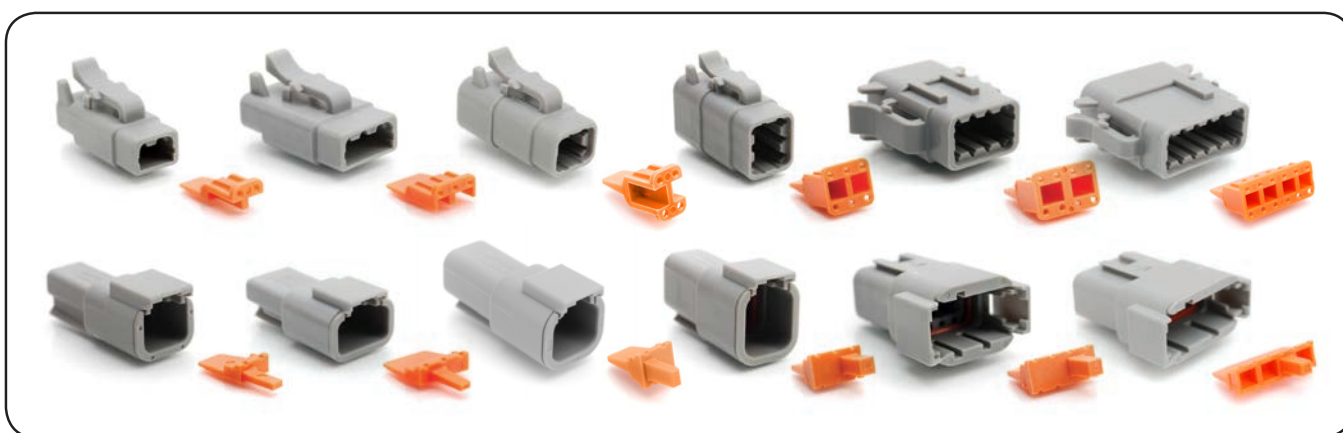
# ATM Series™

## Overview

ATM Series™ connectors are a high-performance, cost-effective solution specifically designed for smaller AWG applications, while still maintaining the strengths of the AT Series™ product line.

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 an internal and rear silicone, multi-sealing perimeter against environmental ingress. Contacts are derived from quality copper alloy to ensure an electrically-reliable connection.

ATM Series™ connectors are compatible with other existing standard products industry-wide.



## Features & Benefits

|                              |   |
|------------------------------|---|
| Current Capacity             | Size 20, 7.5A (max)   |
| Wire Range                   | Size 20 contacts will accept wire ranges of 16 thru 22AWG   |
| Temperature                  | Operating temperature range: -55°C to +125°C at rated current   |
| Dielectric Value             | Meets or exceeds 1500 volts minimum   |
| 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, contacts achieve a minimum pull-out force of 89 lbs.   |
| Connector Retention          | A mated connector subjected to a pulling force by the exiting wire bundle at 89 lbs. times the number of contacts to a maximum of 356 lbs. 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        | 1000 megohms minimum at 25°C  |
| Mating Cycle Durability      | Following 100 cycles of connection engagement and disengagement, degradation either mechanical or electrical is not evident   |

For custom insert configurations, please consult factory

# ATM Series™

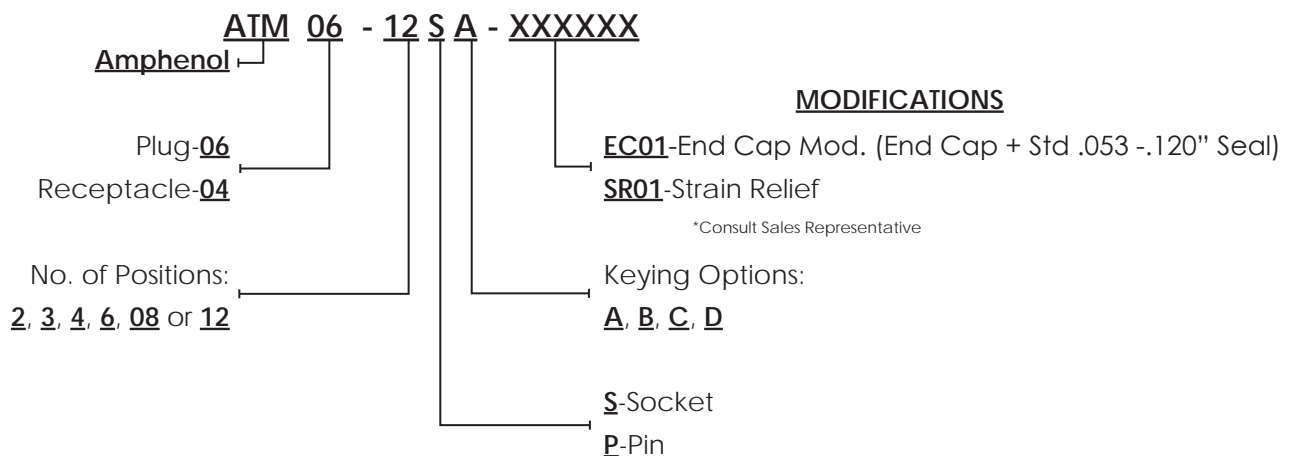
## Features & Benefits, cont.

|                        |   |
|------------------------|---|
| Contact Millivolt Drop | Size 20 (stamped & formed) contacts with 20AWG conductor - 60 mV (solid contact) drop max; 100 mV (stamped & formed contact) drop max at 7.5A test current                            |
| 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 |

## ATM Series™ Part Numbering Sequence



## Plug & Receptacle Body Color Modification

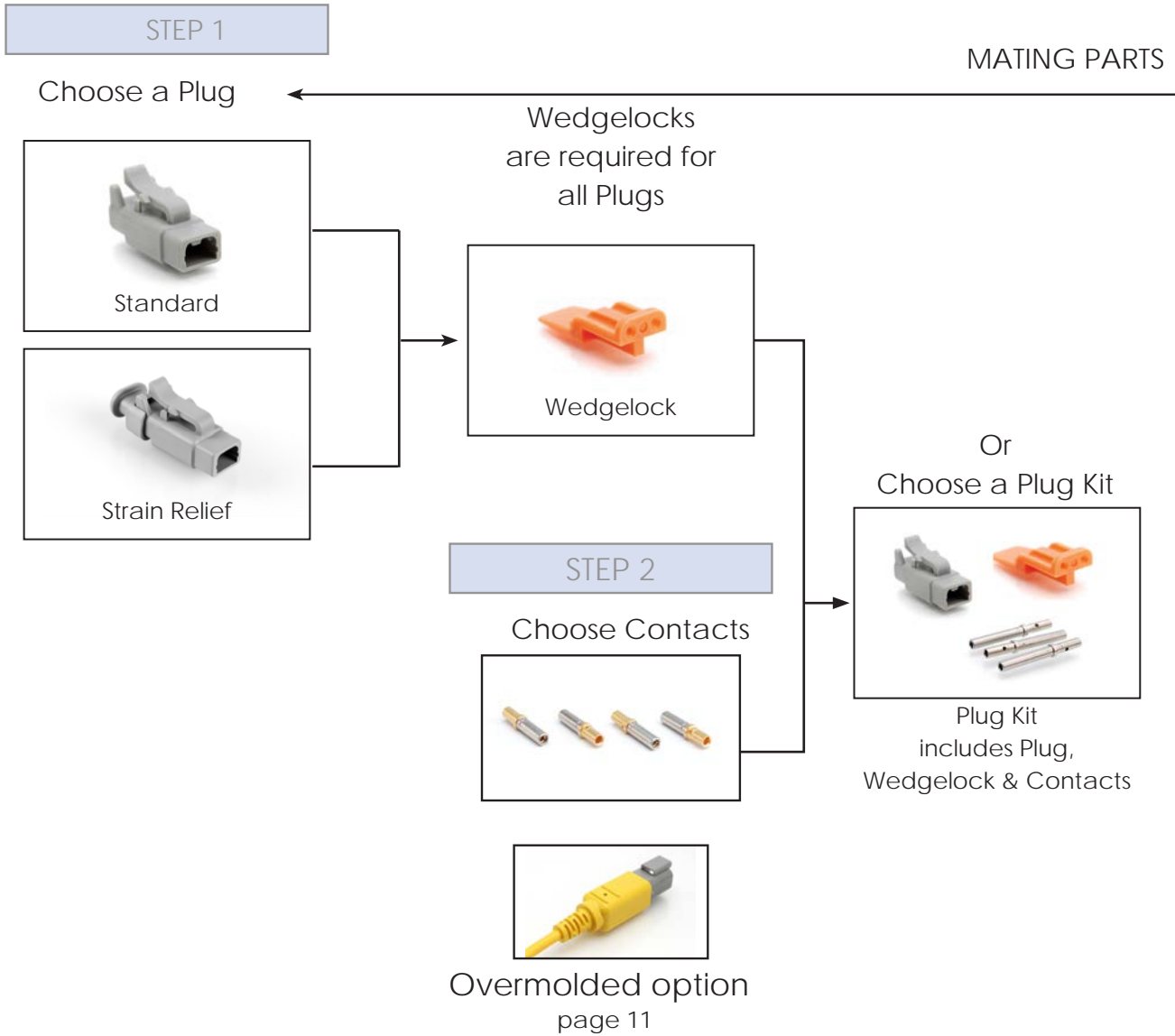
A wide range of standard color options are available for all A Series™ product lines. 8 and 12 position plugs and receptacles require special order. For more information, please contact a Sales Representative.

| Color | Modification Number | Color  | Modification Number |
|-------|---------------------|--------|---------------------|
| Black | XXXX-XXXX-BLK       | Yellow | XXXX-XXXX-YEL       |
| White | XXXX-XXXX-WHT       | Green  | XXXX-XXXX-GRN       |
| Brown | XXXX-XXXX-BRN       | Blue   | XXXX-XXXX-BLU       |
| Grey  | XXXX-XXXX-GRY       | Red    | XXXX-XXXX-RED       |



**NOTE:** The above modifications (-XXXX) are only a sampling of the options available to our customers. For more information, please contact your Sales Representative.

# ATM Series™ Connector Configurations



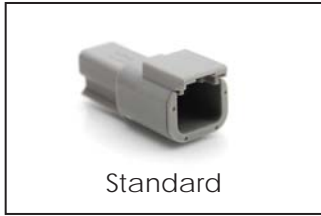
# Need a complete Cable Assembly?

See page 11 or contact the factory for assistance

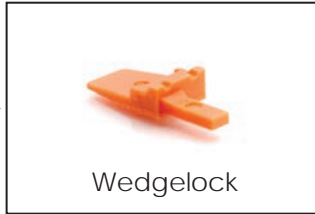
Toll Free: 1-800-394-7732

## STEP 3

Choose a Receptacle



Wedgelocks are required for all Plugs



## STEP 2

Choose Contacts



Overmolded option  
page 11

Or  
Choose a  
Receptacle Kit



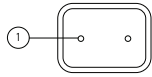
Receptacle Kit  
includes Receptacle,  
Wedgelock & Contacts

Or  
Choose a Plug &  
Receptacle Kit



Plug & Receptacle Kit  
includes Plug,  
Receptacle, Wedgelock  
& Contacts

**ATM**  
**2 POSITIONS**  
**7.5A**



**ATM SERIES STANDARD**  
**PLUGS, RECEPTACLES & WEDGELOCKS**

|                  |           |
|------------------|-----------|
| Contact Size     | <b>20</b> |
| Wire Range (AWG) | 20-22 AWG |
| Amperage         | 7.5       |

| Plug | Part Number    | Description                           | Wedglock | Part Number | Description          |
|------|----------------|---------------------------------------|----------|-------------|----------------------|
|      | ATM06-2S       | Plug, 2-Way                           |          | AWM-2S      | Wedglock Plug, 2-Way |
|      | ATM06-2S-KIT01 | 2 Socket Plug, Wedge and Contacts Kit |          |             |                      |

| Receptacle | Part Number    | Description                              | Wedglock | Part Number | Description                |
|------------|----------------|--|----------|-------------|----------------------------|
|            | ATM04-2P       | Receptacle, 2-Way                        |          | AWM-2P      | Wedglock Receptacle, 2-Way |
|            | ATM04-2P-KIT01 | 2 Pin Receptacle, Wedge and Contacts Kit |          |             |                            |

| Plug & Receptacle Kit | Part Number | Description   |
|-----------------------|-------------|---|
|                       | ATM2PS-CKIT | 2-Way Pin and Socket Plug, Receptacle, Wedge and Contacts Kit |

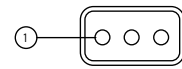
**Other Available Options:**  
 Strain Relief Series see page 34  
 Additional Colors: see page 23  
 Contacts on page 38  
 Tools on page 39

**NOTE:** Wedglocks are required for all plugs.






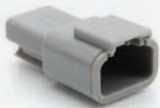


# ATM SERIES STANDARD PLUGS, RECEPTACLES & WEDGELOCKS


**ATM**  
**3 POSITIONS**  
**7.5A**



|                  |           |
|------------------|-----------|
| Contact Size     | <b>20</b> |
| Wire Range (AWG) | 20-22 AWG |
| Amperage         | 7.5       |

| Plug  | Part Number        | Description                           | Wedglock  | Part Number | Description             |
|---|--------------------|---------------------------------------|---|-------------|-------------------------|
|  | ATM06-3S           | Plug,<br>3-Way                        |  | AWM-3S      | Wedglock<br>Plug, 3-Way |
|  | ATM06-3S-<br>KIT01 | 3 Socket Plug, Wedge and Contacts Kit |   |             |                         |

| Receptacle  | Part Number        | Description                              | Wedglock  | Part Number | Description                      |
|---|--------------------|--|---|-------------|----------------------------------|
|   | ATM04-3P           | Receptacle,<br>3-Way                     |  | AWM-3P      | Wedglock<br>Receptacle,<br>3-Way |
|  | ATM04-3P-<br>KIT01 | 3 Pin Receptacle, Wedge and Contacts Kit |   |             |                                  |

| Plug & Receptacle Kit   | Part Number | Description   |
|---|-------------|---|
|  | ATM3PS-CKIT | 3-Way Pin and Socket Plug, Receptacle, Wedge and Contacts Kit |

### Other Available Options:

Strain Relief Series: see page 34

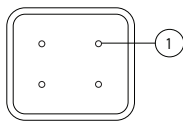
Additional Colors: see page 23

Contacts on page 38

Tools on page 39

**NOTE:** Wedglocks are required for all receptacles.

**ATM**  
**4 POSITIONS**  
**7.5A**



**ATM SERIES STANDARD  
 PLUGS, RECEPTACLES & WEDGELOCKS**

|                  |           |
|------------------|-----------|
| Contact Size     | <b>20</b> |
| Wire Range (AWG) | 20-22 AWG |
| Amperage         | 7.5       |

| Plug | Part Number    | Description                           | Wedglock | Part Number | Description          |
|------|----------------|---------------------------------------|----------|-------------|----------------------|
|      | ATM06-4S       | Plug, 4-Way                           |          | AWM-4S      | Wedglock Plug, 4-Way |
|      | ATM06-4S-KIT01 | 4 Socket Plug, Wedge and Contacts Kit |          |             |                      |

| Receptacle | Part Number    | Description                              | Wedglock | Part Number | Description                |
|------------|----------------|--|----------|-------------|----------------------------|
|            | ATM04-4P       | Receptacle, 4-Way                        |          | AWM-4P      | Wedglock Receptacle, 4-Way |
|            | ATM04-4P-KIT01 | 4 Pin Receptacle, Wedge and Contacts Kit |          |             |                            |

| Plug & Receptacle Kit | Part Number | Description   |
|-----------------------|-------------|---|
|                       | ATM4PS-CKIT | 4-Way Pin and Socket Plug, Receptacle, Wedge and Contacts Kit |

**Other Available Options:**

Strain Relief Series: page 34

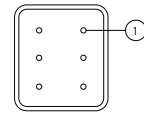
Additional Colors: see page 23

Contacts on page 38

Tools on page 39

**NOTE:** Wedglocks are required for all plugs.

# ATM SERIES STANDARD PLUGS, RECEPTACLES & WEDGELOCKS



**ATM**  
**6 POSITIONS**  
**7.5A**

|                  |           |
|------------------|-----------|
| Contact Size     | <b>20</b> |
| Wire Range (AWG) | 20-22 AWG |
| Amperage         | 7.5       |

| Plug | Part Number        | Description                           | Wedglock | Part Number | Description             |
|------|--------------------|---------------------------------------|----------|-------------|-------------------------|
|      | ATM06-6S           | Plug,<br>6-Way                        |          | AWM-6S      | Wedglock<br>Plug, 6-Way |
|      | ATM06-6S-<br>KIT01 | 6 Socket Plug, Wedge and Contacts Kit |          |             |                         |

| Receptacle | Part Number        | Description                              | Wedglock | Part Number | Description                      |
|------------|--------------------|--|----------|-------------|----------------------------------|
|            | ATM04-6P           | Receptacle,<br>6-Way                     |          | AWM-6P      | Wedglock<br>Receptacle,<br>6-Way |
|            | ATM04-6P-<br>KIT01 | 6 Pin Receptacle, Wedge and Contacts Kit |          |             |                                  |

| Plug & Receptacle Kit | Part Number | Description   |
|-----------------------|-------------|---|
|                       | ATM6PS-CKIT | 6-Way Pin and Socket Plug, Receptacle, Wedge and Contacts Kit |

### Other Available Options:

Strain Relief Series: see page 34

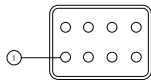
Additional Colors: see page 23

Contacts on page 38

Tools on page 39

**NOTE:** Wedglocks are required for all receptacles.

**ATM**  
**8 POSITIONS**  
**7.5A**



**ATM SERIES STANDARD**  
**PLUGS, RECEPTACLES & WEDGELOCKS**

|                  |           |
|------------------|-----------|
| Contact Size     | <b>20</b> |
| Wire Range (AWG) | 20-22 AWG |
| Amperage         | 7.5       |

| Plug | Part Number     | Description                           | Wedglock | Part Number | Description          |
|------|-----------------|---------------------------------------|----------|-------------|----------------------|
|      | ATM06-08SA      | Plug, 8-Way, A Position*              |          | AWM-8S      | Wedglock Plug, 8-Way |
|      | ATM06-08SA-KT01 | 8 Socket Plug, Wedge and Contacts Kit |          |             |                      |

| Receptacle | Part Number     | Description                                  | Wedglock | Part Number | Description                |
|------------|-----------------|--|----------|-------------|----------------------------|
|            | ATM04-08PA      | Receptacle, 8-Way, A Position*               |          | AWM-8P      | Wedglock Receptacle, 8-Way |
|            | ATM04-08PA-KT01 | 8-Way Pin Receptacle, Wedge and Contacts Kit |          |             |                            |

| Plug & Receptacle Kit | Part Number | Description   |
|-----------------------|-------------|---|
|                       | ATM8PS-CKIT | 8-Way Pin and Socket Plug, Receptacle, Wedge and Contacts Kit |

**Other Available Options:**

Strain Relief Series see page 34

Shrink Boot Adaptor: see page 34

Additional Colors: see page 23

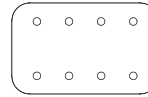
Contacts on page 38

Tools on page 39

\*Alternate keying positions available (B,C,D): see page 31

**NOTE:** Wedglocks are required for all plugs.

# ATM SERIES ALTERNATE POSITION PLUGS, RECEPTACLES & WEDGELOCKS



**ATM**  
**8 POSITIONS-**  
**B,C,D KEYS 7.5A**

|                  |           |
|------------------|-----------|
| Contact Size     | 20        |
| Wire Range (AWG) | 20-22 AWG |
| Amperage         | 7.5       |

| Plug | Part Number | Description                    |
|------|-------------|--------------------------------|
|      | ATM06-08SB  | Plug, 8-Way, B Position, Black |
|      | ATM06-08SC  | Plug, 8-Way, C Position, Green |
|      | ATM06-08SD  | Plug, 8-Way, D Position, Brown |

| Wedglock | Part Number | Description          |
|----------|-------------|----------------------|
|          | AWM-8S      | Wedglock Plug, 8-Way |

| Receptacle | Part Number | Description                          |
|------------|-------------|--------------------------------------|
|            | ATM04-08PB  | Receptacle, 8-Way, B Position, Black |
|            | ATM04-08PC  | Receptacle, 8-Way, C Position, Green |
|            | ATM04-08PD  | Receptacle, 8-Way, D Position, Brown |

| Wedglock | Part Number | Description                |
|----------|-------------|----------------------------|
|          | AWM-8P      | Wedglock Receptacle, 8-Way |

### Other Available Options:

Strain Relief Series see page 34

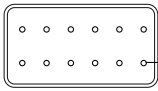
Additional Colors: see page 23

Contacts on page 38

Tools on page 39

**NOTE:** Wedglocks are required for all plugs.

**ATM**  
**12 POSITIONS**  
**7.5A**



**ATM SERIES STANDARD  
 PLUGS, RECEPTACLES & WEDGELOCKS**

|                  |           |
|------------------|-----------|
| Contact Size     | <b>20</b> |
| Wire Range (AWG) | 20-22 AWG |
| Amperage         | 7.5       |

| Plug | Part Number     | Description                                | Wedgeloock | Part Number | Description             |
|------|-----------------|--|------------|-------------|-------------------------|
|      | ATM06-12SA      | Plug, 12-Way, A Position*                  |            | AWM-12S     | Wedgeloock Plug, 12-Way |
|      | ATM06-12SA-KT01 | 12-Way Socket Plug, Wedge and Contacts Kit |            |             |                         |

| Receptacle | Part Number     | Description                                | Wedgeloock | Part Number | Description                   |
|------------|-----------------|--|------------|-------------|-------------------------------|
|            | ATM04-12PA      | Receptacle, 12-Way, A Position*            |            | AWM-12P     | Wedgeloock Receptacle, 12-Way |
|            | ATM04-12PA-KT01 | 12 -Way Receptacle, Wedge and Contacts Kit |            |             |                               |

| Plug & Receptacle Kit | Part Number  | Description  |
|-----------------------|--------------|--|
|                       | ATM12PS-CKIT | 12-Way Pin and Socket Plug, Receptacle, Wedge and Contacts Kit |

**Other Available Options:**

Strain Relief Series see page 34

Additional Colors: see page 23

Contacts on page 38

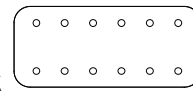
Tools on page 39

\*Alternate keying postions available (B,C,D): see page 33

**NOTE:** Wedgeloocks are required for all receptacles.



# ATM SERIES ALTERNATE POSITION PLUGS, RECEPTACLES & WEDGELOCKS






**ATM**  
12 POSITIONS-  
B,C,D KEYS 7.5A


|                  |           |
|------------------|-----------|
| Contact Size     | 20        |
| Wire Range (AWG) | 20-22 AWG |
| Amperage         | 7.5       |

CONNECTOR SOLUTIONS

| Plug   | Part Number | Description                        |
|--|-------------|------------------------------------|
|   | ATM06-12SB  | Plug, 12-Way,<br>B Position, Black |
|   | ATM06-12SC  | Plug, 12-Way,<br>C Position, Green |
|  | ATM06-12SD  | Plug, 12-Way,<br>D Position, Brown |

| Wedglock   | Part Number | Description              |
|--|-------------|--------------------------|
|  | AWM-12S     | Wedglock<br>Plug, 12-Way |

| Receptacle  | Part Number | Description                              |
|---|-------------|--|
|  | ATM04-12PB  | Receptacle, 12-Way,<br>B Position, Black |
|  | ATM04-12PC  | Receptacle, 12-Way,<br>C Position, Green |
|  | ATM04-12PD  | Receptacle, 12-Way,<br>D Position, Brown |

| Wedglock   | Part Number | Description                       |
|--|-------------|-----------------------------------|
|  | AWM-12P     | Wedglock<br>Receptacle,<br>12-Way |

**Other Available Options:**

Strain Relief Series see page 34

Additional Colors: see page 23

Contacts on page 38

Tools on page 39

**NOTE:** Wedglocks are required for all receptacles.

**ATM SERIES STANDARD PLUG  
STRAIN RELIEF SERIES**

The ATM Strain Relief Series' specifically designed wire cavities protect each individual wire seal, eliminating stress on the rear seal, maintaining IP67 sealing performance regardless of wire bundle direction or improper installation. It is a cost-effective and highly-reliable solution for wire routing, strain relief and sealing issues common in Heavy Duty applications. It ensures a complete environmental seal and necessary strain relief on the production line and in the field.

**ATM-SR01 has Standard Seals**

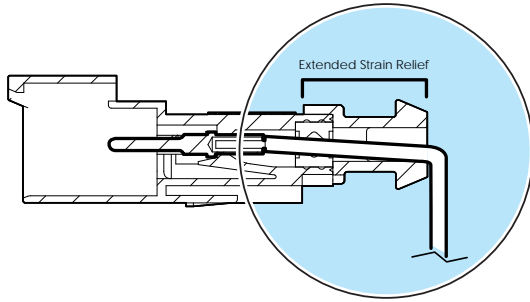
| Plug  | Part Number      | Description  |
|---|------------------|--|
|    | ATM06-2S-SR01GY  | 2-Way Plug, Female Connector with Strain Relief                    |
|    | ATM06-3S-SR01GY  | 3-Way Plug, Female Connector with Strain Relief                    |
|   | ATM06-4S-SR01GY  | 4-Way Plug, Female Connector with Strain Relief                    |
|  | ATM06-6S-SR01GY  | 6-Way Plug, Female with Strain Relief                              |
|  | ATM06-08SA-SR1GY | 8-Way Plug, Female Connector with A Position Key and Strain Relief |
|  | ATM06-08SB-SR1BK | Plug, 8-Way, B Position Black, with Strain Relief                  |
|  | ATM06-08SC-SR1GN | Plug, 8-Way, C Position Green, with Strain Relief                  |
|  | ATM06-08SD-SR1BN | Plug, 8-Way, D Position Brown, with Strain Relief                  |

| Wedgelock  | Part Number | Description           |
|--|-------------|-----------------------|
|    | AWM-2S      | Wedgelock Plug, 2-Way |
|    | AWM-3S      | Wedgelock Plug, 3-Way |
|   | AWM-4S      | Wedgelock Plug, 4-Way |
|  | AWM-6S      | Wedgelock Plug, 6-Way |
|  | AWM-8S      | Wedgelock Plug, 8-Way |


**NOTE:** Wedgelocks are required for all plugs.

# ATM SERIES STANDARD PLUG STRAIN RELIEF SERIES

**ATM**  
**STRAIN RELIEF**  
**7.5A**



| Plug  | Part Number      | Description  |
|---|------------------|--|
|    | ATM06-12SA-SR1GY | 12-Way Plug, Female Connector, A Position Key with Strain Relief |
|    | ATM06-12SB-SR1BK | Plug, 12-Way, B Position Black, with Strain Relief               |
|   | ATM06-12SC-SR1GN | Plug, 12-Way, C Position Green, with Strain Relief               |
|  | ATM06-12SD-SR1BN | Plug, 12-Way, D Position Brown, with Strain Relief               |

| Wedglock   | Part Number | Description          |
|--|-------------|----------------------|
|  | AWM-12S     | Wedglock Plug, 8-Way |

ATM SERIES STANDARD RECEPTACLE  
STRAIN RELIEF SERIES






| Receptacle  | Part Number      | Description  | Wedgelock  | Part Number | Description                 |
|---|------------------|--|--|-------------|-----------------------------|
|    | ATM04-2P-SR01GY  | 2-Way Receptacle, Male Connector with Strain Relief                      |    | AWM-2P      | Wedgelock Receptacle, 2-Way |
|    | ATM04-3P-SR01GY  | 3-Way Receptacle, Male Connector with Strain Relief                      |    | AWM-3P      | Wedgelock Receptacle, 3-Way |
|    | ATM04-4P-SR01GY  | 4-Way Receptacle, Male with Strain Relief                                |    | AWM-4P      | Wedgelock Receptacle, 4-Way |
|   | ATM04-6P-SR01GY  | 6-Way Receptacle, Male with Shrink Boot Adaptor                          |   | AWM-6P      | Wedgelock Receptacle, 6-Way |
|  | ATM04-08PA-SR1GY | 8-Way Receptacle, Male Connector with A Position Key, with Strain Relief |  | AWM-8P      | Wedgelock Receptacle, 8-Way |
|  | ATM04-08PB-SR1BK | Receptacle, 8-Way, B Position, Black, with Strain Relief                 |  |             |                             |
|  | ATM04-08PC-SR1GN | Receptacle, 8-Way, C Position, Green, Strain Relief                      |  |             |                             |
|  | ATM04-08PD-SR1BN | Receptacle, 8-Way, D Position, Brown, with Strain Relief                 |  |             |                             |

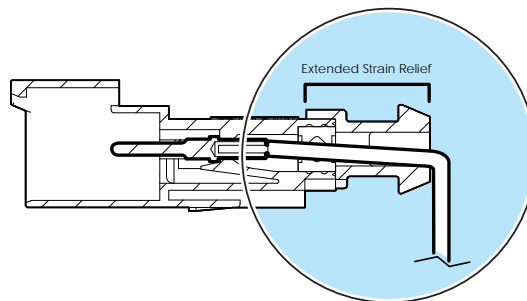
**NOTE:** Wedgelocks are required for all receptacles.

# ATM SERIES STANDARD RECEPTACLE STRAIN RELIEF SERIES

**ATM**  
**STRAIN RELIEF**  
**7.5A**

CONNECTOR SOLUTIONS

| Receptacle   | Part Number      | Description  | Wedglock   | Part Number | Description                 |
|--|------------------|--|--|-------------|-----------------------------|
|   | ATM04-12PA-SR1GY | 12-Way Receptacle, Male Connector with A Position Key with Strain Relief |  | AWM-12P     | Wedglock Receptacle, 12-Way |
|   | ATM04-12PB-SR1BK | Receptacle, 12-Way, B Position, Black, with Strain Relief                |  |             |                             |
|   | ATM04-12PC-SR1GN | Receptacle, 12-Way, C Position, Green, with Strain Relief                |  |             |                             |
|  | ATM04-12PD-SR1BN | Receptacle, 12-Way, D Position, Brown, with Strain Relief                |  |             |                             |

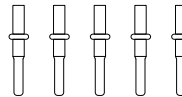


Contacts

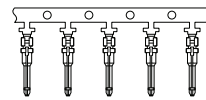
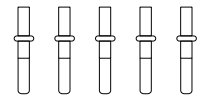
Amphenol offers two types of contacts for use in our products: Solid and Stamped & Formed. Both types of contacts utilize the simple crimp-style termination, requiring no solder usage.



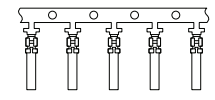
Solid/Machined  
Male Pins



Solid/Machined  
Female Sockets



Stamped & Formed  
Male Pins



Stamped & Formed  
Female Sockets

Standard Contacts - Solid Sockets & Pins

| Series | Size | AWG   | Type  | Part Number    | Description                            |
|--------|------|-------|-------|----------------|--|
| ATM    | 20   | 20-22 | Solid | AT62-201-2031  | Female Contact - Socket, Gold-plated   |
| ATM    | 20   | 20-22 | Solid | AT62-201-20141 | Female Contact - Socket, Nickel-plated |
| ATM    | 20   | 20-22 | Solid | AT60-202-2031  | Male Contact - Pin, Gold-plated        |
| ATM    | 20   | 20-22 | Solid | AT60-202-20141 | Male Contact - Pin, Nickel-plated      |



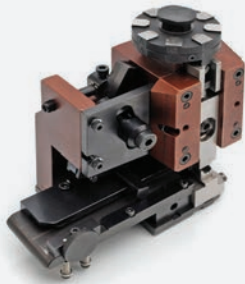

Standard Contacts - Stamped & Formed Sockets & Pins

| Series | Size | AWG   | Type  | Part Number  | Description                            |
|--------|------|-------|-------|--------------|--|
| ATM    | 20   | 16-22 | S & F | AT62-20-0122 | Female Contact - Socket, Nickel-plated |
| ATM    | 20   | 16-22 | S & F | AT62-20-0144 | Female Contact - Socket, Gold-plated   |
| ATM    | 20   | 16-22 | S & F | AT60-20-0122 | Male Contact - Pin, Nickel-plated      |
| ATM    | 20   | 16-22 | S & F | AT60-20-0144 | Male Contact - Pin, Gold-plated        |




### Crimp Tools

Amphenol offers two types of contacts for use in our products: Solid and Stamped & Formed. Both types of contacts utilize the simple crimp-style termination, requiring no solder usage. Below are the tools available to assist with your crimping needs to ensure a proper connection between contact and wire.

| Part  | Part Number | Description  |
|---|-------------|--|
|    | CA-5D12     | Universal Hand Crimp Tool, Size 12/16/20<br>*Solid contacts only |
|    | CA-5E12     | Pneumatic Crimp Tool, Size 12/16/20<br>*Solid contacts only      |
|   | MFX-3974    | Crimp Die - Size 20<br>(Stamped & Formed Contacts)               |
|  | ATT-20-00   | Size 20, 20AWG, Stamped & Formed Contact Tool                    |

### AT Series™ Contact Removal Tool

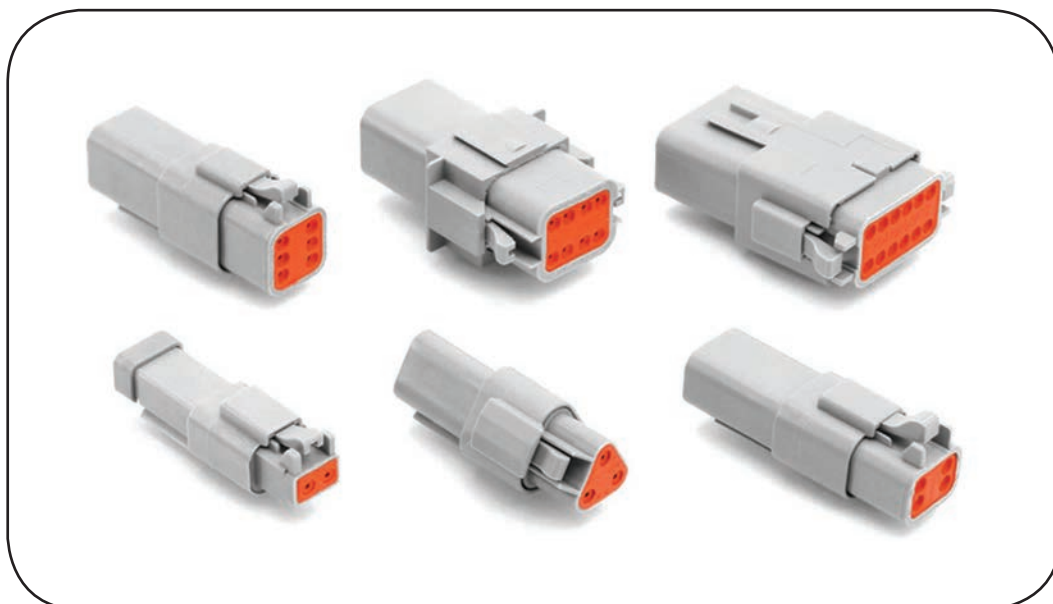
| Part  | Part Number | Description  |
|---|-------------|--|
|  | ATRT-100    | Used for removal of contacts for AT Series™ products |

Seal Plugs



| Series | Contact Size | AWG   | Part No.         | Description                         |
|--------|--------------|-------|------------------|-------------------------------------|
| ATM    | 20           | 20-22 | AT13-204-2005    | Seal Plugs, White                   |
| ATM    | 20           | 20-22 | AT13-204-2005-SR | Seas Plugs, Black (For SR01 Series) |

# AT|Series™



# AT Series™

## Overview

AT Series™ connectors are a high-performance, cost effective solution able to be used in a variety of interconnect applications: Heavy Duty, Transportation, Marine, Diagnostic, Military, Alternative Energy and Agricultural. They contain superior environmental seals and seal retention capabilities.

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.

AT Series™ connectors are compatible with other existing standard products industry-wide.



## Features & Benefits

|                              |   |
|------------------------------|---|
| Current Capacity             | Size 16, 13A (max)  |
| Wire Range                   | Size 16 contacts will accept wire ranges of 14 thru 20AWG   |
| Temperature                  | Operating temperature range: -55°C to +125°C at rated current   |
| Dielectric Value             | Meets or exceeds 1500 volts minimum   |
| 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, contacts achieve a minimum pull-out force of 25 lbs.   |
| Connector Retention          | A mated connector subjected to a pulling force by the exiting wire bundle at 25 lbs. times the number of contacts to a maximum of 100 lbs. 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        | 1000 megohms minimum at 25°C  |
| Mating Cycle Durability      | Following 100 cycles of connection engagement and disengagement, degradation either mechanical or electrical is not evident   |

# AT Series™

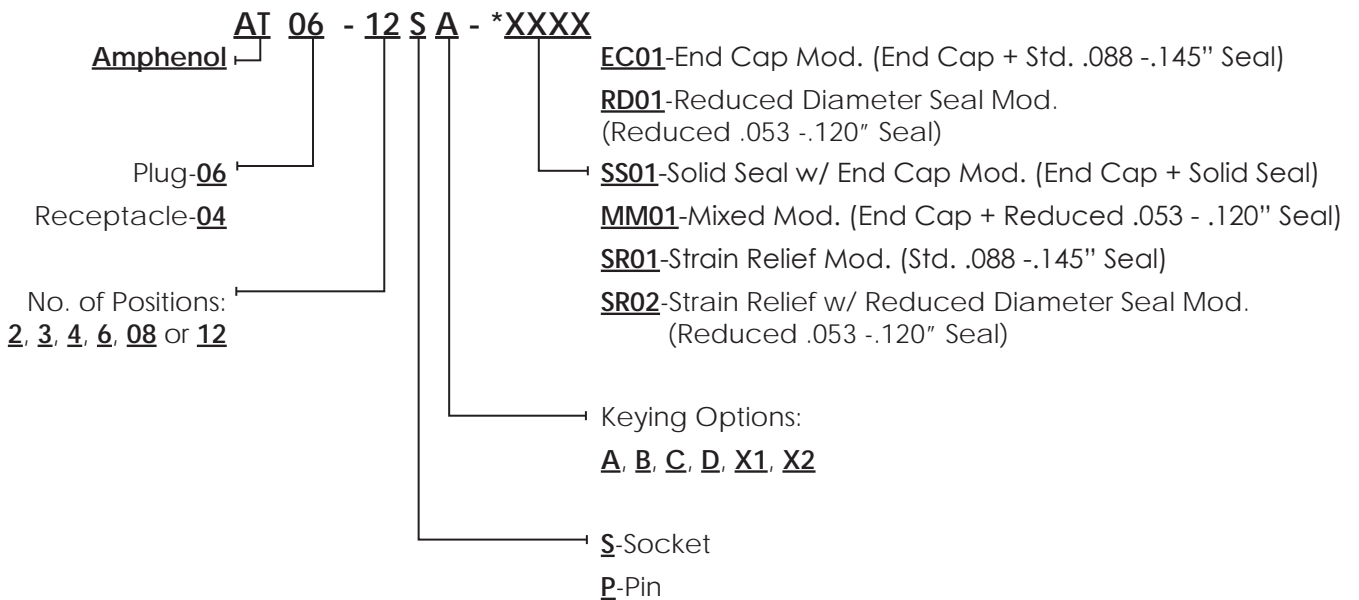
## Features & Benefits, cont.

|                        |   |
|------------------------|---|
| Contact Millivolt Drop | Size 16 contacts with 16AWG conductor - 100 mV drop max at 13A test current   |
| 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™ Part Numbering Sequence



## Plug & Receptacle Body Color Modification

A wide range of standard color options are available for all A Series™ product lines. 8 and 12 position plugs and receptacles require special order. For more information, please contact a Sales Representative.

| Color | Modification Number | Color  | Modification Number |
|-------|---------------------|--------|---------------------|
| Black | XXXX-XXXX-BLK       | Yellow | XXXX-XXXX-YEL       |
| White | XXXX-XXXX-WHT       | Green  | XXXX-XXXX-GRN       |
| Brown | XXXX-XXXX-BRN       | Blue   | XXXX-XXXX-BLU       |
| Grey  | XXXX-XXXX-GRY       | Red    | XXXX-XXXX-RED       |



**NOTE:** The above modifications (-XXXX) are only a sampling of the options available to our customers. For more information, please contact your Sales Representative.

# AT Series™ Connector Configurations

## STEP 1

Choose a Plug

MATING PARTS



Wedgelocks are required for all Plugs



## STEP 2

Choose Contacts



Overmolded option  
page 11

Or  
Choose a Plug Kit



Plug Kit  
includes Plug,  
Wedgelock & Contacts

Or  
Choose a Plug & Receptacle Kit



Plug & Receptacle Kit  
includes Plug,  
Receptacle, Wedgelock  
& Contacts



## Need a complete Cable Assembly?

See page 11 or contact the factory for assistance

Toll Free: 1-800-394-7732

### STEP 3

Choose a Receptacle

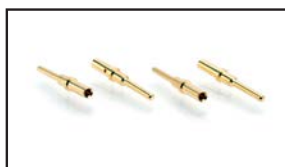


Wedgelocks are required for all Receptacles



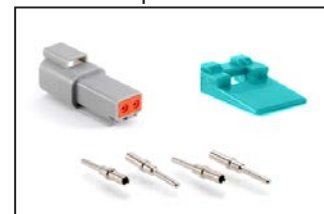
### STEP 4

Choose Contacts



Overmolded option  
page 11

Or  
Choose a  
Receptacle Kit

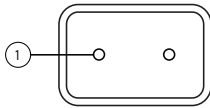


Receptacle Kit  
includes Receptacle,  
Wedgelock & Contacts

Optional  
Protective Covers



**AT**  
**2 POSITIONS**  
**13A**



**AT SERIES STANDARD  
PLUGS, RECEPTACLES & WEDGELOCKS**

|                  |           |
|------------------|-----------|
| Contact Size     | <b>16</b> |
| Wire Range (AWG) | 14-20 AWG |
| Amperage         | 13        |

| Plug | Part Number   | Description                           | Wedglock | Part Number | Description          |
|------|---------------|---------------------------------------|----------|-------------|----------------------|
|      | AT06-2S       | Plug, 2-Way                           |          | AW2S        | Wedglock Plug, 2-Way |
|      | AT06-2S-KIT01 | 2 Socket Plug, Wedge and Contacts Kit |          |             |                      |

| Receptacle | Part Number   | Description                              | Wedglock | Part Number | Description                |
|------------|---------------|--|----------|-------------|----------------------------|
|            | AT04-2P       | Receptacle, 2-Way                        |          | AW2P        | Wedglock Receptacle, 2-Way |
|            | AT04-2P-KIT01 | 2 Pin Receptacle, Wedge and Contacts Kit |          |             |                            |

| Plug & Receptacle Kit | Part Number | Description   |
|-----------------------|-------------|---|
|                       | AT2PS-CKIT  | 2-Way Pin and Socket Plug, Receptacle, Wedge and Contacts Kit |

**NOTE:** Wedgelocks are required for all plugs.

**Other Available Options:**

- Strain Relief Series see page 56
- Reduced Diameter Seal: see page 58
- Endcaps: see page 62
- Endcaps + Reduced Diameter Seal: see page 64
- Protective Cover: see page 70
- LED: see page 68
- Terminating Resistors and Diodes: see page 73
- Additional Colors: see page 43
- Contacts sold separately on page 83
- Tools on page 85

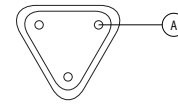


AT BOARD | LOCK  
FLANGELESS WIRE TO  
BOARD CONNECTORS  
see page 77



AT PANEL | MATE  
FLANGE MOUNT HARSH  
ENVIRONMENT CONNECTORS  
see page 81

# AT SERIES STANDARD PLUGS, RECEPTACLES & WEDGELOCKS



**AT**  
**3 POSITIONS**  
**13A**

|                  |           |
|------------------|-----------|
| Contact Size     | <b>16</b> |
| Wire Range (AWG) | 14-20 AWG |
| Amperage         | 13        |

| Plug | Part Number   | Description                           | Wedglock | Part Number | Description          |
|------|---------------|---------------------------------------|----------|-------------|----------------------|
|      | AT06-3S       | Plug, 3-Way                           |          | AW3S        | Wedglock Plug, 3-Way |
|      | AT06-3S-KIT01 | 3 Socket Plug, Wedge and Contacts Kit |          |             |                      |

| Receptacle | Part Number   | Description                              | Wedglock | Part Number | Description                |
|------------|---------------|--|----------|-------------|----------------------------|
|            | AT04-3P       | Receptacle, 3-Way                        |          | AW3P        | Wedglock Receptacle, 3-Way |
|            | AT04-3P-KIT01 | 3 Pin Receptacle, Wedge and Contacts Kit |          |             |                            |

| Plug & Receptacle Kit | Part Number | Description   |
|-----------------------|-------------|---|
|                       | AT3PS-CKIT  | 3-Way Pin and Socket Plug, Receptacle, Wedge and Contacts Kit |

**NOTE:** Wedglocks are required for all receptacles.

## Other Available Options:

- Strain Relief Series see page 56
- Reduced Diameter Seal: see page 58
- Endcaps: see page 62
- Endcaps + Reduced Diameter Seal: see page 64
- Solid Rear Seal: see page 66
- Protective Covers: see page 70
- Terminating Resistor: see page 73
- J-1939 Modifications: see page 71
- Additional Colors: see page 43
- Contacts on page 83
- Tools on page 85

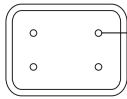


AT BOARD | LOCK  
FLANGELESS WIRE TO  
BOARD CONNECTORS  
see page 77






AT PANEL | MATE  
FLANGE MOUNT HARSH  
ENVIRONMENT CONNECTORS  
see page 81




**AT**  
**4 POSITIONS**  
**13A**




**AT SERIES STANDARD**  
**PLUGS, RECEPTACLES & WEDGELOCKS**

|                  |           |
|------------------|-----------|
| Contact Size     | <b>16</b> |
| Wire Range (AWG) | 14-20 AWG |
| Amperage         | 13        |

| Plug  | Part Number   | Description                           | Wedglock  | Part Number | Description          |
|---|---------------|---------------------------------------|---|-------------|----------------------|
|  | AT06-4S       | Plug, 4-Way                           |  | AW4S        | Wedglock Plug, 4-Way |
|  | AT06-4S-KIT01 | 4 Socket Plug, Wedge and Contacts Kit |   |             |                      |

| Receptacle  | Part Number   | Description                              | Wedglock  | Part Number | Description                |
|---|---------------|--|---|-------------|----------------------------|
|   | AT04-4P       | Receptacle, 4-Way                        |  | AW4P        | Wedglock Receptacle, 4-Way |
|  | AT04-4P-KIT01 | 4 Pin Receptacle, Wedge and Contacts Kit |   |             |                            |

| Plug & Receptacle Kit   | Part Number | Description   |
|---|-------------|---|
|  | AT4PS-CKIT  | 4-Way Pin and Socket Plug, Receptacle, Wedge and Contacts Kit |

**NOTE:** Wedglocks are required for all plugs.

**Other Available Options:**

- Strain Relief Series see page 56
- Reduced Diameter Seal: see page 58
- Endcaps: see page 62
- Endcaps + Reduced Diameter Seal: see page 64
- Solid Rear Seal: see page 66
- Protective Cover: see page 70
- Additional Colors: see page 43
- Contacts sold separately on page 83
- Tools on page 85

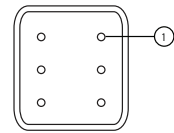


AT BOARD | LOCK  
 FLANGELESS WIRE TO  
 BOARD CONNECTORS  
 see page 77



AT PANEL | MATE  
 FLANGE MOUNT HARSH  
 ENVIRONMENT CONNECTORS  
 see page 81

# AT SERIES STANDARD PLUGS, RECEPTACLES & WEDGELOCKS



**AT**  
**6 POSITIONS**  
**13A**

|                  |           |
|------------------|-----------|
| Contact Size     | <b>16</b> |
| Wire Range (AWG) | 14-20 AWG |
| Amperage         | 13        |

| Plug | Part Number   | Description                           | Wedglock | Part Number | Description          |
|------|---------------|---------------------------------------|----------|-------------|----------------------|
|      | AT06-6S       | Plug, 6-Way                           |          | AW6S        | Wedglock Plug, 6-Way |
|      | AT06-6S-KIT01 | 6 Socket Plug, Wedge and Contacts Kit |          |             |                      |

| Receptacle | Part Number   | Description                              | Wedglock | Part Number | Description                |
|------------|---------------|--|----------|-------------|----------------------------|
|            | AT04-6P       | Receptacle, 6-Way                        |          | AW6P        | Wedglock Receptacle, 6-Way |
|            | AT04-6P-KIT01 | 6 Pin Receptacle, Wedge and Contacts Kit |          |             |                            |

| Plug & Receptacle Kit | Part Number | Description   |
|-----------------------|-------------|---|
|                       | AT6PS-CKIT  | 6-Way Pin and Socket Plug, Receptacle, Wedge and Contacts Kit |

**NOTE:** Wedglocks are required for all receptacles.

### Other Available Options:

- Strain Relief Series see page 57
- Reduced Diameter Seal: see page 58
- Endcaps: see page 63
- Endcaps + Reduced Diameter Seal: see page 65
- Solid Rear Seal: see page 66
- Protective Covers: see page 70
- Additional Colors: see page 43
- Adapter 6 Pin to RJ45: see page 72
- Contacts on page 83
- Tools on page 85

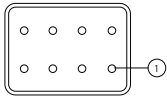


AT BOARD | LOCK  
FLANGELESS WIRE TO  
BOARD CONNECTORS  
see page 77



AT PANEL | MATE  
FLANGE MOUNT HARSH  
ENVIRONMENT CONNECTORS  
see page 81

**AT**  
**8 POSITIONS**  
**13A**



**AT SERIES STANDARD**  
**PLUGS, RECEPTACLES & WEDGELOCKS**

|                  |           |
|------------------|-----------|
| Contact Size     | <b>16</b> |
| Wire Range (AWG) | 14-20 AWG |
| Amperage         | 13        |

| Plug | Part Number     | Description                           | Wedglock | Part Number | Description          |
|------|-----------------|---------------------------------------|----------|-------------|----------------------|
|      | AT06-08SA       | Plug, 8-Way A Position*               |          | AW8S        | Wedglock Plug, 8-Way |
|      | AT06-08SA-KIT01 | 8 Socket Plug, Wedge and Contacts Kit |          |             |                      |

| Receptacle | Part Number     | Description                              | Wedglock | Part Number | Description                |
|------------|-----------------|--|----------|-------------|----------------------------|
|            | AT04-08PA       | Receptacle, 8-Way A Position*            |          | AW8P        | Wedglock Receptacle, 8-Way |
|            | AT04-08PA-KIT01 | 8 Pin Receptacle, Wedge and Contacts Kit |          |             |                            |

| Plug & Receptacle Kit | Part Number | Description   |
|-----------------------|-------------|---|
|                       | AT8PS-CKIT  | 8-Way Pin and Socket Plug, Receptacle, Wedge and Contacts Kit |

\*Alternate keying positions available (B,C,D) see page 51

**Other Available Options:**

- Strain Relief Series see page 56
- Reduced Diameter Seal: see page 58
- Endcaps: see page 62
- Endcaps + Reduced Diameter Seal: see page 64
- Solid Rear Seal: see page 66
- Protective Cover: see page 70
- Additional Colors: see page 43
- Contacts sold separately on page 83
- Tools on page 85



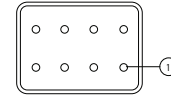
AT BOARD | LOCK  
FLANGELESS WIRE TO  
BOARD CONNECTORS  
see page 77



AT PANEL | MATE  
FLANGE MOUNT HARSH  
ENVIRONMENT CONNECTORS  
see page 81



# AT SERIES 8-WAY B,C,D POSITION KEY PLUGS, RECEPTACLES & WEDGELOCKS






**AT**  
8 POSITIONS-  
B,C,D




CONNECTOR SOLUTIONS

|                  |           |
|------------------|-----------|
| Contact Size     | <b>16</b> |
| Wire Range (AWG) | 14-20 AWG |
| Amperage         | 13        |

## STANDARD CONNECTORS

| Plug   | Part Number | Description                    |
|--|-------------|--------------------------------|
|   | AT06-08SB   | Plug, 8-Way, B Position, Black |
|   | AT06-08SC   | Plug, 8-Way, C Position, Green |
|  | AT06-08SD   | Plug, 8-Way, D Position, Brown |

| Wedglock Part Number  |
|---|
|  |
| AW8S  |

| Receptacle  | Part Number | Description                          |
|---|-------------|--------------------------------------|
|  | AT04-08PB   | Receptacle, 8-Way, B Position, Black |
|  | AT04-08PC   | Receptacle, 8-Way, C Position, Green |
|  | AT04-08PD   | Receptacle, 8-Way, D Position, Brown |

| Wedglock Part Number  |
|---|
|  |
| AW8P  |

**Other Available Options:**  
Reduced Diameter Seal page 58  
Contacts on page 83  
Tools on page 85

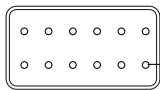


AT BOARD | LOCK  
FLANGELESS WIRE TO  
BOARD CONNECTORS  
see page 77



AT PANEL | MATE  
FLANGE MOUNT HARSH  
ENVIRONMENT CONNECTORS  
see page 81

**AT**  
**12 POSITIONS**  
**13A**



**AT SERIES STANDARD**  
**PLUGS, RECEPTACLES & WEDGELOCKS**

|                  |           |
|------------------|-----------|
| Contact Size     | <b>16</b> |
| Wire Range (AWG) | 14-20 AWG |
| Amperage         | 13        |

| Plug | Part Number     | Description                            | Wedglock | Part Number | Description           |
|------|-----------------|--|----------|-------------|-----------------------|
|      | AT06-12SA       | Plug, 12-Way A Position*               |          | AW12S       | Wedglock Plug, 12-Way |
|      | AT06-12SA-KIT01 | 12 Socket Plug, Wedge and Contacts Kit |          |             |                       |

| Receptacle | Part Number     | Description                               | Wedglock | Part Number | Description                 |
|------------|-----------------|---|----------|-------------|-----------------------------|
|            | AT04-12PA       | Receptacle, 12-Way A Position*            |          | AW12P       | Wedglock Receptacle, 12-Way |
|            | AT04-12PA-KIT01 | 12 Pin Receptacle, Wedge and Contacts Kit |          |             |                             |

| Plug & Receptacle Kit | Part Number | Description  |
|-----------------------|-------------|--|
|                       | AT12PS-CKIT | 12-Way Pin and Socket Plug, Receptacle, Wedge and Contacts Kit |

\*Alternate keying positions available (B,C,D) see page 53

**NOTE:** Wedglocks are required for all receptacles.

**Other Available Options:**

- Strain Relief Series see page 57
- Reduced Diameter Seal: see page 58
- Endcaps: see page 63
- Endcaps + Reduced Diameter Seal: see page 65
- Solid Rear Seal: see page 66
- Protective Covers: see page 70
- Additional Colors: see page 43
- Adapter 12 Pin to RJ45: see page 72
- Contacts on page 83
- Tools on page 85

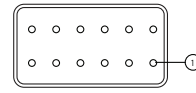


AT BOARD | LOCK  
 FLANGELESS WIRE TO  
 BOARD CONNECTORS  
 see page 77



AT PANEL | MATE  
 FLANGE MOUNT HARSH  
 ENVIRONMENT CONNECTORS  
 see page 81

# AT SERIES 12-WAY B,C, D, X POSITION KEY PLUGS, RECEPTACLES & WEDGELOCKS



**AT**  
**12 POSITIONS-**  
**B,C,D,X**

|                  |           |
|------------------|-----------|
| Contact Size     | <b>16</b> |
| Wire Range (AWG) | 14-20 AWG |
| Amperage         | 13        |

## STANDARD CONNECTORS

| Plug | Part Number | Description  | WedgeLock Part Number |
|------|-------------|--|-----------------------|
|      | AT06-12SB   | 12-Way Plug, Female Connector with B Position Key, Black | <br>AW12S             |
|      | AT06-12SC   | 12-Way Plug, Female Connector with C Position Key, Green |                       |
|      | AT06-12SD   | 12-Way Plug, Female Connector with D Position Key, Brown |                       |
|      | AT06-12SX1  | 12-Way Plug, Female Connector, X1 Position Key           |                       |
|      | AT06-12SX2  | 12-Way Plug, Female Connector, X2 Position Key           |                       |

| Receptacle | Part Number | Description  | WedgeLock Part Number |
|------------|-------------|--|-----------------------|
|            | AT04-12PB   | 12-Way Receptacle, Male Connector with B Position Key and Extended Shroud, Black | <br>AW12P             |
|            | AT04-12PC   | 12-Way Receptacle, Male Connector with C Position Key and Extended Shroud, Green |                       |
|            | AT04-12PD   | 12-Way Receptacle, Male Connector with D Position Key, Extended Shroud, Brown    |                       |

### Other Available Options:

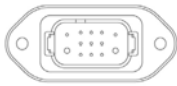
Reduced Diameter Seal: see page 58  
Contacts on page 83  
Tools on page 85



AT BOARD | LOCK  
FLANGELESS WIRE TO  
BOARD CONNECTORS  
see page 77







AT PANEL | MATE  
FLANGE MOUNT HARSH  
ENVIRONMENT CONNECTORS  
see page 81




|                  |                      |
|------------------|----------------------|
| Contact Size     | <b>16 &amp; 12</b>   |
| Wire Range (AWG) | 14-20 AWG/ 10-14 AWG |
| Amperage         | 13, 25               |



**MIXED CONNECTORS - POWER & SIGNAL**

| Plug  | Part Number | Description  |
|---|-------------|--|
|  | AT1612-13SB | 13-Way Plug, Female Connector with B Position Key, Black (Wedglock not required) |

| Receptacle  | Part Number     | Description   |
|---|-----------------|---|
|    | AT1612-13PB     | 13-Way Receptacle, Male Connector with B Position Key, No Gasket, Black (Wedglock not required)           |
|   | AT1612-13PB-G   | 13-Way Receptacle, Pin, Panel Mount, Self-Threading, Standard Seal, Cap, Keyed B. (Wedglock not required) |
|  | AT1612-13PBNF13 | 13-Way 90° Receptacle, Pin, Keyed B, PCB Mount (Wedglock not required, contacts included)                 |

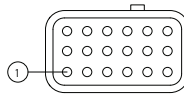
**REDUCED DIAMETER SEAL (.053" - .120")**

| Plug  | Part Number    | Description   |
|---|----------------|---|
|  | AT1612-13SB-RD | 13-Way Plug, Female Connector with B Position Key and Reduced Diameter Seal (E-Seal), Black (Wedglock not required) |

| Receptacle  | Part Number     | Description  |
|---|-----------------|--|
|  | AT1612-13PB-RD  | 13-Way Panel Mount Receptacle, Key Position B, No Gasket, Reduced Diameter Seal (E-Seal). Black. (Wedglock not required) |
|  | AT1612-13PB-RDG | 13-Way, Flange Mount Receptacle, Gasket, Reduced Diameter Seal (E-Seal), Black. (Wedglock not required)                  |

Contacts on pages 83,101  
 Tools on page 85  
 Gasket on page 84


AT SERIES 18-WAY STANDARD  
PLUG



**AT**  
**18 POSITIONS**  
**13A**

|                  |           |
|------------------|-----------|
| Contact Size     | <b>16</b> |
| Wire Range (AWG) | 14-20 AWG |
| Amperage         | 13        |

STANDARD CONNECTORS

| Plug  | Part Number    | Description                                     |
|---|----------------|---|
|  | AT16-18SB-K004 | 18-Way Plug with Wedgelock and End Cap Included |


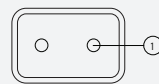








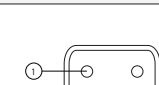





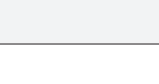

Contacts on page 83  
Tools on page 85

**AT SERIES PLUG**  
**STRAIN RELIEF SERIES**

The AT Strain Relief Series' specifically designed wire cavities protect each individual wire seal, eliminating stress on the rear seal, maintaining IP67 sealing performance regardless of wire bundle direction or improper installation. It is a cost-effective and highly-reliable solution for wire routing, strain relief and sealing issues common in Heavy Duty applications. It ensures a complete environmental seal and necessary strain relief on the production line and in the field.

**AT-SR01** has Standard Seals (.088 - .145")

**AT-SR02** has Reduced Diameter Seals (.053 - .120" seals)

| Plug  | Face View   | Part Number     | Description   | Wedglock Part Number   |
|---|---|-----------------|---|--|
|    |    | AT06-2S-SR01BLK | Plug, 2-Way, Standard Seal                          | <br>AW2S    |
|   |   | AT06-2S-SR02BLK | Plug, 2-Way, Reduced Seal<br>.053-.120"             |  |
|    |    | AT06-3S-SR01BLK | Plug, 3-Way, Standard Seal                          | <br>AW3S    |
|   |   | AT06-3S-SR02BLK | Plug, 3-Way, Reduced Seal<br>.053-.120"             |  |
|   |  | AT06-4S-SR01BLK | Plug, 4-Way, Standard Seal                          | <br>AW4S   |
|   |   | AT06-4S-SR02BLK | Plug, 4-Way, Reduced Seal<br>.053-.120"             |  |
|  |  | AT06-6S-SR01BLK | Plug, 6-Way, Standard Seal                          | <br>AW6S  |
|   |   | AT06-6S-SR02BLK | Plug, 6-Way, Reduced Seal<br>.053-.120"             |  |
|  |  | AT06-08SA-SRGRY | Plug, 8-Way, Position A, Standard Seal              | <br>AW8S  |
|   |   | AT06-08SA-SR2GY | Plug, 8-Way, Pos. A,<br>Reduced Seal<br>.053-.120"  |  |
|  |  | AT06-12SA-SRGRY | Plug, 12-Way, Pos. A,<br>Standard Seal              | <br>AW12S |
|   |   | AT06-12SA-SR2GY | Plug, 12-Way, Pos. A,<br>Reduced Seal<br>.053-.120" |  |



Color options pertain to connector body only. (see page 43 for options.)

**NOTE:** Wedglocks are required for all plugs.


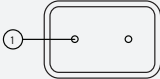


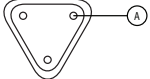


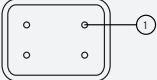


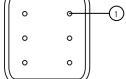


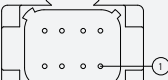


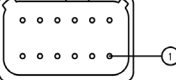

# AT SERIES RECEPTACLE STRAIN RELIEF SERIES

## AT STRAIN RELIEF 13A

The AT Strain Relief Series' specifically designed wire cavities protect each individual wire seal, eliminating stress on the rear seal, maintaining IP67 sealing performance regardless of wire bundle direction or improper installation. It is a cost-effective and highly-reliable solution for wire routing, strain relief and sealing issues common in Heavy Duty applications. It ensures a complete environmental seal and necessary strain relief on the production line and in the field.

**AT-SR01** has Standard Seals (.088 - .145")

**AT-SR02** has Reduced Diameter Seals (.053 - .120" seals)

| Receptacle  | Face View   | Part Number     | Description  | Wedgelock Part Number  |
|---|---|-----------------|--|--|
|    |    | AT04-2P-SR01BLK | Receptacle<br>2-Way, Standard Seal                         | <br>AW2P    |
|   |   | AT04-2P-SR02BLK | Receptacle<br>2-Way, Reduced Seal<br>.053-.120             |  |
|    |    | AT04-3P-SR01BLK | Receptacle<br>3-Way, Standard Seal                         | <br>AW3P    |
|   |   | AT04-3P-SR02BLK | Receptacle<br>3-Way, Reduced Seal<br>.053-.120             |  |
|  |  | AT04-4P-SR01BLK | Receptacle<br>4-Way, Standard Seal                         | <br>AW4P  |
|   |   | AT04-4P-SR02BLK | Receptacle<br>4-Way, Reduced Seal<br>.053-.120             |  |
|  |  | AT04-6P-SR01BLK | Receptacle<br>6-Way, Standard Seal                         | <br>AW6P  |
|   |   | AT04-6P-SR02BLK | Receptacle<br>6-Way, Reduced Seal<br>.053-.120             |  |
|  |  | AT04-08PA-SRGRY | Receptacle<br>8-Way,<br>Pos. A,<br>Standard Seal           | <br>AW8P  |
|   |   | AT04-08PA-SR2GY | Receptacle<br>8-Way, Pos. A,<br>Reduced Seal<br>.053-.120  |  |
|  |  | AT04-12PA-SRGRY | Receptacle<br>12-Way,<br>Pos. A,<br>Standard Seal          | <br>AW12P |
|   |   | AT04-12PA-SR2GY | Receptacle<br>12-Way, Pos. A,<br>Reduced Seal<br>.053-.120 |  |


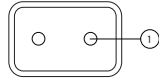



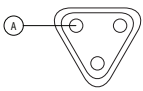



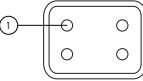



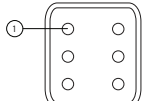



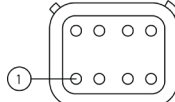


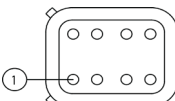

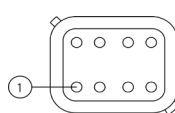

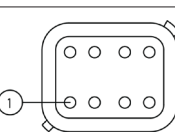


Color options pertain to connector body only. (see page 43 for options.)

**NOTE:** Wedgelocks are required for all receptacles.



Reduced Diameter Seals (.053 - .120" seals)


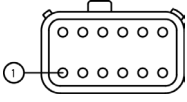


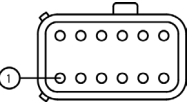

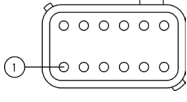

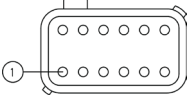
| Plug  | Face View   | Part Number     | Description  | Wedglock Part Number  |
|---|---|-----------------|--|---|
|    |    | AT06-2S-RD01    | 2-Way Plug, Female Connector with Reduced Diameter Seal (E-Seal)                           | <br>AW2S   |
|    |   | AT06-2S-RD01BLK | 2-Way Plug, Black Female Connector with Reduced Diameter Seal (E-Seal)                     |   |
|    |    | AT06-3S-RD01    | 3-Way Plug, Female Connector with Reduced Diameter Seal (E-Seal)                           | <br>AW3S   |
|    |   | AT06-3S-RD01BLK | 3-Way Plug, Black Female Connector with Reduced Diameter Seal (E-Seal)                     |   |
|   |   | AT06-4S-RD01    | 4-Way Plug, Female Connector with Reduced Diameter Seal (E-Seal)                           | <br>AW4S  |
|  |   | AT06-4S-RD01BLK | 4-Way Plug, Black Female Connector with Reduced Diameter Seal (E-Seal)                     |   |
|  |  | AT06-6S-RD01    | 6-Way Plug, Female Connector with Reduced Diameter Seal (E-Seal)                           | <br>AW6S |
|  |   | AT06-6S-RD01BLK | 6-Way Plug, Black Female Connector with Reduced Diameter Seal (E-Seal)                     |   |
|  |  | AT06-08SA-RD01  | 8-Way Plug, Female Connector with A Position Key, Reduced Diameter Seals (E-Seal)          | <br>AW8S |
|  |  | AT06-08SB-RD01  | 8-Way Plug, Female Connector with B Position Key and Reduced Diameter Seal (E-Seal), Black |   |
|  |  | AT06-08SC-RD01  | 8-Way Plug, Female Connector with C Position Key and Reduced Diameter Seal (E-Seal), Green |   |
|  |  | AT06-08SD-RD01  | 8-Way Plug, Female Connector with D Position Key and Reduced Diameter Seal (E-Seal), Brown |   |

**NOTE:** Wedglocks are required for all plugs.

# AT SERIES PLUG REDUCED DIAMETER SEAL PLUGS


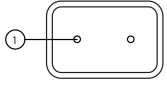



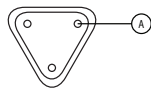



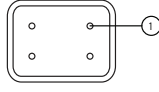



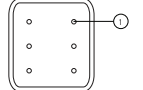



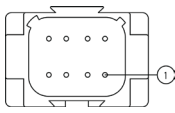


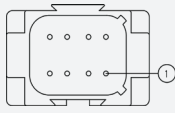

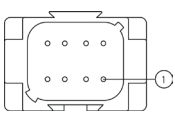

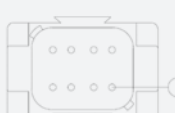
**AT**  
**REDUCED DIA. SEALS**  
**13A**

## Reduced Diameter Seals (.053 - .120" seals)

| Plug  | Face View   | Part Number    | Description   | Wedgelock Part Number  |
|---|---|----------------|---|--|
|  |  | AT06-12SA-RD01 | 12-Way Plug, Female Connector with A Position Key and Reduced Diameter Seal (E-Seal)        | <br>AW12S |
|  |  | AT06-12SB-RD01 | 12-Way Plug, Female Connector with B Position Key and Reduced Diameter Seal (E-Seal), Black |  |
|  |  | AT06-12SC-RD01 | 12-Way Plug, Female Connector with C Position Key and Reduced Diameter Seal (E-Seal), Green |  |
|  |  | AT06-12SD-RD01 | 12-Way Plug, Female Connector with D Position Key and Reduced Diameter Seal (E-Seal), Brown |  |

CONNECTOR SOLUTIONS

Reduced Diameter Seals (.053 - .120" seals)


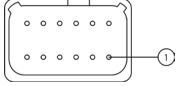


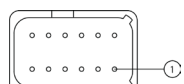

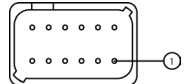

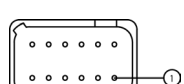
| Receptacle  | Face View   | Part Number     | Description  | Wedgelock Part Number   |
|---|---|-----------------|--|---|
|    |    | AT04-2P-RD01    | 2-Way Receptacle, Male Connector with Reduced Diameter Seal (E-Seal)                           | <br>AW2P   |
|    |   | AT04-2P-RD01BLK | 2-Way Receptacle, Black Male Connector with Reduced Diameter Seal (E-Seal)                     |   |
|    |    | AT04-3P-RD01    | 3-Way Receptacle, Male Connector with Reduced Diameter Seal (E-Seal)                           | <br>AW3P   |
|    |   | AT04-3P-RD01BLK | 3-Way Receptacle, Black Male Connector with Reduced Diameter Seal (E-Seal)                     |   |
|   |   | AT04-4P-RD01    | 4-Way Receptacle, Male Connector with Reduced Diameter Seal (E-Seal)                           | <br>AW4P  |
|  |   | AT04-4P-RD01BLK | 4-Way Receptacle, Black Male Connector with Reduced Diameter Seal (E-Seal)                     |   |
|  |  | AT04-6P-RD01    | 6-Way Receptacle, Male Connector with Reduced Diameter Seal (E-Seal)                           | <br>AW6P |
|  |   | AT04-6P-RD01BLK | 6-Way Receptacle, Black Male Connector with Reduced Diameter Seal (E-Seal)                     |   |
|  |  | AT04-08PA-RD01  | 8-Way Receptacle, Male Connector with A Position Key, Reduced Diameter Seal (E-Seal)           | <br>AW8P |
|  |  | AT04-08PB-RD01  | 8-Way Receptacle, Male Connector with B Position Key and Reduced Diameter Seal (E-Seal). Black |   |
|  |  | AT04-08PC-RD01  | 8-Way Receptacle, Male Connector with C Position Key and Reduced Diameter Seal (E-Seal), Green |   |
|  |  | AT04-08PD-RD01  | 8-Way Receptacle, Male Connector with D Position Key and Reduced Diameter Seal (E-Seal), Brown |   |

**NOTE:** Wedgelocks are required for all receptacles

# AT SERIES RECEPTACLE REDUCED DIAMETER SEAL


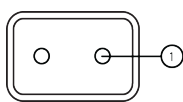



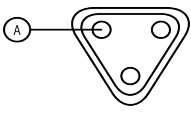



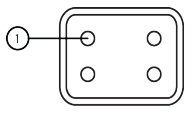



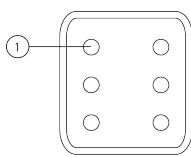



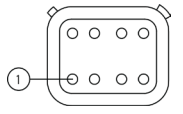


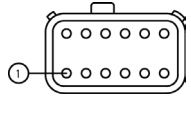

**AT**  
**REDUCED DIA. SEALS**  
**13A**

Reduced Diameter Seals (.053 - .120" seals)

| Receptacle  | Face View   | Part Number    | Description  | Wedglock Part Number   |
|---|---|----------------|--|--|
|  |  | AT04-12PA-RD01 | 12-Way Receptacle, Male Connector with A Position Key and Extended Shroud, Reduced Diameter Seal (E-Seal)        | <br>AW12P |
|  |  | AT04-12PB-RD01 | 12-Way Receptacle, Male Connector with B Position Key and Reduced Diameter Seal (E-Seal).<br>Black               |  |
|  |  | AT04-12PC-RD01 | 12-Way Receptacle, Male Connector with C Position Key and Extended Shroud, Reduced Diameter Seal (E-Seal), Green |  |
|  |  | AT04-12PD-RD01 | 12-Way Receptacle, Male Connector with D Position Key and Reduced Diameter Seal (E-Seal),<br>Brown               |  |


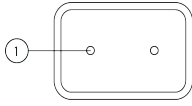


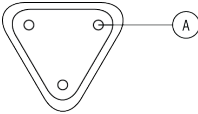






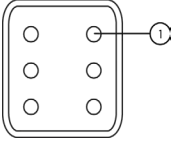



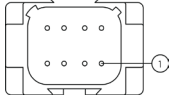


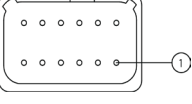

CONNECTOR SOLUTIONS

Modifications: Endcap over standard rear seal (.088 - .145")

| Plug  | Faceview  | Part Number     | Description   | Wedglock Part Number   |
|---|---|-----------------|---|--|
|    |    | AT06-2S-EC01    | 2-Way Plug, Female Connector with End Cap                     | <br>AW2S    |
|    |   | AT06-2S-EC01BLK | 2-Way Plug, Black Female Connector with End Cap, Black        |  |
|    |    | AT06-3S-EC01    | 3-Way Plug, Female Connector with End Cap                     | <br>AW3S    |
|    |   | AT06-3S-EC01BLK | 3-Way Plug, Black Female Connector with End Cap, Black        |  |
|    |    | AT06-4S-EC01    | 4-Way Plug, Female Connector with End Cap                     | <br>AW4S    |
|    |   | AT06-4S-EC01BLK | 4-Way Plug, Black Female Connector with End Cap               |  |
|  |  | AT06-6S-EC01    | 6-Way Plug, Female Connector with End Cap                     | <br>AW6S  |
|  |   | AT06-6S-EC01BLK | 6-Way Plug, Black Female Connector with End Cap               |  |
|  |  | AT06-08SA-EC01  | 8-Way Plug, Female Connector with A Position Key and End Cap  | <br>AW8S  |
|  |  | AT06-12SA-EC01  | 12-Way Plug, Female Connector with A Position Key and End Cap | <br>AW12S |

**NOTE:** Wedglocks are required for all plugs.

Modifications: Endcap over standard rear seal (.088 - .145")

| Receptacle  | Faceview  | Part Number     | Description   | Wedglock Part Number   |
|---|---|-----------------|---|--|
|    |    | AT04-2P-EC01    | 2-Way Receptacle, Male Connector with End Cap   | <br>AW2P    |
|    |   | AT04-2P-EC01BLK | 2-Way Receptacle, Black Male Connector with End Cap, Black                            |  |
|    |    | AT04-3P-EC01    | 3-Way Receptacle, Male Connector with End Cap   | <br>AW3P    |
|    |   | AT04-3P-EC01BLK | 3-Way Receptacle, Male Connector with End Cap, Black                                  |  |
|    |    | AT04-4P-EC01    | 4-Way Receptacle, Male Connector with End Cap   | <br>AW4P    |
|   |   | AT04-4P-EC01BLK | 4-Way Receptacle, Black Male Connector with End Cap, Black                            |  |
|  |  | AT04-6P-EC01    | 6-Way Receptacle, Male Connector with End Cap   | <br>AW6P  |
|  |   | AT04-6P-EC01BLK | 6-Way Receptacle, Black Male Connector with End Cap, Black                            |  |
|  |  | AT04-08PA-EC01  | 8-Way Receptacle, Male Connector with A Position Key and End Cap                      | <br>AW8P  |
|  |  | AT04-12PA-EC01  | 12-Way Receptacle, Male Connector with A Position Key and Extended Shroud and End Cap | <br>AW12P |


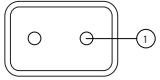



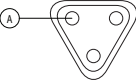



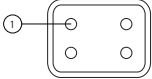



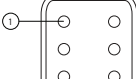



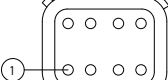



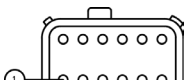



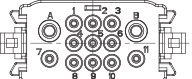
**NOTE:** Wedglocks are required for all receptacles.



**AT**  
**END CAPS +**  
**REDUCED DIA. SEAL**  
**13A**

**AT SERIES PLUG**  
**END CAP + REDUCED DIAMETER SEAL**

Mixed modifications: Endcap plus reduced diameter seal (.053-.120")


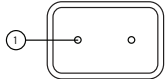



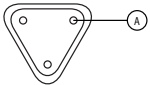



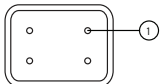



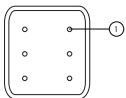



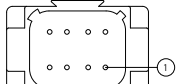



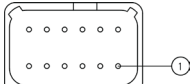


| Plug  | Face View   | Part Number       | Description  | Wedglock Part Number   |
|---|---|-------------------|--|--|
|    |    | AT06-2S-MM01      | 2-Way Plug, Female Connector with Reduced Diameter Seal (E-Seal) and End Cap   | <br>AW2S    |
|    |   | AT06-2S-MM01BLK   | 2-Way Plug, Black Female Connector with Reduced Diameter Seal (E-Seal) and Enhanced Seal Retention (P012) and End Cap                    |  |
|    |    | AT06-3S-MM01      | 3-Way Plug, Female Connector with Reduced Diameter Seal (E-Seal) and End Cap   | <br>AW3S    |
|    |   | AT06-3S-MM01BLK   | 3-Way Plug, Black Female Connector with Reduced Diameter Seal (E-Seal) and End Cap   |  |
|    |   | AT06-4S-MM01      | 4-Way Plug, Female Connector with Reduced Diameter Seal (E-Seal) and End Cap   | <br>AW4S   |
|   |   | AT06-4S-MM01BLK   | 4-Way Plug, Black Female Connector with Reduced Diameter Seal (E-Seal) and End Cap   |  |
|  |  | AT06-6S-MM01      | 6-Way Plug, Female Connector with Reduced Diameter Seal (E-Seal) and End Cap   | <br>AW6S  |
|  |   | AT06-6S-MM01BLK   | 6-Way Plug, Black Female Connector with Reduced Diameter Seal (E-Seal) and End Cap   |  |
|  |  | AT06-08SA-MM01    | 8-Way Plug, Female Connector with A Position Key, Reduced Diameter Seals (E-Seal) and End Cap  | <br>AW8S  |
|  |   | AT06-08SA-MMBLK   | 8-Way Plug, Black Female Connector with A Position Key, Reduced Diameter Seals (E-Seal) and End Cap                                      |  |
|  |  | AT06-12SA-MM01    | 12-Way Plug, Female Connector with A Position Key and Reduced Diameter Seal (E-Seal) and End Cap   | <br>AW12S |
|  |   | AT06-12SA-MM01BLK | 12-Way Plug, Black Female Connector with A Position Key and Reduced Diameter Seal (E-Seal) and Enhanced Seal Retention(P012) and End Cap |  |
|  |  | AT1612-13SB-RD    | 13 Position Plug, Reduced Diameter Seal, End Cap   | not required   |



# AT SERIES RECEPTACLE END CAP + REDUCED DIAMETER SEAL


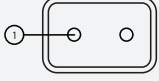

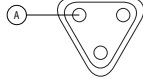

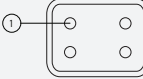

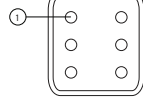

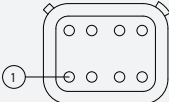

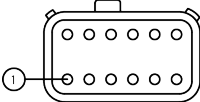
**AT**  
**END CAPS + REDUCED**  
**DIA. SEAL 13A**

Mixed modifications: Endcap plus reduced diameter seal (.053-.120")


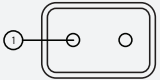

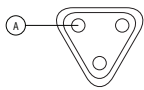

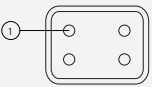

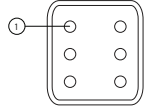

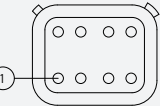

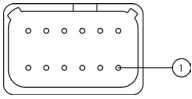
| Receptacle  | Face View   | Part Number     | Description   | Wedglock Part Number   |
|---|---|-----------------|---|--|
|    |    | AT04-2P-MM01    | 2-Way Receptacle, Male Connector with Reduced Diameter Seal (E-Seal) and End Cap  | <br>AW2P    |
|    |   | AT04-2P-MM01BLK | 2-Way Receptacle, Black Male Connector with Reduced Diameter Seal (E-Seal) and End Cap                                      |  |
|    |    | AT04-3P-MM01    | 3-Way Receptacle, Male Connector with Reduced Diameter Seal (E-Seal) and End Cap  | <br>AW3P    |
|    |   | AT04-3P-MM01BLK | 3-Way Receptacle, Black Male Connector with Reduced Diameter Seal (E-Seal) and End Cap                                      |  |
|    |   | AT04-4P-MM01    | 4-Way Receptacle, Male Connector with Reduced Diameter Seal (E-Seal) and End Cap  | <br>AW4P    |
|   |   | AT04-4P-MM01BLK | 4-Way Receptacle, Black Male Connector with Reduced Diameter Seal (E-Seal) and End Cap                                      |  |
|  |  | AT04-6P-MM01    | 6-Way Receptacle, Male Connector with Reduced Diameter Seal (E-Seal) and End Cap  | <br>AW6P  |
|  |   | AT04-6P-MM01BLK | 6-Way Receptacle, Black Male Connector with Reduced Diameter Seal (E-Seal) and End Cap                                      |  |
|  |  | AT04-08PA-MM01  | 8-Way Receptacle, Male Connector with A Position Key, Reduced Diameter Seal (E-Seal) and End Cap                            | <br>AW8P  |
|  |   | AT04-08PA-MMBLK | 8-Way Receptacle, Black Male Connector with A Position Key, Reduced Diameter Seal (E-Seal) and End Cap                      |  |
|  |  | AT04-12PA-MM01  | 12-Way Receptacle, Male Connector with A Position Key and Extended Shroud, Reduced Diameter Seal (E-Seal) and End CAP       | <br>AW12P |
|  |   | AT04-12PA-MMBLK | 12-Way Receptacle, Black Male Connector with A Position Key and Extended Shroud, Reduced Diameter Seal (E-Seal) and End Cap |  |

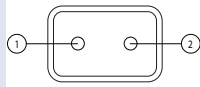
**NOTE:** Wedglocks are required for all receptacles

Modification: Solid Rear Seal + End cap for maintaining an environmental seal with unmated connectors

| Plugs   | Face View   | Part Number    | Description   | Wedglock |
|---|---|----------------|---|----------|
|    |    | AT06-2S-SS01   | 2-Way Plug, Female Connector with Solid Rear Grommet. Wedglock included                     |          |
|    |    | AT06-3S-SS01   | 3-Way Plug, Female Connector with Solid Rear Grommet. Wedglock included                     |          |
|    |    | AT06-4S-SS01   | 4-Way Plug, Female Connector with Solid Rear Grommet. Wedglock included                     |          |
|   |   | AT06-6S-SS01   | 6-Way Plug, Female Connector with Solid Rear Grommet. Wedglock included                     |          |
|  |  | AT06-08SA-SS01 | 8-Way Plug, Female Connector with A Position Key and Solid Rear Grommet. Wedglock included  |          |
|  |  | AT06-12SA-SS01 | 12-Way Plug, Female Connector with A Position Key and Solid Rear Grommet. Wedglock included |          |

Modification: Solid Rear Seal + End cap for maintaining an environmental seal with unmated connectors

| Receptacles   | Face View   | Part Number    | Description  |
|---|---|----------------|--|
|    |    | AT04-2P-SS01   | 2-Way Receptacle, Male Connector with Solid Rear Grommet   |
|    |    | AT04-3P-SS01   | 3-Way Receptacle, Male Connector with Solid Rear Grommet   |
|    |    | AT04-4P-SS01   | 4-Way Receptacle, Male Connector with Solid Rear Grommet   |
|   |   | AT04-6P-SS01   | 6-Way Receptacle, Male Connector with Solid Rear Grommet   |
|  |  | AT04-08PA-SS01 | 8-Way Receptacle, Male Connector with A Position Key and Solid Rear Grommet                      |
|  |  | AT04-12PA-SS01 | 12-Way Receptacle, Male Connector with A Position Key and Extended Shroud and Solid Rear Grommet |



**AT SERIES PLUG**  
**12 VOLT LED OPTIONS**

Designed for electromechanical applications where a visible LED light is integrated into a 2 position plug allowing the user to determine the device is receiving power. Environmentally sealed, field serviceable and cost effective while reducing costly trouble shooting time. 12V and 24V versions available.

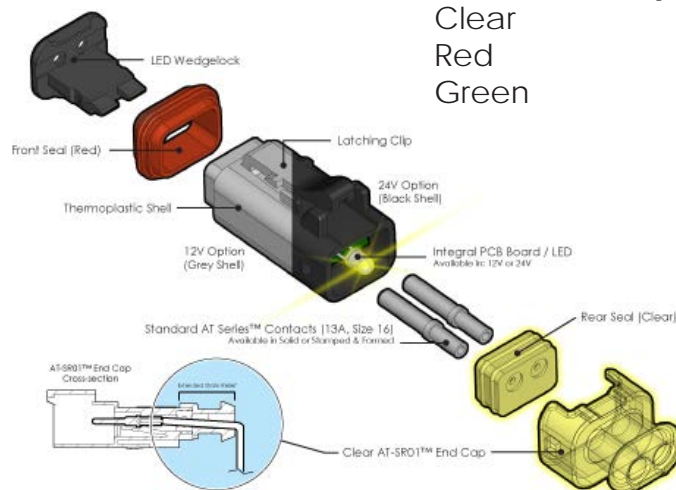
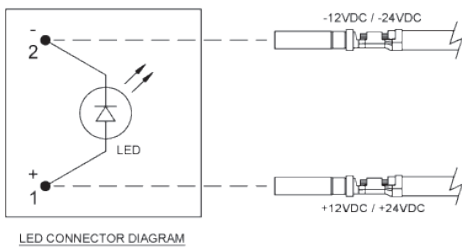
| 12 VOLT |                 |  |                   |
|---------|-----------------|--|-------------------|
| Part    | Part Number     | Description  | Wedglock          |
|         | AT06-2S-LED1201 | 2-Way, Plug, LED, 12V, Clear endcap, Grey Body, <b>CLEAR LED</b> (Requires Wedglock P/N: AW2S-LED)                     |                   |
|         | AT06-2S-LED1202 | 2-Way, Plug, LED, 12V, Clear endcap, Grey Body, Reduced Seal, SR01, <b>CLEAR LED</b> (Requires Wedglock P/N: AW2S-LED) | <br><br>AWS2S-LED |
|         | AT06-2S-LED1220 | 2-Way, Plug, LED, 12V, Clear endcap, Grey Body, SR01, <b>RED LED</b> (Requires Wedglock P/N: AW2S-LED)                 |                   |
|         | AT06-2S-LED1230 | 2-Way, Plug, LED, 12V, Clear endcap, Grey Body, SR01, <b>GREEN LED</b> (Requires Wedglock P/N: AW2S-LED)               |                   |
|         | AT06-2S-LED12K1 | 2-Way LED Plug Kit, 12V, Contacts and Wedge included, Grey, Clear endcap, <b>CLEAR LED</b>                             |                   |
|         | AT06-2S-LED12K2 | 2-Way LED Plug Kit, 12V, Contacts and Wedge included, Reduced Seal, Grey, Clear endcap, <b>CLEAR LED</b>               |                   |

**Connector Body Colors:**

- Gray 12V
- Black 24V

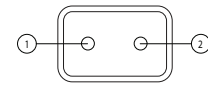
**LED Color Options:**

- Clear
- Red
- Green



\*Yellow LED color and glowing effect used for illustration purpose







# AT SERIES PLUG 24 VOLT LED OPTIONS



**AT**  
**LED OPTIONS**  
**13A/ 24V**

## Features & Benefits

- Integral PCB Board/LED, Front and Rear Seals, and AT-SR01 End Cap Strain Reliefs come factory assembled on the Plug.
- Simply crimp the contact style of your choice...Insert...Snap the wedgelock into place.
- **NO ADDITIONAL ASSEMBLY REQUIRED**

| 24 VOLT   |                 |  |  |
|---|-----------------|--|--|
| Part  | Part Number     | Description  | Wedgelock  |
|    | AT06-2S-LED2401 | 2-Way, Plug, LED, 24V, Clear Endcap, Black Body, <b>CLEAR LED</b> (Requires Wedgelock P/N: AW2S-LED)               | <br>AWS2S-LED |
|    | AT06-2S-LED2402 | 2-Way, Plug, LED, 24V, Clear Endcap, Reduced Seal, Black Body, <b>CLEAR LED</b> (Requires Wedgelock P/N: AW2S-LED) |  |
|    | AT06-2S-LED2420 | 2-Way, Plug, LED, 24V, Clear endcap, Grey Body, SR01, <b>RED LED</b> (Requires Wedgelock P/N: AW2S-LED)            |  |
|  | AT06-2S-LED2430 | 2-Way, Plug, LED, 24V, Clear endcap, Black Body, SR01, <b>GREEN LED</b> (Requires Wedgelock P/N: AW2S-LED)         |  |
|  | AT06-2S-LED24K1 | 2-Way LED Plug Kit, 24V, Contacts and Wedge included, Black, Clear endcap, <b>CLEAR LED</b>                        |  |
|  | AT06-2S-LED24K2 | 2-Way LED Plug Kit, 24V, Contacts and Wedge included, Reduced Seal, Black, Clear endcap, <b>CLEAR LED</b>          |  |

Solenoids | Valves | Sensors | Manifolds  
Coils | Diagnostics | Electronic Controls

- Field Serviceable • Cost-effective
- Quick diagnosis reduces troubleshooting time
- Environmentally-sealed for harsh environments
- Plug and Play - assembled the same as a standard connector

\*Certain chosen devices must be diode-protected

**AT SERIES RECEPTACLE  
PROTECTIVE COVERS**

| Part  | Face View   | Part Number  | Description                                       |
|---|---|--------------|---|
|    |    | AT06-2S-CAP  | 2-way Protective Cover for Plug, Black            |
|    |    | AT06-3S-CAP  | 3-way Protective Cover for Plug, Black            |
|    |    | AT06-4S-CAP  | 4-way Protective Cover for Plug, Black            |
|    |    | AT06-6S-CAP  | 6-way Protective Cover for Plug, Black            |
|   |   | AT06-08S-CAP | 8-way, All Keys Protective Cover for Plug, Black  |
|  |  | AT06-12S-CAP | 12-way, All Keys Protective Cover for Plug, Black |



Mounting Hole provided on all sizes.  
Please go to [www.amphenol-sine.com](http://www.amphenol-sine.com) and search  
by part number to view datasheets.

### J-1939 Modifications - Plug, Receptacles & Wedgelocks

AT Series™ J-1939/11, 3-Pin connectors offer a high performance, reliable and cost effective solution for the SAE 3 position CAN Network requirements . This series is designed to be completely compatible with existing industry standard J1939/11 connectors and provides a complete line of connectors including Y receptacles, network terminations with 120 ohm resistors, and keyed wedgelocks to prevent mis-mating. Additionally, the AT Series offers the -SR01 Strain Relief series in both 3 way receptacles and plugs for critical J1939 in-line connections requiring increased environmental protection and strain relief.



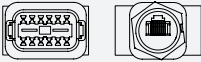

| Receptacle  | Face View   | Part Number      | Description  | Wedgelock Part Number  |
|---|---|------------------|--|--|
|    |    | AT04-3P-RY01     | "Y" Receptacle, 3-Way, Grey<br>*Wedgelock included   |  |
|    |    | AT04-3P-RJ120BK  | Receptacle, 3-Way, J-1939, 120 Ohm, Terminating Resistor, Black, *Wedgelock Included                 | <br>AW3P-1939<br>Wedgelock, 3-Way, J-1939, Blue         |
|    |   | AT04-3P-RJ120    | Recep., 3-Way, J-1939, 120 Ohm, Terminating Resistor, Grey, *Wedgelock Included                      |  |
| Plug  | Face View   | Part Number      | Description  | Wedgelock Part Number  |
|  |  | AT06-3S-SR-01BLK | Plug, 3-Way, Strain Relief, Black  | <br>AW3S-1939<br>Wedgelock, Plug, 3-Way, J-1939, Blue |
|   |   | AT06-3S-RJ120    | Plug, 3-Way, J-1939, 120 Ohm Resistor, Grey, End Cap (Blue wedgelock included)                       | <br>AW3S<br>Wedgelock, Plug, 3-Way                    |
|   |   | AT06-3S-RJL120   | Plug, 3-Way, J-1939, 120 Ohm Resistor, , Grey, End Cap, <b>Latch Guard</b> (Blue wedgelock included) |  |



**AT SERIES PLUG  
ADAPTER 6/12 PIN TO RJ45**


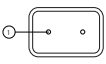
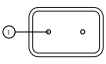
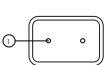








Adapter, 6/12 Pin to RJ45









AT Series™ 6 Pin to RJ45 Adapters are developed to provide a direct connection between industry standard 6 position connectors and 8 position ethernet RJ45 connections.

| Part  | Face View   | Part Number | Description  |
|---|---|-------------|--|
|  |  | P30307-XX   | AT Series™ 6-Way Receptacle to RJ45 8-Way Receptacle   |
|   |  |             | AT Series™ 12-Way Receptacle to RJ45 8-Way Receptacle  |
|  | NA  | ATRJ8-FSSR  | RJ Plug, Sealed Strain Relief, Field Installable/ Serviceable Assembly, 13/16-28 Thread Receptacles (RJ plug not included) |

TERMINATING RESISTORS AND DIODES

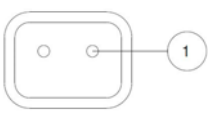





AT Series™ connectors are available with custom resistor values to meet specific application requirements. Consult Sales Representative for resistor, diode and other electronic packaging solutions.

| Part  | Face View   | Part Number     | Type       | Description   |
|---|---|-----------------|------------|---|
|    |    | AT04-2P-R120YEL | Resistor   | 2-Way, Receptacle, 120 Ohm Resistor, NI Pins, Wedgelock, Yellow                 |
|    |    | AT04-2P-THM10K  | Thermistor | 2-Way, Receptacle, 10K Ohm Thermistor, NI Pins, Wedgelock, Red                  |
|    |    | AT04-2P-DIN4GRY | Diode      | 2-Way, Receptacle, Diode, 1N4004, NI Pins, Wedgelock, Gray                      |
|    |    | AT04-3P-RJ120BK | Resistor   | 3-Way, Receptacle, J1939-11, 120 Ohm Resistor, Gold Pins, Blue Wedgelock, Black |
|    |    | AT04-3P-RJ120   | Resistor   | 3-Way, Receptacle, J1939-11, 120 Ohm Resistor, Gold Pins, Blue Wedgelock, Gray  |
|  |  | AT04-4P-R1K2K   | Resistor   | 4-Way, Receptacle, 1.2K & 2.7K Ohm Resistor, NI Pins, Wedgelock, Gray           |
|  |  | AT04-6P-R120BL  | Resistor   | 6-Way, Receptacle, 6 Gang Buss w/ 120 Ohm Resistor, Gold Pins, Wedgelock, Blue  |

| Part  | Face View   | Part Number     | Type     | Description  |
|---|---|-----------------|----------|--|
|  |  | AT06-2S-R120YEL | Resistor | 2-Way, Plug, 120 Ohm Resistor, NI Sockets, Standard Wedgelock, Yellow  |
|  |  | AT06-3S-RJ120BK | Resistor | 3-Way, Plug, J1939-11, 120 Ohm Resistor, Gold Sockets, Blue Wedgelock, Black   |
|  |  | AT06-3S-RJ120   | Resistor | 3-Way, Plug, J-1939, 120 Ohm Resistor, End Cap, Blue Wedgelock, Grey   |
|  |  | AT06-3S-R680    | Resistor | 3-Way, Plug, 680 Ohm Resistor, End Cap, Standard Wedgelock, Grey<br><b>NOTE:</b> Resistor is between A and B position. |

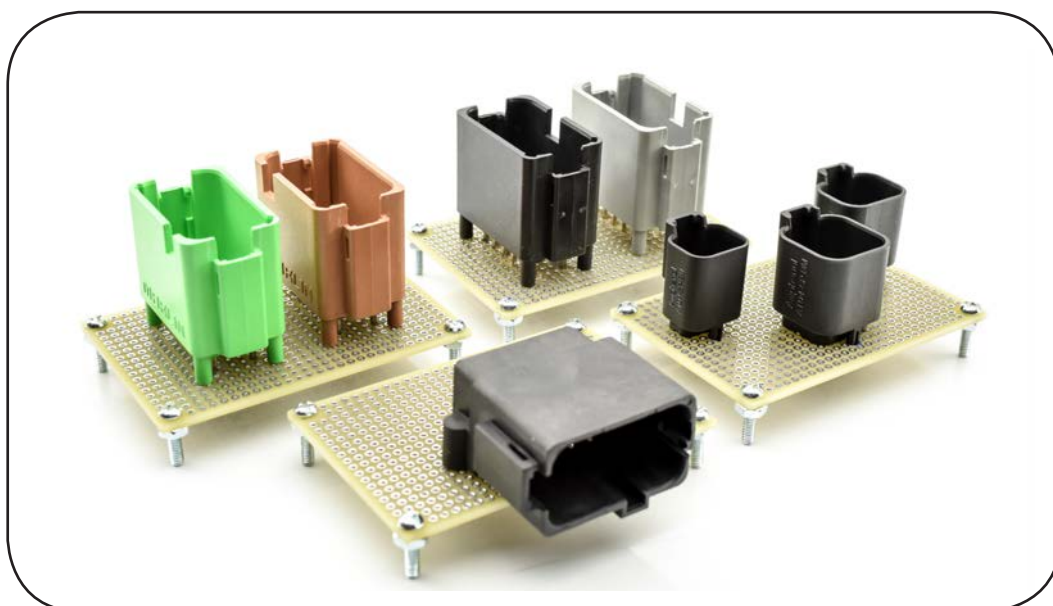
### Extended Body AT Plugs Designed for Overmolding

Custom Cable Assemblies are available for any application, and carry with them the capabilities of being overmolded in any size or length necessary. We have many specialized configurations. For more information, please contact a Sales Representative at 1-800-394-7732.

| Part  | Face View  | Part Number   | Description                                | Wedglock   |
|---|--|---------------|--|--|
|    |  | AT06-2S-OMGRY | 2-Way Custom Overmold Plug, Socket, Gray   | <br>AW2S |
|    |  | AT06-2S-OMBLK | 2-Way Custom Overmold Plug, Socket, Black  |  |
|    |  | AT06-2S-OMBLU | 2-Way Custom Overmold Plug, Socket, Blue   |  |
|    |  | AT06-2S-OMBRN | 2-Way Custom Overmold Plug, Socket, Brown  |  |
|  |  | AT06-2S-OMGRN | 2-Way Custom Overmold Plug, Socket, Green  |  |
|  |  | AT06-2S-OMRED | 2-Way Custom Overmold Plug, Socket, Red    |  |
|  |  | AT06-2S-OMWHT | 2-Way Custom Overmold Plug, Socket, White  |  |
|  |  | AT06-2S-OMYEL | 2-Way Custom Overmold Plug, Socket, Yellow |  |

**NOTE:** These custom products are a sampling of the options available. For more options, please contact your Sales Representative.

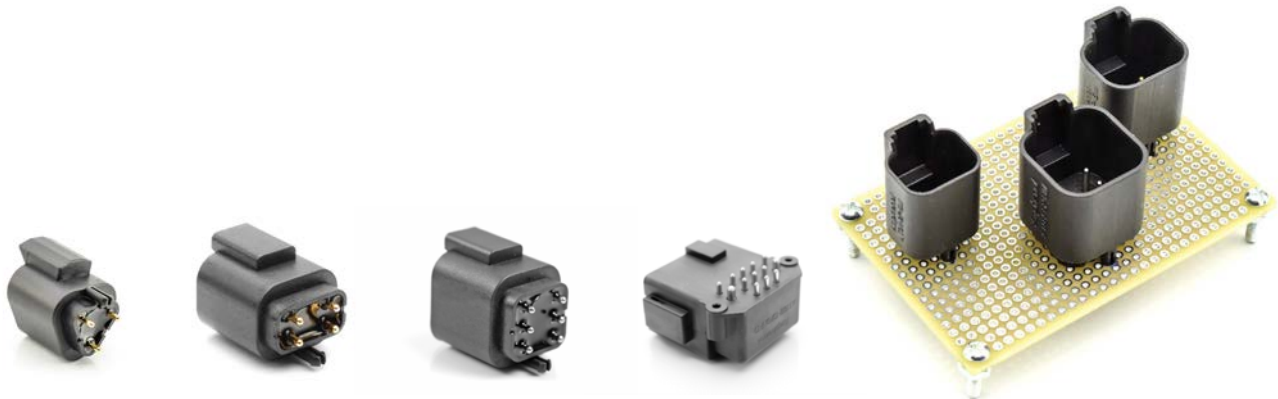
# Board|Lock™



# Board | Lock™ Series

2, 3, 4, 6, 8, 12 and 13 Pos. / Size 16, 13A

13 Pos. (Mixed Power & Signal) / Size 12, 25A; Size 16, 13A



The Amphenol Board | Lock™ series combines flangeless wire-to-board versatility with the proven reliability of the A Series™ environmentally sealed thermoplastic connection system. Perfect for power or data signal applications, Board | Lock™ features a unique design which is compact, low-profile, lightweight and delivers proven durability in off-road and harsh environments. The snap-in board features allow for rapid placement and the enclosed latch-receiver design benefits potting and over-mold applications. When combined with the economical A Series™ positive polarization & available coding options, mis-mating occurrences are dramatically reduced.


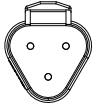


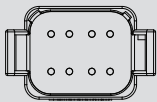
Our engineering teams can provide unique mixed-power & signal arrangements, 90° or straight PCB pins, or custom flange mount designs to reduce overall connector size and save space. We are committed to work with you to ensure a design that meets your needs.

|                         |   |
|-------------------------|---|
| Wire Range              | Size 12 contacts will accept wire ranges of 12-14AWG; Size 16 contacts will accept 14-20AWG   |
| Temperature             | Operating temperature range: -55°C to +125°C at rated current   |
| Housing/Latch           | Thermoplastic/Integrated latch for mating   |
| Dielectric Value        | Meets or exceeds 1500 volts minimum   |
| 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 Retention     | A mated connector subjected to a pulling force by the exiting wire bundle at 25 lbs. times the number of contacts to a maximum of 100 lbs. 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   | 1000 megohms minimum at 25°C  |
| Mating Cycle Durability | Following 100 cycles of connection engagement and disengagement, degradation either mechanical or electrical is not evident   |
| Contact Millivolt Drop  | Size 16 contacts with 16AWG conductor - 100 mV drop max at 13A test current   |
| 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 without loss of electronic performance |

AT Series Board | Lock™ meets all the performance criteria and specifications of the AT Series™, and is also available in a wide variety of custom colors. Consult factory for complete specifications.

|                   |                      |
|-------------------|----------------------|
| Contact Size:     | <b>16 (Included)</b> |
| Wire Range (AWG): | 14-20 AWG            |
| Amperage:         | 13                   |

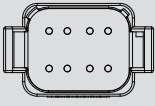
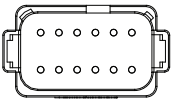
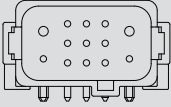
Go to AT Standard Connectors for Plug options starting on page 46

|   | Part Number     | Description   |
|---|-----------------|---|
|    | AT04-2P-BM01    | 2 Pos. Recep., Pin, Gold contact plating, PCB, Board Mount, No potting, Black   |
|   | AT04-2P-BM02    | 2 Pos. Recep., Pin, Gold contact plating, PCB, Board Mount, Potting, Black      |
|   | AT04-2P-BM03    | 2 Pos. Recep., Pin, Nickel contact plating, PCB, Board Mount, No potting, Black |
|   | AT04-2P-BM04    | 2 Pos. Recep., Pin, Nickel contact plating, PCB, Board Mount, Potting, Black    |
|   | ATF13-2P-BM01   | 2 Pos. 90° Recep., Pin, Gold contact plating, PCB, Board Mount, Black           |
|   | ATF13-2P-BM02   | 2 Pos. 90° Recep., Pin, Nickel contact plating, PCB, Board Mount, Black         |
|    | AT04-3P-BM01    | 3 Pos. Recep., Pin, Gold contact plating, PCB, Board Mount, No potting, Black   |
|   | AT04-3P-BM02    | 3 Pos. Recep., Pin, Gold contact plating, PCB, Board Mount, Potting, Black      |
|   | AT04-3P-BM03    | 3 Pos. Recep., Pin, Nickel contact plating, PCB, Board Mount, No potting, Black |
|   | AT04-3P-BM04    | 3 Pos. Recep., Pin, Nickel contact plating, PCB, Board Mount, Potting, Black    |
|   | ATF13-3P-BM01   | 3 Pos. 90° Recep., Pin, Gold contact plating, PCB, Board Mount, Black           |
|   | ATF13-3P-BM02   | 3 Pos. 90° Recep., Pin, Nickel contact plating, PCB, Board Mount, Black         |
|   | AT04-4P-BM01    | 4 Pos. Recep., Pin, Gold contact plating, PCB, Board Mount, No potting, Black   |
|   | AT04-4P-BM02    | 4 Pos. Recep., Pin, Gold contact plating, PCB, Board Mount, Potting, Black      |
|   | AT04-4P-BM03    | 4 Pos. Recep., Pin, Nickel contact plating, PCB, Board Mount, No potting, Black |
|   | AT04-4P-BM04    | 4 Pos. Recep., Pin, Nickel contact plating, PCB, Board Mount, Potting, Black    |
|   | ATF13-4P-BM01   | 4 Pos. 90° Recep., Pin, Gold contact plating, PCB, Board Mount, Black           |
|   | ATF13-4P-BM02   | 4 Pos. 90° Recep., Pin, Nickel contact plating, PCB, Board Mount, Black         |
|  | AT04-6P-BM01    | 6 Pos. Recep., Pin, Gold contact plating, PCB, Board Mount, No potting, Black   |
|   | AT04-6P-BM02    | 6 Pos. Recep., Pin, Gold contact plating, PCB, Board Mount, Potting, Black      |
|   | AT04-6P-BM03    | 6 Pos. Recep., Pin, Nickel contact plating, PCB, Board Mount, No potting, Black |
|   | AT04-6P-BM04    | 6 Pos. Recep., Pin, Nickel contact plating, PCB, Board Mount, Potting, Black    |
|   | ATF13-6P-BM01   | 6 Pos. 90° Recep., Pin, Gold contact plating, PCB, Board Mount, Black           |
|   | ATF13-6P-BM02   | 6 Pos. 90° Recep., Pin, Nickel contact plating, PCB, Board Mount, Black         |
|  | AT04-08PA-BM01  | 8 Pos. Recep., Pin, Gold contact plating, PCB, Board Mount, No potting, Gray    |
|   | AT04-08PA-BM02  | 8 Pos. Recep., Pin, Gold contact plating, PCB, Board Mount, Potting, Gray       |
|   | AT04-08PA-BM03  | 8 Pos. Recep., Pin, Nickel contact plating, PCB, Board Mount, No potting, Gray  |
|   | AT04-08PA-BM04  | 8 Pos. Recep., Pin, Nickel contact plating, PCB, Board Mount, Potting, Gray     |
|   | ATF13-08PA-BM01 | 8 Pos. 90° Recep., Pin, Nickel contact plating, PCB, Board Mount, Gray          |
|   | ATF13-08PA-BM02 | 8 Pos. Recep., Pin, Gold contact plating, PCB, Board Mount, No potting, Gray    |
|   | AT04-08PB-BM01  | 8 Pos. Recep., Pin, Gold contact plating, PCB, Board Mount, No potting, Black   |
|   | AT04-08PB-BM02  | 8 Pos. Recep., Pin, Gold contact plating, PCB, Board Mount, Potting, Black      |
|   | AT04-08PB-BM03  | 8 Pos. Recep., Pin, Nickel contact plating, PCB, Board Mount, No potting, Black |
|   | AT04-08PB-BM04  | 8 Pos. Recep., Pin, Nickel contact plating, PCB, Board Mount, Potting, Black    |
|   | ATF13-08PB-BM01 | 8 Pos. 90° Recep., Pin, Gold contact plating, PCB, Board Mount, Black           |
|   | ATF13-08PB-BM02 | 8 Pos. 90° Recep., Pin, Nickel contact plating, PCB, Board Mount, Black         |
|   | AT04-08PC-BM01  | 8 Pos. Recep., Pin, Gold contact plating, PCB, Board Mount, No potting, Green   |
|   | AT04-08PC-BM02  | 8 Pos. Recep., Pin, Gold contact plating, PCB, Board Mount, Potting, Green      |
|   | AT04-08PC-BM03  | 8 Pos. Recep., Pin, Nickel contact plating, PCB, Board Mount, No potting, Green |
|   | AT04-08PC-BM04  | 8 Pos. Recep., Pin, Nickel contact plating, PCB, Board Mount, Potting, Green    |
|   | ATF13-08PC-BM01 | 8 Pos. 90° Recep., Pin, Gold contact plating, PCB, Board Mount, Green           |
|   | ATF13-08PC-BM02 | 8 Pos. 90° Recep., Pin, Nickel contact plating, PCB, Board Mount, Green         |

Continued on next page

|                  |           |
|------------------|-----------|
| Contact Size     | <b>16</b> |
| Wire Range (AWG) | 14-20 AWG |
| Amperage         | 13        |

Go to AT Standard Connectors for Plug options starting on page 52

|   |                 |   |
|---|-----------------|---|
|    | AT04-08PD-BM01  | 8 Pos. Recep., Pin, Gold contact plating, PCB, Board Mount, No potting, Brown                                       |
|   | AT04-08PD-BM02  | 8 Pos. Recep., Pin, Gold contact plating, PCB, Board Mount, Potting, Brown  |
|   | AT04-08PD-BM03  | 8 Pos. Recep., Pin, Nickel contact plating, PCB, Board Mount, No potting, Brown                                     |
|   | AT04-08PD-BM04  | 8 Pos. Recep., Pin, Nickel contact plating, PCB, Board Mount, Potting, Brown  |
|   | ATF13-08PD-BM01 | 8 Pos. 90° Recep., Pin, Gold contact plating, PCB, Board Mount, Brown   |
|   | ATF13-08PD-BM02 | 8 Pos. 90° Recep., Pin, Nickel contact plating, PCB, Board Mount, Brown   |
|  | AT04-12PA-BM01  | 12 Pos. Recep., Pin, Gold contact plating, PCB, Board Mount, No potting, Gray                                       |
|   | AT04-12PA-BM02  | 12 Pos. Recep., Pin, Gold contact plating, PCB, Board Mount, Potting, Gray  |
|   | AT04-12PA-BM03  | 12 Pos. Recep., Pin, Nickel contact plating, PCB, Board Mount, No potting, Gray                                     |
|   | AT04-12PA-BM04  | 12 Pos. Recep., Pin, Nickel contact plating, PCB, Board Mount, Potting, Gray  |
|   | ATF13-12PA-BM01 | 12 Pos. 90° Recep., Pin, Gold contact plating, PCB, Board Mount, Gray   |
|   | ATF13-12PA-BM02 | 12 Pos. 90° Recep., Pin, Nickel contact plating, PCB, Board Mount, Gray   |
|   | AT04-12PB-BM01  | 12 Pos. Recep., Pin, Gold contact plating, PCB, Board Mount, No potting, Black                                      |
|   | AT04-12PB-BM02  | 12 Pos. Recep., Pin, Gold contact plating, PCB, Board Mount, Potting, Black   |
|   | AT04-12PB-BM03  | 12 Pos. Recep., Pin, Nickel contact plating, PCB, Board Mount, No potting, Black                                    |
|   | AT04-12PB-BM04  | 12 Pos. Recep., Pin, Nickel contact plating, PCB, Board Mount, Potting, Black                                       |
|   | ATF13-12PB-BM01 | 12 Pos. 90° Recep., Pin, Gold contact plating, PCB, Board Mount, Black  |
|   | ATF13-12PB-BM02 | 12 Pos. 90° Recep., Pin, Nickel contact plating, PCB, Board Mount, Black  |
|   | AT04-12PC-BM01  | 12 Pos. Recep., Pin, Gold contact plating, PCB, Board Mount, No potting, Green                                      |
|   | AT04-12PC-BM02  | 12 Pos. Recep., Pin, Gold contact plating, PCB, Board Mount, Potting, Green   |
|   | AT04-12PC-BM03  | 12 Pos. Recep., Pin, Nickel contact plating, PCB, Board Mount, No potting, Green                                    |
|   | AT04-12PC-BM04  | 12 Pos. Recep., Pin, Nickel contact plating, PCB, Board Mount, Potting, Green                                       |
|   | ATF13-12PC-BM01 | 12 Pos. 90° Recep., Pin, Gold contact plating, PCB, Board Mount, Green  |
|   | ATF13-12PC-BM02 | 12 Pos. 90° Recep., Pin, Nickel contact plating, PCB, Board Mount, Green  |
|   | AT04-12PD-BM01  | 12 Pos. Recep., Pin, Gold contact plating, PCB, Board Mount, No potting, Brown                                      |
|   | AT04-12PD-BM02  | 12 Pos. Recep., Pin, Gold contact plating, PCB, Board Mount, Potting, Brown   |
|   | AT04-12PD-BM03  | 12 Pos. Recep., Pin, Nickel contact plating, PCB, Board Mount, No potting, Brown                                    |
|   | AT04-12PD-BM04  | 12 Pos. Recep., Pin, Nickel contact plating, PCB, Board Mount, Potting, Brown                                       |
|   | ATF13-12PD-BM01 | 12 Pos. 90° Recep., Pin, Gold contact plating, PCB, Board Mount, Brown  |
|   | ATF13-12PD-BM02 | 12 Pos. 90° Recep., Pin, Nickel contact plating, PCB, Board Mount, Brown  |
|  | AT1612-13PBNF13 | 13 Pos. 90° Recep., Pin, Nickel contact plating, PCB, Board Mount, No potting, Black, Keyed B. Contact sizes 12, 16 |



# AT Panel|Mate™



# Panel | Mate™ Series

2, 3, 4, 6, 8 and 12 Position / Size 16, 13A  
 13 Position / Size 12, 25A; Size 16, 13A



The Amphenol Panel | Mate™ series combines flange mounting options with the proven reliability of the AT/ATP Series™ environmentally-sealed thermoplastic connection system. Engineered with a one-piece sealed flange design for rapid and secure mounting, its 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.

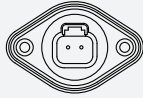
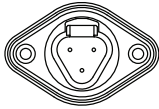
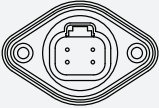
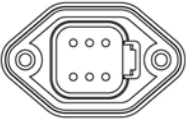
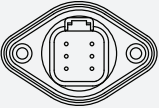
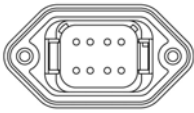
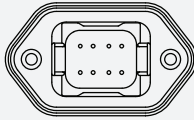
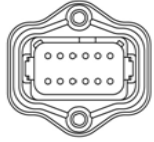
|                              |   |
|------------------------------|---|
| Wire Range                   | Size 12 contacts will accept wire ranges of 12-14AWG; Size 16 contacts will accept 14-20AWG.  |
| Temperature                  | Operating temperature range: -55°C to +125°C at rated current   |
| Housing/Latch                | Thermoplastic/Integrated latch for mating   |
| Dielectric Value             | Meets or exceeds 1500 volts minimum   |
| 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, contacts achieve a minimum pull-out force of 25 lbs.   |
| Connector Retention          | A mated connector subjected to a pulling force by the exiting wire bundle at 25 lbs. times the number of contacts to a maximum of 100 lbs. 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        | 1000 megohms minimum at 25°C  |
| Mating Cycle Durability      | Following 100 cycles of connection engagement and disengagement, degradation either mechanical or electrical is not evident   |
| Contact Millivolt Drop       | Size 16 contacts with 16AWG conductor - 100 mV drop max at 13A test current   |
| 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 without loss of electronic performance |

AT/ATP Series Panel | Mate™ meets all the performance criteria and specifications of the AT Series™, and is also available in a wide variety of custom colors. Consult factory for complete specifications.

# AT PANEL MATE SERIES RECEPTACLES

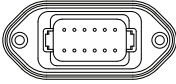
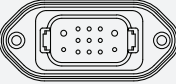
**AT Panel|Mate**  
2-13 POSITIONS  
13A

Go to AT Standard Connectors for Plug options starting on page 46

|   | Part Number    | Description  | Contact Size |
|---|----------------|--|--------------|
|    | AT04-2P-PM11   | 2 Pos. Receptacle, Pin, Panel Mount, Self-Threading                          | 16           |
|   | AT04-2P-PM12   | 2 Pos. Receptacle, Pin, Panel Mount, Self-Threading, RD01 Seal               | 16           |
|   | AT04-2P-PM13   | 2 Pos. Receptacle, Pin, Panel Mount, Self-Threading, Cap                     | 16           |
|   | AT04-2P-PM14   | 2 Pos. Receptacle, Pin, Panel Mount, Self-Threading, RD01 Seal, Cap          | 16           |
|    | AT04-3P-PM11   | 3 Pos. Receptacle, Pin, Panel Mount, Self-Threading                          | 16           |
|   | AT04-3P-PM12   | 3 Pos. Receptacle, Pin, Panel Mount, Self-Threading, RD01 Seal               | 16           |
|   | AT04-3P-PM13   | 3 Pos. Receptacle, Pin, Panel Mount, Self-Threading, Cap                     | 16           |
|   | AT04-3P-PM14   | 3 Pos. Receptacle, Pin, Panel Mount, Self-Threading, RD01 Seal, Cap          | 16           |
|    | AT04-4P-PM11   | 4 Pos. Receptacle, Pin, Panel Mount, Self-Threading                          | 16           |
|   | AT04-4P-PM12   | 4 Pos. Receptacle, Pin, Panel Mount, Self-Threading, RD01 Seal               | 16           |
|   | AT04-4P-PM13   | 4 Pos. Receptacle, Pin, Panel Mount, Self-Threading, Self-Threading, Cap     | 16           |
|   | AT04-4P-PM14   | 4 Pos. Receptacle, Pin, Panel Mount, Self-Threading, RD01 Seal, Cap          | 16           |
|    | AT04-6P-PM05   | 6 Pos. Flange Mount Receptacle with Gasket, Pin, Threaded                    | 16           |
|    | AT04-6P-PM11   | 6 Pos. Receptacle, Pin, Panel Mount, Self-Threading                          | 16           |
|   | AT04-6P-PM12   | 6 Pos. Receptacle, Pin, Panel Mount, Self-Threading, RD01 Seal               | 16           |
|   | AT04-6P-PM13   | 6 Pos. Receptacle, Pin, Panel Mount, Self-Threading, Cap                     | 16           |
|   | AT04-6P-PM14   | 6 Pos. Receptacle, Pin, Panel Mount, Self-Threading, RD01 Seal, Cap          | 16           |
|  | AT04-08PA-PM05 | 8 Pos. Flange Mount Receptacle with Gasket, Pin, Threaded, Keyed A           | 16           |
|  | AT04-08PA-PM11 | 8 Pos. Receptacle, Pin, Panel Mount, Self-Threading, Keyed A                 | 16           |
|   | AT04-08PA-PM12 | 8 Pos. Receptacle, Pin, Panel Mount, Self-Threading, RD01 Seal, Keyed A      | 16           |
|   | AT04-08PA-PM13 | 8 Pos. Receptacle, Pin, Panel Mount, Self-Threading, Cap, Keyed A            | 16           |
|   | AT04-08PA-PM14 | 8 Pos. Receptacle, Pin, Panel Mount, Self-Threading, RD01 Seal, Cap, Keyed A | 16           |
|   | AT04-08PB-PM11 | 8 Pos. Receptacle, Pin, Panel Mount, Self-Threading, Keyed B                 | 16           |
|   | AT04-08PB-PM12 | 8 Pos. Receptacle, Pin, Panel Mount, Self-Threading, RD01 Seal, Keyed B      | 16           |
|   | AT04-08PB-PM13 | 8 Pos. Receptacle, Pin, Panel Mount, Self-Threading, Cap, Keyed B            | 16           |
|   | AT04-08PB-PM14 | 8 Pos. Receptacle, Pin, Panel Mount, Self-Threading, RD01 Seal, Cap, Keyed B | 16           |
|   | AT04-08PC-PM11 | 8 Pos. Receptacle, Pin, Panel Mount, Self-Threading, Keyed C                 | 16           |
|   | AT04-08PC-PM12 | 8 Pos. Receptacle, Pin, Panel Mount, Self-Threading, RD01 Seal, Keyed C      | 16           |
|   | AT04-08PC-PM13 | 8 Pos. Receptacle, Pin, Panel Mount, Self-Threading, Cap, Keyed C            | 16           |
|   | AT04-08PC-PM14 | 8 Pos. Receptacle, Pin, Panel Mount, Self-Threading, RD01 Seal, Cap, Keyed C | 16           |
|   | AT04-08PD-PM11 | 8 Pos. Receptacle, Pin, Panel Mount, Self-Threading, Keyed D                 | 16           |
|   | AT04-08PD-PM12 | 8 Pos. Receptacle, Pin, Panel Mount, Self-Threading, RD01 Seal, Keyed D      | 16           |
|   | AT04-08PD-PM13 | 8 Pos. Receptacle, Pin, Panel Mount, Self-Threading, Cap, Keyed D            | 16           |
|   | AT04-08PD-PM14 | 8 Pos. Receptacle, Pin, Panel Mount, Self-Threading, RD01 Seal, Cap, Keyed D | 16           |
|  | AT04-12PA-PM05 | 12 Pos. Flange Mount Receptacle with Gasket, Pin, Threaded, Keyed A          | 16           |

## AT PANEL MATE SERIES RECEPTACLES (con't)

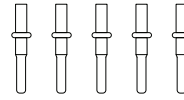
Go to AT Standard Connectors for Plug options starting on page 46

|   | Part Number   | Description  | Contact Size |
|---|---|--|--------------|
|  | <b>AT04-12PA-PM11</b>   | 12 Pos. Receptacle, Pin, Panel Mount, Self-Threading, Keyed A                      | 16           |
|   | <b>AT04-12PA-PM12</b>   | 12 Pos. Receptacle, Pin, Panel Mount, Self-Threading, RD01 Seal, Keyed A           | 16           |
|   | <b>AT04-12PA-PM13</b>   | 12 Pos. Receptacle, Pin, Panel Mount, Self-Threading, Cap, Keyed A                 | 16           |
|   | <b>AT04-12PA-PM14</b>   | 12 Pos. Receptacle, Pin, Panel Mount, Self-Threading, RD01 Seal, Cap, Keyed A      | 16           |
|   | <b>AT04-12PB-PM11</b>   | 12 Pos. Receptacle, Pin, Panel Mount, Self-Threading, Keyed B                      | 16           |
|   | <b>AT04-12PB-PM12</b>   | 12 Pos. Receptacle, Pin, Panel Mount, Self-Threading, RD01 Seal, Keyed B           | 16           |
|   | <b>AT04-12PB-PM13</b>   | 12 Pos. Receptacle, Pin, Panel Mount, Self-Threading, Cap, Keyed B                 | 16           |
|   | <b>AT04-12PB-PM14</b>   | 12 Pos. Receptacle, Pin, Panel Mount, Self-Threading, RD01 Seal, Cap, Keyed B      | 16           |
|   | <b>AT04-12PC-PM11</b>   | 12 Pos. Receptacle, Pin, Panel Mount, Self-Threading, Keyed C                      | 16           |
|   | <b>AT04-12PC-PM12</b>   | 12 Pos. Receptacle, Pin, Panel Mount, Self-Threading, RD01 Seal, Keyed C           | 16           |
|   | <b>AT04-12PC-PM13</b>   | 12 Pos. Receptacle, Pin, Panel Mount, Self-Threading, Cap, Keyed C                 | 16           |
|   | <b>AT04-12PC-PM14</b>   | 12 Pos. Receptacle, Pin, Panel Mount, Self-Threading, RD01 Seal, Cap, Keyed C      | 16           |
|   | <b>AT04-12PD-PM11</b>   | 12 Pos. Receptacle, Pin, Panel Mount, Self-Threading, Keyed D                      | 16           |
|   | <b>AT04-12PD-PM12</b>   | 12 Pos. Receptacle, Pin, Panel Mount, Self-Threading, RD01 Seal, Keyed D           | 16           |
| <b>AT04-12PD-PM13</b>   | 12 Pos. Receptacle, Pin, Panel Mount, Self-Threading, Cap, Keyed D            | 16   |              |
| <b>AT04-12PD-PM14</b>   | 12 Pos. Receptacle, Pin, Panel Mount, Self-Threading, RD01 Seal, Cap, Keyed D | 16   |              |
|  | <b>AT1612-13PB-RDG</b>  | 13 Pos., Receptacle, Pin, Panel Mount, Self Threading, RD01 Seal, Cap, Keyed B     | 16-12        |
|   | <b>AT1612-13PB-G</b>  | 13 Pos., Receptacle, Pin, Panel Mount, Self Threading, Standard Seal, Cap, Keyed B | 16-12        |
|   | <b>AT04-XP-PM1X-G7</b>  | Gasket for 2, 3, 4, 6 Position Receptacles (AT Size 16 receptacles only)           | -            |
|   | <b>AT04-08PB-G7</b>   | Gasket for 8 Position Receptacle   | -            |
|   | <b>AT1612-PB-G7</b>   | Gasket for 12, 13 Position Receptacle  | -            |

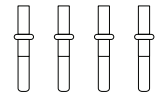
Amphenol offers two types of contacts for use in our products: Solid and Stamped & Formed. Both types of contacts utilize the simple crimp-style termination, requiring no solder usage.



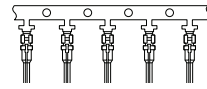
Solid/Machined Male Pins



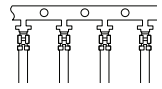
Solid/Machined Female Sockets



Stamped & Formed Male Pins



Stamped & Formed Female Sockets



## Standard Contacts - Solid Sockets & Pins

| Series | Size | AWG   | Type  | Part Number    | Description                            |
|--------|------|-------|-------|----------------|--|
| AT     | 16   | 14    | Solid | AT62-209-1631  | Female Contact - Socket, Gold-plated   |
| AT     | 16   | 14    | Solid | AT62-209-16141 | Female Contact - Socket, Nickel-plated |
| AT     | 16   | 16-20 | Solid | AT62-201-1631  | Female Contact - Socket, Gold-plated   |
| AT     | 16   | 16-20 | Solid | AT62-201-16141 | Female Contact - Socket, Nickel-plated |
| AT     | 16   | 14    | Solid | AT60-215-1631  | Male Contact - Pin, Gold-plated        |
| AT     | 16   | 14    | Solid | AT60-215-16141 | Male Contact - Pin, Nickel-plated      |
| AT     | 16   | 16-20 | Solid | AT60-202-1631  | Male Contact - Pin, Gold-plated        |
| AT     | 16   | 16-20 | Solid | AT60-202-16141 | Male Contact - Pin, Nickel-plated      |

## Standard Contacts - Stamped & Formed Sockets & Pins

| Series | Size | AWG   | Type  | Part Number  | Description                            |
|--------|------|-------|-------|--------------|--|
| AT     | 16   | 14-16 | S & F | AT62-14-0122 | Female Contact - Socket, Nickel-plated |
| AT     | 16   | 14-16 | S & F | AT62-14-0144 | Female Contact - Socket, Gold-plated   |
| AT     | 16   | 16-18 | S & F | AT62-16-0122 | Female Contact - Socket, Nickel-plated |
| AT     | 16   | 16-18 | S & F | AT62-16-0144 | Female Contact - Socket, Gold-plated   |
| AT     | 16   | 18-20 | S & F | AT62-16-0622 | Female Contact - Socket, Nickel-plated |
| AT     | 16   | 18-20 | S & F | AT62-16-0644 | Female Contact - Socket, Gold-plated   |
| AT     | 16   | 14-16 | S & F | AT60-14-0122 | Male Contact - Pin, Nickel-plated      |
| AT     | 16   | 14-16 | S & F | AT60-14-0144 | Male Contact - Pin, Gold-plated        |
| AT     | 16   | 16-18 | S & F | AT60-16-0122 | Male Contact - Pin, Nickel-plated      |
| AT     | 16   | 16-18 | S & F | AT60-16-0144 | Male Contact - Pin, Gold-plated        |
| AT     | 16   | 18-20 | S & F | AT60-16-0622 | Male Contact - Pin, Nickel-plated      |
| AT     | 16   | 18-20 | S & F | AT60-16-0644 | Male Contact - Pin, Gold-plated        |

Seal Plugs



|    |    |       |   |            |                   |
|----|----|-------|---|------------|-------------------|
| AT | 16 | 12-16 | - | A114017    | Seal Plugs, White |
| AT | 16 | 16    | - | A114017-SR | Seal Plugs, Black |

Gasket






|    |    |       |   |              |                                     |
|----|----|-------|---|--------------|-------------------------------------|
| AT | 16 | 12-16 | - | AT1612-PB-G7 | Gasket for 13-Way Receptacle (ONLY) |
|----|----|-------|---|--------------|-------------------------------------|

Amphenol offers two types of contacts for use in our products: Solid and Stamped & Formed. Both types of contacts utilize the simple crimp-style termination, requiring no solder usage. Below are the tools available to assist with your crimping needs to ensure a proper connection between contact and wire.



| Part  | Part Number | Description  |
|---|-------------|--|
|   | CA-5D12     | Universal Hand Crimp Tool, Size 12/16/20<br>*Solid contacts only |
|  | CA-5E12     | Pneumatic Crimp Tool, Size 12/16/20<br>*Solid contacts only      |
|  | MFX-3950    | Crimp Die - Size 16, 18-20AWG<br>(Stamped & Formed Contacts)     |
|   | MFX-3953    | Crimp Die - Size 16, 16-18AWG<br>(Stamped & Formed Contacts)     |
|   | MFX-3975    | Crimp Die - Size 16, 14-16AWG<br>(Stamped & Formed Contacts)     |
|  | ATT-16-00   | Size 16, 14-16AWG, Stamped & Formed Contact Tool                 |
|   | ATT-16-01   | Size 16, 18-20AWG, Stamped & Formed Contact Tool                 |

AT Series™ Contact Removal Tools

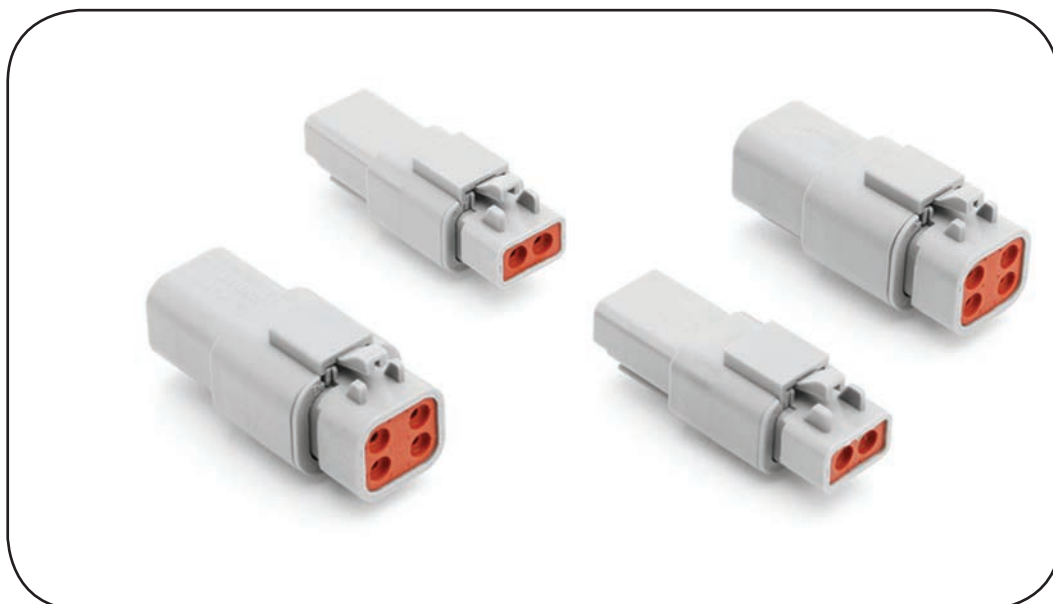
| Part  | Part Number   | Description  |
|---|---------------|--|
|  | ATRT-100      | Used for removal of contacts for AT Series™ products   |
|  | AT11-310-1605 | Contact Removal Tool, plastic, Size 16<br><i>(Used on AT1612 Series connectors, where wedgelock is not required. See pages 54,64,78,82,99)</i> |
|  | AT11-337-1205 | Contact Removal Tool, plastic Size 12<br><i>(Used on AT1612 Series connectors, where wedgelock is not required. See pages 54,64,78,82,99)</i>  |



The AT Series™ Field Repair Kits are the ideal companion for anyone performing on-site or in-the-field maintenance. They contains a full range of plugs, receptacles, wedges, contacts, seals and tools, as well as a cross-reference guide, all in a heavy duty plastic carrying case, easily labeled for quick identification.

| Part  | Part Number     | Description   |
|---|-----------------|---|
|   | <p>AT-RK100</p> | <p>Large Field Repair Kit contents:</p> <p>AT04-2P: 2 Pos. Recep. (15 qty.)<br/>           AT04-3P: 3 Pos. Recep. (10 qty.)<br/>           AT04-4P: 4 Pos. Recep. (10 qty.)<br/>           AT04-6P: 6 Pos. Recep. (10 qty.)<br/>           AT04-08PA: 8 Pos. Recep. (5 qty.)<br/>           AT04-12PA: 12 Pos. Recep. (5 qty.)<br/>           AT06-2S: 2 Pos. Plug (15 qty.)<br/>           AT06-3S: 3 Pos. Plug (10 qty.)<br/>           AT06-4S: 4 Pos. Plug (10 qty.)<br/>           AT06-6S: 6 Pos. Plug (10 qty.)<br/>           AT06-08SA: 8 Pos. Plug (5 qty.)<br/>           AT06-12SA: 12 Pos. Plug (5 qty.)<br/>           AW2P: 2 Pos. Recep. Wedge (15 qty.)<br/>           AW3P: 3 Pos. Recep. Wedge (10 qty.)<br/>           AW4P: 4 Pos. Recep. Wedge (10 qty.)<br/>           AW6P: 6 Pos. Recep. Wedge (10 qty.)<br/>           AW8P: 8 Pos. Recep. Wedge (5 qty.)<br/>           AW12P: 12 Pos. Recep. Wedge (5 qty.)<br/>           AW2S: 2 Pos. Plug Wedge (15 qty.)<br/>           AW3S: 3 Pos. Plug Wedge (10 qty.)<br/>           AW4S: 4 Pos. Plug Wedge (10 qty.)<br/>           AW6S: 6 Pos. Plug Wedge (10 qty.)<br/>           AW8S: 8 Pos. Plug Wedge (5 qty.)<br/>           AW12S: 12 Pos. Plug Wedge (5 qty.)<br/>           AT62-201-1614: Female Contacts - Machined (150 qty.)<br/>           AT60-202-16141: Male Contacts - Machined (150 qty.)<br/>           ATRT-100: Removal Tool for Contact/Wedges (1 qty.)<br/>           AT-RCT100: Universal Repair Case Tool (1 qty.)<br/>           AT-RM100: Repair Manual (1 qty.)<br/>           A114017: Blank Seal 16Awg (20 qty.)</p> |
|  | <p>AT-RK200</p> | <p>Miniature Field Repair Kit contents:</p> <p>AT04-2P: 2 Pos. Recep. (5 qty.)<br/>           AT04-3P: 3 Pos. Recep. (5 qty.)<br/>           AT04-4P: 4 Pos. Recep. (5 qty.)<br/>           AT04-6P: 6 Pos. Recep. (3 qty.)<br/>           AT04-08PA: 8 Pos. Recep. (1 qty.)<br/>           AT04-12PA: 12 Pos. Recep. (1 qty.)<br/>           AT06-2S: 2 Pos. Plug (5 qty.)<br/>           AT06-3S: 3 Pos. Plug (5 qty.)<br/>           AT06-4S: 4 Pos. Plug (5 qty.)<br/>           AT06-6S: 6 Pos. Plug (3 qty.)<br/>           AT06-08SA: 8 Pos. Plug (1 qty.)<br/>           AT06-12SA: 12 Pos. Plug (1 qty.)<br/>           AW2P: 2 Pos. Recep. Wedge (5 qty.)<br/>           AW3P: 3 Pos. Recep. Wedge (5 qty.)<br/>           AW4P: 4 Pos. Recep. Wedge (5 qty.)<br/>           AW6P: 6 Pos. Recep. Wedge (3 qty.)<br/>           AW8P: 8 Pos. Recep. Wedge (1 qty.)<br/>           AW12P: 12 Pos. Recep. Wedge (1 qty.)<br/>           AW2S: 2 Pos. Plug Wedge (5 qty.)<br/>           AW3S: 3 Pos. Plug Wedge (5 qty.)<br/>           AW4S: 4 Pos. Plug Wedge (5 qty.)<br/>           AW6S: 6 Pos. Plug Wedge (3 qty.)<br/>           AW8S: 8 Pos. Plug Wedge (1 qty.)<br/>           AW12S: 12 Pos. Plug Wedge (1 qty.)<br/>           AT62-201-1614: Female Contacts - Machined (50 qty.)<br/>           AT60-202-16141: Male Contacts - Machined (50 qty.)<br/>           ATRT-100: Removal Tool for Contact/Wedges (1 qty.)<br/>           AT-RM100: Repair Manual (1 qty.)<br/>           A114017: Blank Seal 16Awg (10 qty.)</p>   |

# ATP | Series™

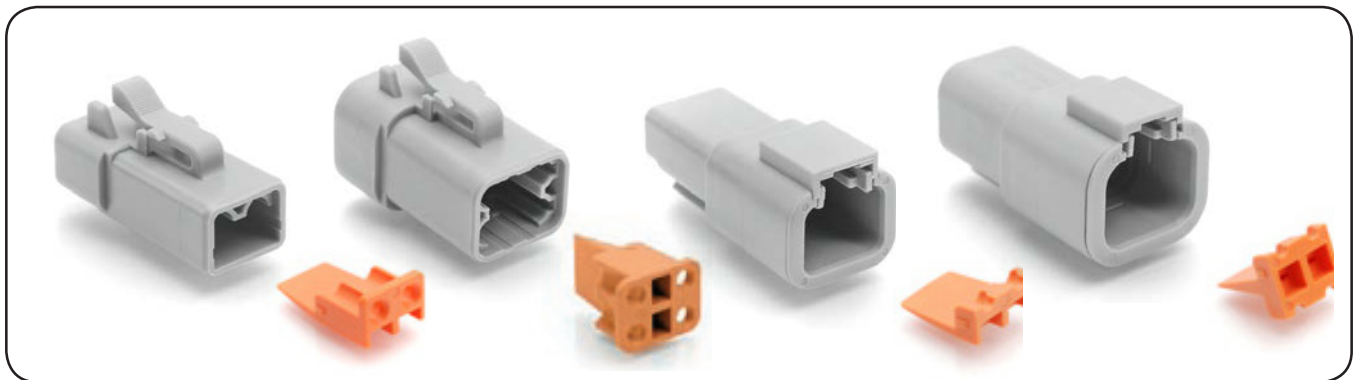


# ATP Series™

## Overview

ATP Series™ connectors are designed as a high-performance, cost-effective, thermoplastic solution to be used within the Marine, Heavy Equipment, Agricultural, Automotive, Alternative Energy fields, as well as other demanding interconnect applications. Available in 2 and 4 position options, the ATP Series™ Connectors contain superior environmental seals, seal retention capabilities and are designed for use with 10-14AWG with size 12 contacts handling up to 25A.

ATP Series™ connectors are compatible with other existing standard products industry-wide.



## Features & Benefits

|   |   |
|---|---|
| Current Capacity                          | Size 12, 25A (max)  |
| Wire Range                                | Size 12 contacts will accept wire ranges of 12 thru 14AWG   |
| Temperature                               | Operative at temperatures from -55°C to +125°C. Continuous at rated current.  |
| Dielectric Withstanding Voltage           | Current leak less than 2 milliamps at 1500 VAC  |
| Physical Shock                            | No unlocking, unmating or other unsatisfactory results during or after 50 G's in each of three usually perpendicular planes. No electrical discontinuities longer than 1 microsecond. MIL-STD 202. Method 213, Condition "C". |
| Vibration                                 | Maintains continuity and exhibits no mechanical or physical damage after vibration levels of 20 G's at 10-2000 Hz.  |
| Insulation Resistance                     | 1000 megohms minimum at 25°C  |
| Corrosion Resistance                      | Connectors show no evidence of corrosion after exposure to 48 hours of salt spray per MIL - STD 1344, method 1001.  |
| Submersion                                | IP67. Wired and mated connection will withstand immersion under three feet of water without loss of electronic qualities or leakage.  |
| Fluid Resistance                          | Connectors show no damage when exposed to most fluids used in industrial application.   |
| Contact Retention Contacts (minimum load) | 70lbs. for Size 12 contacts.  |
| Thermal Cycle                             | No cracking, chipping or leaking after 20 test cycles from -55°C to +125°C.   |
| Durability                                | No electrical or mechanical defects after 100 cycles of engagement and disengagement.   |

# ATP Series™

## Features & Benefits, cont.

### Contact Resistance

Contacts  
Wire Gauge

Size 12  
12AWG

Contact Millivolt Drop

Size 12 (stamped & formed) contacts with 12AWG conductor - 60 mV (solid contact) drop max; 100 mV (stamped & formed contact) drop max at 25A test current

### Wire Sealing Range

Contacts  
Recommended Wire  
Installation O.D.

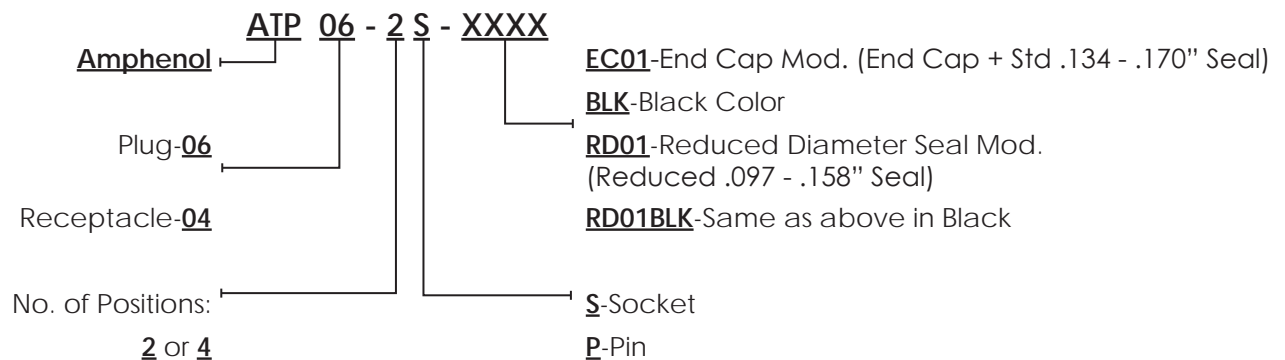
Size 12  
Standard (S-Seal) .134-.195"  
Thin Wall (RD-Seal) .097-.158"

### Product Material

Shell  
Seals  
Wedge  
Contacts

Thermoplastic  
Silicone Elastomer  
Thermoplastic  
Pins: Copper alloy; Sockets: Copper alloy; Finish: Nickel-plated (optional Gold)

## ATP Series™ Part Numbering Sequence



| Color | Modification Number | Color  | Modification Number |
|-------|---------------------|--------|---------------------|
| Black | XXXX-XXXX-BLK       | Yellow | XXXX-XXXX-YEL       |
| White | XXXX-XXXX-WHT       | Green  | XXXX-XXXX-GRN       |
| Brown | XXXX-XXXX-BRN       | Blue   | XXXX-XXXX-BLU       |
| Grey  | XXXX-XXXX-GRY       | Red    | XXXX-XXXX-RED       |



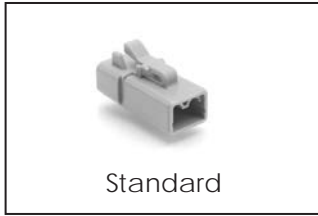
**NOTE:** The above modifications (-XXXX) are only a sampling of the options available to our customers. For more information, please contact your Sales Representative.

# ATP Series™ Connector Configurations

## STEP 1

MATING PARTS

Choose a Plug



Wedgelocks are required for all Plugs



## STEP 2

Choose Contacts



Or  
Choose a Plug Kit



Plug Kit includes Plug, Wedgelock & Contacts



Overmolded option  
page 11

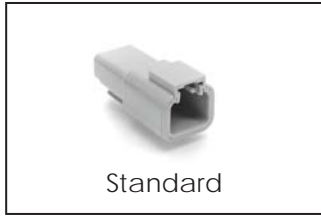
## Need a complete Cable Assembly?

See page 11 or contact the factory for assistance

Toll Free: 1-800-394-7732

### STEP 3

Choose a Receptacle



Wedgelocks are required for all Receptacles



Or  
Choose a  
Receptacle Kit



### STEP 4

Choose Contacts



Overmolded option  
page 11

Or  
Choose a Plug &  
Receptacle Kit









Plug & Receptacle Kit includes Plug, Receptacle, Wedgelock & Contacts

**ATP SERIES STANDARD  
 PLUGS, RECEPTACLES & WEDGELOCKS**

|                  |           |
|------------------|-----------|
| Contact Size     | <b>12</b> |
| Wire Range (AWG) | 10-14 AWG |
| Amperage         | 25        |

| Plug  | Part Number    | Description                           | Wedglock  | Part Number | Description          |
|---|----------------|---------------------------------------|---|-------------|----------------------|
|  | ATP06-2S       | Plug, 2-Way                           |  | AWP-2S      | Wedglock Plug, 2-Way |
|  | ATP06-2S-KIT01 | 2 Socket Plug, Wedge and Contacts Kit |   |             |                      |
|  | ATP06-2S-BLK   | Plug, 2-Way Black                     |  | AWP-2S      | Wedglock Plug, 2-Way |

| Receptacle  | Part Number    | Description                              | Wedglock  | Part Number | Description                |
|---|----------------|--|---|-------------|----------------------------|
|  | ATP04-2P       | Receptacle, 2-Way                        |  | AWP-2P      | Wedglock Receptacle, 2-Way |
|  | ATP04-2P-KIT01 | 2 Pin Receptacle, Wedge and Contacts Kit |   |             |                            |
|  | ATP04-2P-BLK   | Receptacle, 2-Way Black                  |  | AWP-2P      | Wedglock Receptacle, 2-Way |

| Plug & Receptacle Kit   | Part Number | Description   |
|---|-------------|---|
|  | ATP2PS-CKIT | 2-Way Pin and Socket Plug, Receptacle, Wedge and Contacts Kit |

**NOTE:** Wedglocks are required for all plug and receptacles

**Other Available Options:**

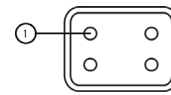
- End Caps see page 94
- Reduced Diameter Seals see page 95
- Contacts see page 101
- Tools see page 102



ATP PANEL | MATE  
 FLANGE MOUNT HARSH EN-  
 VIRONMENT CONNECTORS  
 see page 99



# ATP SERIES STANDARD PLUGS, RECEPTACLES & WEDGELOCKS



**ATP**  
**4 POSITIONS**  
**25A**

|                  |           |
|------------------|-----------|
| Contact Size     | 12        |
| Wire Range (AWG) | 10-14 AWG |
| Amperage         | 25        |

| Plug                  | Part Number    | Description   | Wedglock | Part Number | Description                |
|-----------------------|----------------|---|----------|-------------|----------------------------|
|                       | ATP06-4S       | Plug, 4-Way   |          | AWP-4S      | Wedglock Plug, 4-Way       |
|                       | ATP06-4S-KIT01 | 4 Socket Plug, Wedge and Contacts Kit                         |          |             |                            |
|                       | ATP06-4S-BLK   | Plug, 4-Way Black   |          | AWP-4S      | Wedglock Plug, 4-Way       |
| Receptacle            | Part Number    | Description   | Wedglock | Part Number | Description                |
|                       | ATP04-4P       | Receptacle, 4-Way   |          | AWP-4P      | Wedglock Receptacle, 4-Way |
|                       | ATP04-4P-KIT01 | 4 Pin Receptacle, Wedge and Contacts Kit                      |          |             |                            |
|                       | ATP04-4P-BLK   | Receptacle, 4-Way Black                                       |          | AWP-4P      | Wedglock Receptacle, 4-Way |
| Plug & Receptacle Kit | Part Number    | Description   |          |             |                            |
|                       | ATP4PS-CKIT    | 4-Way Pin and Socket Plug, Receptacle, Wedge and Contacts Kit |          |             |                            |

**NOTE:** Wedglocks are required for all plug and receptacles

### Other Available Options:

- End Caps see page 94
- Reduced Diameter Seals see page 95
- Contacts see page 101
- Tools see page 102




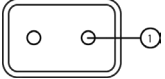


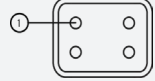

ATP PANEL | MATE  
FLANGE MOUNT HARSH ENVIRONMENT CONNECTORS  
see page 99


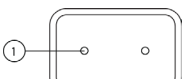


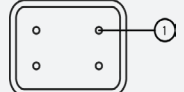

**ATP SERIES STANDARD PLUG and RECEPTACLE**  
**END CAPS**

|                  |           |
|------------------|-----------|
| Contact Size     | 12        |
| Wire Range (AWG) | 10-14 AWG |
| Amperage         | 25        |

AT Series™ connectors offer several modifications for increased design flexibility or special application requirements.

**END CAPS**

| Plug  | Faceview  | Part Number   | Description                               | Wedgelock Part Number   |
|---|---|---------------|---|---|
|  |  | ATP06-2S-EC01 | 2-Way Plug, Female Connector with End Cap | <br>AWP-2S |
|  |  | ATP06-4S-EC01 | 4-Way Plug, Female Connector with End Cap | <br>AWP-4S |

| Receptacle  | Faceview  | Part Number   | Description                                   | Wedgelock Part Number   |
|---|---|---------------|---|---|
|  |  | ATP04-2P-EC01 | 2-Way Receptacle, Male Connector with End Cap | <br>AWP-2P |
|  |  | ATP04-4P-EC01 | 4-Way Receptacle, Male Connector with End Cap | <br>AWP-4P |


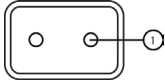



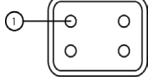


**NOTE:** Wedgelocks are required for all plug and receptacles.


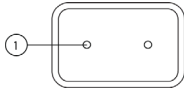


# ATP SERIES STANDARD PLUG and RECEPTACLE REDUCED DIAMETER SEALS

**ATP**  
**REDUCED DIA.**  
**SEALS 25A**

|                  |           |
|------------------|-----------|
| Contact Size     | 12        |
| Wire Range (AWG) | 10-14 AWG |
| Amperage         | 25        |

## REDUCED DIAMETER SEALS (.053" - .120")

| Plug  | Faceview  | Part Number     | Description  | Wedglock Part Number  |
|---|---|-----------------|--|---|
|    |    | ATP06-2S-RD01   | 2-Way Plug, Female Connector with Reduced Diameter Seal        | <br>AWP-2S   |
|    |   | ATP06-2S-RD01BK | 2-Way Plug, Female Connector with Reduced Diameter Seal, Black |   |
|   |  | ATP06-4S-RD01   | 4-Way Plug, Female Connector with Reduced Diameter Seal        | <br>AWP-4S |
|  |   | ATP06-4S-RD01BK | 4-Way Plug, Female Connector with Reduced Diameter Seal, Black |   |

| Receptacle  | Faceview  | Part Number   | Description                                   | Wedglock Part Number  |
|---|---|---------------|---|---|
|  |  | ATP04-2P-RD01 | 2-Way Receptacle, Male, Reduced Diameter Seal | <br>AWP-2P |
|  |   | ATP04-4P-RD01 | 4-Way Receptacle, Male, Reduced Diameter Seal |   |

**NOTE:** Wedglocks are required for all plug and receptacles.



# ATP Panel|Mate™



# ATP Panel | Mate™ Series

2, 4, 13 Position / Size 12, 25A

13 Position / Size 12, 25A; Size 16, 13A



The Amphenol Panel | Mate™ series combines flange mounting options with the proven reliability of the AT/ATP Series™ environmentally-sealed thermoplastic connection system. Engineered with a one-piece sealed flange design for rapid and secure mounting, its 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.

|   |   |
|---|---|
| Current Capacity                          | Size 12, 25A (max)  |
| Wire Range                                | Size 12 contacts will accept wire ranges of 10 thru 14AWG   |
| Temperature                               | Operative at temperatures from -55°C to +125°C. Continuous at rated current.  |
| Dielectric Withstanding Voltage           | Current leak less than 2 milliamps at 1500 VAC  |
| Physical Shock                            | No unlocking, unmating or other unsatisfactory results during or after 50 G's in each of three usually perpendicular planes. No electrical discontinuities longer than 1 microsecond. MIL-STD 202. Method 213, Condition "C". |
| Vibration                                 | Maintains continuity and exhibits no mechanical or physical damage after vibration levels of 20 G's at 10-2000 Hz.  |
| Insulation Resistance                     | 1000 megohms minimum at 25°C  |
| Corrosion Resistance                      | Connectors show no evidence of corrosion after exposure to 48 hours of salt spray per MIL - STD 1344, method 1001.  |
| Submersion                                | IP67. Wired and mated connection will withstand immersion under three feet of water without loss of electronic qualities or leakage.  |
| Fluid Resistance                          | Connectors show no damage when exposed to most fluids used in industrial application.   |
| Contact Retention Contacts (minimum load) | 70lbs. for Size 12 contacts.  |
| Thermal Cycle                             | No cracking, chipping or leaking after 20 test cycles from -55°C to +125°C.   |
| Durability                                | No electrical or mechanical defects after 100 cycles of engagement and disengagement.   |

AT/ATP Series Panel | Mate™ meets all the performance criteria and specifications of the AT Series™, and is also available in a wide variety of custom colors. Consult factory for complete specifications.

Go to ATP Standard Connectors for Plug options starting on page 92

|   | Part Number      | Description  | Contact Size | AMP   |
|---|------------------|--|--------------|-------|
|    | ATP04-2P-PM07G   | 2 Pos. Recep., Pin, Panel Mount, w Gasket, Black                               | 12           | 25    |
|   | ATP04-2P-PM07GEC | 2 Pos. Recep., Pin, Panel Mount, w Gasket, End Cap, Black                      | 12           | 25    |
|   | ATP04-2P-PM08G   | 2 Pos. Recep., Pin, Panel Mount, w Gasket, Grey                                | 12           | 25    |
|   | ATP04-2P-PM08GEC | 2 Pos. Recep., Pin, Panel Mount, w Gasket, End Cap, Grey                       | 12           | 25    |
|    | ATP04-4P-PM07G   | 4 Pos. Recep., Pin, Panel Mount, w Gasket, Black                               | 12           | 25    |
|   | ATP04-4P-PM07GEC | 4 Pos. Recep., Pin, Panel Mount, w Gasket, End Cap, Black                      | 12           | 25    |
|   | ATP04-4P-PM08G   | 4 Pos. Recep., Pin, Panel Mount, w Gasket, Grey                                | 12           | 25    |
|   | ATP04-4P-PM08GEC | 4 Pos. Recep., Pin, Panel Mount, w Gasket, End Cap, Grey                       | 12           | 25    |
|   | AT1612-13PB-RDG  | 13 Pos., Recep., Pin, Panel Mount, Self Threading, RD01 Seal, Cap, Keyed B     | 16-12        | 13-25 |
|   | AT1612-13PB-G    | 13 Pos., Recep., Pin, Panel Mount, Self Threading, Standard Seal, Cap, Keyed B | 16-12        | 13-25 |
|  | AT1612-PB-G7     | Gasket for 12, 13 Position Receptacle  | -            | -     |

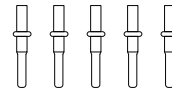




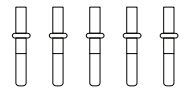
Amphenol offers two types of contacts for use in our products: Solid and Stamped & Formed. Both types of contacts utilize the simple crimp-style termination, requiring no solder usage.



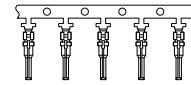
Solid/Machined Male Pins



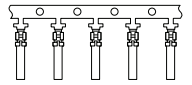
Solid/Machined Female Sockets



Stamped & Formed Male Pins



Stamped & Formed Female Sockets



## Standard Contacts - Solid Sockets & Pins

| Series | Size | AWG   | Type  | Part Number    | Description                            |
|--------|------|-------|-------|----------------|--|
| ATP    | 12   | 12-14 | Solid | AT62-210-1231  | Female Contact - Socket, Gold-plated   |
| ATP    | 12   | 12-14 | Solid | AT62-203-12141 | Female Contact - Socket, Nickel-plated |
| ATP    | 12   | 12-14 | Solid | AT60-220-1231  | Male Contact - Pin, Gold-plated        |
| ATP    | 12   | 12-14 | Solid | AT60-204-12141 | Male Contact - Pin, Nickel-plated      |

## Standard Contacts - Stamped & Formed Sockets & Pins

| Series | Size | AWG   | Type  | Part Number  | Description                            |
|--------|------|-------|-------|--------------|--|
| ATP    | 12   | 12-14 | S & F | AT62-12-0166 | Female Contact - Socket, Nickel-plated |
| ATP    | 12   | 12-14 | S & F | AT62-12-0144 | Female Contact - Socket, Gold-plated   |
| ATP    | 12   | 12-14 | S & F | AT60-12-0166 | Male Contact - Pin, Nickel-plated      |
| ATP    | 12   | 12-14 | S & F | AT60-12-0144 | Male Contact - Pin, Gold-plated        |
| ATP    | 12   | 10-12 | S & F | AT62-12-0222 | Female Contact - Pin, Nickel-plated    |
| ATP    | 12   | 10-12 | S & F | AT60-12-0222 | Male Contact - Pin, Nickel-plated      |



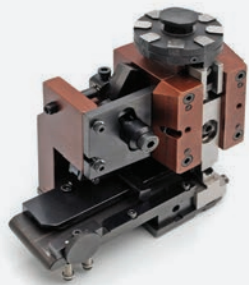

## Specialty Contacts - DiagnosticGrade™ Solid Sockets & Pins

Smaller AWG for diagnostic applications; Gold-plated; increased mating cycles; cost-effective.


| Series | Size | AWG | Type  | Part Number        | Description   |
|--------|------|-----|-------|--------------------|---|
| ATP    | 12   | 20  | Solid | AT62-210-1231-1820 | Female Contact - Socket, DiagnosticGrade, Gold-plated |
| ATP    | 12   | 20  | Solid | 65-54749           | Male Contact - Pin, DiagnosticGrade, Gold-plated      |

**Crimp Tools**

Amphenol offers two types of contacts for use in our products: Solid and Stamped & Formed. Both types of contacts utilize the simple crimp-style termination, requiring no solder usage. Below are the tools available to assist with your crimping needs to ensure a proper connection between contact and wire.

| Part  | Part Number | Description  |
|---|-------------|--|
|    | CA-5D12     | Universal Hand Crimp Tool, Size 12/16/20<br>*Solid contacts only |
|    | CA-5E12     | Pneumatic Crimp Tool, Size 12/16/20<br>*Solid contacts only      |
|   | MXF-3973    | Crimp Die - Size 12<br>(Stamped & Formed Contacts)               |
|  | ATT-12-00   | Size 12, 12AWG, Stamped & Formed Contact Tool                    |

**AT Series™ Contact Removal Tool**

| Part  | Part Number | Description  |
|---|-------------|--|
|  | ATRT-100    | Used for removal of contacts for AT Series™ products |

Seal Plugs



|     |    |       |   |         |                   |
|-----|----|-------|---|---------|-------------------|
| ATP | 16 | 12-16 | - | A114017 | Seal Plugs, White |
|-----|----|-------|---|---------|-------------------|

Backshells

| Part | Part Number   | Description                                 |
|------|---------------|---|
|      | ATP06-4S-NC12 | Backshell for 4 Position Plug or Receptacle |



# AHD | Series™



# AHD Series™

## Overview

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.

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.

AHD Series™ connectors are completely compatible with all other existing standard products industry-wide.



## Features & Benefits

|                       |  |
|-----------------------|--|
| Current Capacity      | 6 position: Size 12, 25A (max)<br>9 position: Size 16, 13A (max)   |
| Wire Range            | Size 12 contacts will accept wire ranges of 10 thru 14AWG<br>Size 16 contacts will accept wire ranges of 14 thru 20AWG           |
| Temperature           | DiagnosticGrade™ / Military Style: Operating temperature range: -55°C TO +125°C at rated current.                                |
| Dielectrical Strength | DiagnosticGrade™ / Military Style: 1500 volts minimum  |
| Physical Shock        | Military Style: No locking, unmating or other unsatisfactory result after 50 g's in each of three mutually perpendicular planes. |
| Vibration             | Military Style: Maintains continuity and exhibits no mechanical or physical damage after vibration. (20 g's at 10-2000 Hz)       |
| Insulation Resistance | DiagnosticGrade™ / Military Style: 1000 megohms minimum at 25°C.   |
| Durability            | DiagnosticGrade™ / Military Style: No electric or mechanical defects after 100 cycles of engagement and disengagement.           |



# AHD Series™

## Features & Benefits, cont.

|                              |  |
|------------------------------|--|
| 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   |
| UI Approval                  | Certified and compliant  |
| Contact Current Rating       | DiagnosticGrade™ / Military Style: At +125°C, continuous, less thru wire:<br>#12 contact = 25A max. current; #16 contact = 13A max. current        |
| Corrosion Resistance         | DiagnosticGrade™ / Military Style: Connectors show no evidence of corrosion after exposure to 48 hours of salt spray per MIL-STD 1344 method 1001. |

## Product Material

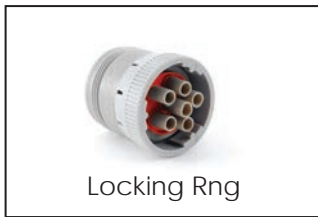
|          |                          |
|----------|--------------------------|
| Housings | Thermoplastic            |
| Seals    | Silicone Elastomer       |
| Contacts | Copper alloy/Gold plated |

# AHD Series™ Connector Configurations

STEP 1

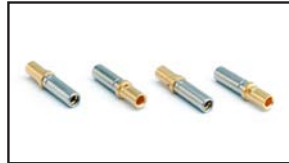
MATING PARTS

Choose a Plug



STEP 2

Choose Contacts



## Need a complete Cable Assembly?

See page 11 or contact the factory for assistance

Toll Free: 1-800-394-7732

### STEP 3

Choose a Receptacle



Standard



Jam Mount, Extended Shroud



Flange



Reduced Seal



In-Line Threaded Rear



Diagnostic

### STEP 2

Choose Contacts

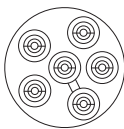


Optional Receptacle Caps







Optional Panel Nut



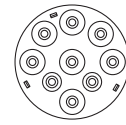


**AHD SERIES STANDARD  
 PLUGS & RECEPTACLES**

|                   |           |
|-------------------|-----------|
| Contact Size:     | <b>12</b> |
| Wire Range (AWG): | 10-14 AWG |
| Amperage:         | 25        |

| Plug  | Part Number     | Description  |
|---|-----------------|--|
|  | AHD16-6-12S     | 6 Position, Plug, Smooth Shell Diagnostic Grade<br><b>Size 12 socket contacts only</b>   |
|  | AHD16-6-12SB010 | 6 Position, Plug, Locking Ring<br><b>Size 12 socket contacts only</b>  |
|  | P23232          | <b>6 -Way Plug, LED.</b> LED light is integrated into a 6 position plug for determining if device is receiving power. Environmentally sealed, field serviceable, and cost effective. |
| Receptacle  | Part Number     | Description  |
|  | AHD10-6-12P-L   | 6 Position, Receptacle<br><b>Size 12 pin contacts only</b>   |

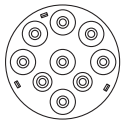
# AHD SERIES STANDARD PLUGS & RECEPTACLES



**AHD**  
**9 POSITIONS**  
**13A**


|                   |           |
|-------------------|-----------|
| Contact Size:     | <b>16</b> |
| Wire Range (AWG): | 14-20 AWG |
| Amperage:         | 13        |

| Plug       | Part Number       | Description  |
|------------|-------------------|--|
|            | AHD16-9-1939S     | 9 Position, Plug, Locking Ring<br><b>Size 16 socket contacts only</b>  |
|            | AHD16-9-1939SE    | 9 Position, Plug, Locking Ring, Reduced Seal<br><b>Size 16 socket contacts only</b>                              |
|            | AHD17-9-1939S     | 9 Position, Plug, Smooth Shell<br><b>Size 16 socket contacts only</b>  |
|            | AHD16-9-96S       | 9 Position, Plug, Locking Ring (non-J1939)<br><b>Size 16 socket contacts only</b>                                |
|            | AHD16-9-1939S80   | 9 Position, Plug, HD Series, Locking Ring, Green, Type II<br><b>Size 16 socket contacts only</b>                 |
|            | AHD16-9-1939S8R   | 9 Position, Plug, HD Series, Locking Ring, Green<br>Reduced Seal, Type II<br><b>Size 16 socket contacts only</b> |
| Receptacle | Part Number       | Description  |
|            | AHD10-9-96P       | 9 Position, Receptacle<br><b>Size 16 pin contacts only</b>   |
|            | AHD10-9-1939P     | 9 Position, Receptacle, Flange<br><b>Size 16 pin contacts only</b>   |
|            | AHD10-9-1939PE    | 9 Position, Receptacle, Flange, Reduced Seal<br><b>Size 16 pin contacts only</b>                                 |
|            | AHD10-9-1939P80   | 9 Position, Receptacle, HD Series, Flange, Green, Type II<br><b>Size 16 pin contacts only</b>                    |
|            | AHD10-9-1939P8R   | 9 Position, Receptacle, HD Series, Flange, Reduced Seal, Green,<br>Type II<br><b>Size 16 pin contacts only</b>   |
|            | AHD14-9-96P       | 9 Position, Receptacle, In Line Threaded Rear<br><b>Size 16 pin contacts only</b>                                |
|            | AHD14-9-1939P     | 9 Position, Receptacle, In-Line Threaded Rear J1939<br><b>Size 16 pin contacts only</b>                          |
|            | AHD17-9-1939PES   | AHD Series™, 9-Way, Jam Mount<br>Extended Shroud, Receptacle   |
|            | AHD17-9-1939PES80 | HD Series 9 Pin Receptacle (TYPE 2)<br>Jam Mount / Extended Shroud   |
|            | AHD17-PN01        | AHD Series™ Panel Nut<br>(for use with P/N: AHD17-9-1939PES)   |
|            | AHD17-PN01-GRN    | HD Series 9 Pin PANEL NUT<br>(for use with P/N: AHD17-9-1939PES80) GREEN   |




### AHD Series™ Unsealed Diagnostic Receptacle

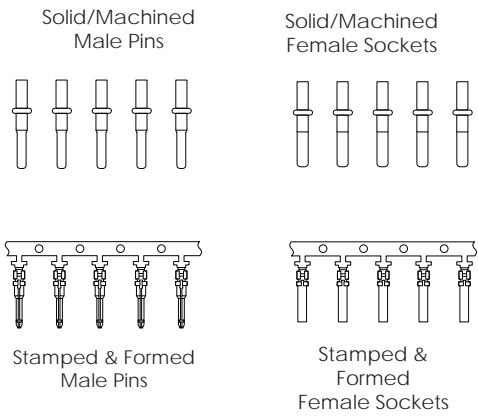
AHD Series™ unsealed diagnostic 9-way receptacle that is cost effective, yet rugged. Mates with industry standard diagnostic 9-way plugs.

| Receptacle  | Mod. Number     | Description                              |
|---|-----------------|--|
|  | AHD10-9-1939PNR | AHD Series™, 9-Way, Receptacle, Unsealed |

### Receptacle Caps - 6 and 9 positions

| Cap   | Part Number      | Description   |
|---|------------------|---|
|    | AHDC-16-6        | 6 Position, Receptacle, Cap, Grey                                   |
|    | AHDC-16-9        | 9 Position, Receptacle, Cap, Grey                                   |
|    | AHDC-16-9-BLK    | 9 Position, Receptacle, Cap, Black                                  |
|    | AHDC-16-9-OBDBGN | 9 Position Receptacle Cap, Green, <b>OBD Label</b>                  |
|    | AHDC-16-9-OBDBK  | 9 Position, Receptacle, Cap, Black, <b>OBD Label</b>                |
|  | AHDC169-T-OBDBGN | 9 Pin Receptacle Cap w/ Rubber Tether Green, <b>OBD Label</b>       |
|  | AHDC169-T-OBDBK  | 9 Position, Receptacle, Cap w/ Tether, Black, <b>OBD Label</b>      |
|  | AHDC169-TMOBDBK  | 9 Position, Receptacle, Cap w/ Wire Tether, Black, <b>OBD Label</b> |
|  | AHDC169-TMOBDGN  | 9 Position, Receptacle, Cap w/ Wire Tether, Green, <b>OBD Label</b> |
|  | AHDC169-T        | 9 Position, Receptacle, Cap w/ Tether, Grey                         |
|  | AHDC169-T-BLK    | 9 Position, Receptacle, Cap w/ Tether, Black                        |
|  | AHDC169-TMBLK    | 9 Position, Receptacle, Cap w/ Wire Tether, Black                   |
|  | AHDC169-TM       | 9 Position, Receptacle, Cap w/ Wire Tether, Grey                    |





Standard Contacts - Solid Sockets & Pins

| Series | Size | AWG   | Type  | Part Number    | Description                            |
|--------|------|-------|-------|----------------|--|
| AHD-6  | 12   | 12-14 | Solid | AT62-210-1231  | Female Contact - Socket, Gold-plated   |
| AHD-6  | 12   | 12-14 | Solid | AT62-203-12141 | Female Contact - Socket, Nickel-plated |
| AHD-9  | 16   | 14    | Solid | AT62-209-1631  | Female Contact - Socket, Gold-plated   |
| AHD-9  | 16   | 14    | Solid | AT62-209-16141 | Female Contact - Socket, Nickel-plated |
| AHD-9  | 16   | 16-20 | Solid | AT62-201-1631  | Female Contact - Socket, Gold-plated   |
| AHD-9  | 16   | 16-20 | Solid | AT62-201-16141 | Female Contact - Socket, Nickel-plated |
| AHD-6  | 12   | 12-14 | Solid | AT60-220-1231  | Male Contact - Pin, Gold-plated        |
| AHD-6  | 12   | 12-14 | Solid | AT60-204-12141 | Male Contact - Pin, Nickel-plated      |
| AHD-9  | 16   | 14    | Solid | AT60-215-1631  | Male Contact - Pin, Gold-plated        |
| AHD-9  | 16   | 14    | Solid | AT60-215-16141 | Male Contact - Pin, Nickel-plated      |
| AHD-9  | 16   | 16-20 | Solid | AT60-202-1631  | Male Contact - Pin, Gold-plated        |
| AHD-9  | 16   | 16-20 | Solid | AT60-202-16141 | Male Contact - Pin, Nickel-plated      |

Standard Contacts - Stamped & Formed Sockets & Pins


| Series | Size | AWG   | Type  | Part Number  | Description                            |
|--------|------|-------|-------|--------------|--|
| AHD-6  | 12   | 12-14 | S & F | AT62-12-0166 | Female Contact - Socket, Nickel-plated |
| AHD-6  | 12   | 12-14 | S & F | AT62-12-0144 | Female Contact - Socket, Gold-plated   |
| AHD-9  | 16   | 14-16 | S & F | AT62-14-0122 | Female Contact - Socket, Nickel-plated |
| AHD-9  | 16   | 14-16 | S & F | AT62-14-0144 | Female Contact - Socket, Gold-plated   |
| AHD-9  | 16   | 16-18 | S & F | AT62-16-0122 | Female Contact - Socket, Nickel-plated |
| AHD-9  | 16   | 16-18 | S & F | AT62-16-0144 | Female Contact - Socket, Gold-plated   |
| AHD-9  | 16   | 18-20 | S & F | AT62-16-0622 | Female Contact - Socket, Nickel-plated |
| AHD-9  | 16   | 18-20 | S & F | AT62-16-0644 | Female Contact - Socket, Gold-plated   |
| AHD-6  | 12   | 12-14 | S & F | AT60-12-0166 | Male Contact - Pin, Nickel-plated      |
| AHD-6  | 12   | 12-14 | S & F | AT60-12-0144 | Male Contact - Pin, Gold-plated        |
| AHD-9  | 16   | 14-16 | S & F | AT60-14-0122 | Male Contact - Pin, Nickel-plated      |
| AHD-9  | 16   | 14-16 | S & F | AT60-14-0144 | Male Contact - Pin, Gold-plated        |
| AHD-9  | 16   | 16-18 | S & F | AT60-16-0122 | Male Contact - Pin, Nickel-plated      |
| AHD-9  | 16   | 16-18 | S & F | AT60-16-0144 | Male Contact - Pin, Gold-plated        |
| AHD-9  | 16   | 18-20 | S & F | AT60-16-0622 | Male Contact - Pin, Nickel-plated      |
| AHD-9  | 16   | 18-20 | S & F | AT60-16-0644 | Male Contact - Pin, Gold-plated        |

### Crimp Tools

Amphenol offers two types of contacts for use in our products: Solid and Stamped & Formed. Both types of contacts utilize the simple crimp-style requiring no solder usage. Below are the tools available to assist with your crimping needs to ensure a proper connection between contact and wire.

| Part  | Part Number | Description  |
|---|-------------|--|
|    | CA-5D12     | Universal Hand Crimp Tool, Size 12/16/20<br>*Solid contacts only |
|    | CA-5E12     | Pneumatic Crimp Tool, Size 12/16/20<br>*Solid contacts only      |
|   | MFX-3973    | Crimp Die - Size 12<br>(Stamped & Formed Contacts)               |
|   | MFX-3950    | Crimp Die - Size 16, 18-20AWG<br>(Stamped & Formed Contacts)     |
|   | MFX-3953    | Crimp Die - Size 16, 16-18AWG<br>(Stamped & Formed Contacts)     |
|   | MFX-3975    | Crimp Die - Size 16, 14-16AWG<br>(Stamped & Formed Contacts)     |
|  | ATT-12-00   | Size 12, 12AWG, Stamped & Formed Contact Tool                    |
|   | ATT-16-00   | Size 16, 14-16AWG, Stamped & Formed Contact Tool                 |
|   | ATT-16-01   | Size 16, 18-20AWG, Stamped & Formed Contact Tool                 |

### AT Series™ Contact Removal Tool

| Part  | Part Number   | Description                            |
|---|---------------|--|
|  | AT11-337-1205 | Contact Removal Tool, plastic Size 12  |
|  | AT11-310-1605 | Contact Removal Tool, plastic, Size 16 |

Seal Plugs



|     |    |       |   |         |                   |
|-----|----|-------|---|---------|-------------------|
| AHD | 16 | 12-16 | - | A114017 | Seal Plugs, White |
|-----|----|-------|---|---------|-------------------|

Amphenol Sine Systems offers customized solutions across all our standard product lines. Whether you are looking for a custom connector solution or a complete turn-key cable assembly solution, Amphenol Sine Systems is your one source for proven, reliable and innovative results on a global level. While our Standard products are a competitive option on a Global level, it is our Custom solutions that set us apart.

Contact Customer Service today to speak with one of our Program Managers or Engineers regarding your next custom project using our live chat, call toll free +1 800 394 7732 or email at [csr@amphenol-sine.com](mailto:csr@amphenol-sine.com).





# ATC | Series™



# ATC Series™

Cylindrical, Thermoplastic, Non Threaded Coupling, Harsh Environment, Power Connector

## Overview

Amphenol Industrial Products Group introduces a series of thermoplastic receptacles featuring Amphenol's AT contact technology. This series is designed to perform in the demanding applications found on construction and farm equipment, plus truck environments. The AT Circular series is a molded thermoplastic receptacle with a positive reverse bayonet retention system and sealed by redundant grommet wire sealing. The square flange design ensures a drop in replacement to existing panel designs and the jam nut version makes for easy installation. The 9 pin black receptacles are in accordance with the interface of the J1939 diagnostic connector.

AT Contact technology™ is already used successfully at major OEM's and features machined contacts with both Nickel and Gold plating.



### Features:

- Jam nut and square flange mounting styles solution
- Quick mating and unmating reverse bayonet coupling
- Environmentally sealed against moisture and contaminants
- Contact retention system decreases installation costs and increases reliability
- RoHs compliant product
- Heavy duty industrial connector, economical connector selection

### Material Specifications:

|                          |  |
|--------------------------|--|
| Receptacle Square Flange | Thermoplastic  |
| Grommet Seal             | Neoprene Rubber for 3 and 5 pin<br>Silicone Rubber for 9 pin |
| Contact (AT Series)      | Copper Alloy (Nickel and Gold plating available)             |

### Electrical Specifications based on AT Machined:

|  |   |
|--|---|
| Dielectric Withstanding Voltage (Test Voltage) | Current leakage less than 2 milliamps at 1500 VAC |
| Current Rating at 125 degree C                 | 13 A  |
| Contact Millivolt Drop                         | 60 (AWG 16 Wire, 13 A)                            |
| Insulation Resistance                          | 1000 megaohms min. at 25°C                        |



ATC Series™

**Mechanical Specifications:**

|                             |  |
|-----------------------------|--|
| Operating Temperature Range | Current leakage less than 2 milliamps at 1500 VAC  |
| Durability (Mating Cycle)   | 13 A   |
| Corrosion Resistance        | 60 (AWG 16 Wire, 13 A)   |
| Moisture Resistance         | 1000 megaohms min. at 25°C   |
| Fluid Resistance            | Connectors show no damage when exposed to most fluids used in industrial applications  |
| Thermal Shock               | -40°/+125°C, 100 cycles, 1 hour per cycle  |
| Crimp Tensile Strength      | 25 lbs   |
| Vibration                   | Maintains continuity and exhibits no mechanical or physical damage during or while subject to sinusoidal vibration, having an amplitude of .060 inches double amplitude and the frequency varied linearly between limits of 10 to 2000 to 10 Hz with a maximum force of 20g's. No electrical discontinuities longer than 1 microsecond |
| Physical Shock              | No unlocking, unmating or other unsatisfactory result during or after 50 g's in each of three mutually perpendicular planes. No electrical discontinuities longer than 1 microsecond. MIL STD 202, Method 213, Condition "C"   |

**PART NUMBERING SEQUENCE**

|  |           |                 |          |          |
|--|-----------|-----------------|----------|----------|
| <u>ATC</u>   | <u>10</u> | <u>- 9-1939</u> | <u>P</u> | <u>N</u> |
| 1  | 2         | 3               | 4        |          |
| <p>1 designates AT Circular Connector</p> <p>2 Shell Style</p> <p>    <b>09</b> = Small Flange Jam Nut Receptacle (includes jam nut)</p> <p>    <b>10</b> = Square Flange Receptacle</p> <p>    <b>17</b> = Jam Nut Receptacle (jam nut sold separately)</p> <p>    <b>11</b> = Round Nut Receptacle</p> <p>3 Shell Sizes and Insert Arrangements</p> <p>    <b>3, 5, 9-1939</b></p> <p>4 Contact</p> <p>    <b>P</b> for Pin (only available for Receptacles)</p> |           |                 |          |          |

**ACCESSORIES**

| PART NUMBER | DESCRIPTION  |
|-------------|--|
| ATC10-RC3C  | Cap with Lanyard for Size 3 Square Flange Receptacle |
| ATC10-RC3   | Cap less Lanyard for Size 3 Receptacle               |
| ATC10-RC5C  | Cap with Lanyard for Size 5 Square Flange Receptacle |
| ATC10-RC5   | Cap less Lanyard for Size 5 Receptacle               |
| ATC10-RC9C  | Cap with Lanyard for Size 9 Square Flange Receptacle |
| ATC10-RC9   | Cap less Lanyard for Size 9 Receptacle               |
| ATC10-RC9L  | Cap with Lanyard for Size 9 Jam nut Receptacle       |
| ALHN-19     | Hex Nut for ATC-17-9-1939PN                          |
| ASR9-1939   | Strain Relief for Small Flange J1939 Receptacle      |
| AWS9-1939   | Wave Spring for Small Flange J1939 Receptacle        |





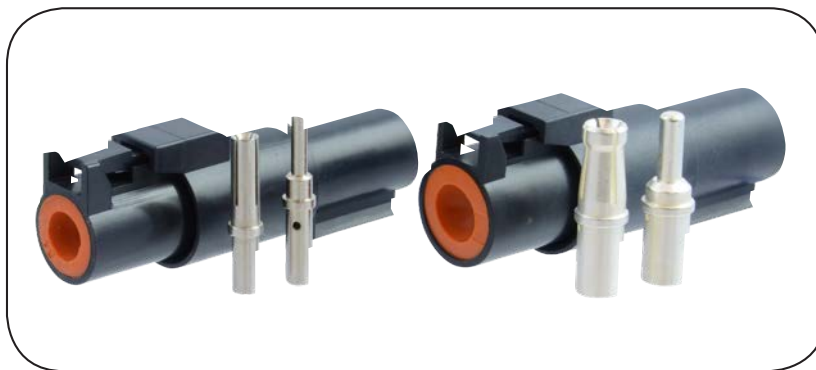
# ATHD | Series™



# ATHD Series™

## Overview

The heavy duty ATHD connector series for size 12 and size 8 power contacts are sealed, single pole, in-line connection systems to replace splices and/or provide power wherever needed. These thermoplastic connectors are field installable and repairable and can thus replace expensive and unrepairable splices. The power connectors are ruggedized and designed for high vibration applications in the Heavy Equipment and Mining markets. Additional styles and custom solutions to mate to the ATHD plugs are available upon request, including higher temperature resin and seals for harsh fluid applications.



### Features:

- Size 8 crimp contacts are rated to 70 amps\*
- Size 12 crimp contacts are rated to 35 amps\*
- Both will meet 100 mating cycles
- Designed for temperatures of -55 °C to 125 °C
- Operating voltage of 500 VAC
- Dielectric withstanding voltage of 1500 VAC
- RoHS compliant
- Clip slots for a variety of mounting solutions
- IP67 rated

\* Using Amphenol's exclusive RADSOK® technology



ATHD Size 12  
with Stamped and Formed Contacts

### Mechanical Specifications:

|                                 | Size 12 System                                  | Size 8 System                                       |
|---------------------------------|---|---|
| Current Rating                  | 35A with RADSOK®,<br>25A with standard contacts | 70A with RADSOK®, and<br>60A with standard contacts |
| Contact Quantity                | 1   | 1   |
| Contact Size                    | 12 AWG  | 8 AWG   |
| Operating Temperature           | -55 °C to 125 °C with 150°C<br>upon request     | -55 °C to 125 °C with 150°C<br>upon request         |
| Contact Retention               | 133N  | 156N  |
| Mating Cycles                   | 100   | 100   |
| Insulation Resistance           | 1000MΩ Min. (at 25 °C)                          | 1000MΩ Min. (at 25 °C)                              |
| Dielectric Withstanding Voltage | 1500 AC (RMS)                                   | 1500 AC (RMS)                                       |
| Moisture Resistance             | IP67 (mated)                                    | IP67 (mated)  |
| Operating Voltage               | 500 VAC   | 500 VAC   |
| Allowable Wire Size             | 16-12 AWG                                       | 10-8 AWG  |

ATHD Series™ PLUGS & RECEPTACLES

ATHD Series™

PART NUMBERS FOR TERMINALS

|             |   |          |          |          |          |          |          |   |           |           |
|-------------|---|----------|----------|----------|----------|----------|----------|---|-----------|-----------|
| <b>ATHD</b> | - | <b>1</b> | <b>P</b> | -        | <b>N</b> | -        | <b>S</b> | - | <b>12</b> | <b>XX</b> |
| <b>1</b>    |   | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> | <b>6</b> | <b>7</b> |   |           |           |

1 Series  
 2 One terminal  
 3 Gender P = Pin  
 S = Socket  
 4 Plating  
 G= Gold  
 S= Silver (machined only)  
 N= Nickel  
 T= Tin  
 5 Contacts  
 S= Stamped & Formed (size 12 only)  
 M= Machined  
 6 Contact Size 8 or 12  
 7 Special Additions:  
 16 = 16 Gauge Cable (Size 12 only)  
 R= Radsok (Machined only)

PART NUMBERS FOR PLASTIC

|             |   |          |           |          |           |           |
|-------------|---|----------|-----------|----------|-----------|-----------|
| <b>ATHD</b> | - | <b>1</b> | <b>PS</b> | -        | <b>12</b> | <b>XX</b> |
| <b>1</b>    |   | <b>2</b> | <b>3</b>  | <b>4</b> | <b>5</b>  |           |

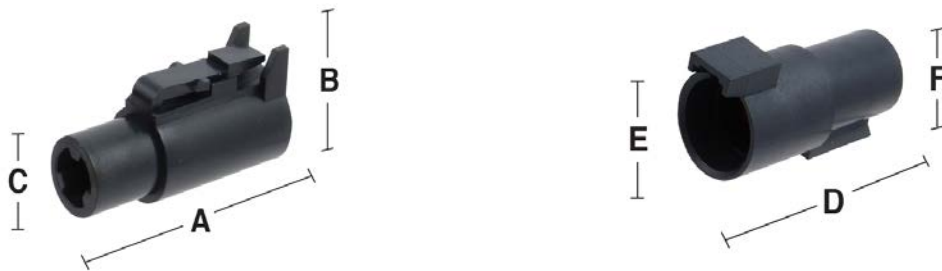
1 Series  
 2 One terminal  
 3 Housing + Terminal\*  
 PS = Plug with Socket  
 RP = Receptacle with Pin  
 4 Contact Size 8 or 12  
 5 Special Additions:  
 16 = 16 Gauge Cable

\*Note: Housing Plug must use the Socket terminal (PS) and Housing Receptacle must use the Pin terminal(RP)

CONNECTOR SOLUTIONS

Part Numbers:

|            | Size 12 System for 12 gauge cable | Size 12 System for 16 gauge cable | Size 8 System |
|------------|-----------------------------------|-----------------------------------|---------------|
| Plug       | ATHD-1PS-12                       | ATHD-1PS-12 (16)                  | ATHD-1PS-8    |
| Receptacle | ATHD-1RP-12                       | ATHD-1RP-12 (16)                  | ATHD-1RP-8    |



| Contact Size | ATHD Plug      |            |            | ATHD Receptacle |            |            |
|--------------|----------------|------------|------------|-----------------|------------|------------|
|              | Overall Length |            |            | Overall Length  |            |            |
|              | A              | B          | C          | A               | B          | C          |
| 12           | 1.498(38.05)   | 771(19.58) | 570(14.48) | 2.073(52.65)    | 850(21.59) | 710(18.08) |
| 8            | 1.498(38.05)   | 861(21.87) | 660(16.76) | 2.073(52.65)    | 940(23.88) | 800(20.32) |

Notice: Specifications are subject to change without notice. Contact your nearest Amphenol Corporation Sales Office for the latest specifications. All statements, information and data given herein are believed to be accurate and reliable but are presented without guarantee, warranty, or responsibility of any kind, expressed or implied. Statements of suggestions concerning possible use of our products are made without representation or warranty that any such use is free of patent infringement and are not recommendations to infringe any patent. The user should assume that all safety measures are indicated or that other measures may not be required. Specifications are typical and may not apply to all connectors.



# Dura|Mate™



Circular Plastic Connectors for Heavy Duty Applications



## Circular Plastic Connectors for Heavy Duty Applications

Available in Size 24 with 7, 9, 18, 19, 21, 23, 27, 29, 31, 35 and 47 Insert Arrangements  
Available in Size 18 with 14 Insert Arrangement

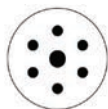
The Amphenol Dura | Mate™ environmentally sealed multi-pin thermoplastic circular connector series provides an economical quick-connect bayonet locking system manufactured to withstand the challenges and complexities of harsh environment off-road applications.



While maintaining compatibility with existing shell size 24 industry standard designs, ease of use was exceeded through enhanced ergonomics using an easy grip coupling system and visual and tactile indicators ensuring reliable mating confirmation. Wire management improvements include two different back shell systems that thread onto the rear of the connectors to provide strain relief and additional wire seal protection. The low cost, tie wrap option and the fully enclosed back shell are interchangeable for specific application requirements. Its rugged high performance capability is ideal for panel mount or in-line heavy-duty applications such as commercial vehicle, agriculture, construction or marine installations.



**18-14**  
14 Size 16



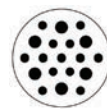
**24-7**  
6 Size 12  
1 Size 8 **RADSOK®**



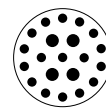
**24-9**  
1 Size 4  
2 Size 8  
6 Size 12



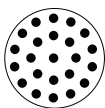
**24-18**  
1 Size 8  
3 Size 12  
14 Size 16



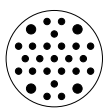
**24-19**  
6 Size 12  
13 Size 16



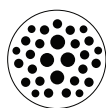
**24-21**  
4 Size 12  
17 Size 16



**24-23**  
23 Size 16



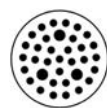
**24-27**  
4 Size 12  
23 Size 16



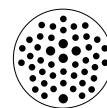
**24-29**  
4 Size 12  
19 Size 16  
6 Size 20



**24-31**  
31 Size 16



**24-35**  
3 Size 16  
32 Size 20



**24-47**  
5 Size 16  
42 Size 20



## Features and Benefits

- Polarized for proper mating of connector halves
- High density signal and mixed power insert configurations
- Operating temperature range: -55C to +125C
- High current configurations incorporating revolutionary **RADSOK®** contacts
- High strength impact resistant & lightweight thermoplastic housings
- Contacts available in economical reel-mounted high volume machine termination or in machined loose-piece form.
- Low insertion force stamped terminals offer improved manufacturing efficiencies
- Wire entry sealing available in three separate ranges for discrete wire applications:

| Recommended Wire Insulation Overall Diameter (OD) |                                  |                                 |                                 |
|---|----------------------------------|---------------------------------|---------------------------------|
| Contact Size                                      | Normal Seal                      | Thin Seal                       | Reduced Seal                    |
| 20  | N/A                              | N/A                             | 1.02mm (.040") - 2.41mm (.095") |
| 16  | 2.54mm (.100") - 3.40 mm (.134") | 2.23mm (.088") - 3.40mm (.134") | 1.35mm (.053") - 3.05mm (.120") |
| 12  | 3.43mm (.135") - 4.32mm (.170")  | N/A                             | 2.46mm (.097") - 4.01mm (.158") |
| 8   | 4.83mm (.190") - 6.10mm (.240")  | N/A                             | 3.43mm (.135") - 5.50mm (.220") |
| 4   | N/A                              | N/A                             | 6.63mm (.261") - 7.42mm (.292") |

- Standard WTA(Wide Thread Adapter) provides maximum access to rear grommet and improved serviceability.
- Engineered rapid and secure mating system achieves IP69K protection from ingress of dust, water mud and other contaminants
- Redundant sealing features consisting of durable high temperature silicone provide barrier from lubricating oils, hydraulic fluids and fossil fuels.
- Rigid back shells maintain a compression-fit design to resist maximum pull-out forces and facilitate strain-relief for jacketed cable ranges.

### Performance Specifications

### Shell Specifications

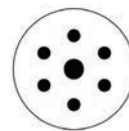
|                                 |  |                   |                 |
|---------------------------------|--|-------------------|-----------------|
| Current Rating per Contact      | Size 4 100A; Size 8, 60A; Size 12, 25A;<br>Size 16, 13A; Size 20, 7.5A | Coupling Nut      | Thermoplastic   |
| Operating Temperature           | -55°C to +125°C  | Insulation Insert | Thermoplastic   |
| Dielectric Withstanding Voltage | Current Leakage - 12 milliamp at 1500 VAC                              | Seal              | Silicone Rubber |
| Degree of Protection            | IP67/IP69K   | Color             | Black           |
| Mating Cycle Durability         | 100 Cycles   | Contact           | Common System   |
| RoHS                            | Compliant  |                   |                 |

## Features and Benefits (con't)

- Utilizes industry standard contact system
- Environmentally-sealed to IP69K and vibration resistant
- Wide threaded collar ring for increased serviceability and connector access (1)
- Highly visible indicators for quick alignment and 100% positive mating (2)
- Enclosed 1-piece threaded backshell with low-cost strain relief (3)
- Optional 2-piece threaded backshell with compression nut (4)
- Optional Size 24 snap over straight and 90°conduit strain relief backshell (5)
- Contact removal tools (6)
- **RADSOK®** contacts (7)
- Panel Nut (8)



# 7 POSITION PLUGS & RECEPTACLES



**DURA|MATE**  
7 POSITIONS  
25A,80A

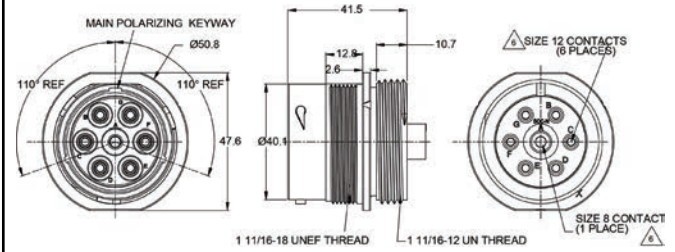
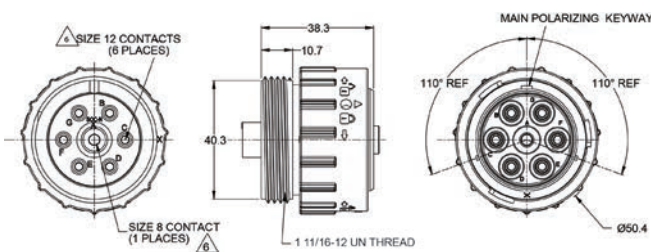
Shell Size  
**24**

|                              |                                    |                                    |
|------------------------------|------------------------------------|------------------------------------|
| Contact Size                 | <b>12</b>                          | <b>8</b>                           |
| Contact Qty                  | 6                                  | 1 RADSOK®                          |
| Seal OD Range<br>NORMAL SEAL | 3.43mm (.135") -<br>4.32mm (.170") | 4.83mm (.190") -<br>6.10mm (.240") |
| Wire Range                   | 10-14 AWG                          | 7-10 AWG                           |
| Amperage                     | 25                                 | 80                                 |



## PLUG

## RECEPTACLE



Standard and reverse terminal genders allows for custom polarization

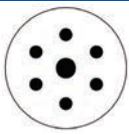
|  |                                     |
|--|-------------------------------------|
| Part Number<br><b>AHDP06-24-07SN-WTA</b>   | Gender: Standard<br>Contact: Socket |
| Rear Seal Type: NORMAL, Green  |                                     |
| Description: Size 24 Plug with 7 positions, Socket, standard arrangement, normal seal, wide thread adapter |                                     |
| Mating Part(s): AHDP04-24-07PN-WTA<br><i>See Receptacle column on this page for more details</i>           |                                     |

|   |                                  |
|---|----------------------------------|
| Part Number<br><b>AHDP04-24-07PN-WTA</b>  | Gender: Standard<br>Contact: Pin |
| Rear Seal Type: NORMAL, Green   |                                  |
| Description: Size 24 Receptacle with 7 positions, Pin, standard arrangement, normal seal, wide thread adapter |                                  |
| Mating Part(s): AHDP06-24-07SN-WTA<br><i>See Plug column on this page for more details</i>                    |                                  |

|  |                                  |
|--|----------------------------------|
| Part Number<br><b>AHDP06-24-07PN-WTA</b>   | Gender: Reversed<br>Contact: Pin |
| Rear Seal Type: NORMAL, Green  |                                  |
| Description: Size 24 Plug with 7 positions, Pin, reverse arrangement, normal seal, wide thread adapter |                                  |
| Mating Part(s): AHDP04-24-07SN-WTA<br><i>See Receptacle column on this page for more details</i>       |                                  |

|   |                                     |
|---|-------------------------------------|
| Part Number<br><b>AHDP04-24-07SN-WTA</b>  | Gender: Reversed<br>Contact: Socket |
| Rear Seal Type: NORMAL, Green   |                                     |
| Description: Size 24 Receptacle with 7 positions, Socket, reverse arrangement, normal seal, wide thread adapter |                                     |
| Mating Part(s): AHDP06-24-07PN-WTA<br><i>See Plug column on this page for more details</i>                      |                                     |

For custom insert configurations, please call 1 800 394 7732

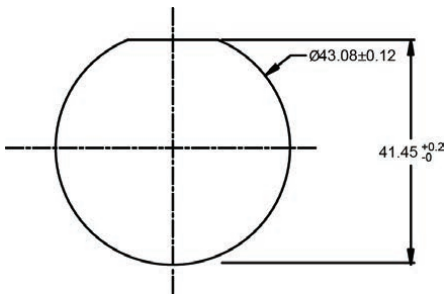


# 7 POSITION PLUGS & RECEPTACLES - CONTACTS

Shell Size  
24

| Contact Size | Part No.       | Type                     | (Pin/Socket) | Wire Range (AWG) | AMP | Plating |
|--------------|----------------|--------------------------|--------------|------------------|-----|---------|
| 8            | SC000345       | Machined <b>Radsok</b> ® | Pin          | 7-10             | 80  | Silver  |
| 8            | SC000346       | Machined <b>Radsok</b> ® | Socket       | 7-10             | 80  | Silver  |
| 8            | SC000345-141   | Machined                 | Pin          | 8-10             | 60  | Nickel  |
| 8            | SC000379       | Machined                 | Socket       | 8-10             | 60  | Nickel  |
| 12           | AT60-204-12141 | Machined                 | Pin          | 12-14            | 25  | Nickel  |
| 12           | AT60-220-1231  | Machined                 | Pin          | 12-14            | 25  | Gold    |
| 12           | AT62-203-12141 | Machined                 | Socket       | 12-14            | 25  | Nickel  |
| 12           | AT62-210-1231  | Machined                 | Socket       | 12-14            | 25  | Gold    |
| 12           | AT60-12-0166   | Stamped & Formed         | Pin          | 12-14            | 25  | Nickel  |
| 12           | AT60-12-0144   | Stamped & Formed         | Pin          | 12-14            | 25  | Gold    |
| 12           | AT62-12-0166   | Stamped & Formed         | Socket       | 12-14            | 25  | Nickel  |
| 12           | AT62-12-0144   | Stamped & Formed         | Socket       | 12-14            | 25  | Gold    |
| 12           | AT60-12-0222   | Stamped & Formed         | Pin          | 10-12            | 25  | Nickel  |
| 12           | AT60-12-0244   | Stamped & Formed         | Pin          | 10-12            | 25  | Gold    |
| 12           | AT62-12-0222   | Stamped & Formed         | Socket       | 10-12            | 25  | Nickel  |
| 12           | AT62-12-0244   | Stamped & Formed         | Socket       | 10-12            | 25  | Gold    |

Recommended Panel Mounting Hole  
Recommended panel thickness: 1.6 to 4.7mm

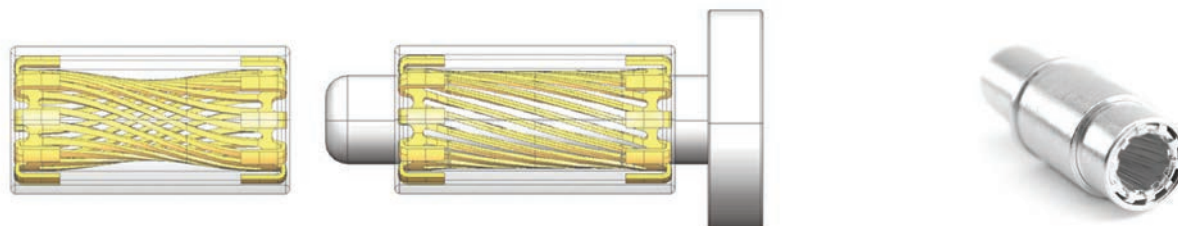


|   |
|---|
| Part Number<br><b>AHDP24-PN01</b>   |
| Panel Nut, Shell Size 24  |
|  |

|   |
|---|
| Part Number<br><b>AT14-001-2486</b>   |
| Metal Lock Washer<br>Shell Size 24  |
|  |

For custom insert configurations, please call 1 800 394 7732

## RADSOK® Contacts



### The RADSOK® Design

- Socket cylinder within female contact has several equally spaced longitudinal beams twisted into a hyperbolic shape
- As a 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 multi-volt drop

## RADSOK® Technical Data

### High Reliability

Unique RADSOK® design and construction technology creates an electrical contact interface that exceeds typical interconnect requirements. Applications in Aerospace, Medical, Industrial, Automotive, Mining, Offshore and other harsh environments depend on the high reliability of Amphenol RADSOK® technology.

### Low Contact Engagement/Separation Forces

The hyperbolic lamella socket contact construction distributes normal forces over a high percentage of the mating 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.

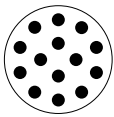
### Low Contact Resistance

The large interface 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 10,000 mating cycles. 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.





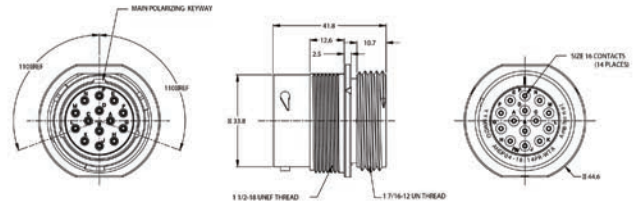
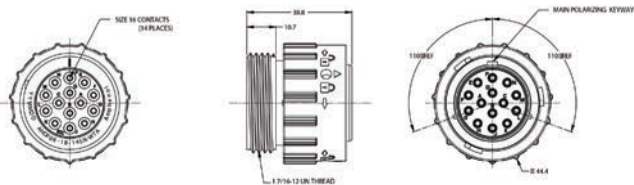
# 14 POSITION PLUGS & RECEPTACLES

Shell Size  
**18**

|                     |                                 |
|---------------------|---------------------------------|
| Contact Size        | <b>16</b>                       |
| Contact Qty         | 14                              |
| Seal OD Range       |                                 |
| <b>NORMAL SEAL</b>  | 2.54mm (.100") - 3.40mm (.134") |
| <b>REDUCED SEAL</b> | 1.35mm (.053") - 3.05mm (.120") |
| Wire Range          | 14-20 AWG                       |
| Amperage            | 13                              |



| PLUG | RECEPTACLE |
|------|------------|
|------|------------|



*Standard and reverse terminal genders allows for custom polarization*

|   |   |
|---|---|
| <b>Part Number</b><br><b>AHDP06-18-14SN-WTA</b>   | <b>Gender: Standard</b><br><b>Contact: Socket</b> |
| <b>Rear Seal Type: NORMAL, Green</b>  |   |
| Description: Size 18 Plug with 14 positions, Socket, standard arrangement, normal seal, wide thread adapter |   |
| Mating Part(s): AHDP04-18-14PN-WTA, AHDP04-18-14PR-WTA  |   |
| See Receptacle column on this page for more details   |   |

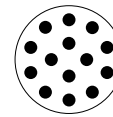
|  |  |
|--|--|
| <b>Part Number</b><br><b>AHDP04-18-14PN-WTA</b>  | <b>Gender: Standard</b><br><b>Contact: Pin</b> |
| <b>Rear Seal Type: NORMAL, Green</b>   |  |
| Description: Size 18 Receptacle with 14 positions, Pin, standard arrangement, normal seal, wide thread adapter |  |
| Mating Part(s): AHDP06-18-14SN-WTA, AHDP06-18-14SR-WTA   |  |
| See Plug column on this page for more details  |  |

|  |   |
|--|---|
| <b>Part Number</b><br><b>AHDP06-18-14SR-WTA</b>  | <b>Gender: Standard</b><br><b>Contact: Socket</b> |
| <b>Rear Seal Type: REDUCED SEAL, Blue</b>  |   |
| Description: Size 18 Plug with 14 positions, Socket, standard arrangement, reduced seal, wide thread adapter |   |
| Mating Part(s): AHDP04-18-14PN-WTA, AHDP04-18-14PR-WTA   |   |
| See Receptacle column on this page for more details  |   |

|   |  |
|---|--|
| <b>Part Number</b><br><b>AHDP04-18-14PR-WTA</b>   | <b>Gender: Standard</b><br><b>Contact: Pin</b> |
| <b>Rear Seal Type: REDUCED SEAL, Blue</b>   |  |
| Description: Size 18 Receptacle with 14 positions, Pin, standard arrangement, reduced seal, wide thread adapter |  |
| Mating Part(s): AHDP06-18-14SN-WTA, AHDP06-18-14SR-WTA  |  |
| See Plug column on this page for more details   |  |

For custom insert configurations, please call 1 800 394 7732

# 14 POSITION PLUGS & RECEPTACLES



**DURA|MATE**  
14 POSITIONS  
13A

Shell Size  
**18**

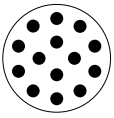
CONNECTOR SOLUTIONS

| PLUG  |                                  | RECEPTACLE   |                                     |
|---|----------------------------------|--|-------------------------------------|
| Part Number<br><b>AHDP06-18-14PN-WTA</b>  | Gender: Reversed<br>Contact: Pin | Part Number<br><b>AHDP04-18-14SN-WTA</b>   | Gender: Reversed<br>Contact: Socket |
| Rear Seal Type: NORMAL, Green   |                                  | Rear Seal Type: NORMAL, Green  |                                     |
| Description: Size 18 Plug with 14 positions, Pin, reversed arrangement, normal seal, wide thread adapter  |                                  | Description: Size 18 Receptacle with 14 positions, Socket, standard arrangement, normal seal, wide thread adapter  |                                     |
| Mating Part(s): AHDP04-18-14SN-WTA,<br>AHDP04-18-14SR-WTA   |                                  | Mating Part(s): AHDP06-18-14PN-WTA,<br>AHDP06-18-14PR-WTA  |                                     |
| <i>See Receptacle column on this page for more details</i>  |                                  | <i>See Plug column on this page for more details</i>   |                                     |
| Part Number<br><b>AHDP06-18-14PR-WTA</b>  | Gender: Reversed<br>Contact: Pin | Part Number<br><b>AHDP04-18-14SR-WTA</b>   | Gender: Reversed<br>Contact: Socket |
| Rear Seal Type: REDUCED SEAL, Blue  |                                  | Rear Seal Type: REDUCED SEAL, Blue   |                                     |
| Description: Size 18 Plug with 14 positions, Pin, reversed arrangement, reduced seal, wide thread adapter |                                  | Description: Size 18 Receptacle with 14 positions, Socket, reversed arrangement, reduced seal, wide thread adapter |                                     |
| Mating Part(s): AHDP04-18-14SN-WTA,<br>AHDP04-18-14SR-WTA   |                                  | Mating Part(s): AHDP06-18-14PN-WTA,<br>AHDP06-18-14PR-WTA  |                                     |
| <i>See Receptacle column on this page for more details</i>  |                                  | <i>See Plug column on this page for more details</i>   |                                     |

## CONTACTS

| Contact Size | Part No.       | Type             | (Pin/Socket) | Wire Range (AWG) | AMP | Plating |
|--------------|----------------|------------------|--------------|------------------|-----|---------|
| 16           | AT60-215-1631  | Machined         | Pin          | 14               | 13  | Gold    |
| 16           | AT60-215-16141 | Machined         | Pin          | 14               | 13  | Nickel  |
| 16           | AT62-209-1631  | Machined         | Socket       | 14               | 13  | Gold    |
| 16           | AT62-209-16141 | Machined         | Socket       | 14               | 13  | Nickel  |
| 16           | AT60-202-1631  | Machined         | Pin          | 16-20            | 13  | Gold    |
| 16           | AT60-202-16141 | Machined         | Pin          | 16-20            | 13  | Nickel  |
| 16           | AT62-201-1631  | Machined         | Socket       | 16-20            | 13  | Gold    |
| 16           | AT62-201-16141 | Machined         | Socket       | 16-20            | 13  | Nickel  |
| 16           | AT60-14-0144   | Stamped & Formed | Pin          | 14-16            | 13  | Gold    |
| 16           | AT60-14-0122   | Stamped & Formed | Pin          | 14-16            | 13  | Nickel  |
| 16           | AT62-14-0144   | Stamped & Formed | Socket       | 14-16            | 13  | Gold    |
| 16           | AT62-14-0122   | Stamped & Formed | Socket       | 14-16            | 13  | Nickel  |



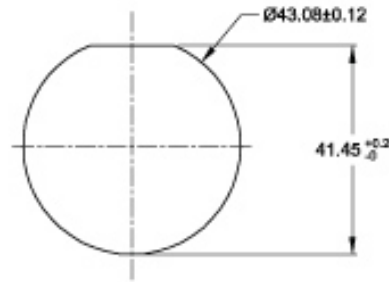


# 14 POSITION PLUGS & RECEPTACLES- CONTACTS (con't)

Shell Size  
18

| Contact Size | Part No.     | Type             | (Pin/Socket) | Wire Range (AWG) | AMP | Plating |
|--------------|--------------|------------------|--------------|------------------|-----|---------|
| 16           | AT60-16-0144 | Stamped & Formed | Pin          | 16-18            | 13  | Gold    |
| 16           | AT60-16-0122 | Stamped & Formed | Pin          | 16-18            | 13  | Nickel  |
| 16           | AT62-16-0144 | Stamped & Formed | Socket       | 16-18            | 13  | Gold    |
| 16           | AT62-16-0122 | Stamped & Formed | Socket       | 16-18            | 13  | Nickel  |
| 16           | AT60-16-0644 | Stamped & Formed | Pin          | 18-20            | 13  | Gold    |
| 16           | AT60-16-0622 | Stamped & Formed | Pin          | 18-20            | 13  | Nickel  |
| 16           | AT62-16-0644 | Stamped & Formed | Socket       | 18-20            | 13  | Gold    |
| 16           | AT62-16-0622 | Stamped & Formed | Socket       | 18-20            | 13  | Nickel  |

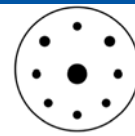
Recommended Panel Mounting Hole  
Recommended panel thickness: 1.6 to 4.7mm



|  |
|--|
| <b>Part Number</b><br><b>AHDP18-PN01</b> |
| Panel Nut, Shell Size 18                 |
|  |

|  |
|--|
| <b>Part Number</b><br><b>AT14-002-1886</b> |
| Metal Lock Washer<br>Shell Size 18         |
|  |

# 9 POSITION PLUGS & RECEPTACLES



**DURA|MATE**  
9 POSITIONS  
100A,60A,25A

Shell Size  
**24**

|                     |                                   |                                   |                                    |
|---------------------|-----------------------------------|-----------------------------------|------------------------------------|
| Contact Size        | <b>04</b>                         | <b>08</b>                         | <b>12</b>                          |
| Contact Qty         | 1                                 | 2                                 | 6                                  |
| Seal OD Range       |                                   |                                   |                                    |
| <b>REDUCED SEAL</b> | 6.63mm (.261")-<br>7.42mm (.292") | 3.43mm (.135")-<br>5.59mm (.220") | 2.46mm (.097") -<br>4.01mm (.158") |
| Wire Range          | 6 AWG                             | 8-10 AWG                          | 10-14 AWG                          |
| Amperage            | 100                               | 60                                | 25                                 |



CONNECTOR SOLUTIONS

| PLUG  | RECEPTACLE  |   |   |  |   |  |                                    |  |   |  |   |   |   |   |  |  |  |                                    |  |   |  |
|---|---|---|---|--|---|--|------------------------------------|--|---|--|---|---|---|---|--|--|--|------------------------------------|--|---|--|
|   |   |   |   |  |   |  |                                    |  |   |  |   |   |   |   |  |  |  |                                    |  |   |  |
| <p><i>Standard and reverse terminal genders allows for custom polarization</i></p>  |   |   |   |  |   |  |                                    |  |   |  |   |   |   |   |  |  |  |                                    |  |   |  |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <tr style="background-color: #d9e1f2;"> <td style="width: 30%;"><b>Part Number</b><br/><b>AHDP06-24-09SR-WTA</b></td> <td><b>Gender: Standard</b><br/><b>Contact: Socket</b></td> </tr> <tr style="background-color: #00a0e3; color: white;"> <td colspan="2"><b>Rear Seal Type: REDUCED SEAL, Blue</b></td> </tr> <tr> <td colspan="2">Description: Size 24 Plug with 9 positions, Socket, standard arrangement, reduced seal, wide thread adapter</td> </tr> <tr> <td colspan="2">Mating Part(s): AHDP04-24-09PR-WTA</td> </tr> <tr> <td colspan="2" style="font-size: small; padding-top: 5px;">See Receptacle column on this page for more details</td> </tr> </table> | <b>Part Number</b><br><b>AHDP06-24-09SR-WTA</b>   | <b>Gender: Standard</b><br><b>Contact: Socket</b> | <b>Rear Seal Type: REDUCED SEAL, Blue</b> |  | Description: Size 24 Plug with 9 positions, Socket, standard arrangement, reduced seal, wide thread adapter |  | Mating Part(s): AHDP04-24-09PR-WTA |  | See Receptacle column on this page for more details |  | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr style="background-color: #d9e1f2;"> <td style="width: 30%;"><b>Part Number</b><br/><b>AHDP04-24-09PR-WTA</b></td> <td><b>Gender: Standard</b><br/><b>Contact: Pin</b></td> </tr> <tr style="background-color: #00a0e3; color: white;"> <td colspan="2"><b>Rear Seal Type: REDUCED SEAL, Blue</b></td> </tr> <tr> <td colspan="2">Description: Size 24 Receptacle with 9 positions, Pin, standard arrangement, reduced seal, wide thread adapter</td> </tr> <tr> <td colspan="2">Mating Part(s): AHDP06-24-09SR-WTA</td> </tr> <tr> <td colspan="2" style="font-size: small; padding-top: 5px;">See Plug column on this page for more details</td> </tr> </table>   | <b>Part Number</b><br><b>AHDP04-24-09PR-WTA</b> | <b>Gender: Standard</b><br><b>Contact: Pin</b>    | <b>Rear Seal Type: REDUCED SEAL, Blue</b> |  | Description: Size 24 Receptacle with 9 positions, Pin, standard arrangement, reduced seal, wide thread adapter |  | Mating Part(s): AHDP06-24-09SR-WTA |  | See Plug column on this page for more details |  |
| <b>Part Number</b><br><b>AHDP06-24-09SR-WTA</b>   | <b>Gender: Standard</b><br><b>Contact: Socket</b> |   |   |  |   |  |                                    |  |   |  |   |   |   |   |  |  |  |                                    |  |   |  |
| <b>Rear Seal Type: REDUCED SEAL, Blue</b>   |   |   |   |  |   |  |                                    |  |   |  |   |   |   |   |  |  |  |                                    |  |   |  |
| Description: Size 24 Plug with 9 positions, Socket, standard arrangement, reduced seal, wide thread adapter   |   |   |   |  |   |  |                                    |  |   |  |   |   |   |   |  |  |  |                                    |  |   |  |
| Mating Part(s): AHDP04-24-09PR-WTA  |   |   |   |  |   |  |                                    |  |   |  |   |   |   |   |  |  |  |                                    |  |   |  |
| See Receptacle column on this page for more details   |   |   |   |  |   |  |                                    |  |   |  |   |   |   |   |  |  |  |                                    |  |   |  |
| <b>Part Number</b><br><b>AHDP04-24-09PR-WTA</b>   | <b>Gender: Standard</b><br><b>Contact: Pin</b>    |   |   |  |   |  |                                    |  |   |  |   |   |   |   |  |  |  |                                    |  |   |  |
| <b>Rear Seal Type: REDUCED SEAL, Blue</b>   |   |   |   |  |   |  |                                    |  |   |  |   |   |   |   |  |  |  |                                    |  |   |  |
| Description: Size 24 Receptacle with 9 positions, Pin, standard arrangement, reduced seal, wide thread adapter  |   |   |   |  |   |  |                                    |  |   |  |   |   |   |   |  |  |  |                                    |  |   |  |
| Mating Part(s): AHDP06-24-09SR-WTA  |   |   |   |  |   |  |                                    |  |   |  |   |   |   |   |  |  |  |                                    |  |   |  |
| See Plug column on this page for more details   |   |   |   |  |   |  |                                    |  |   |  |   |   |   |   |  |  |  |                                    |  |   |  |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <tr style="background-color: #d9e1f2;"> <td style="width: 30%;"><b>Part Number</b><br/><b>AHDP06-24-09PR-WTA</b></td> <td><b>Gender: Reversed</b><br/><b>Contact: Pin</b></td> </tr> <tr style="background-color: #00a0e3; color: white;"> <td colspan="2"><b>Rear Seal Type: REDUCED SEAL, Blue</b></td> </tr> <tr> <td colspan="2">Description: Size 24 Plug, 9 positions, Pin, reversed arrangement, reduced seal, wide thread adapter</td> </tr> <tr> <td colspan="2">Mating Part(s): AHDP04-24-09SR-WTA</td> </tr> <tr> <td colspan="2" style="font-size: small; padding-top: 5px;">See Receptacle column on this page for more details</td> </tr> </table>           | <b>Part Number</b><br><b>AHDP06-24-09PR-WTA</b>   | <b>Gender: Reversed</b><br><b>Contact: Pin</b>    | <b>Rear Seal Type: REDUCED SEAL, Blue</b> |  | Description: Size 24 Plug, 9 positions, Pin, reversed arrangement, reduced seal, wide thread adapter        |  | Mating Part(s): AHDP04-24-09SR-WTA |  | See Receptacle column on this page for more details |  | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr style="background-color: #d9e1f2;"> <td style="width: 30%;"><b>Part Number</b><br/><b>AHDP04-24-09SR-WTA</b></td> <td><b>Gender: Reversed</b><br/><b>Contact: Socket</b></td> </tr> <tr style="background-color: #00a0e3; color: white;"> <td colspan="2"><b>Rear Seal Type: REDUCED SEAL, Blue</b></td> </tr> <tr> <td colspan="2">Description: Size 24 Receptacle, 9 positions, Socket, reversed arrangement, reduced seal, wide thread adapter</td> </tr> <tr> <td colspan="2">Mating Part(s): AHDP06-24-09PR-WTA</td> </tr> <tr> <td colspan="2" style="font-size: small; padding-top: 5px;">See Plug column on this page for more details</td> </tr> </table> | <b>Part Number</b><br><b>AHDP04-24-09SR-WTA</b> | <b>Gender: Reversed</b><br><b>Contact: Socket</b> | <b>Rear Seal Type: REDUCED SEAL, Blue</b> |  | Description: Size 24 Receptacle, 9 positions, Socket, reversed arrangement, reduced seal, wide thread adapter  |  | Mating Part(s): AHDP06-24-09PR-WTA |  | See Plug column on this page for more details |  |
| <b>Part Number</b><br><b>AHDP06-24-09PR-WTA</b>   | <b>Gender: Reversed</b><br><b>Contact: Pin</b>    |   |   |  |   |  |                                    |  |   |  |   |   |   |   |  |  |  |                                    |  |   |  |
| <b>Rear Seal Type: REDUCED SEAL, Blue</b>   |   |   |   |  |   |  |                                    |  |   |  |   |   |   |   |  |  |  |                                    |  |   |  |
| Description: Size 24 Plug, 9 positions, Pin, reversed arrangement, reduced seal, wide thread adapter  |   |   |   |  |   |  |                                    |  |   |  |   |   |   |   |  |  |  |                                    |  |   |  |
| Mating Part(s): AHDP04-24-09SR-WTA  |   |   |   |  |   |  |                                    |  |   |  |   |   |   |   |  |  |  |                                    |  |   |  |
| See Receptacle column on this page for more details   |   |   |   |  |   |  |                                    |  |   |  |   |   |   |   |  |  |  |                                    |  |   |  |
| <b>Part Number</b><br><b>AHDP04-24-09SR-WTA</b>   | <b>Gender: Reversed</b><br><b>Contact: Socket</b> |   |   |  |   |  |                                    |  |   |  |   |   |   |   |  |  |  |                                    |  |   |  |
| <b>Rear Seal Type: REDUCED SEAL, Blue</b>   |   |   |   |  |   |  |                                    |  |   |  |   |   |   |   |  |  |  |                                    |  |   |  |
| Description: Size 24 Receptacle, 9 positions, Socket, reversed arrangement, reduced seal, wide thread adapter   |   |   |   |  |   |  |                                    |  |   |  |   |   |   |   |  |  |  |                                    |  |   |  |
| Mating Part(s): AHDP06-24-09PR-WTA  |   |   |   |  |   |  |                                    |  |   |  |   |   |   |   |  |  |  |                                    |  |   |  |
| See Plug column on this page for more details   |   |   |   |  |   |  |                                    |  |   |  |   |   |   |   |  |  |  |                                    |  |   |  |

For custom insert configurations, please call 1 800 394 7732

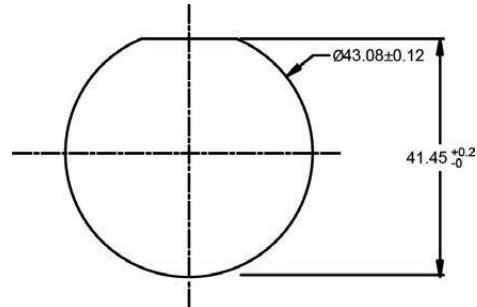


# 9 POSITION PLUGS & RECEPTACLES - CONTACTS

Shell Size  
**24**

| Contact Size | Part No.       | Type             | (Pin/Socket) | Wire Range (AWG) | AMP | Plating |
|--------------|----------------|------------------|--------------|------------------|-----|---------|
| 04           | AT60-204-0490  | Machined         | Pin          | 6                | 100 | Nickel  |
| 04           | AT62-203-04141 | Machined         | Socket       | 6                | 100 | Nickel  |
| 08           | AT62-203-08141 | Machined         | Socket       | 6                | 100 | Nickel  |
| 08           | AT60-204-08141 | Machined         | Pin          | 8-10             | 60  | Nickel  |
| 12           | AT60-220-1231  | Machined         | Pin          | 12-14            | 25  | Gold    |
| 12           | AT60-204-12141 | Machined         | Pin          | 12-14            | 25  | Nickel  |
| 12           | AT62-210-1231  | Machined         | Socket       | 12-14            | 25  | Gold    |
| 12           | AT62-203-12141 | Machined         | Socket       | 12-14            | 25  | Nickel  |
| 12           | AT60-12-0244   | Stamped & Formed | Pin          | 10-12            | 25  | Gold    |
| 12           | AT60-12-0222   | Stamped & Formed | Pin          | 10-12            | 25  | Nickel  |
| 12           | AT62-12-0244   | Stamped & Formed | Socket       | 10-12            | 25  | Gold    |
| 12           | AT62-12-0222   | Stamped & Formed | Socket       | 10-12            | 25  | Nickel  |
| 12           | AT60-12-0144   | Stamped & Formed | Pin          | 12-14            | 25  | Gold    |
| 12           | AT60-12-0166   | Stamped & Formed | Pin          | 12-14            | 25  | Nickel  |
| 12           | AT62-12-0144   | Stamped & Formed | Socket       | 12-14            | 25  | Gold    |
| 12           | AT62-12-0166   | Stamped & Formed | Socket       | 12-14            | 25  | Nickel  |

Recommended Panel Mounting Hole  
Recommended panel thickness: 1.6 to 4.7mm







# 18 POSITION PLUGS & RECEPTACLES

Shell Size  
24

| PLUG  |  | RECEPTACLE   |   |
|---|--|--|---|
| <i>Standard and reverse terminal genders allows for custom polarization</i>                           |  |  |   |
| <b>Part Number</b><br><b>AHDP06-24-18PN-WTA</b>   | <b>Gender: Reversed</b><br><b>Contact: Pin</b> | <b>Part Number</b><br><b>AHDP04-24-18SN-WTA</b>  | <b>Gender: Reversed</b><br><b>Contact: Socket</b> |
| Rear Seal Type: NORMAL, GREEN   |  | Rear Seal Type: NORMAL, GREEN  |   |
| Description: Size 24 Plug, 18 positions, pin, reversed arrangement, normal seal, wide thread adapter  |  | Description: Size 24 Receptacle, 18 positions, socket, reversed arrangement, normal seal, wide thread adapter  |   |
| Mating Part(s): AHDP04-24-18SN-WTA, AHDP04-24-18SR-WTA  |  | Mating Part(s): AHDP06-24-18PN-WTA, AHDP06-24-18PR-WTA   |   |
| See Receptacle column on this page for more details   |  | See Plug column on this page for more details  |   |
| <b>Part Number</b><br><b>AHDP06-24-18PR-WTA</b>   | <b>Gender: Reversed</b><br><b>Contact: Pin</b> | <b>Part Number</b><br><b>AHDP04-24-18SR-WTA</b>  | <b>Gender: Reversed</b><br><b>Contact: Socket</b> |
| Rear Seal Type: REDUCED SEAL, Blue  |  | Rear Seal Type: NORMAL, Blue   |   |
| Description: Size 24 Plug, 18 positions, pin, reversed arrangement, reduced seal, wide thread adapter |  | Description: Size 24 Receptacle, 18 positions, socket, reversed arrangement, reduced seal, wide thread adapter |   |
| Mating Part(s): AHDP04-24-18SN-WTA, AHDP04-24-18SR-WTA  |  | Mating Part(s): AHDP06-24-18PN-WTA, AHDP06-24-18PR-WTA   |   |
| See Receptacle column on this page for more details   |  | See Plug column on this page for more details  |   |

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CONTACTS

| Contact Size | Part No.       | Type             | (Pin/Socket) | Wire Range (AWG) | AMP | Plating |
|--------------|----------------|------------------|--------------|------------------|-----|---------|
| 08           | AT60-204-08141 | Machined         | Pin          | 8-10             | 60  | Nickel  |
| 08           | AT60-203-08141 | Machined         | Pin          | 8-10             | 60  | Nickel  |
| 12           | AT60-220-1231  | Machined         | Pin          | 12-14            | 25  | Gold    |
| 12           | AT60-204-12141 | Machined         | Pin          | 12-14            | 25  | Nickel  |
| 12           | AT62-210-1231  | Machined         | Socket       | 12-14            | 25  | Gold    |
| 12           | AT62-203-12141 | Machined         | Socket       | 12-14            | 25  | Nickel  |
| 12           | AT60-12-0244   | Stamped & Formed | Pin          | 10-12            | 25  | Gold    |
| 12           | AT60-12-0222   | Stamped & Formed | Pin          | 10-12            | 25  | Nickel  |
| 12           | AT62-12-0244   | Stamped & Formed | Socket       | 10-12            | 25  | Gold    |
| 12           | AT62-12-0222   | Stamped & Formed | Socket       | 10-12            | 25  | Nickel  |
| 12           | AT60-12-0144   | Stamped & Formed | Pin          | 12-14            | 25  | Gold    |
| 12           | AT60-12-0166   | Stamped & Formed | Pin          | 12-14            | 25  | Nickel  |
| 12           | AT62-12-0144   | Stamped & Formed | Socket       | 12-14            | 25  | Gold    |
| 12           | AT62-12-0166   | Stamped & Formed | Socket       | 12-14            | 25  | Nickel  |
| 16           | AT60-215-1631  | Machined         | Pin          | 14               | 13  | Gold    |
| 16           | AT60-215-16141 | Machined         | Pin          | 14               | 13  | Nickel  |
| 16           | AT62-209-1631  | Machined         | Socket       | 14               | 13  | Gold    |
| 16           | AT62-209-16141 | Machined         | Socket       | 14               | 13  | Nickel  |
| 16           | AT60-202-1631  | Machined         | Pin          | 16-20            | 13  | Gold    |
| 16           | AT60-202-16141 | Machined         | Pin          | 16-20            | 13  | Nickel  |
| 16           | AT62-201-1631  | Machined         | Socket       | 16-20            | 13  | Gold    |
| 16           | AT62-201-16141 | Machined         | Socket       | 16-20            | 13  | Nickel  |
| 16           | AT60-14-0144   | Stamped & Formed | Pin          | 14-16            | 13  | Gold    |
| 16           | AT60-14-0122   | Stamped & Formed | Pin          | 14-16            | 13  | Nickel  |
| 16           | AT62-14-0144   | Stamped & Formed | Socket       | 14-16            | 13  | Gold    |
| 16           | AT62-14-0122   | Stamped & Formed | Socket       | 14-16            | 13  | Nickel  |
| 16           | AT60-16-0144   | Stamped & Formed | Pin          | 16-18            | 13  | Gold    |
| 16           | AT60-16-0122   | Stamped & Formed | Pin          | 16-18            | 13  | Nickel  |
| 16           | AT62-16-0144   | Stamped & Formed | Socket       | 16-18            | 13  | Gold    |
| 16           | AT62-16-0122   | Stamped & Formed | Socket       | 16-18            | 13  | Nickel  |
| 16           | AT60-16-0644   | Stamped & Formed | Pin          | 18-20            | 13  | Gold    |
| 16           | AT60-16-0622   | Stamped & Formed | Pin          | 18-20            | 13  | Nickel  |
| 16           | AT62-16-0644   | Stamped & Formed | Socket       | 18-20            | 13  | Gold    |
| 16           | AT62-16-0622   | Stamped & Formed | Socket       | 18-20            | 13  | Nickel  |

CONNECTOR SOLUTIONS

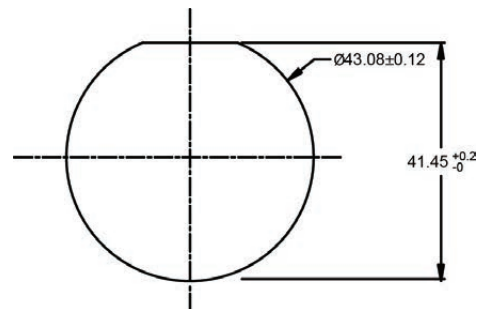


# 18 POSITION PLUGS & RECEPTACLES

Shell Size  
24

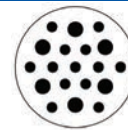


Recommended Panel Mounting Hole  
Recommended panel thickness: 1.6 to 4.7mm





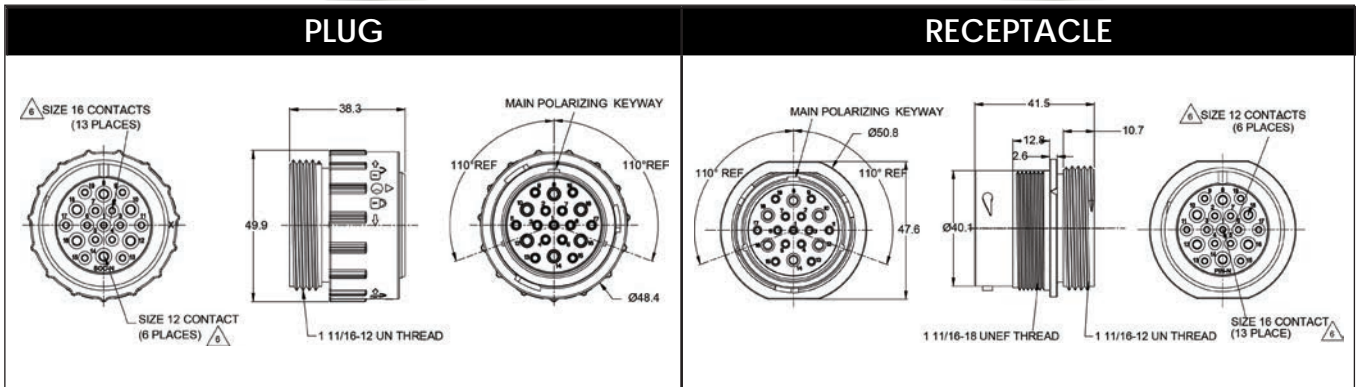
# 19 POSITION PLUGS & RECEPTACLES



**DURA|MATE**  
19 POSITIONS  
25A, 13A

Shell Size  
**24**

|                     |                               |                               |
|---------------------|-------------------------------|-------------------------------|
| Contact Size        | <b>12</b>                     | <b>16</b>                     |
| Contact Qty         | 6                             | 13                            |
| Seal OD Range       |                               |                               |
| <b>NORMAL SEAL</b>  | 3.43mm (.135")-4.32mm (.170") | 2.54mm (.100")-3.40mm (.134") |
| <b>REDUCED SEAL</b> | 2.46mm (.097")-4.01mm (.158") | 1.35mm (.053")-3.05mm (.120") |
| Wire Range          | 10-14 AWG                     | 14-20 AWG                     |
| Amperage            | 25                            | 13                            |



Standard and reverse terminal genders allows for custom polarization

|   |                                     |
|---|-------------------------------------|
| <b>Part Number</b><br><b>AHDP06-24-19SN-WTA</b>   | Gender: Standard<br>Contact: Socket |
| <b>Rear Seal Type: NORMAL, Green</b>  |                                     |
| Description: Size 24 Plug with 19 positions, Socket, standard arrangement, normal seal, wide thread adapter |                                     |
| Mating Part(s): AHDP04-24-19PN-WTA,<br>AHDP04-24-19PR-WTA   |                                     |
| See Receptacle column on this page for more details   |                                     |

|  |                                  |
|--|----------------------------------|
| <b>Part Number</b><br><b>AHDP04-24-19PN-WTA</b>  | Gender: Standard<br>Contact: Pin |
| <b>Rear Seal Type: NORMAL, Green</b>   |                                  |
| Description: Size 24 Receptacle with 19 positions, Pin, standard arrangement, normal seal, wide thread adapter |                                  |
| Mating Part(s): AHDP06-24-19SN-WTA,<br>AHDP06-24-19SR-WTA  |                                  |
| See Plug column on this page for more details  |                                  |

|  |                                     |
|--|-------------------------------------|
| <b>Part Number</b><br><b>AHDP06-24-19SR-WTA</b>  | Gender: Standard<br>Contact: Socket |
| <b>Rear Seal Type: REDUCED SEAL, Blue</b>  |                                     |
| Description: Size 24 Plug with 19 positions, Socket, standard arrangement, RD01 reduced diameter seal, wide thread adapter |                                     |
| Mating Part(s): AHDP04-24-19PN-WTA,<br>AHDP04-24-19PR-WTA  |                                     |
| See Receptacle column on this page for more details  |                                     |

|  |                                  |
|--|----------------------------------|
| <b>Part Number</b><br><b>AHDP04-24-19PR-WTA</b>  | Gender: Standard<br>Contact: Pin |
| <b>Rear Seal Type: REDUCED SEAL, Blue</b>  |                                  |
| Description: Size 24 Receptacle with 19 positions, Pin, standard arrangement, RD01 reduced diameter, wide thread adapter |                                  |
| Mating Part(s): AHDP06-24-19SN-WTA,<br>AHDP06-24-19SR-WTA  |                                  |
| See Plug column on this page for more details  |                                  |

For custom insert configurations, please call 1 800 394 7732



# 19 POSITION PLUGS & RECEPTACLES - CONTACTS

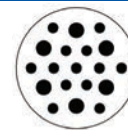
Shell Size  
24

| PLUG   |                                  | RECEPTACLE   |                                     |
|--|----------------------------------|--|-------------------------------------|
| Part Number<br><b>AHDP06-24-19PN-WTA</b>   | Gender: Reversed<br>Contact: Pin | Part Number<br><b>AHDP04-24-19SN-WTA</b>   | Gender: Reversed<br>Contact: Socket |
| Rear Seal Type: NORMAL, Green  |                                  | Rear Seal Type: NORMAL, Green  |                                     |
| Description: Size 24 Plug with 19 positions, Pin, reverse arrangement, normal seal, wide thread adapter                |                                  | Description: Size 24 Receptacle with 19 positions, Socket, reverse arrangement, normal seal, wide thread adapter           |                                     |
| Mating Part(s): AHDP04-24-19SN-WTA,<br>AHDP04-24-19SR-WTA  |                                  | Mating Part(s): AHDP06-24-19PN-WTA,<br>AHDP06-24-19PR-WTA  |                                     |
| <i>See Receptacle column on this page for more details</i>   |                                  | <i>See Plug column on this page for more details</i>   |                                     |
| Part Number<br><b>AHDP06-24-19PR-WTA</b>   | Gender: Reversed<br>Contact: Pin | Part Number<br><b>AHDP04-24-19SR-WTA</b>   | Gender: Reversed<br>Contact: Socket |
| Rear Seal Type: REDUCED SEAL, Blue   |                                  | Rear Seal Type: REDUCED SEAL, Blue   |                                     |
| Description: Size 24 Plug with 19 positions, Pin, reverse arrangement, RD01 reduced diameter seal, wide thread adapter |                                  | Description: Size 24 Receptacle with 19 positions, Socket, reverse arrangement, RD01 reduced diameter, wide thread adapter |                                     |
| Mating Part(s): AHDP04-24-19SN-WTA,<br>AHDP04-24-19SR-WTA  |                                  | Mating Part(s): AHDP06-24-19PN-WTA,<br>AHDP06-24-19PR-WTA  |                                     |
| <i>See Receptacle column on this page for more details</i>   |                                  | <i>See Plug column on this page for more details</i>   |                                     |

## 19 Position Plugs & Receptacles- Contacts

| Contact Size | Part No.       | Type             | (Pin/Socket) | Wire Range (AWG) | AMP | Plating |
|--------------|----------------|------------------|--------------|------------------|-----|---------|
| 12           | AT60-220-1231  | Machined         | Pin          | 12-14            | 25  | Gold    |
| 12           | AT60-204-12141 | Machined         | Pin          | 12-14            | 25  | Nickel  |
| 12           | AT62-210-1231  | Machined         | Socket       | 12-14            | 25  | Gold    |
| 12           | AT62-203-12141 | Machined         | Socket       | 12-14            | 25  | Nickel  |
| 12           | AT60-12-0244   | Stamped & Formed | Pin          | 10-12            | 25  | Gold    |
| 12           | AT60-12-0222   | Stamped & Formed | Pin          | 10-12            | 25  | Nickel  |
| 12           | AT62-12-0244   | Stamped & Formed | Socket       | 10-12            | 25  | Gold    |
| 12           | AT62-12-0222   | Stamped & Formed | Socket       | 10-12            | 25  | Nickel  |
| 12           | AT60-12-0144   | Stamped & Formed | Pin          | 12-14            | 25  | Gold    |
| 12           | AT60-12-0166   | Stamped & Formed | Pin          | 12-14            | 25  | Nickel  |
| 12           | AT62-12-0144   | Stamped & Formed | Socket       | 12-14            | 25  | Gold    |
| 12           | AT62-12-0166   | Stamped & Formed | Socket       | 12-14            | 25  | Nickel  |

# 19 POSITION PLUGS & RECEPTACLES- CONTACTS (con't)



**DURA|MATE**  
19 POSITIONS  
25A,13A

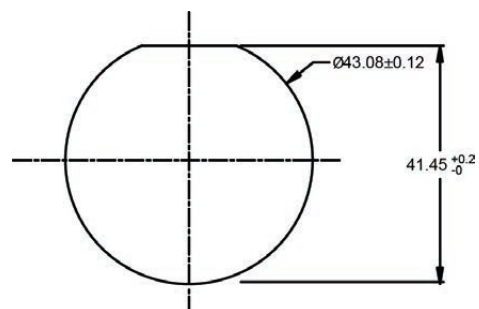
Shell Size  
**24**

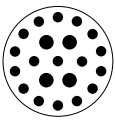
CONNECTOR SOLUTIONS

| Contact Size | Part No.       | Type             | (Pin/Socket) | Wire Range (AWG) | AMP | Plating |
|--------------|----------------|------------------|--------------|------------------|-----|---------|
| 16           | AT60-215-1631  | Machined         | Pin          | 14               | 13  | Gold    |
| 16           | AT60-215-16141 | Machined         | Pin          | 14               | 13  | Nickel  |
| 16           | AT62-209-1631  | Machined         | Socket       | 14               | 13  | Gold    |
| 16           | AT62-209-16141 | Machined         | Socket       | 14               | 13  | Nickel  |
| 16           | AT60-202-1631  | Machined         | Pin          | 16-20            | 13  | Gold    |
| 16           | AT60-202-16141 | Machined         | Pin          | 16-20            | 13  | Nickel  |
| 16           | AT62-201-1631  | Machined         | Socket       | 16-20            | 13  | Gold    |
| 16           | AT62-201-16141 | Machined         | Socket       | 16-20            | 13  | Nickel  |
| 16           | AT60-14-0144   | Stamped & Formed | Pin          | 14-16            | 13  | Gold    |
| 16           | AT60-14-0122   | Stamped & Formed | Pin          | 14-16            | 13  | Nickel  |
| 16           | AT62-14-0144   | Stamped & Formed | Socket       | 14-16            | 13  | Gold    |
| 16           | AT62-14-0122   | Stamped & Formed | Socket       | 14-16            | 13  | Nickel  |
| 16           | AT60-16-0144   | Stamped & Formed | Pin          | 16-18            | 13  | Gold    |
| 16           | AT60-16-0122   | Stamped & Formed | Pin          | 16-18            | 13  | Nickel  |
| 16           | AT62-16-0144   | Stamped & Formed | Socket       | 16-18            | 13  | Gold    |
| 16           | AT62-16-0122   | Stamped & Formed | Socket       | 16-18            | 13  | Nickel  |
| 16           | AT60-16-0644   | Stamped & Formed | Pin          | 18-20            | 13  | Gold    |
| 16           | AT60-16-0622   | Stamped & Formed | Pin          | 18-20            | 13  | Nickel  |
| 16           | AT62-16-0644   | Stamped & Formed | Socket       | 18-20            | 13  | Gold    |
| 16           | AT62-16-0622   | Stamped & Formed | Socket       | 18-20            | 13  | Nickel  |



Recommended Panel Mounting Hole  
 Recommended panel thickness: 1.6 to 4.7mm





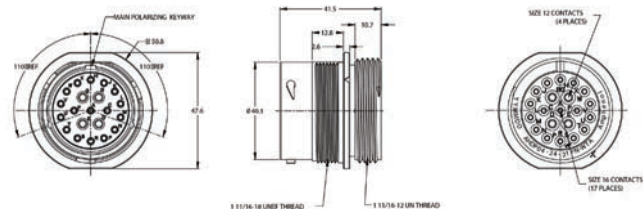
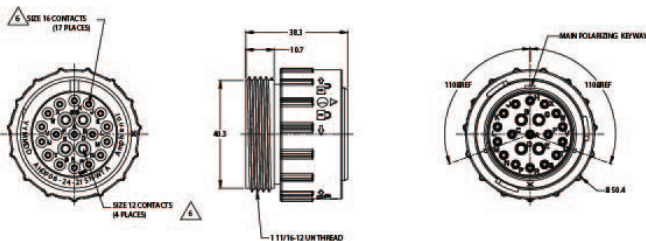
# 21 POSITION PLUGS & RECEPTACLES

Shell Size  
24

|               |                               |                               |
|---------------|-------------------------------|-------------------------------|
| Contact Size  | 12                            | 16                            |
| Contact Qty   | 4                             | 17                            |
| Seal OD Range |                               |                               |
| NORMAL SEAL   | 3.43mm (.135")-4.32mm (.170") | 2.54mm (.100")-3.40mm (.134") |
| REDUCED SEAL  | 2.46mm (.097")-4.01mm (.158") | 1.35mm (.053")-3.05mm (.120") |
| Wire Range    | 10-14 AWG                     | 14-20 AWG                     |
| Amperage      | 25                            | 13                            |



| PLUG | RECEPTACLE |
|------|------------|
|------|------------|



Standard and reverse terminal genders allows for custom polarization

|   |   |
|---|---|
| <b>Part Number</b><br>AHDP06-24-21SN-WTA  | <b>Gender:</b> Standard<br><b>Contact:</b> Socket |
| <b>Rear Seal Type:</b> NORMAL, Green  |   |
| Description: Size 24 Plug with 21 positions, Socket, standard arrangement, normal seal, wide thread adapter |   |
| Mating Part(s): AHDP04-24-21PN-WTA, AHDP04-24-19PR-WTA  |   |
| See Receptacle column on this page for more details   |   |

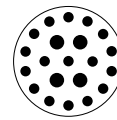
|  |  |
|--|--|
| <b>Part Number</b><br>AHDP04-24-21PN-WTA   | <b>Gender:</b> Standard<br><b>Contact:</b> Pin |
| <b>Rear Seal Type:</b> NORMAL, Green   |  |
| Description: Size 24 Receptacle with 21 positions, Pin, standard arrangement, normal seal, wide thread adapter |  |
| Mating Part(s): AHDP06-24-21SN-WTA, AHDP06-24-21SR-WTA   |  |
| See Plug column on this page for more details  |  |

|  |   |
|--|---|
| <b>Part Number</b><br>AHDP06-24-21SR-WTA   | <b>Gender:</b> Standard<br><b>Contact:</b> Socket |
| <b>Rear Seal Type:</b> REDUCED SEAL, Blue  |   |
| Description: Size 24 Plug with 21 positions, Socket, standard arrangement, reduced seal, wide thread adapter |   |
| Mating Part(s): AHDP04-24-21PN-WTA, AHDP04-24-19PR-WTA   |   |
| See Receptacle column on this page for more details  |   |

|   |  |
|---|--|
| <b>Part Number</b><br>AHDP04-24-21PR-WTA  | <b>Gender:</b> Standard<br><b>Contact:</b> Pin |
| <b>Rear Seal Type:</b> REDUCED SEAL, Blue   |  |
| Description: Size 24 Receptacle with 21 positions, Pin, standard arrangement, reduced seal, wide thread adapter |  |
| Mating Part(s): AHDP06-24-21SN-WTA, AHDP06-24-21SR-WTA  |  |
| See Plug column on this page for more details   |  |

For custom insert configurations, please call 1 800 394 7732

# 21 POSITION PLUGS & RECEPTACLES - CONTACTS



**DURA|MATE**  
21 POSITIONS  
25A,13A

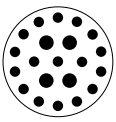
Shell Size  
**24**

CONNECTOR SOLUTIONS

| PLUG  |                                  | RECEPTACLE   |                                     |
|---|----------------------------------|--|-------------------------------------|
| Part Number<br><b>AHDP06-24-21PN-WTA</b>  | Gender: Reversed<br>Contact: Pin | Part Number<br><b>AHDP04-24-21SN-WTA</b>   | Gender: Reversed<br>Contact: Socket |
| Rear Seal Type: NORMAL, Green   |                                  | Rear Seal Type: NORMAL, Green  |                                     |
| Description: Size 24 Plug with 21 positions, Pin, reversed arrangement, normal seal, wide thread adapter  |                                  | Description: Size 24 Receptacle with 21 positions, Socket, reversed arrangement, normal seal, wide thread adapter  |                                     |
| Mating Part(s): AHDP04-24-21SN-WTA,<br>AHDP04-24-21SR-WTA   |                                  | Mating Part(s): AHDP06-24-21PN-WTA,<br>AHDP06-24-21PR-WTA  |                                     |
| <i>See Receptacle column on this page for more details</i>  |                                  | <i>See Plug column on this page for more details</i>   |                                     |
| Part Number<br><b>AHDP06-24-21PR-WTA</b>  | Gender: Reversed<br>Contact: Pin | Part Number<br><b>AHDP04-24-21SR-WTA</b>   | Gender: Reversed<br>Contact: Socket |
| Rear Seal Type: REDUCED SEAL, Blue  |                                  | Rear Seal Type: REDUCED SEAL, Blue   |                                     |
| Description: Size 24 Plug with 21 positions, Pin, reversed arrangement, reduced seal, wide thread adapter |                                  | Description: Size 24 Receptacle with 21 positions, Socket, reversed arrangement, reduced seal, wide thread adapter |                                     |
| Mating Part(s): AHDP04-24-21SN-WTA,<br>AHDP04-24-21SR-WTA   |                                  | Mating Part(s): AHDP06-24-21PN-WTA,<br>AHDP06-24-21PR-WTA  |                                     |
| <i>See Receptacle column on this page for more details</i>  |                                  | <i>See Plug column on this page for more details</i>   |                                     |

## 21 Position Plugs & Receptacles- Contacts

| Contact Size | Part No.       | Type             | (Pin/Socket) | Wire Range (AWG) | AMP | Plating |
|--------------|----------------|------------------|--------------|------------------|-----|---------|
| 12           | AT60-220-1231  | Machined         | Pin          | 12-14            | 25  | Gold    |
| 12           | AT60-204-12141 | Machined         | Pin          | 12-14            | 25  | Nickel  |
| 12           | AT62-210-1231  | Machined         | Socket       | 12-14            | 25  | Gold    |
| 12           | AT62-203-12141 | Machined         | Socket       | 12-14            | 25  | Nickel  |
| 12           | AT60-12-0244   | Stamped & Formed | Pin          | 10-12            | 25  | Gold    |
| 12           | AT60-12-0222   | Stamped & Formed | Pin          | 10-12            | 25  | Nickel  |
| 12           | AT62-12-0244   | Stamped & Formed | Socket       | 10-12            | 25  | Gold    |
| 12           | AT62-12-0222   | Stamped & Formed | Socket       | 10-12            | 25  | Nickel  |
| 12           | AT60-12-0144   | Stamped & Formed | Pin          | 12-14            | 25  | Gold    |
| 12           | AT60-12-0166   | Stamped & Formed | Pin          | 12-14            | 25  | Nickel  |
| 12           | AT62-12-0144   | Stamped & Formed | Socket       | 12-14            | 25  | Gold    |
| 12           | AT62-12-0166   | Stamped & Formed | Socket       | 12-14            | 25  | Nickel  |



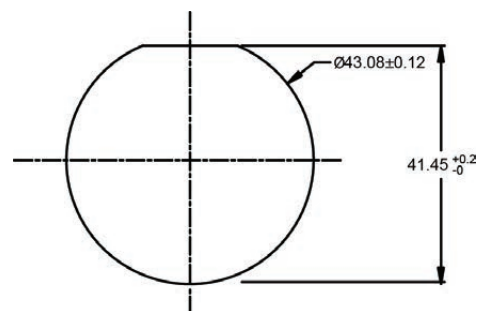
## 21 POSITION PLUGS & RECEPTACLES- CONTACTS (con't)

Shell Size  
**24**

| Contact Size | Part No.       | Type             | (Pin/Socket) | Wire Range (AWG) | AMP | Plating |
|--------------|----------------|------------------|--------------|------------------|-----|---------|
| 16           | AT60-215-1631  | Machined         | Pin          | 14               | 13  | Gold    |
| 16           | AT60-215-16141 | Machined         | Pin          | 14               | 13  | Nickel  |
| 16           | AT62-209-1631  | Machined         | Socket       | 14               | 13  | Gold    |
| 16           | AT62-209-16141 | Machined         | Socket       | 14               | 13  | Nickel  |
| 16           | AT60-202-1631  | Machined         | Pin          | 16-20            | 13  | Gold    |
| 16           | AT60-202-16141 | Machined         | Pin          | 16-20            | 13  | Nickel  |
| 16           | AT62-201-1631  | Machined         | Socket       | 16-20            | 13  | Gold    |
| 16           | AT62-201-16141 | Machined         | Socket       | 16-20            | 13  | Nickel  |
| 16           | AT60-14-0144   | Stamped & Formed | Pin          | 14-16            | 13  | Gold    |
| 16           | AT60-14-0122   | Stamped & Formed | Pin          | 14-16            | 13  | Nickel  |
| 16           | AT62-14-0144   | Stamped & Formed | Socket       | 14-16            | 13  | Gold    |
| 16           | AT62-14-0122   | Stamped & Formed | Socket       | 14-16            | 13  | Nickel  |
| 16           | AT60-16-0144   | Stamped & Formed | Pin          | 16-18            | 13  | Gold    |
| 16           | AT60-16-0122   | Stamped & Formed | Pin          | 16-18            | 13  | Nickel  |
| 16           | AT62-16-0144   | Stamped & Formed | Socket       | 16-18            | 13  | Gold    |
| 16           | AT62-16-0122   | Stamped & Formed | Socket       | 16-18            | 13  | Nickel  |
| 16           | AT60-16-0644   | Stamped & Formed | Pin          | 18-20            | 13  | Gold    |
| 16           | AT60-16-0622   | Stamped & Formed | Pin          | 18-20            | 13  | Nickel  |
| 16           | AT62-16-0644   | Stamped & Formed | Socket       | 18-20            | 13  | Gold    |
| 16           | AT62-16-0622   | Stamped & Formed | Socket       | 18-20            | 13  | Nickel  |

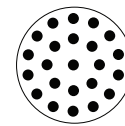


Recommended Panel Mounting Hole  
 Recommended panel thickness: 1.6 to 4.7mm





# 23 POSITION PLUGS & RECEPTACLES



**DURA|MATE**  
23 POSITIONS  
13A

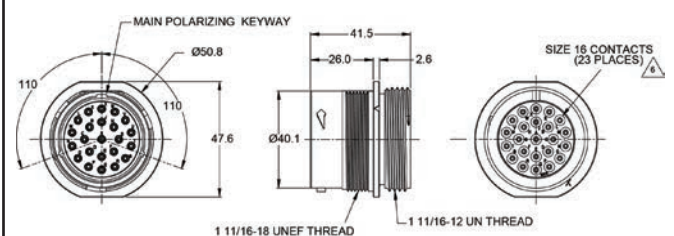
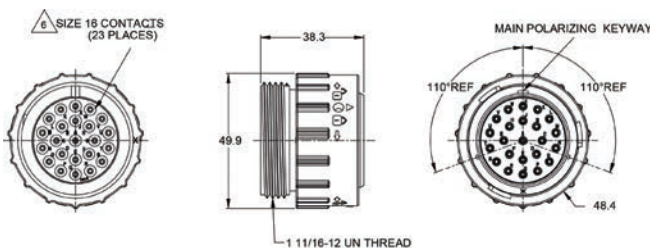
Shell Size  
**24**

|                     |                                 |
|---------------------|---------------------------------|
| Contact Size        | <b>16</b>                       |
| Contact Qty         | 23                              |
| Seal OD Range       |                                 |
| <b>NORMAL SEAL</b>  | 2.54mm (.100") - 3.40mm (.134") |
| <b>REDUCED SEAL</b> | 1.35mm (.053") - 3.05mm (.120") |
| Wire Range          | 14-20 AWG                       |
| Amperage            | 13                              |



## PLUG

## RECEPTACLE



Standard and reverse terminal genders allows for custom polarization

|   |                                     |
|---|-------------------------------------|
| Part Number<br><b>AHDP06-24-23SN-WTA</b>  | Gender: Standard<br>Contact: Socket |
| Rear Seal Type: <b>NORMAL SEAL, Blue</b>  |                                     |
| Description: Size 24 Plug with 23 positions, Socket, standard arrangement, normal seal, wide thread adapter |                                     |
| Mating Part(s): AHDP04-24-23PN-WTA, AHDP04-24-23PR-WTA  |                                     |
| See Receptacle column on this page for more details   |                                     |

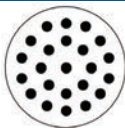
|  |                                  |
|--|----------------------------------|
| Part Number<br><b>AHDP04-24-23PN-WTA</b>   | Gender: Standard<br>Contact: Pin |
| Rear Seal Type: <b>NORMAL, Green</b>   |                                  |
| Description: Size 24 Receptacle with 23 positions, Pin, standard arrangement, normal seal, wide thread adapter |                                  |
| Mating Part(s): AHDP06-24-23SN-WTA, AHDP06-24-23SR-WTA   |                                  |
| See Plug column on this page for more details  |                                  |

|  |                                     |
|--|-------------------------------------|
| Part Number<br><b>AHDP06-24-23SR-WTA</b>   | Gender: Standard<br>Contact: Socket |
| Rear Seal Type: <b>REDUCED SEAL, Blue</b>  |                                     |
| Description: Size 24 Plug with 23 positions, Socket, standard arrangement, RD01 reduced diameter seal, wide thread adapter |                                     |
| Mating Part(s): AHDP04-24-23PN-WTA, AHDP04-24-23PR-WTA   |                                     |
| See Receptacle column on this page for more details  |                                     |

|   |                                  |
|---|----------------------------------|
| Part Number<br><b>AHDP04-24-23PR-WTA</b>  | Gender: Standard<br>Contact: Pin |
| Rear Seal Type: <b>REDUCED SEAL, Blue</b>   |                                  |
| Description: Size 24 Receptacle with 23 positions, Pin, standard arrangement, RD01 reduced diameter seal, wide thread adapter |                                  |
| Mating Part(s): AHDP06-24-23SN-WTA, AHDP06-24-23SR-WTA  |                                  |
| See Plug column on this page for more details   |                                  |

For custom insert configurations, please call 1 800 394 7732





## 23 POSITION PLUGS & RECEPTACLES

Shell Size  
24

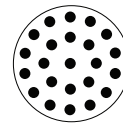
| PLUG   |                                  | RECEPTACLE  |                                     |
|--|----------------------------------|---|-------------------------------------|
| Part Number<br><b>AHDP06-24-23PN-WTA</b>   | Gender: Reversed<br>Contact: Pin | Part Number<br><b>AHDP04-24-23SN-WTA</b>  | Gender: Reversed<br>Contact: Socket |
| Rear Seal Type: NORMAL, Green  |                                  | Rear Seal Type: NORMAL, Green   |                                     |
| Description: Size 24 Plug with 23 positions, Pin, reverse arrangement, normal seal, wide thread adapter                |                                  | Description: Size 24 Receptacle with 23 positions, Socket, reverse arrangement, normal seal, wide thread adapter                |                                     |
| Mating Part(s): AHDP04-24-23SN-WTA,<br>AHDP04-24-23SR-WTA  |                                  | Mating Part(s): AHDP06-24-23PN-WTA,<br>AHDP06-24-23PR-WTA   |                                     |
| <i>See Receptacle column on this page for more details</i>   |                                  | <i>See Plug column on this page for more details</i>  |                                     |
| Part Number<br><b>AHDP06-24-23PR-WTA</b>   | Gender: Reversed<br>Contact: Pin | Part Number<br><b>AHDP04-24-23SR-WTA</b>  | Gender: Reversed<br>Contact: Socket |
| Rear Seal Type: REDUCED SEAL, Blue   |                                  | Rear Seal Type: REDUCED SEAL, Blue  |                                     |
| Description: Size 24 Plug with 23 positions, Pin, reverse arrangement, RD01 reduced diameter seal, wide thread adapter |                                  | Description: Size 24 Receptacle with 23 positions, Socket, reverse arrangement, RD01 reduced diameter seal, wide thread adapter |                                     |
| Mating Part(s): AHDP04-24-23SN-WTA,<br>AHDP04-24-23SR-WTA  |                                  | Mating Part(s): AHDP06-24-23PN-WTA,<br>AHDP06-24-23PR-WTA   |                                     |
| <i>See Receptacle column on this page for more details</i>   |                                  | <i>See Plug column on this page for more details</i>  |                                     |

### 23 Position Plugs & Receptacles - Contacts

| Contact Size | Part No.       | Type             | (Pin/Socket) | Wire Range (AWG) | AMP | Plating |
|--------------|----------------|------------------|--------------|------------------|-----|---------|
| 16           | AT60-215-16141 | Machined         | Pin          | 14               | 13  | Nickel  |
| 16           | AT60-215-1631  | Machined         | Pin          | 14               | 13  | Gold    |
| 16           | AT62-209-16141 | Machined         | Socket       | 14               | 13  | Nickel  |
| 16           | AT62-209-1631  | Machined         | Socket       | 14               | 13  | Gold    |
| 16           | AT60-202-16141 | Machined         | Pin          | 16-20            | 13  | Nickel  |
| 16           | AT60-202-1631  | Machined         | Pin          | 16-20            | 13  | Gold    |
| 16           | AT62-201-16141 | Machined         | Socket       | 16-20            | 13  | Nickel  |
| 16           | AT62-201-1631  | Machined         | Socket       | 16-20            | 13  | Gold    |
| 16           | AT60-14-0122   | Stamped & Formed | Pin          | 14-16            | 13  | Nickel  |
| 16           | AT60-14-0144   | Stamped & Formed | Pin          | 14-16            | 13  | Gold    |
| 16           | AT62-14-0122   | Stamped & Formed | Socket       | 14-16            | 13  | Nickel  |
| 16           | AT62-14-0144   | Stamped & Formed | Socket       | 14-16            | 13  | Gold    |

For custom insert configurations, please consult factory

# 23 POSITION PLUGS & RECEPTACLES - CONTACTS

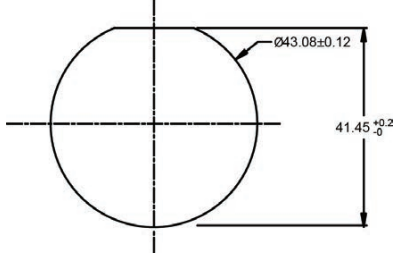


**DURA|MATE**  
23 POSITIONS  
13A

Shell Size  
**24**

| Contact Size | Part No.     | Type             | (Pin/Socket) | Wire Range (AWG) | AMP | Plating |
|--------------|--------------|------------------|--------------|------------------|-----|---------|
| 16           | AT60-16-0122 | Stamped & Formed | Pin          | 16-18            | 13  | Nickel  |
| 16           | AT60-16-0144 | Stamped & Formed | Pin          | 16-18            | 13  | Gold    |
| 16           | AT62-16-0122 | Stamped & Formed | Socket       | 16-18            | 13  | Nickel  |
| 16           | AT62-16-0144 | Stamped & Formed | Socket       | 16-18            | 13  | Gold    |
| 16           | AT60-16-0622 | Stamped & Formed | Pin          | 18-20            | 13  | Nickel  |
| 16           | AT60-16-0644 | Stamped & Formed | Pin          | 18-20            | 13  | Gold    |
| 16           | AT62-16-0622 | Stamped & Formed | Socket       | 18-20            | 13  | Nickel  |
| 16           | AT62-16-0644 | Stamped & Formed | Socket       | 18-20            | 13  | Gold    |

Recommended Panel Mounting Hole  
Recommended panel thickness:  
1.6 to 4.7mm



Part Number  
**AHDP24-PN01**

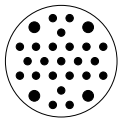
Panel Nut, Shell Size 24



Part Number  
**AT14-001-2486**

Metal Lock Washer  
Shell Size 24





# 27 POSITION PLUGS & RECEPTACLES

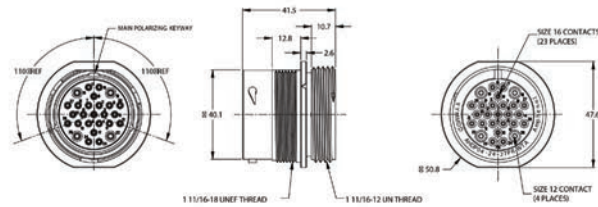
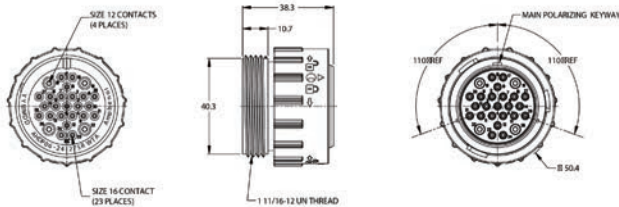
Shell Size  
24

|               |                               |                               |
|---------------|-------------------------------|-------------------------------|
| Contact Size  | 12                            | 16                            |
| Contact Qty   | 4                             | 23                            |
| Seal OD Range |                               |                               |
| REDUCED SEAL  | 2.46mm (.097")-4.01mm (.158") | 1.35mm (.053")-3.05mm (.120") |
| Wire Range    | 10-14 AWG                     | 14-20 AWG                     |
| Amperage      | 25                            | 13                            |



## PLUG

## RECEPTACLE



Standard and reverse terminal genders allows for custom polarization

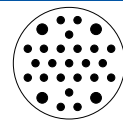
|  |                                     |
|--|-------------------------------------|
| Part Number<br><b>AHDP06-24-27SR-WTA</b>   | Gender: Standard<br>Contact: Socket |
| Rear Seal Type: REDUCED SEAL, Blue   |                                     |
| Description: Size 24 Plug with 27 positions, Socket, standard arrangement, reduced seal, wide thread adapter |                                     |
| Mating Part(s): AHDP04-24-27PR-WTA   |                                     |
| See Receptacle column on this page for more details  |                                     |

|   |                                  |
|---|----------------------------------|
| Part Number<br><b>AHDP04-24-27PR-WTA</b>  | Gender: Standard<br>Contact: Pin |
| Rear Seal Type: REDUCED SEAL, Blue  |                                  |
| Description: Size 24 Receptacle with 27 positions, Pin, standard arrangement, reduced seal, wide thread adapter |                                  |
| Mating Part(s): AHDP06-24-27SR-WTA  |                                  |
| See Plug column on this page for more details   |                                  |

|   |                                  |
|---|----------------------------------|
| Part Number<br><b>AHDP06-24-27PR-WTA</b>  | Gender: Reversed<br>Contact: Pin |
| Rear Seal Type: REDUCED SEAL, Blue  |                                  |
| Description: Size 24 Plug with 27 positions, Pin, reversed arrangement, reduced seal, wide thread adapter |                                  |
| Mating Part(s): AHDP04-24-27SR-WTA  |                                  |
| See Receptacle column on this page for more details   |                                  |

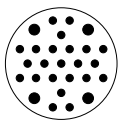
|  |                                     |
|--|-------------------------------------|
| Part Number<br><b>AHDP04-24-27SR-WTA</b>   | Gender: Reversed<br>Contact: Socket |
| Rear Seal Type: REDUCED SEAL, Blue   |                                     |
| Description: Size 24 Receptacle with 27 positions, Socket, reversed arrangement, reduced seal, wide thread adapter |                                     |
| Mating Part(s): AHDP06-24-27PR-WTA   |                                     |
| See Plug column on this page for more details  |                                     |

For custom insert configurations, please call 1 800 394 7732


 Shell Size  
**24**

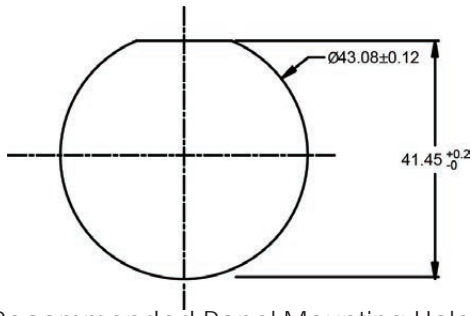
## 27 Position Plugs & Receptacles- Contacts

| Contact Size | Part No.       | Type             | (Pin/Socket) | Wire Range (AWG) | AMP | Plating |
|--------------|----------------|------------------|--------------|------------------|-----|---------|
| 12           | AT60-220-1231  | Machined         | Pin          | 12-14            | 25  | Gold    |
| 12           | AT60-204-12141 | Machined         | Pin          | 12-14            | 25  | Nickel  |
| 12           | AT62-210-1231  | Machined         | Socket       | 12-14            | 25  | Gold    |
| 12           | AT62-203-12141 | Machined         | Socket       | 12-14            | 25  | Nickel  |
| 12           | AT60-12-0244   | Stamped & Formed | Pin          | 10-12            | 25  | Gold    |
| 12           | AT60-12-0222   | Stamped & Formed | Pin          | 10-12            | 25  | Nickel  |
| 12           | AT62-12-0244   | Stamped & Formed | Socket       | 10-12            | 25  | Gold    |
| 12           | AT62-12-0222   | Stamped & Formed | Socket       | 10-12            | 25  | Nickel  |
| 12           | AT60-12-0144   | Stamped & Formed | Pin          | 12-14            | 25  | Gold    |
| 12           | AT60-12-0166   | Stamped & Formed | Pin          | 12-14            | 25  | Nickel  |
| 12           | AT62-12-0144   | Stamped & Formed | Socket       | 12-14            | 25  | Gold    |
| 12           | AT62-12-0166   | Stamped & Formed | Socket       | 12-14            | 25  | Nickel  |
| 16           | AT60-215-1631  | Machined         | Pin          | 14               | 13  | Gold    |
| 16           | AT60-215-16141 | Machined         | Pin          | 14               | 13  | Nickel  |
| 16           | AT62-209-1631  | Machined         | Socket       | 14               | 13  | Gold    |
| 16           | AT62-209-16141 | Machined         | Socket       | 14               | 13  | Nickel  |
| 16           | AT60-202-1631  | Machined         | Pin          | 16-20            | 13  | Gold    |
| 16           | AT60-202-16141 | Machined         | Pin          | 16-20            | 13  | Nickel  |
| 16           | AT62-201-1631  | Machined         | Socket       | 16-20            | 13  | Gold    |
| 16           | AT62-201-16141 | Machined         | Socket       | 16-20            | 13  | Nickel  |
| 16           | AT60-14-0144   | Stamped & Formed | Pin          | 14-16            | 13  | Gold    |
| 16           | AT60-14-0122   | Stamped & Formed | Pin          | 14-16            | 13  | Nickel  |
| 16           | AT62-14-0144   | Stamped & Formed | Socket       | 14-16            | 13  | Gold    |
| 16           | AT62-14-0122   | Stamped & Formed | Socket       | 14-16            | 13  | Nickel  |
| 16           | AT60-16-0144   | Stamped & Formed | Pin          | 16-18            | 13  | Gold    |
| 16           | AT60-16-0122   | Stamped & Formed | Pin          | 16-18            | 13  | Nickel  |
| 16           | AT62-16-0144   | Stamped & Formed | Socket       | 16-18            | 13  | Gold    |
| 16           | AT62-16-0122   | Stamped & Formed | Socket       | 16-18            | 13  | Nickel  |
| 16           | AT60-16-0644   | Stamped & Formed | Pin          | 18-20            | 13  | Gold    |
| 16           | AT60-16-0622   | Stamped & Formed | Pin          | 18-20            | 13  | Nickel  |
| 16           | AT62-16-0644   | Stamped & Formed | Socket       | 18-20            | 13  | Gold    |
| 16           | AT62-16-0622   | Stamped & Formed | Socket       | 18-20            | 13  | Nickel  |



## 27 POSITION ACCESSORIES

Shell Size  
24



Recommended Panel Mounting Hole  
Recommended panel thickness: 1.6 to 4.7mm

Part Number  
**AHDP24-PN01**

Panel Nut, Shell Size 24

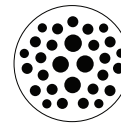


Part Number  
**AT14-001-2486**

Metal Lock Washer  
Shell Size 24



# 29 POSITION PLUGS & RECEPTACLES



**DURA|MATE**  
29 POSITIONS  
7.5A,13A,25A

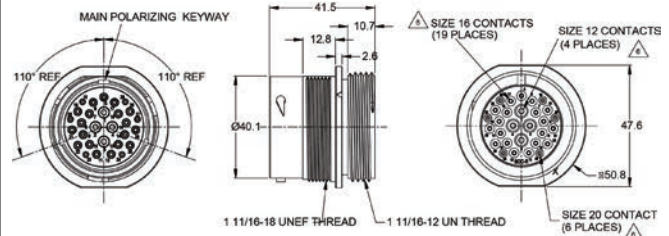
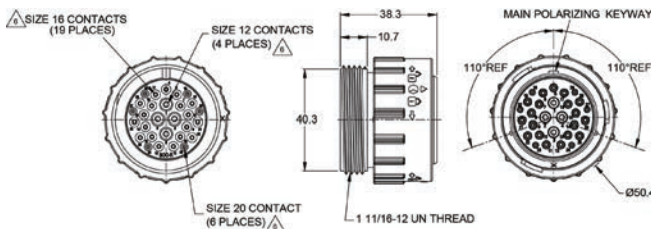
Shell Size  
**24**

|                     |                                 |                                 |                                 |
|---------------------|---------------------------------|---------------------------------|---------------------------------|
| Contact Size        | <b>20</b>                       | <b>16</b>                       | <b>12</b>                       |
| Contact Qty         | 6                               | 19                              | 4                               |
| Seal OD Range       |                                 |                                 |                                 |
| <b>REDUCED SEAL</b> | 1.02mm (.040") - 2.41mm (.095") | 1.35mm (.053") - 3.05mm (.120") | 2.46mm (.097") - 4.01mm (.158") |
| Wire Range          | 16-22 AWG                       | 14-20 AWG                       | 10-14 AWG                       |
| Amperage            | 7.5                             | 13                              | 25                              |



## PLUG

## RECEPTACLE



Standard and reverse terminal genders allows for custom polarization

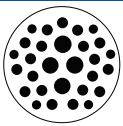
|   |                                     |
|---|-------------------------------------|
| Part Number<br><b>AHDP06-24-29SR-WTA</b>  | Gender: Standard<br>Contact: Socket |
| Rear Seal Type: REDUCED SEAL, Blue  |                                     |
| Description: Size 24 Plug with 29 positions, Socket standard arrangement, RD01 reduced diameter seal, wide thread adapter |                                     |
| Mating Part(s): AHDP04-24-29PR-WTA  |                                     |
| See Receptacle column on this page for more details   |                                     |

|   |                                  |
|---|----------------------------------|
| Part Number<br><b>AHDP04-24-29PR-WTA</b>  | Gender: Standard<br>Contact: Pin |
| Rear Seal Type: REDUCED SEAL, Blue  |                                  |
| Description: Size 24 Receptacle with 29 positions, Pin, standard arrangement, RD01 reduced diameter seal, wide thread adapter |                                  |
| Mating Part(s): AHDP06-24-29SR-WTA  |                                  |
| See Plug column on this page for more details   |                                  |

|   |                                  |
|---|----------------------------------|
| Part Number<br><b>AHDP06-24-29PR-WTA</b>  | Gender: Reversed<br>Contact: Pin |
| Rear Seal Type: REDUCED SEAL, Blue  |                                  |
| Description: Size 24 Plug with 29 positions, Pin reverse arrangement, RD01 reduced diameter seal, wide thread adapter |                                  |
| Mating Part(s): AHDP04-24-29SR-WTA  |                                  |
| See Receptacle column on this page for more details   |                                  |

|   |                                     |
|---|-------------------------------------|
| Part Number<br><b>AHDP04-24-29SR-WTA</b>  | Gender: Reversed<br>Contact: Socket |
| Rear Seal Type: REDUCED SEAL, Blue  |                                     |
| Description: Size 24 Receptacle with 29 positions, Socket, reverse arrangement, RD01 reduced diameter seal, wide thread adapter |                                     |
| Mating Part(s): AHDP06-24-29PR-WTA  |                                     |
| See Plug column on this page for more details   |                                     |

For custom insert configurations, please call 1 800 394 7732



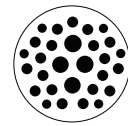
## 29 POSITION PLUGS & RECEPTACLES - CONTACTS

Shell Size  
24

| Contact Size | Part No.       | Type             | (Pin/Socket) | Wire Range (AWG) | AMP | Plating |
|--------------|----------------|------------------|--------------|------------------|-----|---------|
| 12           | AT60-204-12141 | Machined         | Pin          | 12-14            | 25  | Nickel  |
| 12           | AT60-220-1231  | Machined         | Pin          | 12-14            | 25  | Gold    |
| 12           | AT62-203-12141 | Machined         | Socket       | 12-14            | 25  | Nickel  |
| 12           | AT62-210-1231  | Machined         | Socket       | 12-14            | 25  | Gold    |
| 12           | AT60-12-0222   | Stamped & Formed | Pin          | 10-12            | 25  | Nickel  |
| 12           | AT60-12-0244   | Stamped & Formed | Pin          | 10-12            | 25  | Gold    |
| 12           | AT62-12-0222   | Stamped & Formed | Socket       | 10-12            | 25  | Nickel  |
| 12           | AT62-12-0244   | Stamped & Formed | Socket       | 10-12            | 25  | Gold    |
| 12           | AT60-12-0166   | Stamped & Formed | Pin          | 12-14            | 25  | Nickel  |
| 12           | AT60-12-0144   | Stamped & Formed | Pin          | 12-14            | 25  | Gold    |
| 12           | AT62-12-0166   | Stamped & Formed | Socket       | 12-14            | 25  | Nickel  |
| 12           | AT62-12-0144   | Stamped & Formed | Socket       | 12-14            | 25  | Gold    |
| 16           | AT60-215-16141 | Machined         | Pin          | 14               | 13  | Nickel  |
| 16           | AT60-215-1631  | Machined         | Pin          | 14               | 13  | Gold    |
| 16           | AT62-209-16141 | Machined         | Socket       | 14               | 13  | Nickel  |
| 16           | AT62-209-1631  | Machined         | Socket       | 14               | 13  | Gold    |
| 16           | AT60-202-16141 | Machined         | Pin          | 16-20            | 13  | Nickel  |
| 16           | AT60-202-1631  | Machined         | Pin          | 16-20            | 13  | Gold    |
| 16           | AT62-201-16141 | Machined         | Socket       | 16-20            | 13  | Nickel  |
| 16           | AT62-201-1631  | Machined         | Socket       | 16-20            | 13  | Gold    |
| 16           | AT60-14-0122   | Stamped & Formed | Pin          | 14-16            | 13  | Nickel  |
| 16           | AT60-14-0144   | Stamped & Formed | Pin          | 14-16            | 13  | Gold    |
| 16           | AT60-16-0122   | Stamped & Formed | Pin          | 16-18            | 13  | Nickel  |
| 16           | AT60-16-0144   | Stamped & Formed | Pin          | 16-18            | 13  | Gold    |
| 16           | AT62-16-0122   | Stamped & Formed | Socket       | 16-18            | 13  | Nickel  |
| 16           | AT62-16-0144   | Stamped & Formed | Socket       | 16-18            | 13  | Gold    |
| 16           | AT60-16-0622   | Stamped & Formed | Pin          | 18-20            | 13  | Nickel  |
| 16           | AT60-16-0644   | Stamped & Formed | Pin          | 18-20            | 13  | Gold    |
| 16           | AT62-16-0622   | Stamped & Formed | Socket       | 18-20            | 13  | Nickel  |
| 16           | AT62-16-0644   | Stamped & Formed | Socket       | 18-20            | 13  | Gold    |
| 20           | AT60-202-20141 | Machined         | Pin          | 20-22            | 7.5 | Nickel  |
| 20           | AT60-202-2031  | Machined         | Pin          | 20-22            | 7.5 | Gold    |
| 20           | AT62-201-20141 | Machined         | Socket       | 20-22            | 7.5 | Nickel  |
| 20           | AT62-201-2031  | Machined         | Socket       | 20-22            | 7.5 | Gold    |
| 20           | AT60-20-0122   | Stamped & Formed | Pin          | 16-22            | 7.5 | Nickel  |
| 20           | AT60-20-0144   | Stamped & Formed | Pin          | 16-22            | 7.5 | Gold    |
| 20           | AT62-20-0122   | Stamped & Formed | Socket       | 16-22            | 7.5 | Nickel  |
| 20           | AT62-20-0144   | Stamped & Formed | Socket       | 16-22            | 7.5 | Gold    |



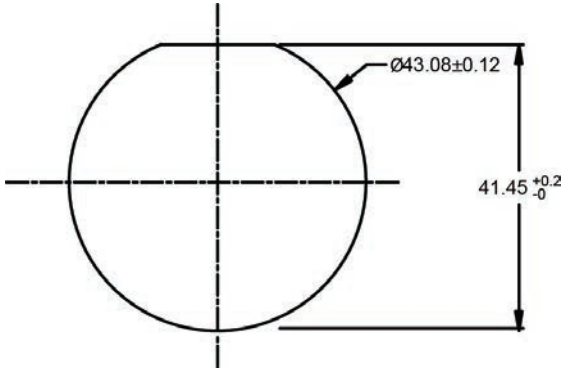
# 29 POSITION PLUGS & RECEPTACLES



**DURA|MATE**  
29 POSITIONS  
7.5A, 13A, 25A

Shell Size  
**24**

Recommended Panel Mounting Hole  
Recommended panel thickness: 1.6 to 4.7mm



Part Number  
**AHDP24-PN01**

Panel Nut, Shell Size 24



Part Number  
**AT14-001-2486**

Metal Lock Washer  
Shell Size 24





Shell Size  
24

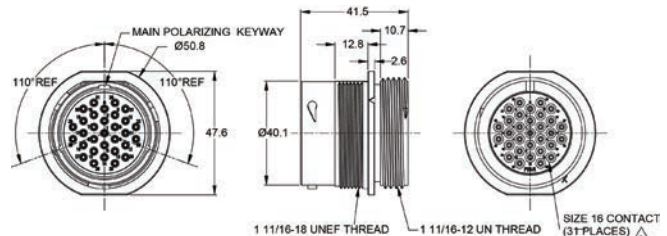
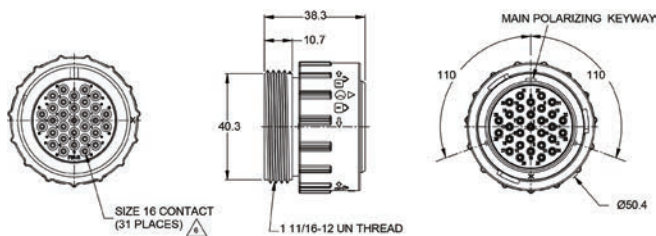
## 31 POSITION PLUGS & RECEPTACLES

|                  |                                 |
|------------------|---------------------------------|
| Contact Size     | 16                              |
| Contact Qty      | 31                              |
| Seal OD Range    |                                 |
| REDUCED SEAL     | 1.35mm (.053") - 3.05mm (.120") |
| THIN SEAL        | 2.23mm (.088") - 3.40mm (.134") |
| Wire Range (AWG) | 14-20 AWG                       |
| Amperage         | 13                              |



### PLUG

### RECEPTACLE



Standard and reverse terminal genders allows for custom polarization

|  |                                     |
|--|-------------------------------------|
| Part Number<br><b>AHDP06-24-31SR-WTA</b>   | Gender: Standard<br>Contact: Socket |
| Rear Seal Type: REDUCED SEAL, Blue   |                                     |
| Description: Size 24 Plug with 31 positions, Socket, standard arrangement, RD01 reduced diameter seal, wide thread adapter |                                     |
| Mating Part(s): AHDP04-24-31PR-WTA,<br>AHDP04-24-31PT-WTA  |                                     |
| See Receptacle column on this page for more details  |                                     |

|   |                                  |
|---|----------------------------------|
| Part Number<br><b>AHDP04-24-31PR-WTA</b>  | Gender: Standard<br>Contact: Pin |
| Rear Seal Type: REDUCED SEAL, Blue  |                                  |
| Description: Size 24 Receptacle with 31 positions, Pin, standard arrangement, RD01 reduced diameter seal, wide thread adapter |                                  |
| Mating Part(s): AHDP06-24-31SR-WTA,<br>AHDP06-24-31ST-WTA   |                                  |
| See Plug column on this page for more details   |                                  |

|   |                                     |
|---|-------------------------------------|
| Part Number<br><b>AHDP06-24-31ST-WTA</b>  | Gender: Standard<br>Contact: Socket |
| Rear Seal Type: THIN SEAL, Grey   |                                     |
| Description: Size 24 Plug with 31 positions, Socket, standard arrangement, thin seal, wide thread adapter |                                     |
| Mating Part(s): AHDP04-24-31PR-WTA,<br>AHDP04-24-31PT-WTA   |                                     |
| See Receptacle column on this page for more details   |                                     |

|  |                                  |
|--|----------------------------------|
| Part Number<br><b>AHDP04-24-31PT-WTA</b>   | Gender: Standard<br>Contact: Pin |
| Rear Seal Type: THIN SEAL, Grey  |                                  |
| Description: Size 24 Receptacle with 31 positions, Pin, standard arrangement, thin seal, wide thread adapter |                                  |
| Mating Part(s): AHDP06-24-31SR-WTA,<br>AHDP06-24-31ST-WTA  |                                  |
| See Plug column on this page for more details  |                                  |

For custom insert configurations, please call 1 800 394 7732

# 31 POSITION PLUGS & RECEPTACLES



**DURA|MATE**  
31 POSITIONS  
13A

Shell Size  
**24**

CONNECTOR SOLUTIONS

| PLUG   |  | RECEPTACLE  |   |
|--|--|---|---|
| <b>Part Number</b><br><b>AHDP06-24-31PR-WTA</b>  | <b>Gender: Reversed</b><br><b>Contact: Pin</b> | <b>Part Number</b><br><b>AHDP04-24-31SR-WTA</b>   | <b>Gender: Reversed</b><br><b>Contact: Socket</b> |
| <b>Rear Seal Type: REDUCED SEAL, Blue</b>  |  | <b>Rear Seal Type: REDUCED SEAL, Blue</b>   |   |
| Description: Size 24 Plug with 31 positions, Pin, reverse arrangement, RD01 reduced diameter seal, wide thread adapter |  | Description: Size 24 Receptacle with 31 positions, Socket, reverse arrangement, RD01 reduced diameter seal, wide thread adapter |   |
| Mating Part(s): AHDP04-24-31SR-WTA, AHDP04-24-31ST-WTA   |  | Mating Part(s): AHDP06-24-31PR-WTA, AHDP06-24-31PT-WTA  |   |
| <i>See Receptacle column on this page for more details</i>   |  | <i>See Plug column on this page for more details</i>  |   |
| <b>Part Number</b><br><b>AHDP06-24-31PT-WTA</b>  | <b>Gender: Reversed</b><br><b>Contact: Pin</b> | <b>Part Number</b><br><b>AHDP04-24-31ST-WTA</b>   | <b>Gender: Reversed</b><br><b>Contact: Socket</b> |
| <b>Rear Seal Type: THIN SEAL, Grey</b>   |  | <b>Rear Seal Type: THIN SEAL, Grey</b>  |   |
| Description: Size 24 Plug with 31 positions, Pin, reverse arrangement, thin seal, wide thread adapter                  |  | Description: Size 24 Receptacle with 31 positions, Socket, reverse arrangement, thin seal, wide thread adapter                  |   |
| Mating Part(s): AHDP04-24-31SR-WTA, AHDP04-24-31ST-WTA   |  | Mating Part(s): AHDP06-24-31PR-WTA, AHDP06-24-31PT-WTA  |   |
| <i>See Receptacle column on this page for more details</i>   |  | <i>See Plug column on this page for more details</i>  |   |

## 31 Pin Plugs & Receptacles - Contacts

| Contact Size | Part No.       | Type             | (Pin/Socket) | Wire Range (AWG) | AMP | Plating |
|--------------|----------------|------------------|--------------|------------------|-----|---------|
| 16           | AT60-215-16141 | Machined         | Pin          | 14               | 13  | Nickel  |
| 16           | AT60-215-1631  | Machined         | Pin          | 14               | 13  | Gold    |
| 16           | AT62-209-16141 | Machined         | Socket       | 14               | 13  | Nickel  |
| 16           | AT62-209-1631  | Machined         | Socket       | 14               | 13  | Gold    |
| 16           | AT60-202-16141 | Machined         | Pin          | 16-20            | 13  | Nickel  |
| 16           | AT60-202-1631  | Machined         | Pin          | 16-20            | 13  | Gold    |
| 16           | AT62-201-16141 | Machined         | Socket       | 16-20            | 13  | Nickel  |
| 16           | AT62-201-1631  | Machined         | Socket       | 16-20            | 13  | Gold    |
| 16           | AT60-14-0122   | Stamped & Formed | Pin          | 14-16            | 13  | Nickel  |
| 16           | AT60-14-0144   | Stamped & Formed | Pin          | 14-16            | 13  | Gold    |

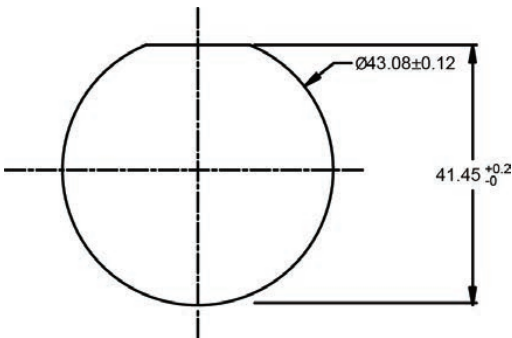


# 31 POSITION PLUGS & RECEPTACLES

Shell Size  
24

| Contact Size | Part No.     | Type             | (Pin/Socket) | Wire Range (AWG) | AMP | Plating |
|--------------|--------------|------------------|--------------|------------------|-----|---------|
| 16           | AT60-16-0122 | Stamped & Formed | Pin          | 16-18            | 13  | Nickel  |
| 16           | AT60-16-0144 | Stamped & Formed | Pin          | 16-18            | 13  | Gold    |
| 16           | AT60-16-0622 | Stamped & Formed | Pin          | 18-20            | 13  | Nickel  |
| 16           | AT60-16-0644 | Stamped & Formed | Pin          | 18-20            | 13  | Gold    |
| 16           | AT62-14-0122 | Stamped & Formed | Socket       | 14-16            | 13  | Nickel  |
| 16           | AT62-14-0144 | Stamped & Formed | Socket       | 14-16            | 13  | Gold    |
| 16           | AT62-16-0122 | Stamped & Formed | Socket       | 16-18            | 13  | Nickel  |
| 16           | AT62-16-0144 | Stamped & Formed | Socket       | 16-18            | 13  | Gold    |
| 16           | AT62-16-0622 | Stamped & Formed | Socket       | 18-20            | 13  | Nickel  |
| 16           | AT62-16-0644 | Stamped & Formed | Socket       | 18-20            | 13  | Gold    |

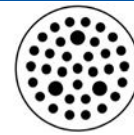
Recommended Panel Mounting Hole  
Recommended Panel thickness: 1.6 to 4.7mm



|  |
|--|
| <b>Part Number</b><br><b>AHDP24-PN01</b>   |
| Panel Nut, Shell Size 24   |
|  |

|  |
|--|
| <b>Part Number</b><br><b>AT14-001-2486</b>   |
| Metal Lock Washer<br>Shell Size 24   |
|  |

# 35 POSITION PLUGS & RECEPTACLES



**DURA|MATE**  
35 POSITIONS  
7.5A, 13A

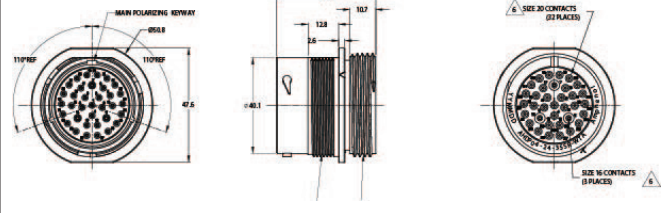
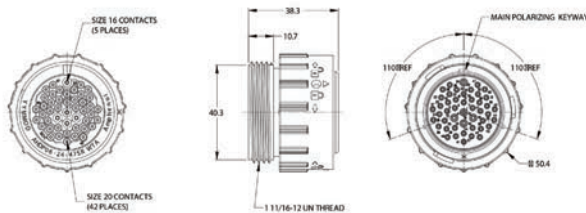
Shell Size  
**24**

|                     |                                 |                                 |
|---------------------|---------------------------------|---------------------------------|
| Contact Size        | <b>20</b>                       | <b>16</b>                       |
| Contact Qty         | 32                              | 3                               |
| Seal OD Range       |                                 |                                 |
| <b>REDUCED SEAL</b> | 1.02mm (.040") - 2.41mm (.095") | 1.35mm (.053") - 3.05mm (.120") |
| Wire Range          | 16-22 AWG                       | 14-20 AWG                       |
| Amperage            | 7.5                             | 13                              |



## PLUG

## RECEPTACLE



*Standard and reverse terminal genders allows for custom polarization*

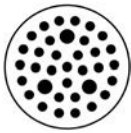
|  |                                     |
|--|-------------------------------------|
| Part Number<br><b>AHDP06-24-35SR-WTA</b>   | Gender: Standard<br>Contact: Socket |
| Rear Seal Type: REDUCED SEAL, Blue   |                                     |
| Description: Size 24 Plug, 35 positions, socket, standard arrangement, reduced seal, wide thread adapter |                                     |
| Mating Part(s): AHDP04-24-35PR-WTA, AHDP04-24-35PR-WTA   |                                     |
| <i>See Receptacle column on this page for more details</i>   |                                     |

|  |                                  |
|--|----------------------------------|
| Part Number<br><b>AHDP04-24-35PR-WTA</b>   | Gender: Standard<br>Contact: Pin |
| Rear Seal Type: REDUCED SEAL, Blue   |                                  |
| Description: Size 24 Receptacle, 35 positions, pin, standard arrangement, reduced seal wide thread adapter |                                  |
| Mating Part(s): AHDP06-24-35SR-WTA, AHDP06-24-35SR-WTA   |                                  |
| <i>See Plug column on this page for more details</i>   |                                  |

|   |                                  |
|---|----------------------------------|
| Part Number<br><b>AHDP06-24-35PR-WTA</b>  | Gender: Reversed<br>Contact: Pin |
| Rear Seal Type: REDUCED SEAL, Blue  |                                  |
| Description: Size 24 Plug, 35 positions, pin, reversed arrangement, reduced seal, wide thread adapter |                                  |
| Mating Part(s): AHDP04-24-35SR-WTA, AHDP04-24-35SN-WTA  |                                  |
| <i>See Receptacle column on this page for more details</i>  |                                  |

|  |                                     |
|--|-------------------------------------|
| Part Number<br><b>AHDP04-24-35SR-WTA</b>   | Gender: Reversed<br>Contact: Socket |
| Rear Seal Type: REDUCED SEAL, Blue   |                                     |
| Description: Size 24 Receptacle, 35 positions, socket, reversed arrangement, reduced seal, wide thread adapter |                                     |
| Mating Part(s): AHDP06-24-47PR-WTA   |                                     |
| <i>See Plug column on this page for more details</i>   |                                     |

For custom insert configurations, please call 1 800 394 7732



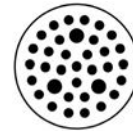
## 35 POSITION PLUGS & RECEPTACLES - CONTACTS

Shell Size

24

| Contact Size | Part No.       | Type             | (Pin/Socket) | Wire Range (AWG) | AMP | Plating |
|--------------|----------------|------------------|--------------|------------------|-----|---------|
| 16           | AT60-215-16141 | Machined         | Pin          | 14               | 13  | Nickel  |
| 16           | AT60-215-1631  | Machined         | Pin          | 14               | 13  | Gold    |
| 16           | AT62-209-16141 | Machined         | Socket       | 14               | 13  | Nickel  |
| 16           | AT62-209-1631  | Machined         | Socket       | 14               | 13  | Gold    |
| 16           | AT60-202-16141 | Machined         | Pin          | 16-20            | 13  | Nickel  |
| 16           | AT60-202-1631  | Machined         | Pin          | 16-20            | 13  | Gold    |
| 16           | AT62-201-16141 | Machined         | Socket       | 16-20            | 13  | Nickel  |
| 16           | AT62-201-1631  | Machined         | Socket       | 16-20            | 13  | Gold    |
| 16           | AT60-14-0122   | Stamped & Formed | Pin          | 14-16            | 13  | Nickel  |
| 16           | AT60-14-0144   | Stamped & Formed | Pin          | 14-16            | 13  | Gold    |
| 16           | AT62-14-0122   | Stamped & Formed | Socket       | 14-16            | 13  | Nickel  |
| 16           | AT62-14-0144   | Stamped & Formed | Socket       | 14-16            | 13  | Gold    |
| 16           | AT60-16-0122   | Stamped & Formed | Pin          | 16-18            | 13  | Nickel  |
| 16           | AT60-16-0144   | Stamped & Formed | Pin          | 16-18            | 13  | Gold    |
| 16           | AT62-16-0122   | Stamped & Formed | Socket       | 16-18            | 13  | Nickel  |
| 16           | AT62-16-0144   | Stamped & Formed | Socket       | 16-18            | 13  | Gold    |
| 16           | AT60-16-0622   | Stamped & Formed | Pin          | 18-20            | 13  | Nickel  |
| 16           | AT60-16-0644   | Stamped & Formed | Pin          | 18-20            | 13  | Gold    |
| 16           | AT62-16-0622   | Stamped & Formed | Socket       | 18-20            | 13  | Nickel  |
| 16           | AT62-16-0644   | Stamped & Formed | Socket       | 18-20            | 13  | Gold    |
| 20           | AT60-202-20141 | Machined         | Pin          | 20-22            | 7.5 | Nickel  |
| 20           | AT60-202-2031  | Machined         | Pin          | 20-22            | 7.5 | Gold    |
| 20           | AT62-201-20141 | Machined         | Socket       | 20-22            | 7.5 | Nickel  |
| 20           | AT62-201-2031  | Machined         | Socket       | 20-22            | 7.5 | Gold    |
| 20           | AT60-20-0122   | Stamped & Formed | Pin          | 16-22            | 7.5 | Nickel  |
| 20           | AT60-20-0144   | Stamped & Formed | Pin          | 16-22            | 7.5 | Gold    |
| 20           | AT62-20-0122   | Stamped & Formed | Socket       | 16-22            | 7.5 | Nickel  |
| 20           | AT62-20-0144   | Stamped & Formed | Socket       | 16-22            | 7.5 | Gold    |

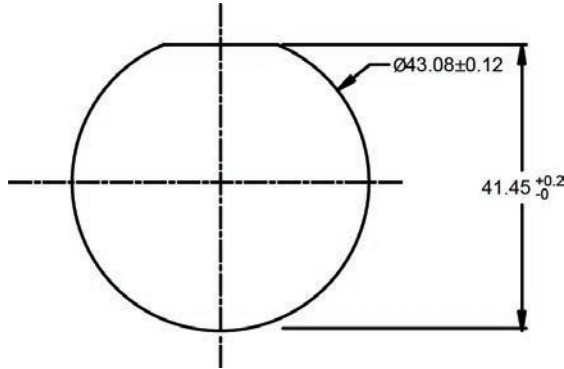
# 35 POSITION PLUGS & RECEPTACLES



**DURA|MATE**  
35 POSITIONS  
7.5A, 13A

Shell Size  
24

Recommended Panel Mounting Hole  
Recommended panel thickness: 1.6 to 4.7mm



Part Number  
**AHDP24-PN01**

Panel Nut, Shell Size 24



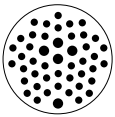
Part Number  
**AT14-001-2486**

Metal Lock Washer  
Shell Size 24



CONNECTOR SOLUTIONS





# 47 POSITION PLUGS & RECEPTACLES - CONTACTS

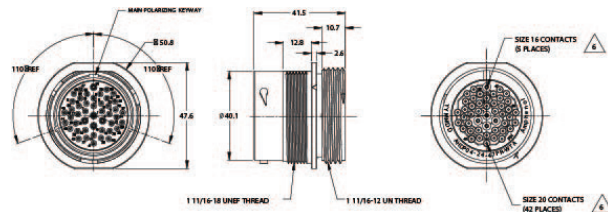
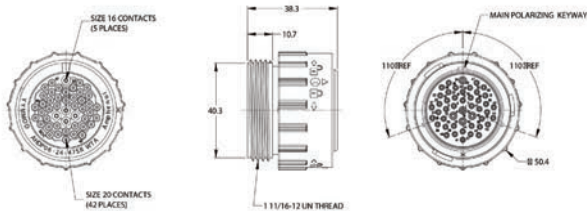
Shell Size  
24

|               |                                 |                                 |
|---------------|---------------------------------|---------------------------------|
| Contact Size  | 20                              | 16                              |
| Contact Qty   | 42                              | 5                               |
| Seal OD Range |                                 |                                 |
| REDUCED SEAL  | 1.02mm (.040") - 2.41mm (.095") | 1.35mm (.053") - 3.05mm (.120") |
| Wire Range    | 16-22 AWG                       | 14-20 AWG                       |
| Amperage      | 7.5                             | 13                              |



## PLUG

## RECEPTACLE



Standard and reverse terminal genders allows for custom polarization

|  |                                     |
|--|-------------------------------------|
| Part Number<br><b>AHDP06-24-47SR-WTA</b>   | Gender: Standard<br>Contact: Socket |
| Rear Seal Type: REDUCED SEAL, Blue   |                                     |
| Description: Size 24 Plug with 47 positions, Socket, standard arrangement, reduced seal, wide thread adapter |                                     |
| Mating Part(s): AHDP04-24-47PR-WTA   |                                     |
| See Receptacle column on this page for more details  |                                     |

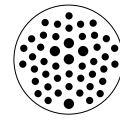
|   |                                  |
|---|----------------------------------|
| Part Number<br><b>AHDP04-24-47PR-WTA</b>  | Gender: Standard<br>Contact: Pin |
| Rear Seal Type: REDUCED SEAL, Blue  |                                  |
| Description: Size 24 Receptacle with 47 positions, Pin, standard arrangement, reduced seal, wide thread adapter |                                  |
| Mating Part(s): AHDP06-24-47SR-WTA  |                                  |
| See Plug column on this page for more details   |                                  |

|   |                                  |
|---|----------------------------------|
| Part Number<br><b>AHDP06-24-47PR-WTA</b>  | Gender: Reversed<br>Contact: Pin |
| Rear Seal Type: REDUCED SEAL, Blue  |                                  |
| Description: Size 24 Plug with 47 positions, Pin, reversed arrangement, reduced seal, wide thread adapter |                                  |
| Mating Part(s): AHDP04-24-47SR-WTA  |                                  |
| See Receptacle column on this page for more details   |                                  |

|  |                                     |
|--|-------------------------------------|
| Part Number<br><b>AHDP04-24-47SR-WTA</b>   | Gender: Reversed<br>Contact: Socket |
| Rear Seal Type: REDUCED SEAL, Blue   |                                     |
| Description: Size 24 Receptacle with 47 positions, Socket, reversed arrangement, reduced seal, wide thread adapter |                                     |
| Mating Part(s): AHDP06-24-47PR-WTA   |                                     |
| See Plug column on this page for more details  |                                     |

For custom insert configurations, please call 1 800 394 7732

# 47 Position Plugs & Receptacles

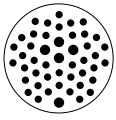


**DURA|MATE**  
47 POSITIONS  
7.5A,13A

Shell Size  
**24**

CONNECTOR SOLUTIONS

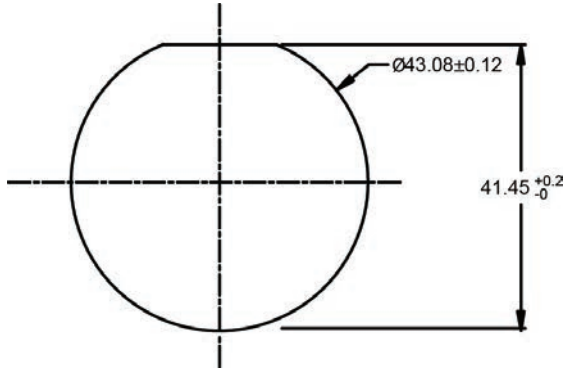
| Contact Size | Part No.       | Type             | (Pin/Socket) | Wire Range (AWG) | AMP | Plating |
|--------------|----------------|------------------|--------------|------------------|-----|---------|
| 16           | AT60-215-16141 | Machined         | Pin          | 14               | 13  | Nickel  |
| 16           | AT60-215-1631  | Machined         | Pin          | 14               | 13  | Gold    |
| 16           | AT62-209-16141 | Machined         | Socket       | 14               | 13  | Nickel  |
| 16           | AT62-209-1631  | Machined         | Socket       | 14               | 13  | Gold    |
| 16           | AT60-202-16141 | Machined         | Pin          | 16-20            | 13  | Nickel  |
| 16           | AT60-202-1631  | Machined         | Pin          | 16-20            | 13  | Gold    |
| 16           | AT62-201-16141 | Machined         | Socket       | 16-20            | 13  | Nickel  |
| 16           | AT62-201-1631  | Machined         | Socket       | 16-20            | 13  | Gold    |
| 16           | AT60-14-0122   | Stamped & Formed | Pin          | 14-16            | 13  | Nickel  |
| 16           | AT60-14-0144   | Stamped & Formed | Pin          | 14-16            | 13  | Gold    |
| 16           | AT62-14-0122   | Stamped & Formed | Socket       | 14-16            | 13  | Nickel  |
| 16           | AT62-14-0144   | Stamped & Formed | Socket       | 14-16            | 13  | Gold    |
| 16           | AT60-16-0122   | Stamped & Formed | Pin          | 16-18            | 13  | Nickel  |
| 16           | AT60-16-0144   | Stamped & Formed | Pin          | 16-18            | 13  | Gold    |
| 16           | AT62-16-0122   | Stamped & Formed | Socket       | 16-18            | 13  | Nickel  |
| 16           | AT62-16-0144   | Stamped & Formed | Socket       | 16-18            | 13  | Gold    |
| 16           | AT60-16-0622   | Stamped & Formed | Pin          | 18-20            | 13  | Nickel  |
| 16           | AT60-16-0644   | Stamped & Formed | Pin          | 18-20            | 13  | Gold    |
| 16           | AT62-16-0622   | Stamped & Formed | Socket       | 18-20            | 13  | Nickel  |
| 16           | AT62-16-0644   | Stamped & Formed | Socket       | 18-20            | 13  | Gold    |
| 20           | AT60-202-20141 | Machined         | Pin          | 20-22            | 7.5 | Nickel  |
| 20           | AT60-202-2031  | Machined         | Pin          | 20-22            | 7.5 | Gold    |
| 20           | AT62-201-20141 | Machined         | Socket       | 20-22            | 7.5 | Nickel  |
| 20           | AT62-201-2031  | Machined         | Socket       | 20-22            | 7.5 | Gold    |
| 20           | AT60-20-0122   | Stamped & Formed | Pin          | 16-22            | 7.5 | Nickel  |
| 20           | AT60-20-0144   | Stamped & Formed | Pin          | 16-22            | 7.5 | Gold    |
| 20           | AT62-20-0122   | Stamped & Formed | Socket       | 16-22            | 7.5 | Nickel  |
| 20           | AT62-20-0144   | Stamped & Formed | Socket       | 16-22            | 7.5 | Gold    |



## 47 POSITION PLUGS & RECEPTACLES

Shell Size  
**24**

Recommended Panel Mounting Hole  
Recommended panel thickness: 1.6 to 4.7mm



Part Number  
**AHDP24-PN01**

Panel Nut, Shell Size 24



Part Number  
**AT14-001-2486**

Metal Lock Washer  
Shell Size 24



Part Number  
**WA23-DS**

Heavy Duty Pneumatic Crimp Tool



Part Number  
**WA23-138DA**

Die Assembly for WA23-DS Heavy Duty Pneumatic Crimp Tool, Size 4



Part Number  
**WA23-2**

Die Assembly for WA23-DS Heavy Duty Pneumatic Crimp Tool, Size 8



Part Number  
**WA23-11**

Contact Locater, Size 4



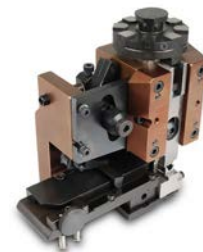
Part Number  
**WA23-10**

Contact Locater, Size 8



Part Number  
**MFX-3973**

Size 12 Crimp Die for Stamped and Formed Contacts



Part Number  
**MFX-3950**

Size 16 Crimp Die for Stamped and Formed Contacts 18-20 AWG



Part Number  
**MFX-3953**

Size 16 Crimp Die for Stamped and Formed Contacts 16-18 AWG



Part Number  
**MFX-3974**

Size 20 Crimp Die for Stamped and Formed Contacts



Part Number  
**CA-5D12**

Universal Hand Crimp Tool, Size  
12/16/20 Solid Contacts Only



Part Number  
**CA-5E12**

Pneumatic Crimp Tool, Size  
12/16/20 Solid Contacts Only



Part Number  
**ATT-20-00**

Size 20 Stamped and Formed  
Contact Tool 20 AWG



Part Number  
**ATT-16-00**

Size 16 Stamped and Formed  
Contact Tool 14-16 AWG



Part Number  
**ATT-16-01**

Size 16 Stamped and Formed  
Contact Tool 18-20 AWG



Part Number  
**ATT-12-00**

Size 12 Stamped and Formed  
Contact Tool 12 AWG



Part Number  
**AT11-240-2005**

Contact Removal Tool, plastic,  
Size 20



Part Number  
**AT11-310-1605**

Contact Removal Tool, plastic  
Size 16



Part Number  
**AT11-337-1205**

Contact Removal Tool, plastic  
Size 12



# DURA | MATE TOOLS(con't)

|   |
|---|
| <b>Part Number</b><br><b>AT11-001-3.6M</b>  |
| Contact Removal Tool, plastic<br>Size 8 (3.6 mm)                                  |
|  |

|   |
|---|
| <b>Part Number</b><br><b>AT114008</b>   |
| Contact Removal Tool, plastic<br>Size 8   |
|  |

|   |
|---|
| <b>Part Number</b><br><b>AT11-027-0405</b>  |
| Contact Removal Tool, plastic<br>Size 4, 4AWG                                       |
|  |

|   |
|---|
| <b>Part Number</b><br><b>AT114009</b>   |
| Contact Removal Tool, plastic<br>Size 4, 6AWG                                       |
|  |

# DURAMATE ACCESSORIES

Part Number  
**AHDPBS-0406-001**

Size 24 Backshell WTA



Part Number  
**AHDPBS-0406-002**

Size 24 Backshell WTA with compression nut  
Cable diameter range: .57-.71"



Part Number  
**AHDPBS-0406-003**

Size 24 Backshell WTA with compression nut  
Cable diameter range: .76-.95"



Part Number  
**AHDPBS-18-001**

Size 18 Backshell WTA



Part Number  
**AHDPBS-18-002**

Size 18 Backshell WTA with compression nut . Cable diameter range 14.5mm - 18.0mm



Part Number  
**AHDPBS-010-2405**

Size 24 Backshell, Conduit snap over straight



Part Number  
**AHDPBS-011-2405**

Size 24 Backshell, Conduit snap over right angle



Part Number  
**AHDP-16-04477**

Size 24 Rubber Flange Seal



Part Number  
**AHDP-16-04978**

Size 18 Rubber Flange Seal





DURA | MATE ACCESSORIES(con't)

|   |
|---|
| Part Number<br><b>AHDC04-18</b>   |
| Size 18 Plug cap, sealed  |
|  |

|   |
|---|
| Part Number<br><b>AHDC06-18</b>   |
| Size 18 Receptacle cap, sealed  |
|  |

|   |
|---|
| Part Number<br><b>AHDC06-24</b>   |
| Size 24 Receptacle cap, sealed  |
|  |


|  |
|--|
| Part Number<br><b>AHDC04-24-PM</b>   |
| Size 24 Protective Plug Cap threaded and sealed                                    |
|  |

|  |
|--|
| Part Number<br><b>AHDC04-24-PMT</b>  |
| Size 24 Protective Plug Cap threaded and sealed with tether                        |
|  |

|  |
|--|
| Part Number<br><b>AHDC04-24</b>  |
| Size 24 Protective Plug Cap, sealed  |
|  |

|   |
|---|
| Part Number<br><b>AHDC04-24-T</b>   |
| Size 24 Protective Plug Cap, sealed with tether                                     |
|  |

|   |
|---|
| Part Number<br><b>A114018</b>   |
| Seal Plug, Size 8, 8-10 AWG   |
|  |

|   |
|---|
| Part Number<br><b>A114019</b>   |
| Seal Plug, Size 4, 4-6 AWG  |
|  |

## Part Number Cross Reference

| Competitor's Compatible Part Number |                    |                    | Amphenol PN        | Page |
|-------------------------------------|--------------------|--------------------|--------------------|------|
| Exclusive to Amphenol Sine Systems  |                    |                    | AHDP06-24-07SN-WTA | 133  |
| Exclusive to Amphenol Sine Systems  |                    |                    | AHDP04-24-07PN-WTA | 133  |
| Exclusive to Amphenol Sine Systems  |                    |                    | AHDP06-24-07PN-WTA | 133  |
| Exclusive to Amphenol Sine Systems  |                    |                    | AHDP04-24-07SN-WTA | 133  |
| HDP26-18-14SN                       | HDP26-18-14SN-L015 | HDP26-18-14SN-L024 | AHDP06-18-14SN-WTA | 134  |
| HDP26-18-14SE                       | HDP26-18-14SE-L015 | HDP26-18-14SE-L024 | AHDP06-18-14SR-WTA | 134  |
| HDP24-18-14PN                       | HDP24-18-14PN-L015 | HDP24-18-14PN-L024 | AHDP04-18-14PN-WTA | 134  |
| HPD24-18-14PE                       | HPD24-18-14PE-L015 | HPD24-18-14PE-L024 | AHDP04-18-14PR-WTA | 134  |
| HDP26-18-14PN                       | HDP26-18-14PN-L015 | HDP26-18-14PN-L024 | AHDP06-18-14PN-WTA | 135  |
| HDP26-18-14PE                       | HDP26-18-14PE-L015 | HDP26-18-14PE-L024 | AHDP06-18-14PR-WTA | 135  |
| HDP24-18-14SN                       | HDP24-18-14SN-L015 | HDP24-18-14SN-L024 | AHDP04-18-14SN-WTA | 135  |
| HDP24-18-14SE                       | HDP24-18-14SE-L015 | HDP24-18-14SE-L024 | AHDP04-18-14SR-WTA | 135  |
| HDP26-24-19SN                       | HDP26-24-19SN-L015 | HDP26-24-19SN-L024 | AHDP06-24-19SN-WTA | 143  |
| HDP26-24-19SE                       | HDP26-24-19SE-L015 | HDP26-24-19SE-L024 | AHDP06-24-19SR-WTA | 143  |
| HDP24-24-19PN                       | HDP24-24-19PN-L015 | HDP24-24-19PN-L024 | AHDP04-24-19PN-WTA | 143  |
| HDP24-24-19PE                       | HDP24-24-19PE-L015 | HDP24-24-19PE-L024 | AHDP04-24-19PR-WTA | 143  |
| HDP26-24-19PN                       | HDP26-24-19PN-L015 | HDP26-24-19PN-L024 | AHDP06-24-19PN-WTA | 144  |
| HDP26-24-19PE                       | HDP26-24-19PE-L015 | HDP26-24-19PE-L024 | AHDP06-24-19PR-WTA | 144  |
| HDP24-24-19SN                       | HDP24-24-19SN-L015 | HDP24-24-19SN-L024 | AHDP04-24-19SN-WTA | 144  |
| HDP24-24-19SE                       | HDP24-24-19SE-L015 | HDP24-24-19SE-L024 | AHDP04-24-19SR-WTA | 144  |
| HDP26-24-21SN                       | HDP26-24-21SN-L015 | HDP26-24-21SN L024 | AHDP06-24-21SN-WTA | 146  |
| HDP26-24-21SE                       | HDP26-24-21SE-L015 | HDP26-24-21SE L024 | AHDP06-24-21SR-WTA | 146  |
| HDP24-24-21PN                       | HDP24-24-21PN-L015 | HDP24-24-21PN L024 | AHDP04-24-21PN-WTA | 146  |
| HPD24-24-21PE                       | HPD24-24-21PE-L015 | HPD24-24-21PE L024 | AHDP04-24-21PR-WTA | 146  |
| HDP26-24-21PN                       | HDP26-24-21PN-L015 | HDP26-24-21PN L024 | AHDP06-24-21PN-WTA | 147  |
| HDP24-24-21SN                       | HDP24-24-21SN-L015 | HDP24-24-21SN L024 | AHDP06-24-21PR-WTA | 147  |
| HDP24-24-21SN                       | HDP24-24-21SN-L015 | HDP24-24-21SN L024 | AHDP04-24-21SN-WTA | 147  |
| HDP24-24-21SE                       | HDP24-24-21SE-L015 | HDP24-24-21SE L024 | AHDP04-24-21SR-WTA | 147  |
| HDP26-24-23SN                       | HDP26-24-23SN-L015 | HDP26-24-23SN-L024 | AHDP06-24-23SN-WTA | 151  |
| HDP26-24-23SE                       | HDP26-24-23SE-L015 | HDP26-24-23SE-L024 | AHDP06-24-23SR-WTA | 151  |
| HDP24-24-23PN                       | HDP24-24-23PN-L015 | HDP24-24-23PN-L024 | AHDP04-24-23PN-WTA | 151  |
| HDP24-24-23PE                       | HDP24-24-23PE-L015 | HDP24-24-23PE-L024 | AHDP04-24-23PR-WTA | 151  |
| HDP26-24-23PN                       | HDP26-24-23PN-L015 | HDP26-24-23PN-L024 | AHDP06-24-23PN-WTA | 151  |
| HDP26-24-23PE                       | HDP26-24-23PE-L015 | HDP26-24-23PE-L024 | AHDP06-24-23PR-WTA | 151  |
| HDP24-24-23SN                       | HDP24-24-23SN-L015 | HDP24-24-23SN-L024 | AHDP04-24-23SN-WTA | 151  |
| HDP24-24-23SE                       | HDP24-24-23SE-L015 | HDP24-24-23SE-L024 | AHDP04-24-23SR-WTA | 151  |

## Part Number Cross Reference (con't)

| Competitor's Compatible Part Number |                    |                    | Amphenol PN        | Page |
|-------------------------------------|--------------------|--------------------|--------------------|------|
| Exclusive to Amphenol Sine Systems  |                    |                    | AHDP06-24-27SR-WTA | 152  |
| Exclusive to Amphenol Sine Systems  |                    |                    | AHDP04-24-27PR-WTA | 152  |
| Exclusive to Amphenol Sine Systems  |                    |                    | AHDP06-24-27PR-WTA | 153  |
| Exclusive to Amphenol Sine Systems  |                    |                    | AHDP04-24-27SR-WTA | 153  |
| HDP24-24-29PE                       | HDP24-24-29PE-L015 | HDP24-24-29PE-L024 | AHDP04-24-29PR-WTA | 155  |
| HDP26-24-29PE                       | HDP26-24-29PE-L015 | HDP26-24-29PE-L024 | AHDP06-24-29PR-WTA | 155  |
| HDP24-24-29SE                       | HDP24-24-29SE-L015 | HDP24-24-29SE-L024 | AHDP04-24-29SR-WTA | 155  |
| HDP24-24-29SE                       | HDP24-24-29SE-L015 | HDP24-24-29SE-L024 | AHDP06-24-29SR-WTA | 155  |
| HDP26-24-31SE                       | HDP26-24-31SE-L015 | HDP26-24-31SE-L024 | AHDP06-24-31SR-WTA | 159  |
| HDP26-24-31ST                       | HDP26-24-31ST-L015 | HDP26-24-31ST-L024 | AHDP06-24-31ST-WTA | 159  |
| HDP24-24-31PE                       | HDP24-24-31PE-L015 | HDP24-24-31PE-L024 | AHDP04-24-31PR-WTA | 159  |
| HDP24-24-31PT                       | HDP24-24-31PT-L015 | HDP24-24-31PT-L024 | AHDP04-24-31PT-WTA | 159  |
| HDP26-24-31PE                       | HDP26-24-31PE-L015 | HDP26-24-31PE-L024 | AHDP06-24-31PR-WTA | 159  |
| HDP26-24-31PT                       | HDP26-24-31PT-L015 | HDP26-24-31PT-L024 | AHDP06-24-31PT-WTA | 159  |
| HDP24-24-31SE                       | HDP24-24-31SE-L015 | HDP24-24-31SE-L024 | AHDP04-24-31SR-WTA | 159  |
| HDP24-24-31ST                       | HDP24-24-31ST-L015 | HDP24-24-31ST-L024 | AHDP04-24-31ST-WTA | 159  |
| HDP26-24-47SE                       | HDP26-24-47SE-L015 | HDP26-24-47SE-L024 | AHDP06-24-47SR-WTA | 165  |
| HDP26-24-47PE                       | HDP26-24-47PE-L015 | HDP26-24-47PE-L024 | AHDP06-24-47PR-WTA | 165  |
| HPD24-24-47PE                       | HPD24-24-47PE-L015 | HPD24-24-47PE-L024 | AHDP04-24-47PR-WTA | 165  |
| HDP24-24-47SE                       | HDP24-24-47SE-L015 | HDP24-24-47SE-L024 | AHDP04-24-47SR-WTA | 165  |



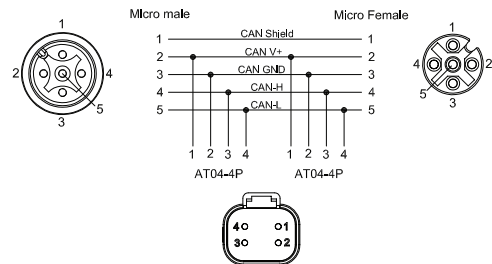
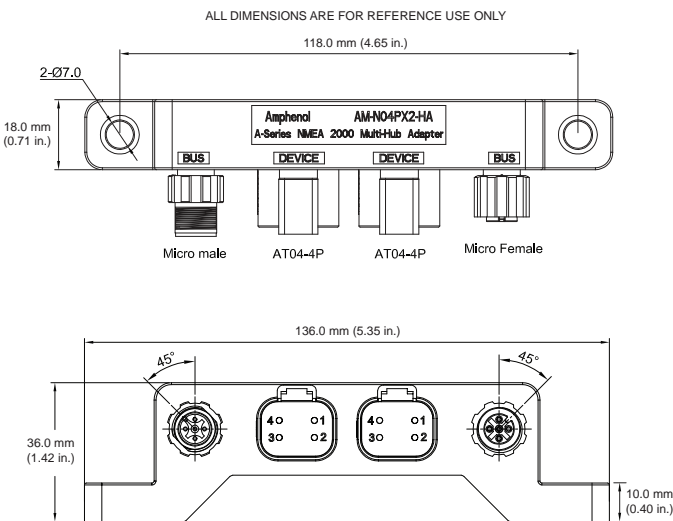
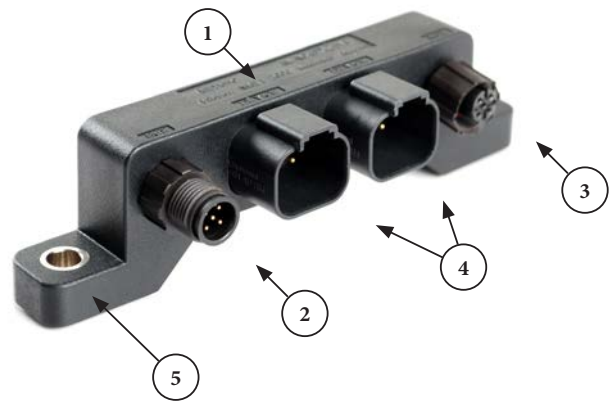
# Hydro|Net™



# Hydro | Net™ Series

## Feature & Benefits

- Provides OEM's flexibility and increased reliability when connecting multiple devices to NMEA 2000 network
- Two 4 pin AT/DT interfaces easily adapts devices to field proven, sealed, and serviceable electrical connections
- Powers the NMEA network in a rugged, compact, and environmentally sealed package
- Factory assembled for true Plug and Play capability
- Reduces the need to modify or assemble NMEA connections onto cables
- Allows for customized and built-to-length electrical harnesses eliminating costly coils of unused cable
- Factory assembled part for simplified mounting
- Environmentally-sealed to IP67 rating
- Rugged thermoplastic overmold (UL94-V0) ①
- Micro NMEA - Male ② and Female ③
- 2 - Four (4) position receptacles (AT/DT) with gold pins ④
- Stainless steel inserts for mounting ⑤



### Performance and Material Specifications

|                                 |   |
|---------------------------------|---|
| Current Rating                  | 4A  |
| Voltage Rating                  | 60V AC/DC   |
| Operating Temperature           | -20°C to +130°C                                       |
| Dielectric Withstanding Voltage | Less than 2 milliamps current leakage @ 1000 Volts AC |
| Degree of Protection            | IP67 (Mated condition)                                |
| Degree of Pollution             | 3 per UL840   |
| Overvoltage Category            | III per UL840   |
| Mating Cycle Durability         | >100 cycles   |

|                   |                                      |
|-------------------|--------------------------------------|
| RoHS              | Compliant                            |
| Coupling Nut      | PA66 UL94V-0                         |
| Insulation Insert | PA66, UL94 V0                        |
| Seal              | Silicon Rubber                       |
| Overmold Material | Thermoplastic                        |
| Color             | Black                                |
| Contact           | Gold Flash-plating over Copper Alloy |

Performance and Material Specifications

|                                 |   |
|---------------------------------|---|
| Current Rating                  | 4A  |
| Voltage Rating                  | 60V AC/DC   |
| Operating Temperature           | -20°C to +130°C                                       |
| Dielectric Withstanding Voltage | Less than 2 milliamps current leakage @ 1000 Volts AC |
| Degree of Protection            | IP67 (Mated condition)                                |
| Degree of Pollution             | 3 per UL840   |
| Overvoltage Category            | III per UL840   |
| Mating Cycle Durability         | >100 cycles   |

|                   |                                      |
|-------------------|--------------------------------------|
| RoHS              | Compliant                            |
| Coupling Nut      | PA66 UL94V-0                         |
| Insulation Insert | PA66, UL94 V0                        |
| Seal              | Silicon Rubber                       |
| Overmold Material | Thermoplastic                        |
| Color             | Black                                |
| Contact           | Gold Flash-plating over Copper Alloy |



| Part Number   | Description   |
|---------------|---|
| AM-N04PX2-HA  | Multi-Hub, Hydro   Net Adapter, AT/ NMEA 2000               |
| AM-N05-TEE    | Multi-Hub, Tee, NMEA 2000                                   |
| AM-N05P-TERM  | Multi-Hub, Terminator Plug, NMEA 2000, Male Pin w/ LED      |
| AM-N05S-TERM  | Multi-Hub, Terminator Plug, NMEA 2000, Female Socket w/ LED |
| AM-N05PS-M0.3 | Double-ended, NMEA 2000, M/F Plug, 0.3 Meter                |
| AM-N05PS-M1   | Double-ended, NMEA 2000, M/F Plug, 1 Meter                  |
| AM-N05PS-M3   | Double-ended, NMEA 2000, M/F Plug, 3 Meter                  |
| AM-N05PS-M5   | Double-ended, NMEA 2000, M/F Plug, 5 Meter                  |
| AM-N05PS-M9   | Double-ended, NMEA 2000, M/F Plug, 9 Meter                  |
| AM-N05PS-M20  | Double-ended, NMEA 2000, M/F Plug, 20 Meter                 |
| AM-N05P-M0.3  | Single-ended, NMEA 2000, Plug, Male Pin, 0.3 Meter          |
| AM-N05P-M1    | Single-ended, NMEA 2000, Plug, Male Pin, 1 Meter            |
| AM-N05P-M3    | Single-ended, NMEA 2000, Plug, Male Pin, 3 Meter            |
| AM-N05P-M5    | Single-ended, NMEA 2000, Plug, Male Pin, 5 Meter            |
| AM-N05P-M9    | Single-ended, NMEA 2000, Plug, Male Pin, 9 Meter            |
| AM-N05P-M20   | Single-ended, NMEA 2000, Plug, Male Pin, 20 Meter           |
| AM-N05S-M0.3  | Single-ended, NMEA 2000, Plug, Female Socket, 0.3 Meter     |
| AM-N05S-M1    | Single-ended, NMEA 2000, Plug, Female Socket, 1 Meter       |
| AM-N05S-M3    | Single-ended, NMEA 2000, Plug, Female Socket, 3 Meter       |
| AM-N05S-M5    | Single-ended, NMEA 2000, Plug, Female Socket, 5 Meter       |
| AM-N05S-M9    | Single-ended, NMEA 2000, Plug, Female Socket, 9 Meter       |
| AM-N05S-M20   | Single-ended, NMEA 2000, Plug, Female Socket, 20 Meter      |
| AT04-4P-KIT01 | AT, 4P, Kit Wedge & Contacts                                |
| AT4PS-CKIT    | AT, Complete Pin & Socket Wedge Kit                         |



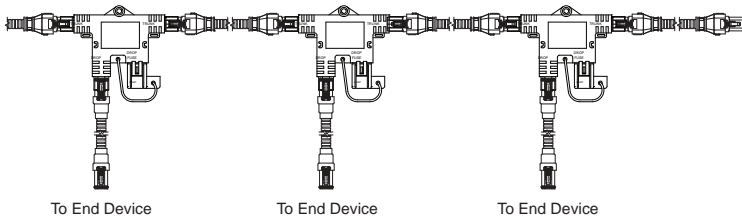


# Multi|Mate™



# Multi | Mate™ Series

Trunk (Size 12, 25A Max) and Drop (Size 16, 13A Max), or  
Trunk (Size 16, 13A Max) and Drop (Size 16, 13A Max)



The Amphenol Multi | Mate™ expands upon the proven reliability of the A Series™ environmentally sealed thermoplastic connection system with rugged over-molded "Plug & Play" connection types for power, signal and data for your diverse electrical requirements. Today's ever evolving wiring protocols have dictated the rapid acceleration of "Quick-Connect" topologies increasing designers options with streamlined and proven connectivity systems. The objective is to provide cost reductions within all phases of design, installation and service of pre-existing electrical architectures by simplifying your wiring requirements.

Built upon the versatility and economy of the A Series™ product line, a full complement of options including high impact resistant connectors, contacts and accessory options are readily available to meet your changing demands. Cable requirements can be ordered as complete assemblies direct from Amphenol or assembled at time of installation, this system is ideal for heavy-duty applications such as commercial vehicle, agriculture, construction or marine installations.

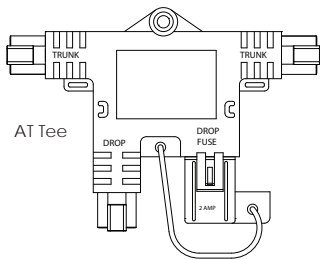
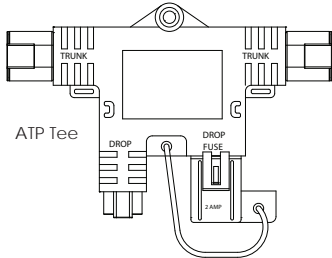
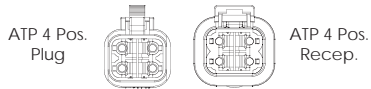
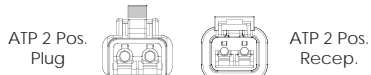
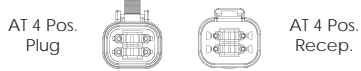
## Features and Benefits

- Rapid install due to scalable modular design at startup
- Faster commissioning with reliable "Plug & Play" capability dramatically reduces cost
- Fuse protection provides protection for "Drop" device.
- Lower fused values possible at device versus main "Trunk"
- Accepts any standard automotive "ATO" fuse
- Quick disconnects minimize downtime from removal or replacement of failed equipment
- High strength impact resistant & lightweight thermoplastic housings
- Contacts available in economical reel-mounted high volume machine termination or machined loose-piece form.
- Low insertion force stamped terminals offer improved manufacturing efficiencies
- Engineered rapid and secure mating system achieves IP67 protection from ingress of dust, water mud and other contaminants
- Redundant sealing features consisting of durable high temperature silicone provide barrier from lubricating oils, hydraulic fluids and fossil fuels.
- Rigid back shells provide strain-relief for convoluted tubing.

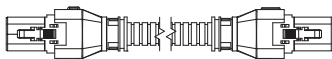
The Multi | Mate™ system meets all the performance criteria and specifications of the AT and ATP Series™ of connectors. For more information, refer to the AT and ATP Series™ documentation found online, or contact Customer Service.

# MULTI|MATE SERIES PLUGS, RECEPTACLES & HARNESSSES

**Multi|Mate**  
2,4 POSITIONS  
13A, 25A



ATP Double-ended Harness "Trunk"



AT Double-ended Harness "Trunk"



AT Double-ended Harness "Drop"



| Part Number | Description - Panel Mount Receptacles with Wire Leads                  |
|-------------|--|
| P31142-XX   | ATP, 2 Position Panel Recep., Male(Size 12) with 12AWG Wire Leads, 25A |
| P31143-XX   | ATP, 4 Position Panel Recep., Male(Size 12) with 12AWG Wire Leads, 25A |
| P31144-XX   | AT, 2 Position Panel Recep., Male(Size 16) with 14AWG Wire Leads, 13A  |
| P31145-XX   | AT, 4 Position Panel Recep., Male(Size 16) with 14AWG Wire Leads, 13A  |

| Part Number | Description - Tee's  |
|-------------|--|
| P31134      | ATP, Tee, 2 Position Recep., Male, 25A (Trunk), Recep. Male, 13A (Drop) w/ fuse holder |
| P31135      | ATP, Tee, 2 Position Recep., Male 25A (Trunk), Recep. Male, 13A (Drop)                 |
| P31136      | ATP, Tee, 4 Position Recep., Male, 25A (Trunk), Recep. Male, 13A (Drop) w/ fuse holder |
| P31137      | ATP, Tee, 4 Position Recep., Male, 25A (Trunk), Recep. Male, 13A (Drop)                |
| P31138      | AT, Tee, 2 Position, Recep. Male, 13A (Trunk), Recep. Male, 13A (Drop) w/ fuse holder  |
| P31139      | AT, Tee, 2 Position, Recep. Male, 13A (Trunk), Recep. Male, 13A (Drop)                 |
| P31140      | AT, Tee, 4 Position, Recep. Male, 13A (Trunk), Recep. Male, 13A (Drop) w/ fuse holder  |
| P31141      | AT, Tee, 4 Position, Recep. Male, 13A (Trunk), Recep. Male, 13A (Drop)                 |

| Part Number | Description - Double-ended Harness "Trunk"   |
|-------------|--|
| P31146-XX   | ATP, 2 Position Plug(Size 12) Double-ended Harness Female, w/ 12AWG Wire Leads & Tubing, 25A                                 |
| P31147-XX   | ATP, 4 Position Plug(Size 12) Double-ended Harness Female, w/ 12AWG Wire Leads & Tubing, 25A                                 |
| P31148-XX   | ATP, 4 Position Double-ended Harness Plug Female, w/ 2 Pos.(Size 12) 12AWG(25A) & 2 Pos., "Can Lo/Can Hi" 18AWG, with Tubing |
| P31149-XX   | AT, 2 Position(Size 16) Double-ended Harness Plug Female, w/ 16AWG Wire Leads & Tubing, 13A                                  |
| P31150-XX   | AT, 4 Position(Size 16) Double-ended Harness Plug Female, w/ 16AWG Wire Leads & Tubing, 13A                                  |
| P31151-XX   | AT, 4 Position Double-ended Harness Plug Female, w/ 2 Pos.(Size 16) 16AWG(13A) & 2 Pos., "Can Lo/Can Hi" 18AWG, with Tubing  |

| Part Number | Description - Double-ended Harness "Drop"  |
|-------------|--|
| P31170-XX   | AT, 2 Position, (Size 16) Double-ended Harness Plug Female w/ 16AWG Wire Leads & Tubing, 13A |
| P31171-XX   | AT, 4 Position, (Size 16) Double-ended Harness Plug Female w/ 16AWG Wire Leads & Tubing, 13A |

| Part Number | Description - Plug "Terminators"                                       |
|-------------|--|
| P31172      | AT, 2 Position, Plug Terminator Female, (Size 16)                      |
| P31173      | AT, 4 Position, Plug Terminator Female, (Size 16)                      |
| P31174      | AT, 4 Position, Plug Terminator Female, (Size 16) w/ 120 ohm resistor  |
| P31175      | ATP, 2 Position, Plug Terminator Female, (Size 12)                     |
| P31176      | ATP, 4 Position, Plug Terminator Female, (Size 12)                     |
| P31177      | ATP, 4 Position, Plug Terminator Female, (Size 12) w/ 120 ohm resistor |



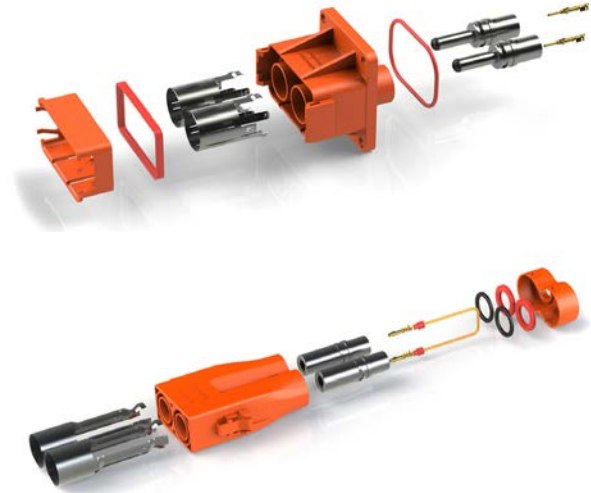
# Magna | Mate™



# Magna | Mate™ Series

## 2 Positions

- Designed to withstand the extreme conditions of the trucking, agricultural, mining, construction, and marine industries.
- Features Amphenol's RADSOK contact technology
- Current rating of 86 amps for the 10mm<sup>2</sup> wire, 120 amps for the 25mm<sup>2</sup> wire, 180 amps for the 35-50mm<sup>2</sup> wire
- Constructed of heavy-duty thermoplastic
- Able to withstand extreme vibration and mechanical shock
- IP67 rated in mated condition
- Operating temperature range of -40°C to 130°C
- Inline or panel mount
- OPTIONAL Last Mate / First Break HVIL Circuit



|   |   |
|---|---|
| Plug/Receptacle   | RADSOK® Contacts  |
| Material Specifications   |   |
| Shell: Thermoplastic UL94-V0  | Pin: Copper Alloy   |
| Grommet: Silicone Rubber  | Socket: Copper Alloy  |
|   | Finish: Silver-plated (Power contact)<br>Gold-plated (Signal contact)                                   |
| General Specifications  |   |
| Current Ratings   |   |
|   | Power contact: 8mm 180 amps<br>Signal contact: 16# 13 amps; 2,5mm 23 amps                               |
| General Specifications  |   |
| Dielectric Withstanding Voltage:  |   |
| Current leak less than 2 milliamps at 6000 VAC  | Insulation Resistance: 5000 megohms minimum 25°C  |
| Rated voltage: 1000V AC/DC  |   |
| EMC Shielding: Available  | HVIL (High Voltage Interlock Loop): Available   |
| Protection: Mated condition IP67  | Temperature Operation: temperatures from -40°C to +130°C.   |
| Vibration: No unlocking or unmating. Exhibits no mechanical or physical damage after sinusoidal vibration levels of 20G's at 10 to 2000 Hz in each of the three mutually perpendicular planes. No electrical discontinuities longer than 1 microsecond. | Fluid Resistance: Connectors show no damage when exposed to most fluids used in industrial application. |
| Thermal Cycle No cracking, chipping or leaking after 20 test cycles from -40°C to +130°C  | Durability: No electrical or mechanical defects after 500 cycles of engagement and disengagement.       |

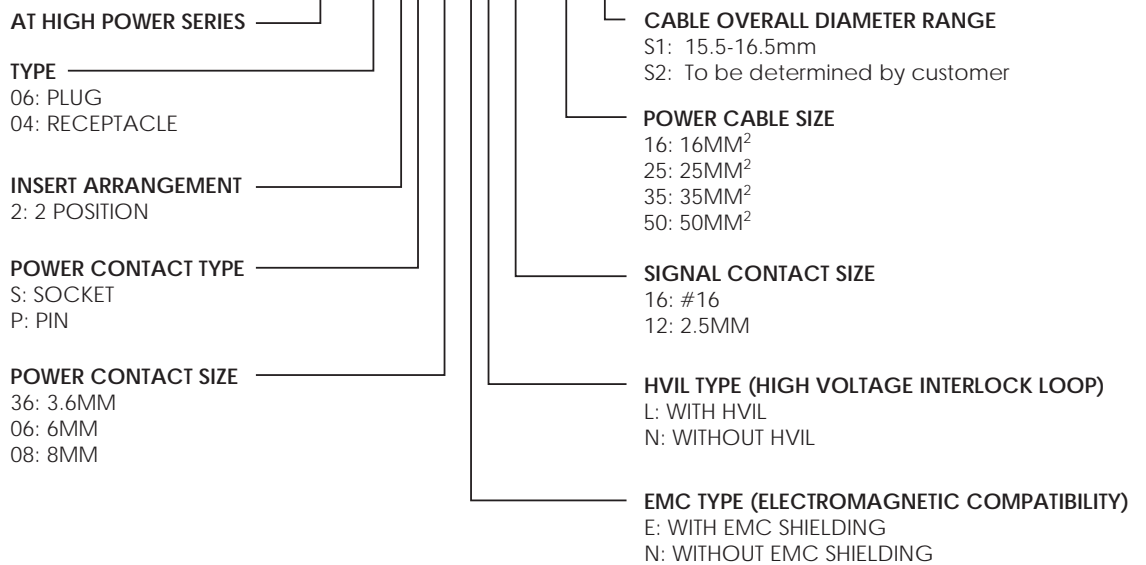


## PART NUMBER SEQUENCE

### PLUG



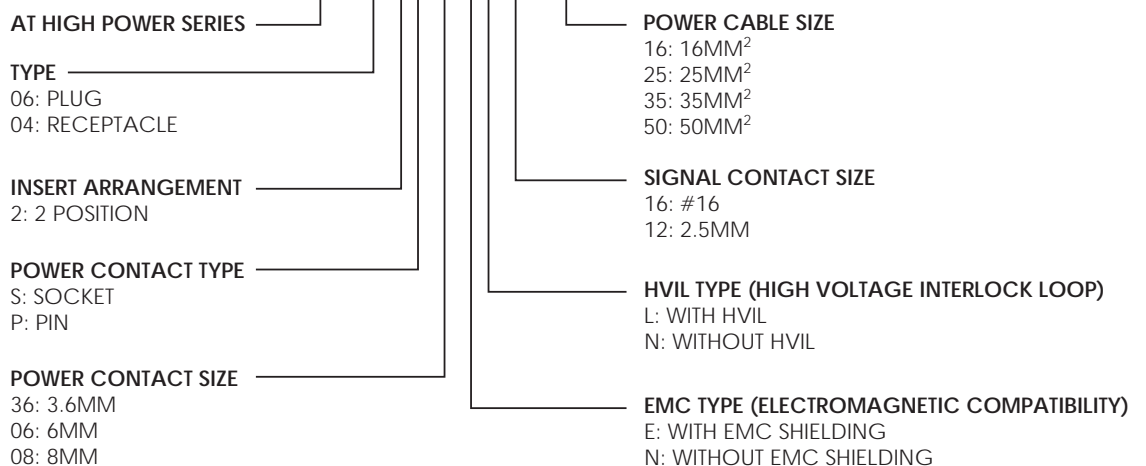
**A T H P 0 6 2 S 0 8 E L 1 6 - 5 0 S X**



### RECEPTACLE



**A T H P 0 4 2 P 0 8 E L 1 6 - 5 0**



Uses 8mm Contact



## PLUGS

| Part Number         | Power Contact Type | Signal Contact Size | Power Cable Size  | Cable OD Range (Plug) |
|---------------------|--------------------|---------------------|-------------------|-----------------------|
| ATHP062S08NN12-35S1 | Socket             | 2.5mm               | 35mm <sup>2</sup> | 15.5 - 16.5 mm        |
| ATHP062S08NN12-35S2 | Socket             | 2.5mm               | 35mm <sup>2</sup> | customer requirements |
| ATHP062S08NN16-35S1 | Socket             | 16                  | 35mm <sup>2</sup> | 15.5 - 16.5 mm        |
| ATHP062S08NN16-35S2 | Socket             | 16                  | 35mm <sup>2</sup> | customer requirements |
| ATHP062S08NN12-50S1 | Socket             | 2.5mm               | 50mm <sup>2</sup> | 15.5 - 16.5 mm        |
| ATHP062S08NN12-50S2 | Socket             | 2.5mm               | 50mm <sup>2</sup> | customer requirements |
| ATHP062S08NN16-50S1 | Socket             | 16                  | 50mm <sup>2</sup> | 15.5 - 16.5 mm        |
| ATHP062S08NN16-50S2 | Socket             | 16                  | 50mm <sup>2</sup> | customer requirements |

## RECEPTACLES

| Part Number       | Power Contact Type | Signal Contact Size | Power Cable Size  |
|-------------------|--------------------|---------------------|-------------------|
| ATHP042P08NN12-35 | Pin                | 2.5mm               | 35mm <sup>2</sup> |
| ATHP042P08NN16-35 | Pin                | 16                  | 35mm <sup>2</sup> |
| ATHP042P08NN12-50 | Pin                | 2.5mm               | 50mm <sup>2</sup> |
| ATHP042P08NN16-50 | Pin                | 16                  | 50mm <sup>2</sup> |

# Magna | Mate SERIES PLUGS & RECEPTACLES STANDARD

**Magna | Mate**  
2 POSITIONS  
180A

Uses 8mm Contact



## PLUGS

| STANDARD Plug with High Voltage Interlock Loop |                    |                     |                   |                       |
|--|--------------------|---------------------|-------------------|-----------------------|
| Part Number                                    | Power Contact Type | Signal Contact Size | Power Cable Size  | Cable OD Range (Plug) |
| ATHP062S08NL12-35S1                            | Socket             | 2.5mm               | 35mm <sup>2</sup> | 15.5 - 16.5 mm        |
| ATHP062S08NL12-35S2                            | Socket             | 2.5mm               | 35mm <sup>2</sup> | customer requirements |
| ATHP062S08NL16-35S1                            | Socket             | 16                  | 35mm <sup>2</sup> | 15.5 - 16.5 mm        |
| ATHP062S08NL16-35S2                            | Socket             | 16                  | 35mm <sup>2</sup> | customer requirements |
| ATHP062S08NL12-50S1                            | Socket             | 2.5mm               | 50mm <sup>2</sup> | 15.5 - 16.5 mm        |
| ATHP062S08NL12-50S2                            | Socket             | 2.5mm               | 50mm <sup>2</sup> | customer requirements |
| ATHP062S08NL16-50S1                            | Socket             | 16                  | 50mm <sup>2</sup> | 15.5 - 16.5 mm        |
| ATHP062S08NL16-50S2                            | Socket             | 16                  | 50mm <sup>2</sup> | customer requirements |

## RECEPTACLES

| STANDARD Plug with High Voltage Interlock Loop |                    |                     |                   |
|--|--------------------|---------------------|-------------------|
| Part Number                                    | Power Contact Type | Signal Contact Size | Power Cable Size  |
| ATHP042P08NL12-35                              | Pin                | 2.5mm               | 35mm <sup>2</sup> |
| ATHP042P08NL16-35                              | Pin                | 16                  | 35mm <sup>2</sup> |
| ATHP042P08NL12-50                              | Pin                | 2.5mm               | 50mm <sup>2</sup> |
| ATHP042P08NL16-50                              | Pin                | 16                  | 50mm <sup>2</sup> |

Uses 8mm Contact



PLUGS

| EMC Plugs with High Voltage Interlock Loop |                    |                     |                   |                       |
|--|--------------------|---------------------|-------------------|-----------------------|
| Part Number                                | Power Contact Type | Signal Contact Size | Power Cable Size  | Cable OD Range (Plug) |
| ATHP062S08EL12-35S1                        | Socket             | 2.5mm               | 35mm <sup>2</sup> | 15.5 - 16.5 mm        |
| ATHP062S08EL12-35S2                        | Socket             | 2.5mm               | 35mm <sup>2</sup> | customer requirements |
| ATHP062S08EL16-35S1                        | Socket             | 16                  | 35mm <sup>2</sup> | 15.5 - 16.5 mm        |
| ATHP062S08EL16-35S2                        | Socket             | 16                  | 35mm <sup>2</sup> | customer requirements |
| ATHP062S08EL12-50S1                        | Socket             | 2.5mm               | 50mm <sup>2</sup> | 15.5 - 16.5 mm        |
| ATHP062S08EL12-50S2                        | Socket             | 2.5mm               | 50mm <sup>2</sup> | customer requirements |
| ATHP062S08EL16-50S1                        | Socket             | 16                  | 50mm <sup>2</sup> | 15.5 - 16.5 mm        |
| ATHP062S08EL16-50S2                        | Socket             | 16                  | 50mm <sup>2</sup> | customer requirements |

| EMC Plugs without High Voltage Interlock Loop |                    |                     |                   |                       |
|---|--------------------|---------------------|-------------------|-----------------------|
| Part Number                                   | Power Contact Type | Signal Contact Size | Power Cable Size  | Cable OD Range (Plug) |
| ATHP062S08EN12-35S1                           | Socket             | 2.5mm               | 35mm <sup>2</sup> | 15.5 - 16.5 mm        |
| ATHP062S08EN12-35S2                           | Socket             | 2.5mm               | 35mm <sup>2</sup> | customer requirements |
| ATHP062S08EN16-35S1                           | Socket             | 16                  | 35mm <sup>2</sup> | 15.5 - 16.5 mm        |
| ATHP062S08EN16-35S2                           | Socket             | 16                  | 35mm <sup>2</sup> | customer requirements |
| ATHP062S08EN12-50S1                           | Socket             | 2.5mm               | 50mm <sup>2</sup> | 15.5 - 16.5 mm        |
| ATHP062S08EN12-50S2                           | Socket             | 2.5mm               | 50mm <sup>2</sup> | customer requirements |
| ATHP062S08EN16-50S1                           | Socket             | 16                  | 50mm <sup>2</sup> | 15.5 - 16.5 mm        |
| ATHP062S08EN16-50S2                           | Socket             | 16                  | 50mm <sup>2</sup> | customer requirements |

# Magna | Mate SERIES RECEPTACLES EMC SHIELDING

**Magna | Mate**  
**2 POSITIONS**  
**180A**

Uses 8mm Contact



CONNECTOR SOLUTIONS

## RECEPTACLES

| EMC Receptacles with High Voltage Interlock Loop    |                    |                     |                   |
|---|--------------------|---------------------|-------------------|
| Part Number   | Power Contact Type | Signal Contact Size | Power Cable Size  |
| ATHP042P08EL12-35                                   | Pin                | 2.5mm               | 35mm <sup>2</sup> |
| ATHP042P08EL16-35                                   | Pin                | 16                  | 35mm <sup>2</sup> |
| ATHP042P08EL12-50                                   | Pin                | 2.5mm               | 50mm <sup>2</sup> |
| ATHP042P08EL16-50                                   | Pin                | 16                  | 50mm <sup>2</sup> |
| EMC Receptacles without High Voltage Interlock Loop |                    |                     |                   |
| Part Number   | Power Contact Type | Signal Contact Size | Power Cable Size  |
| ATHP042P08EN12-35                                   | Pin                | 2.5mm               | 35mm <sup>2</sup> |
| ATHP042P08EN16-35                                   | Pin                | 16                  | 35mm <sup>2</sup> |
| ATHP042P08EN12-50                                   | Pin                | 2.5mm               | 50mm <sup>2</sup> |
| ATHP042P08EN16-50                                   | Pin                | 16                  | 50mm <sup>2</sup> |

## RADSOK® Contacts

### RADSOK® Benefits at a Glance

- Cost effective production using stamp & form technology
- Fully automated production for full press capability
- Low insertion and extraction forces
- High number of mating cycles
- Reduced assembly effort
- Contact coverage up to 65%
- Long lasting contact normal forces guaranteed through optimal grid technology
- Self cleaning effect during the mating process
- No torque resistance required of electrical housing - allowing for easier designs
- Absorption of vibrations

### RADSOK® Technical Data

#### High Reliability

Unique RADSOK® design and construction technology creates an electrical contact interface that exceeds typical interconnect requirements. Applications in Aerospace, Medical, Industrial, Automotive, Mining, Offshore and other harsh environments depend on the high reliability of Amphenol RADSOK® technology.

#### Low Contact Engagement/Separation Forces

The hyperbolic lamella socket contact construction distributes normal forces over a high percentage of the mating 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 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 10,000 mating cycles. 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.

Crimp Barrel Contact



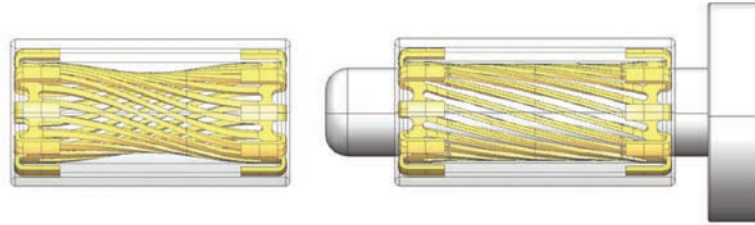
Flat Hole Tail Contact



Screw Tail Contact



## RADSOK® Product Overview



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 on spring (beam element) properties of the contact elements, which tend to weaken over time. Unlike most other pin and socket solutions, the RADSOK® contact 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 a large conductive surface area. Correspondingly low voltage drop and low temperature rise are also achieved while maintaining low insertion forces.

### The RADSOK® Design



- Socket cylinder within female contact has several equally spaced longitudinal beams twisted into a hyperbolic shape
- As a 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 multi-volt drop

RADSOK Contact (Max. current carrying capacity meet DIN EN 60512 specification.)

| Shell size  | Applicable Cable  | Contact Plating | current (AC)  |  |
|-------------|---|-----------------|---|--|
|             |   |                 | temperature   |  |
| 12 (3.6mm)  | 10mm <sup>2</sup> , 16mm <sup>2</sup>                     | Silver Plated   | 65A (10mm <sup>2</sup> ), 86A (16mm <sup>2</sup> )                              |  |
| 14 (6.0mm)  | 25mm <sup>2</sup>   | Silver Plated   | 120A (25mm <sup>2</sup> )   |  |
| 16 (8.0mm)  | 35mm <sup>2</sup> , 50mm <sup>2</sup>                     | Silver Plated   | 130A (35mm <sup>2</sup> ), 180A (50mm <sup>2</sup> )                            |  |
| 20 (10.0mm) | 50mm <sup>2</sup> , 70mm <sup>2</sup> , 95mm <sup>2</sup> | Silver Plated   | 180A (50mm <sup>2</sup> ), 250A (70mm <sup>2</sup> ), 300A (95mm <sup>2</sup> ) |  |

**Note:** The given electrical values correspond to a single contact. With the addition of a housing, an increased number of poles or other modifications, the values must be adjusted downwards accordingly.

## RADSOK® Advantages and Custom Developed Solutions

### RADSOK® Technology Advantages

- **High Reliability** - Unique design and construction technology create an electrical contact interface that exceeds typical interconnect requirements.
- **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, RADSOK® contacts have been tested to maintain low contact resistance beyond 10,000 mating cycles.

### Standard and Custom-Developed Solutions

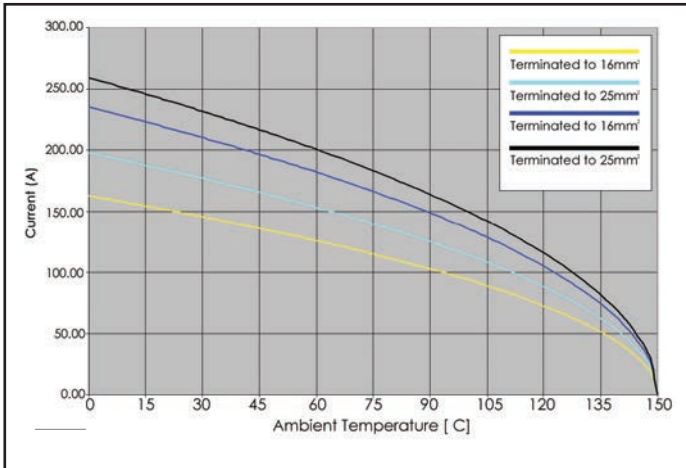
- In addition to the various standard sizes of RADSOK® components, custom-developed solutions are also available. Amphenol has the global design, engineering and manufacturing resources to provide RADSOK® sockets pressed into busbars, crimped to cables, assembled into connectors, assembled into customer 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 RADSOK® products range from 50 amps to over 1000 amps.
- Amphenol connectors with RADSOK® contacts are offered with a variety of positive locking features (HiLok® and SurLok® ) that insure 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.



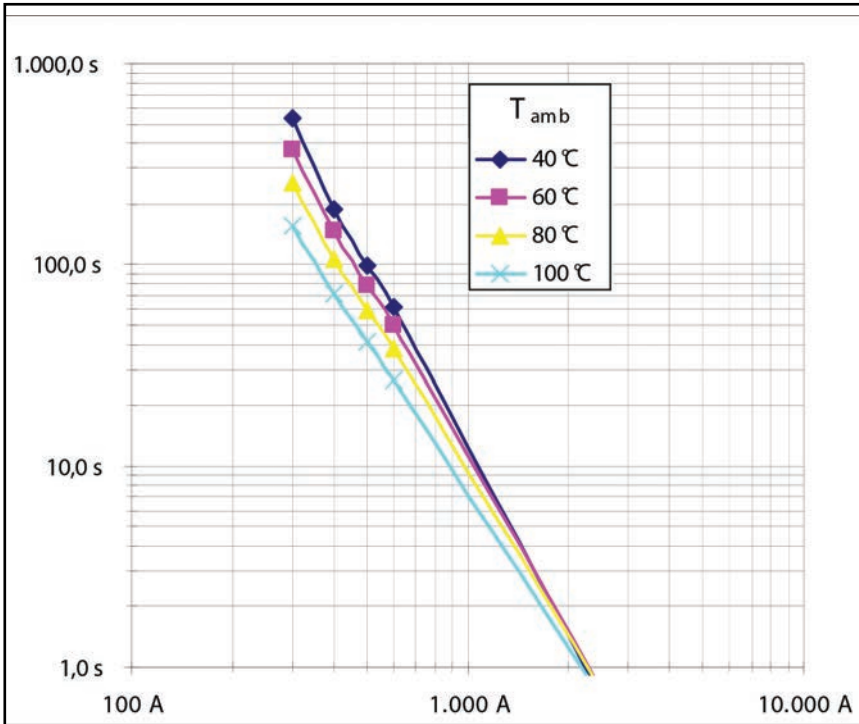
# RADSOK® Series Rated Current and Working Voltage

## Contact Current Carrying Capacity

### Derating 8mm



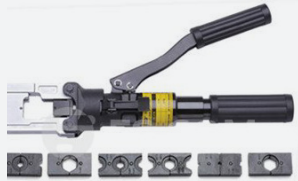
### 8mm RADSOK®



## Contacts (included)

| Contact Size / Current | Wire Range |                 | Pin P/N  | Socket P/N | Pin P/N | Socket P/N | Plating    |
|------------------------|------------|-----------------|----------|------------|---------|------------|------------|
|                        | AWG        | mm <sup>2</sup> |          |            |         |            |            |
| #8 (45A)               | 12-10      | 3.0-6.0         | MP10A23S | MS10A23S   | N/A     | N/A        | Silver     |
| 2.5mm (23A)            | 14-12      | 2.5-3.5         | N/A      | N/A        | SP12A1T | SS12A1T    | Tin        |
| #16 (13A)              | 16-14      | 2.0-2.5         | MP14M23F | MS14M23F   | SP14M1F | SS14M1F    | Gold Flash |

## Tools

| Crimping Tool  | Part Number | Description   |
|--|-------------|---|
|  | 96-978-22   | <p>Suitable crimping range: 10-185 mm<sup>2</sup><br/>                     Opening and closing type head, rotatable 180°, easy to operate.<br/>                     Automatic relief pressure after the crimping,</p> <p>Crimping Dies (mm<sup>2</sup>)<br/>                     10/16,25/35,50/70,95/120,150,185</p> |

# Magna | Mate SERIES PLUGS & RECEPTACLES STANDARD

**Magna | Mate**  
**2 POSITIONS**  
**86A**

Uses 3.6mm Contact



## PLUGS

| Part Number        | Power Contact Type | Signal Contact Size | Power Cable Size  | Cable OD Range (Plug) |
|--------------------|--------------------|---------------------|-------------------|-----------------------|
| ATHPO6S36NN12-16S1 | Socket             | 12                  | 16mm <sup>2</sup> | S1                    |
| ATHPO6S36NN12-16S2 | Socket             | 12                  | 16mm <sup>2</sup> | S2                    |
| ATHPO6S36NN16-16S1 | Socket             | 16                  | 16mm <sup>2</sup> | S1                    |
| ATHPO6S36NN16-16S2 | Socket             | 16                  | 16mm <sup>2</sup> | S2                    |
| ATHPO6S36NN12-35S1 | Socket             | 12                  | 35mm <sup>2</sup> | S1                    |
| ATHPO6S36NN12-35S2 | Socket             | 12                  | 35mm <sup>2</sup> | S2                    |
| ATHPO6S36NN16-35S1 | Socket             | 16                  | 35mm <sup>2</sup> | S1                    |
| ATHPO6S36NN16-35S2 | Socket             | 16                  | 35mm <sup>2</sup> | S2                    |
| ATHPO6S36NN12-50S1 | Socket             | 12                  | 50mm <sup>2</sup> | S1                    |
| ATHPO6S36NN12-50S2 | Socket             | 12                  | 50mm <sup>2</sup> | S2                    |
| ATHPO6S36NN16-50S1 | Socket             | 16                  | 50mm <sup>2</sup> | S1                    |
| ATHPO6S36NN16-50S2 | Socket             | 16                  | 50mm <sup>2</sup> | S2                    |

## RECEPTACLES

| Part Number      | Power Contact Type | Signal Contact Size | Power Cable Size  |
|------------------|--------------------|---------------------|-------------------|
| ATHPO4P36NN12-16 | Pin                | 12                  | 16mm <sup>2</sup> |
| ATHPO4P36NN16-16 | Pin                | 16                  | 16mm <sup>2</sup> |
| ATHPO4P36NN12-25 | Pin                | 12                  | 25mm <sup>2</sup> |
| ATHPO4P36NN16-25 | Pin                | 16                  | 25mm <sup>2</sup> |
| ATHPO4P36NN12-35 | Pin                | 12                  | 35mm <sup>2</sup> |
| ATHPO4P36NN16-35 | Pin                | 16                  | 35mm <sup>2</sup> |
| ATHPO4P36NN12-50 | Pin                | 12                  | 50mm <sup>2</sup> |
| ATHPO4P36NN16-50 | Pin                | 16                  | 50mm <sup>2</sup> |

Uses 3.6mm Contact



**PLUGS**

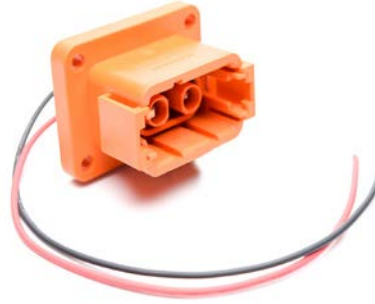
| EMC Plugs with High Voltage Interlock Loop |                    |                     |                   |                       |
|--|--------------------|---------------------|-------------------|-----------------------|
| Part Number                                | Power Contact Type | Signal Contact Size | Power Cable Size  | Cable OD Range (Plug) |
| ATHP06S36EL12-16S1                         | Socket             | 12                  | 16mm <sup>2</sup> | S1                    |
| ATHP06S36EL12-16S2                         | Socket             | 12                  | 16mm <sup>2</sup> | S2                    |
| ATHP06S36EL12-35S1                         | Socket             | 12                  | 35mm <sup>2</sup> | S1                    |
| ATHP06S36EL12-35S2                         | Socket             | 12                  | 35mm <sup>2</sup> | S2                    |
| ATHP06S36EL12-50S1                         | Socket             | 12                  | 50mm <sup>2</sup> | S1                    |
| ATHP06S36EL12-50S2                         | Socket             | 12                  | 50mm <sup>2</sup> | S2                    |
| ATHP06S36EL16-16S1                         | Socket             | 16                  | 16mm <sup>2</sup> | S1                    |
| ATHP06S36EL16-16S2                         | Socket             | 16                  | 16mm <sup>2</sup> | S2                    |
| ATHP06S36EL16-35S1                         | Socket             | 16                  | 35mm <sup>2</sup> | S1                    |
| ATHP06S36EL16-35S2                         | Socket             | 16                  | 35mm <sup>2</sup> | S2                    |
| ATHP06S36EL16-50S1                         | Socket             | 16                  | 50mm <sup>2</sup> | S1                    |
| ATHP06S36EL16-50S2                         | Socket             | 16                  | 50mm <sup>2</sup> | S2                    |

| EMC Plugs without High Voltage Interlock Loop |                    |                     |                   |                       |
|---|--------------------|---------------------|-------------------|-----------------------|
| Part Number                                   | Power Contact Type | Signal Contact Size | Power Cable Size  | Cable OD Range (Plug) |
| ATHP06S36EN12-16S1                            | Socket             | 12                  | 16mm <sup>2</sup> | S1                    |
| ATHP06S36EN12-16S2                            | Socket             | 12                  | 16mm <sup>2</sup> | S2                    |
| ATHP06S36EN16-16S1                            | Socket             | 16                  | 16mm <sup>2</sup> | S1                    |
| ATHP06S36EN16-16S2                            | Socket             | 16                  | 16mm <sup>2</sup> | S2                    |
| ATHP06S36EN12-35S1                            | Socket             | 12                  | 35mm <sup>2</sup> | S1                    |
| ATHP06S36EN12-35S2                            | Socket             | 12                  | 35mm <sup>2</sup> | S2                    |
| ATHP06S36EN16-35S1                            | Socket             | 16                  | 35mm <sup>2</sup> | S1                    |
| ATHP06S36EN16-35S2                            | Socket             | 16                  | 35mm <sup>2</sup> | S2                    |
| ATHP06S36EN12-50S1                            | Socket             | 12                  | 50mm <sup>2</sup> | S1                    |
| ATHP06S36EN12-50S2                            | Socket             | 12                  | 50mm <sup>2</sup> | S2                    |
| ATHP06S36EN16-50S1                            | Socket             | 16                  | 50mm <sup>2</sup> | S1                    |
| ATHP06S36EN16-16S2                            | Socket             | 16                  | 50mm <sup>2</sup> | S2                    |

# Magna | Mate SERIES RECEPTACLES EMC SHIELDING

Magna | Mate  
2 POSITIONS  
86A

Uses 3.6mm Contact



## RECEPTACLES

| EMC Receptacles with High Voltage Interlock Loop |                    |                     |                   |
|--|--------------------|---------------------|-------------------|
| Part Number                                      | Power Contact Type | Signal Contact Size | Power Cable Size  |
| ATHP04P36EL12-16                                 | Pin                | 12                  | 16mm <sup>2</sup> |
| ATHP04P36EL16-16                                 | Pin                | 16                  | 25mm <sup>2</sup> |
| ATHP04P36EL12-25                                 | Pin                | 12                  | 25mm <sup>2</sup> |
| ATHP04P36EL16-25                                 | Pin                | 16                  | 16mm <sup>2</sup> |
| ATHP04P36EL12-35                                 | Pin                | 12                  | 35mm <sup>2</sup> |
| ATHP04P36EL16-35                                 | Pin                | 16                  | 35mm <sup>2</sup> |
| ATHP04P36EL12-50                                 | Pin                | 12                  | 50mm <sup>2</sup> |
| ATHP04P36EL16-50                                 | Pin                | 16                  | 50mm <sup>2</sup> |

| EMC Receptacles without High Voltage Interlock Loop |                    |                     |                   |
|---|--------------------|---------------------|-------------------|
| Part Number   | Power Contact Type | Signal Contact Size | Power Cable Size  |
| ATHP04P36EN12-16                                    | Pin                | 12                  | 16mm <sup>2</sup> |
| ATHP04P36EN16-16                                    | Pin                | 16                  | 16mm <sup>2</sup> |
| ATHP04P36EN12-25                                    | Pin                | 12                  | 25mm <sup>2</sup> |
| ATHP04P36EN16-25                                    | Pin                | 16                  | 25mm <sup>2</sup> |
| ATHP04P36EN12-35                                    | Pin                | 12                  | 35mm <sup>2</sup> |
| ATHP04P36EN16-35                                    | Pin                | 16                  | 35mm <sup>2</sup> |
| ATHP04P36EN12-50                                    | Pin                | 12                  | 50mm <sup>2</sup> |
| ATHP04P36EN16-50                                    | Pin                | 16                  | 50mm <sup>2</sup> |

# Appendix

## Glossary of Terms

|  |  |
|--|--|
| <b>American Wire Gauge (AWG)</b>   | <b>Connector life</b>  |
| System of numerical designations for wire sizes, based on specified ranges of cross-sectional areas. Starts with 4/0 (000) at the largest size, going to 3/0, 2/0, 1/0, 1, 2, and up to 40 and beyond for the smallest size. A step of one AWG number corresponds to a reduction of cross-sectional area of appr. 20 %.  | The number of mating cycles prior to abrasion of the conductive contact surface and which does not result in a significant rise of the contact resistance. Tests according to test 9a of ICE 60512-5 / DIN EN 60512 Part 5.  |
| <b>Attenuation</b>   | <b>Contact</b>   |
| A reduction of power. Occurs naturally when waves travel through lines, wave guides, or media such as air or water. Is produced additionally by imperfections in electrical or optical connections (attenuation in fibre optics), e. g. contact resistance, mismatch, etc.   | The conductive element in a connector which mates with a corresponding element to provide an electrical path.  |
| <b>Bulkhead connector</b>  | <b>Contact resistance</b>  |
| Connector designed to be inserted into a panel cutout from the rear of the panel, thus forming part of the barrier between two spaces. Back-mounted.   | The electrical resistance of a mated set of contacts under specified conditions. Tested according to tests 2a, 2b, 2c, of IEC 60 512 -2/ DIN EN 60 512-2.  |
| <b>Clearance</b>   | <b>Contact size</b>  |
| The shortest distance in air between two conductive parts, see IEC 60664.  | The designation used to differentiate one contact from another. It may be denoted by one of the following numbering systems:   |
| <b>Climatic stability</b>  | <b>Creepage distance</b>   |
| General term describing the behavior of components under various climatic conditions, e. g. high and low temperatures, tropical climate, high humidity, moist heat, fungus, atmospheric conditions (industrial atmosphere), reduced air pressure, etc. Climatic conditions for test purposes are explained in IEC 60068, DIN 46 040.   | The shortest distance along the surface of the insulating material between two conductive parts. The longer the distance, the less the risk of arc damage or tracking. Minimum creepage distances are specified according to the rated voltage and the applicable pollution degree and Comparative Tracking Index. |
| <b>Connector</b>   | <b>Crimped connection</b>  |
| A component which terminates conductors for the purpose of providing connection and disconnection to a suitable mating component which shall not be engaged or disengaged when live. Depending on the fastening to a cabinet, panel, rack etc. or a cable, they are classified as fixed or free connectors. A connector comprises one or more contacts and a housing which may have a separate connector insert and a separate outer housing or shell. | A solderless connection made by crimping. IEC 60352-2 / DIN IEC 60352 Part 2.  |
| <b>Connector housing</b>   | <b>Derating curve</b>  |
| The part of a connector into which the insert and the contacts are assembled. It may function as part of the locking mechanism.  | The method for determining derating is specified in IEC 60 512-3. Here the combination of ambient temperature ( $T_u$ ) and the current ( $I$ ) leading to the same maximum allowable temperature ( $T_b$ ) at the hottest point of the connector are plotted.   |
| <b>Connector insert</b>  | <b>DIN</b>   |
| An insulating element designed to support and position contacts in a connector housing. In connectors electromagnetic interference is prevented by shielding. Shielded connectors normally provide means to connect the screens of attached cables.  | Deutsches Institut für Normung. A German standards organization.   |
|  | <b>Electromagnetic interference (EMI)</b>  |
|  | General term describing the undesirable effects of the immission or emission of radio frequency fields.  |
|  | <b>Funnel entry (restricted entry C146 D series)</b>   |
|  | Flared or widened entrance to a conductor barrel permitting easier insertion of the conductor.   |
|  | <b>Insertion or withdrawal force</b>   |
|  | The force required to fully insert or withdraw a set of mated connectors without the effect of coupling, locking or similar devices. The insertion force is usually greater than the withdrawal force.   |

# Appendix

## Connector Glossary

|  |  |
|--|--|
| <b>Insulation grip</b>   | <b>Wire range</b>  |
| The area of a crimp contact that has been reshaped around the insulation of the conductor by compression during the crimping operation.  | The range of wire cross sections which is compatible with the dimensions the terminals of the contact (wire barrel). The wire range is expressed in mm <sup>2</sup> or in AWG numbers. |
| <b>Insulation resistance</b>   |  |
| The resistance of the insulation between two conductive elements, in particular, the resistance between two contacts or between a contact and a metallic housing or shield. Tested according to test 3a of IEC 60512-2 / DIN IEC 60512 Part 2.   |  |
| <b>Intermateable</b>   |  |
| Two connectors are intermateable when they are capable of being connected electrically and mechanically but without regard to their performance and intermountability.   |  |
| <b>Locator</b>   |  |
| In a crimping tool the device used for positioning a crimp contact or terminal end.  |  |
| <b>Mating cycle</b>  |  |
| One mating cycle comprises one insertion and one withdrawal operation. Term used in the definition of connector life.  |  |
| <b>Material group</b>  |  |
| Classification of insulation materials according to their CTI values (CTI = Comparative Tracking Index)  |  |
| <b>Overvoltage category</b>  |  |
| A numeral defining a transient overvoltage condition. Overvoltage categories I, II, III and IV are used.   |  |
| <b>Connector with braking capacity (CBC)</b>   |  |
| A component which may be engaged or disengaged in normal use, when live or under load. Note: In the sense of this document the term - live- is used if contacts are under voltage not necessarily with a current flowing across the contacts. The term - load - is used if a current is flowing across the contacts. |  |
| <b>Rated current</b>   |  |
| A current value assigned by the manufacturer which the connector or PSD can carry continuously (without interruption) and simultaneously through all its contacts wired with the largest conductor preferably at an ambient temperature of 40 °C without the upper temperature being exceeded.                       |  |
| <b>Shield, shielding</b>   |  |
| Shielding of internal or external electric fields by means of a plane with a uniform electric potential, formed by metal shells or metallic layers on the inside or outside of plastic shells. The shield is normally connected to the shielding braid of the cable and/or chassis ground.                           |  |



# Appendix

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