



# AHD AHD Series™

## Circular Thermoplastic Connectors for Diagnostic Applications

Available in 6 and 9 Position

Amphenol Sine Systems **AHD Series™ Connectors** were developed in response to the overwhelming need for an economic alternative to today's existing diagnostic product options. Designed specifically as a cost-conscious, reliable alternative, intermateable to industry standard 6 and 9 pin connectors, the AHD Series™ is ideal for any situation where either controlled and/or uncontrolled environmental conditions exist. Amphenol Sine Systems AHD Series™ Connectors offer a smooth, non-sealing option for controlled applications, an environmentally-sealed, threaded option for more demanding applications, as well as J1939 Type 1 (Black Body) and Type 2 (Green Body) options.

**What is J1939?** J1939 has become the accepted industry standard and the choice for vehicle diagnostic and data communication for commercial heavy-duty, off-highway, truck, bus, marine propulsion, power generation, industrial pumping, construction, and material handling machines. J1939 is a higher-layer protocol based on Controller Area Network (CAN). Adopted widely by the diesel engine industry, it provides diagnostic data such as vehicle engine speed, temperature, oil temperature, exhaust emissions, and other customizable options.

AHD Series™ - Specifications (Reference Individual Datasheets)

|                                |                                                                                                              |
|--------------------------------|--------------------------------------------------------------------------------------------------------------|
| IP Rating (in mated condition) | IP67                                                                                                         |
| Max. Current (Amperage)        | 13A-25A                                                                                                      |
| Max. Voltage Rating            | 250V                                                                                                         |
| Operating Temperature          | -55°C to +125°C                                                                                              |
| Coupling System                | Coupling Ring                                                                                                |
| Housing Body                   | Thermoplastic UL94-VO                                                                                        |
| Contact Types                  | Stamped & Formed, Machined                                                                                   |
| Contact Termination            | Crimp                                                                                                        |
| Contact Material               | Copper Alloy/Gold-Plated                                                                                     |
| Wire Range                     | 10-20AWG (See datasheets)                                                                                    |
| Sealing Material               | Silicone Rubber                                                                                              |
| Min. Mating Cycles             | >500                                                                                                         |
| Contact Current Rating         | At +125°C, continuous, less thru wire: #12 contact = 25A max. current; #16 contact = 13A max. current        |
| Physical Shock                 | No locking, unmating or other unsatisfactory result after 50 g's in each of 3 mutually perpendicular planes. |
| Dielectrical Strength          | 1500 volts minimum                                                                                           |
| Vibration                      | Maintains continuity and exhibits no mechanical or physical damage after vibration. (20 g's at 10-2000 Hz)   |
| Durability                     | No electric or mechanical defects after 100 cycles of engagement and disengagement.                          |
| Corrosion Resistance           | No evidence of corrosion after exposure to 48 hrs of salt spray per MIL-STD 1344 method 1001                 |



## What Are The Differences Between J1939 Type 1 and 2?

| Type 1 (Black Body) | Pin | Type 2 (Green Body)    |
|---------------------|-----|------------------------|
| Ground              | A   | Ground                 |
| Battery             | B   | Battery                |
| J1939 + 250kb       | C   | J1939 + 500kb          |
| J1939 - 250kb       | D   | J1939 - 500kb          |
| J1939 Shield        | E   | J1939 Shield           |
| J1708+              | F   | J1708+ / J1939 + 250kb |
| J1708-              | G   | J1708- / J1939 - 250kb |
| OEM Specific        | H   | OEM Specific           |
| OEM Specific        | J   | OEM Specific           |



**A Series™ Family**



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

AHD Series™ - Plugs

**Note:** Refer to individual datasheets on [www.amphenol-sine.com](http://www.amphenol-sine.com) for full specs, faceviews, keying location and product dimensions.

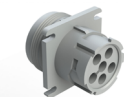
| Image                                                                            | Part Number     | Description                                                                                                                                                         | Contact Size | Amp | Type |
|----------------------------------------------------------------------------------|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-----|------|
|  | AHD16-6-12SB010 | 6 Position, Plug, Socket, Contact Size 12, 25A, AHD Series™, Coupling Ring, Silicone Rubber Seal (Red), Standard Diameter Rear Seal (Red), Threaded Rear, Grey Body | 12           | 25A | -    |
|  | AHD16-6-12S     | 6 Position, Plug, Socket, Contact Size 12, 25A, AHD Series™, Standard Diameter Rear Seal (Red), Threaded Rear, Grey Body                                            | 12           | 25A | -    |
|  | AHD16-9-96S     | 9 Position, Plug, Socket, Contact Size 16, 13A, AHD Series™, Coupling Ring, Silicone Rubber Seal (Red), Standard Diameter Rear Seal (Red), Threaded Rear, Grey Body | 16           | 13A | -    |
|  | AHD16-9-96SE    | 9 Position, Plug, Socket, Contact Size 16, 13A, AHD Series™, Coupling Ring, Silicone Rubber Seal (Red), Standard Diameter Rear Seal (Red), Threaded Rear, Grey Body | 16           | 13A | -    |

|                                                                                     |                |                                                                                                                                                                                     |    |     |              |
|-------------------------------------------------------------------------------------|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|-----|--------------|
|    | AHD16-9-1939S  | 9 Position, Plug, Socket, Contact Size 16, 13A, AHD Series™, J1939 Type 1, Coupling Ring, Silicone Rubber Seal (Red), Standard Diameter Rear Seal (Red), Threaded Rear, Black Body  | 16 | 13A | J1939 Type 1 |
|   | AHD16-9-1939SE | 9 Position, Plug, Socket, Contact Size 16, 13A, AHD Series™, J1939 Type 1, Coupling Ring, Silicone Rubber Seal (Red), Reduced Diameter Rear Seal (Green), Threaded Rear, Black Body | 16 | 13A | J1939 Type 1 |
|  | AHD17-9-1939S  | 9 Position, Plug, Socket, Contact Size 16, 13A, AHD Series™, J1939 Type 1, Standard Diameter Rear Seal (Red), Threaded Rear, Black Body                                             | 16 | 13A | J1939 Type 1 |
|  | AHD17-9-1939SE | 9 Position, Plug, Socket, Contact Size 16, 13A, AHD Series™, J1939 Type 1, Coupling Ring, Silicone Rubber Seal (Red), Reduced Diameter Rear Seal (Green), Threaded Rear, Black Body | 16 | 13A | J1939 Type 1 |

|                                                                                     |                 |                                                                                                                                                                                     |    |     |              |
|-------------------------------------------------------------------------------------|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|-----|--------------|
|  | AHD16-9-1939S80 | 9 Position, Plug, Socket, Contact Size 16, 13A, AHD Series™, J1939 Type 2, Coupling Ring, Silicone Rubber Seal (Red), Standard Diameter Rear Seal (Red), Threaded Rear, Green Body  | 16 | 13A | J1939 Type 2 |
|  | AHD16-9-1939S8R | 9 Position, Plug, Socket, Contact Size 16, 13A, AHD Series™, J1939 Type 2, Coupling Ring, Silicone Rubber Seal (Red), Reduced Diameter Rear Seal (Green), Threaded Rear, Green Body | 16 | 13A | J1939 Type 2 |
|  | AHD17-9-1939S80 | 9 Position, Plug, Socket, Contact Size 16, 13A, AHD Series™, J1939 Type 2, Standard Diameter Rear Seal (Red), Threaded Rear, Green Body                                             | 16 | 13A | J1939 Type 2 |
|  | AHD17-9-1939S8R | 9 Position, Plug, Socket, Contact Size 16, 13A, AHD Series™, J1939 Type 2, Reduced Diameter Rear Seal (Green), Threaded Rear, Green Body                                            | 16 | 13A | J1939 Type 2 |

## AHD Series™ - Receptacles

**Note:** Refer to individual datasheets on [www.amphenol-sine.com](http://www.amphenol-sine.com) for full specs, faceviews, keying location and product dimensions.

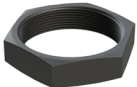
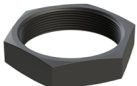
| Image                                                                              | Part Number         | Description                                                                                                                                                                                      | Contact Size | Amp | Type         |
|------------------------------------------------------------------------------------|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-----|--------------|
|    | AHD10-6-12P-L       | 6 Position, Square Flange Receptacle, Pin, Contact Size 12, 25A, AHD Series™, Silicone Rubber Seal (Red), Standard Diameter Rear Seal (Red), Threaded Rear, Grey Body                            | 12           | 25A | -            |
|    | AHD14-9-96P         | 9 Position, In-Line Receptacle, Pin, Contact Size 16, 13A, AHD Series™, Silicone Rubber Seal (Red), Standard Diameter Rear Seal (Red), Threaded Rear, Grey Body                                  | 16           | 13A | -            |
|    | AHD14-9-1939P       | 9 Position, In-Line Receptacle, Pin, Contact Size 16, 13A, AHD Series™, J1939 Type 1, Silicone Rubber Seal (Red), Standard Diameter Rear Seal (Red), Threaded Rear, Black Body                   | 16           | 13A | J1939 Type 1 |
|    | AHD10-9-96P         | 9 Position, Square Flange Receptacle, Pin, Contact Size 16, 13A, AHD Series™, Silicone Rubber Seal (Red), Standard Diameter Rear Seal (Red), Threaded Rear, Grey Body                            | 16           | 13A | -            |
|   | AHD10-9-96PE        | 9 Position, Square Flange Receptacle, Pin, Contact Size 16, 13A, AHD Series™, Silicone Rubber Seal (Red), Reduced Diameter Rear Seal (Green), Threaded Rear, Grey Body                           | 16           | 13A | -            |
|  | AHD10-9-1939P-B022  | 9 Position, Jam Nut Receptacle, Pin, Contact Size 16, 13A, AHD Series™, J1939 Type 1, Silicone Rubber Seal (Red), Standard Diameter Rear Seal (Red), Threaded Rear, Black Body                   | 16           | 13A | J1939 Type 1 |
|  | AHD10-9-1939PR-B022 | 9 Position, Jam Nut Receptacle, Pin, Contact Size 16, 13A, AHD Series™, J1939 Type 1, Silicone Rubber Seal (Red), Reduced Diameter Rear Seal (Green), Threaded Rear, Black Body                  | 16           | 13A | J1939 Type 1 |
|  | AHD17-9-1939PE      | 9 Position, Jam Nut Receptacle w Extended Shell, Pin, Contact Size 16, 13A, AHD Series™, J1939 Type 1, Silicone Rubber Seal (Red), Reduced Diameter Rear Seal (Green), Threaded Rear, Black Body | 16           | 13A | J1939 Type 1 |
|  | AHD17-9-1939PES     | 9 Position, Jam Nut Receptacle w Extended Shell, Pin, Contact Size 16, 13A, AHD Series™, J1939 Type 1, Silicone Rubber Seal (Red), Standard Diameter Rear Seal (Red), Threaded Rear, Black Body  | 16           | 13A | J1939 Type 1 |
|  | AHD10-9-1939P-BP80  | 9 Position, Jam Nut Receptacle, Pin, Contact Size 16, 13A, AHD Series™, J1939 Type 2, Silicone Rubber Seal (Red), Standard Diameter Rear Seal (Red), Threaded Rear, Green Body                   | 16           | 13A | J1939 Type 2 |
|  | AHD10-9-1939PR-BP80 | 9 Position, Jam Nut Receptacle, Pin, Contact Size 16, 13A, AHD Series™, J1939 Type 2, Silicone Rubber Seal (Red), Reduced Diameter Rear Seal (Green), Threaded Rear, Green Body                  | 16           | 13A | J1939 Type 2 |

| Image                                                                              | Part Number         | Description                                                                                                                                                                                     | Contact Size | Amp | Type         |
|------------------------------------------------------------------------------------|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-----|--------------|
|   | AHD17-9-1939PES80   | 9 Position, Jam Nut Receptacle w Extended Shell, Pin, Contact Size 16, 13A, AHD Series™, J1939 Type 2, Silicone Rubber Seal (Red), Standard Diameter Rear Seal (Red), Threaded Rear, Green Body | 16           | 13A | J1939 Type 2 |
|    | AHD10-9-1939P       | 9 Position, Square Flange Receptacle, Pin, Contact Size 16, 13A, AHD Series™, J1939 Type 1, Silicone Rubber Seal (Red), Standard Diameter Rear Seal (Red), Threaded Rear, Black Body            | 16           | 13A | J1939 Type 1 |
|    | AHD10-9-1939PE      | 9 Position, Square Flange Receptacle, Pin, Contact Size 16, 13A, AHD Series™, J1939 Type 1, Silicone Rubber Seal (Red), Reduced Diameter Rear Seal (Green), Threaded Rear, Black Body           | 16           | 13A | J1939 Type 1 |
|    | AHD10-9-1939PNR     | 9 Position, Square Flange Receptacle, Pin, Contact Size 16, 13A, AHD Series™, J1939 Type 1, Silicone Rubber Seal (Red), Without Rear Seal, Threaded Rear, Black Body                            | 16           | 13A | J1939 Type 1 |
|    | AHD10-9-1939P80     | 9 Position, Square Flange Receptacle, Pin, Contact Size 16, 13A, AHD Series™, J1939 Type 2, Silicone Rubber Seal (Red), Standard Diameter Rear Seal (Red), Threaded Rear, Green Body            | 16           | 13A | J1939 Type 2 |
|   | AHD10-9-1939P8R     | 9 Position, Square Flange Receptacle, Pin, Contact Size 16, 13A, AHD Series™, J1939 Type 2, Silicone Rubber Seal (Red), Reduced Diameter Rear Seal (Green), Threaded Rear, Green Body           | 16           | 13A | J1939 Type 2 |
|  | AHD10-9-1939PR-P080 | 9 Position, Square Flange Receptacle, Pin, Contact Size 16, 13A, AHD Series™, J1939 Type 2, Silicone Rubber Seal (Red), Reduced Diameter Rear Seal (Green), Threaded Rear, Green Body           | 16           | 13A | J1939 Type 2 |

## AHD Series™ - Accessories

**Note:** Refer to individual datasheets on [www.amphenol-sine.com](http://www.amphenol-sine.com) for full specs, faceviews, keying location and product dimensions.

| Image                                                                               | Part Number | Description                                                                       |
|-------------------------------------------------------------------------------------|-------------|-----------------------------------------------------------------------------------|
|  | AHDC-16-6   | 6 Position, Receptacle Cap, AHD Series™, Thermoplastic, Grey Body                 |
|  | AHD18-006   | 6 Position, Strain Relief w Ty-Wrap, AHD Series™, Thermoplastic/Rubber, Grey Body |

|                                                                                    |                |                                                                                                        |
|------------------------------------------------------------------------------------|----------------|--------------------------------------------------------------------------------------------------------|
|  | AHD17-PN01     | 9 Position, Jam Mount Receptacle Nut, For PE/PES Only, AHD Series™, Thermoplastic, Black Body          |
|  | AHD17-PN01-GRN | 9 Position, Jam Mount Receptacle Nut, For PES80 Only, AHD Series™, Thermoplastic, Green Body           |
|  | AHDP18-PN01    | 9 Position, Jam Mount Receptacle Nut, For -BP80 and -B022 Only, AHD Series™, Thermoplastic, Black Body |

| Image                                                                               | Part Number      | Description                                                                              |
|-------------------------------------------------------------------------------------|------------------|------------------------------------------------------------------------------------------|
|    | AHDC-16-9        | 9 Position, Receptacle Cap, AHD Series™, Thermoplastic, Grey Body                        |
|    | AHDC-16-9-BLK    | 9 Position, Receptacle Cap, AHD Series™, Thermoplastic, Black Body                       |
|    | AHDC-16-9-OBDBK  | 9 Position, Receptacle Cap (OBD), AHD Series™, Thermoplastic, Black Body                 |
|    | AHDC-16-9-OBDBGN | 9 Position, Receptacle Cap (OBD), AHD Series™, Thermoplastic, Green Body                 |
|     | AHDC169-T        | 9 Position, Receptacle Cap w Rubber Tether, AHD Series™, Thermoplastic, Grey Body        |
|     | AHDC169-T-BLK    | 9 Position, Receptacle Cap w Rubber Tether, AHD Series™, Thermoplastic, Black Body       |
|   | AHDC169-TM       | 9 Position, Receptacle Cap w Metal Tether, AHD Series™, Thermoplastic, Grey Body         |
|   | AHDC169-TMBLK    | 9 Position, Receptacle Cap w Metal Tether, AHD Series™, Thermoplastic, Black Body        |
|   | AHDC169-TMOBDBK  | 9 Position, Receptacle Cap (OBD) w Metal Tether, AHD Series™, Thermoplastic, Black Body  |
|   | AHDC169-TMOBDGN  | 9 Position, Receptacle Cap (OBD) w Metal Tether, AHD Series™, Thermoplastic, Green Body  |
|   | AHDC169-T-OBDBK  | 9 Position, Receptacle Cap (OBD) w Rubber Tether, AHD Series™, Thermoplastic, Black Body |
|   | AHDC169-T-OBDBGN | 9 Position, Receptacle Cap (OBD) w Rubber Tether, AHD Series™, Thermoplastic, Green Body |
|  | AHD18-009        | 9 Position, Strain Relief w Ty-Wrap, AHD Series™, Thermoplastic/Rubber, Grey Body        |

| Image                                                                            | Part Number | Description                                         |
|----------------------------------------------------------------------------------|-------------|-----------------------------------------------------|
|  | AHDC-09T    | 9 Position, Tether, AHD Series™, Rubber, Black Body |

AHD Series™ - Contacts  
**Note:** Refer to individual part number datasheets found at [www.amphenol-sine.com](http://www.amphenol-sine.com) or our [A Series Contacts Flyer](#).