

Amphenol®



AT Circular Connector Series

The Amphenol Industrial Operations' AT Circular Series is a robust, environmentally sealed connector solution designed for heavy-duty applications in construction, agriculture, trucking, industrial controls, and transportation.

These connectors feature a thermoplastic shell with a reverse bayonet coupling mechanism for quick and secure mating. Available in jam nut (no screws required) and square flange mounting styles, the series offers easy installation with optional strain relief for enhanced durability. Additionally, an optional cap and lanyard are available to protect the connectors when not in use, ensuring long-term performance in harsh environments. The 9-pin black receptacle aligns with the J1939 diagnostic connector interface, ensuring compatibility with vehicle data communication systems.

Utilizing AT contact technology, these connectors incorporate machined contacts with Nickel or Gold plating, delivering superior conductivity and long-term performance. The series is RoHS compliant, designed to withstand harsh environments by sealing against moisture and contaminants, while the contact retention system increases reliability and reduces installation costs.

With multiple layout configurations (available in 3, 5, 6, and 9 contacts) the AT Circular Series provides a durable and cost-effective interconnect solution for demanding applications.

Features:

- Jam Nut and Square Flange Mounting Solutions
- Quick Mating and Unmating - Reverse Bayonet Coupling
- Environmentally Sealed - Sealed against moisture and contaminants
- Contact retention system which decreases installation costs and increases reliability
- Strain relief option for enhanced durability
- Optional cap and lanyard for additional protection
- Meets J1939 specification for vehicle data communication
- Heavy-duty thermoplastic shell designed for rugged environments
- Available in 3, 5, 6, and 9 contact layouts
- Ideal for heavy equipment, industrial controls, transportation, marine, and energy applications
- RoHS Compliant Product

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Electrical Specifications based on AT Machined Contacts

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

Material Specification

Receptacle Square Flange	Thermoplastic
Grommet seal	Neoprene Rubber: 3, 5 and 6 pin Silicone Rubber: 9 pin
Contact (AT Series)	Copper Alloy (Nickel and Gold plating available)

How to Order Contacts and Accessories

PN	Contact Description
AT0-202-16141	Machined size 16 Pin Contact, nickel plating
AT2-201-16141	Machined size 16 Socket Contact, nickel plating
AT0-202-1631	Machined size 16 Socket Contact, gold plating
AT2-201-1631	Machined size 16 Socket Contact, gold plating

Part Number	Accessory 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



Mechanical Specifications

Operating Temperature Range	-55°C to +125°C
Durability(Mating Cycle)	No electrical or mechanical defects after 100 cycles of engagement or disengagement
Corrosion Resistance	Connectors show no evidence of corrosion after exposure to 48 hours of salt spray per MIL STD 1344 Method 1001
Moisture Resistance	Water does not penetrate seals when submerged in 3 feet of water
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 50g's in each of three mutually perpendicular planes. No electrical discontinuities longer than 1 microsecond. MIL STD 202, Method 213, Condition "C".

How to Order Contact and Accesories

1	2	3	4	5	
ATC	10	9-1939	P	N	
Product Line	Shell Style		Shell Size and Insert Arrangements	Contacts	Wire Size
	09	Small Flange Jam Nut Receptacle (includes jam nut)	3, 5, 6, 9-1939	P for Pin (Only for Receptacle)	N for Ø 0.051 inch
	10	Square Flange Receptacle		S for Socket (Only for Plug)	E for Ø 0.035 inch
	11	Round Nut Receptacle			
	16	Plug			
	17	Jam Nut Receptacle (excludes jam nut)			

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