

What are AHD Series™ Connectors?

Amphenol Sine Systems AHD Series™ Connectors were developed in response to the overwhelming need for an economic alternative to today's existing diagnostic product options. Designed specifically as a cost-conscious, reliable alternative, intermateable to industry standard 6 and 9 pin connectors, the AHD Series™ is ideal for any situation where either controlled and/or uncontrolled environmental conditions exist.

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

Feature	Advantage
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

Performance Criteria	
PHYSICAL SHOCK	Military Style: No locking, unmating or other unsatisfactory result after 50 g's in each of three mutually perpendicular planes.
DIELECTRICAL STRENGTH	DiagnosticGrade™ / Military Style: 1500 volts minimum
VIBRATION	Military Style: Maintains continuity and exhibits no mechanical or physical damage after vibration. (20 g's at 10-2000 Hz)
TEMPERATURE	DiagnosticGrade™ / Military Style: Operating temperature range: -55°C TO +125°C at rated current.
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.
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™ Specifications

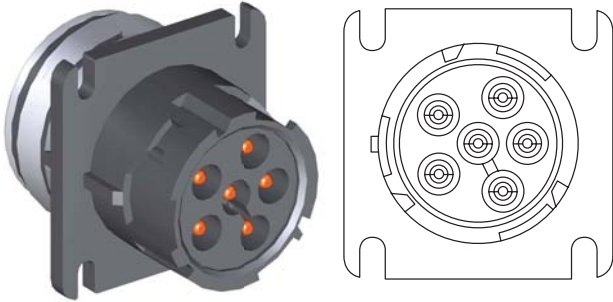
AHD Series™ 6 Pin Receptacles, Plugs and Caps

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

RECEPTACLE - Military Style

P/N: AHD10-6-12P-L

6 POSITION



SMOOTH SHELL PLUG - DiagnosticGrade™

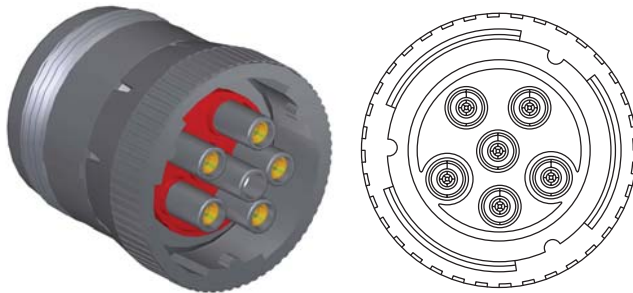
P/N: AHD16-6-12S (available w/out Rear Seal)



LOCKING RING PLUG - Military Style

P/N: AHD16-6-12S-B010

6 POSITION



RECEPTACLE CAP - Military Style

P/N: AHDC-16-6



AHD Series™ 9 Pin Receptacles and Plugs (J1939)

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

RECEPTACLE - Military Style

P/N: AHD10-9-1939P

9 POSITION



SMOOTH SHELL PLUG - DiagnosticGrade™

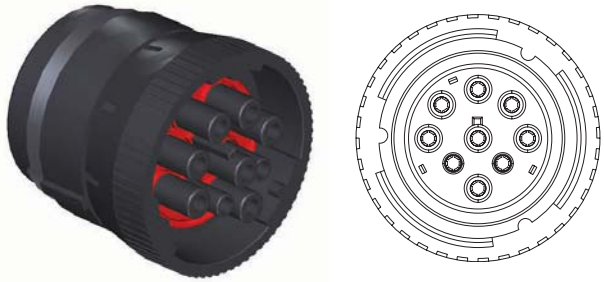
P/N: AHD17-9-1939S (available w/out Rear Seal)



LOCKING RING PLUG - Military Style

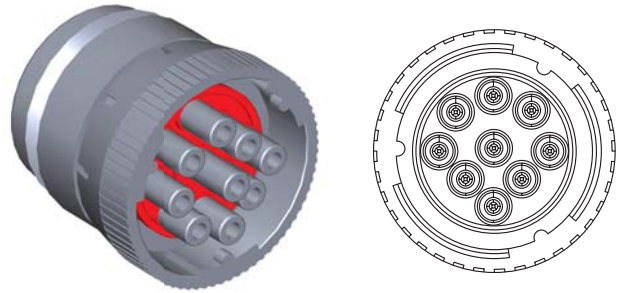
P/N: AHD16-9-1939S

9 POSITION



LOCKING RING PLUG (Non J1939) - Military Style

P/N: AHD16-9-96S



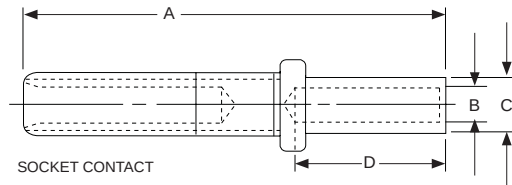
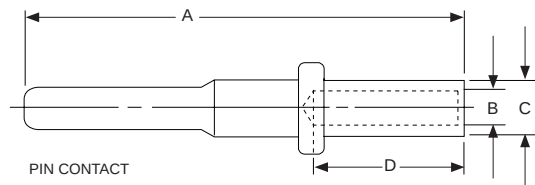
AHD Series™

Pin Contacts, Socket Contacts and Tooling

All measurements in Inches

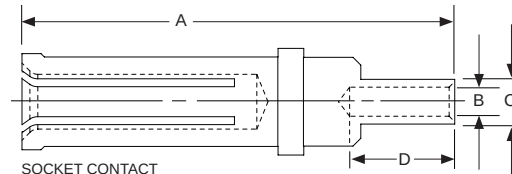
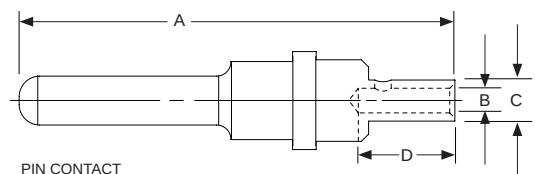
Listed below are quick-reference illustrations for both Military-style and DiagnosticGrade™ crimp options, as well as the Amphenol Sine Systems part numbers.

Military-Style Solid Crimp



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

DiagnosticGrade™ - Solid Crimp



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

Universal Hand Crimp Tool - Part Numbers

P/N: CA-5D12



Pin Contacts, Socket Contacts and Tooling

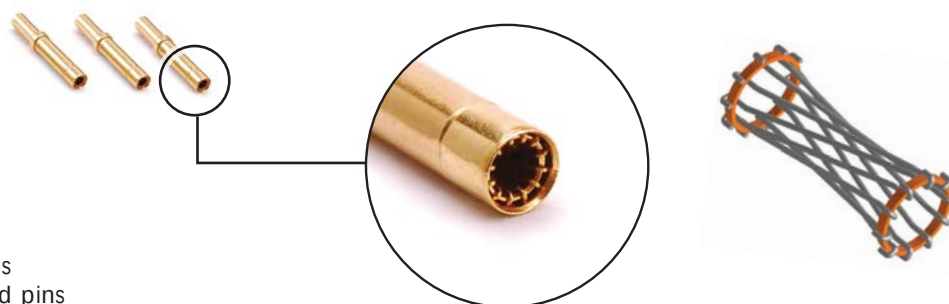
All measurements in Inches

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

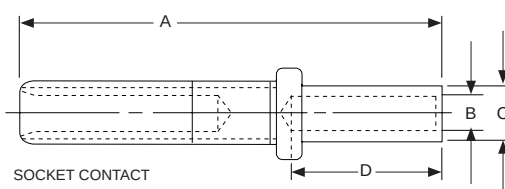


Hyperbolic Contacts

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

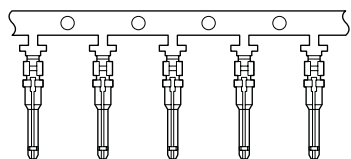


RockSolid™ Gold Contacts

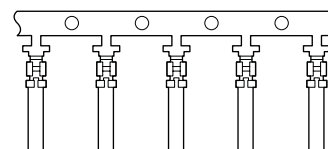


Part Numbers (Fits AT Series™ and AHD Series™)	Size/ Type	A Max	B Min	C Max	D Min	AWG Range	Recomm'd Strip Length
65-54942-14	16 SOC	.759	.073	.106	.250	14	.250-.312
65-54942-16	16 SOC	.759	.068	.103	.250	16	.250-.312
65-54942-20	16 SOC	.759	.048	.078	.172	20	.250-.312

Stamped and Formed - Size 16



PINS



SOCKETS

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

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

Crimp Die (Stamped & Formed Contacts)

P/N: MFX 3950



Sealing Plug (Size 16)

P/N: A114017



AT and AHD Series™ Accessories