



### AT Circular Series

#### BACKGROUND

The Amphenol Industrial Operations' (AIO) AT Circular Series has been a trusted solution in the industrial and transportation markets for years. This robust line of thermoplastic receptacles features Amphenol's proven AT contact technology, designed to excel in demanding environments such as construction, agricultural machinery, and heavy-duty trucking. The AT Circular Series incorporates a durable molded thermoplastic housing, a positive reverse bayonet retention system, and redundant grommet wire sealing to ensure reliable performance. With its square-flange design allowing seamless integration into existing panel layouts and its jam nut version simplifying installation, the series has established itself as a dependable solution for a range of applications. Additionally, the 9-pin black receptacles conform to the J1939 diagnostic connector interface, ensuring compatibility with industry standards.

#### PROBLEM

Industrial and transportation environments demand connection systems capable of withstanding extreme conditions, including temperature fluctuations, high vibration, and exposure to corrosive elements. Conventional connection solutions often fail to perform reliably under such stresses, leading to costly downtime and maintenance. Ensuring compatibility with existing systems while maintaining high electrical performance and durability poses an ongoing challenge in these harsh applications. A connection solution that delivers consistent reliability, robust performance, and ease of integration is essential to meet these requirements.

#### AIO SOLUTION

The AT Circular Series provides a cost-effective and proven solution for harsh environments, including trucking, mining machinery, and agricultural equipment. Designed for versatility, the series is available in multiple configurations, including 3, 5, 6, and 9-pin insert arrangements, to accommodate various application requirements. These connectors operate efficiently across a wide temperature range from -55°C to +125°C, ensuring reliable performance in extreme conditions. With a dielectric strength of up to 1500 volts and a current capacity of 13 amps, the series consistently delivers exceptional electrical performance. Its rugged design ensures resistance to vibration forces up to 20g and corrosion-free operation after 48 hours of salt spray exposure, as verified by MIL-STD-1344 Method 1001. The AT Circular Series has consistently demonstrated its reliability and durability in the most demanding industrial and transportation applications.