ALUMINUM GTMS

INTERCONNECTS & DIRECT ALUMINUM SEALING

HSC HERMETIC SEAL™ / SEALTRON™

AMETEK ENGINEERED INTERCONNECT AND PACKAGING

Best service and quality for our customers

Aluminum-based hermetically sealed interconnect solutions offer a unique choice for military, defense and harsh environment applications due to their durability, reliability, and performance. These solutions are designed to protect critical electronic components from extreme temperatures, humidity and high pressures.

Aluminum is an excellent material choice for hermetically sealed connectors due to its unique properties. It is lightweight, strong, and offers excellent thermal conductivity and resistance to corrosion, making it ideal for use in harsh environments.

Hermetic circular connectors

Our hermetically sealed connectors are essential for ensuring the success of critical missions and operations. They are commonly used in communication systems, missile guidance and control systems, and other defense applications, where performance and reliability are crucial.

As military and defense organizations continue to rely on advanced technologies to meet their evolving needs, our hermetic solutions continue to play a critical role in ensuring the success and safety of mission critical operations. AMETEK Engineered Interconnect & Packaging (EIP) solutions offer the highest levels of performance, reliability, and security available in the industry today, making them a valuable asset to any harsh environment application.



Key applications

- Aircraft
- eVTOL
- UAV/UAS
- Satellites
- Performance automotive





MIL-DTL-38999 Black Zinc Nickel plated aluminum GTMS

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Why use AMETEK's Aluminum Interconnect?

The following are the product differentiators:

- Light weight shells – 65% of standard connector materials
- Robust resistance to corrosion with several available coatings
- Leak rate up to 1 x 10^{-10} cc/sec He @ 1 atm
- Matched seal is more resistant to thermal cycling
- Configurations to MIL-DTL-5015, MIL-DTL-24308, MIL-DTL-26500, MIL-DTL-38999, MIL-DTL-83723
- Special designs available

Contact us to discuss additional superior electrical properties of this solution

Material	Current (Amps)			
	SIZE 20	SIZE 16	SIZE 12	SIZE 8
Copper Alloy*	7.5	13.0	23.0	46.0
Nickel Iron	5.0	10.0	17.0	24.0
Kovar	2.3	3.9	6.9	13.8
Inconel	1.7	3.0	5.3	10.6

* Copper alloy pins used in aluminum hermetic connectors offer high conductivity and allow for overall size reduction.

Performance Parameters	AMETEK	(MIL-DTL-38999)
Hermeticity (cc He/Sec)	Up to 1 x 10^{-10}	1 x 10^{-7}
Thermal Cycle	-65°C to 200°C (Tested per MIL STD 202, Method 107, Cond C)	-65°C - 200°C
Insulation Resistance	> 5 Giga-Ohms @ 500 VDC	5 Giga-Ohms @ 500 VDC
DWV	> 1000 VAC: Depends on spacing	1000 VAC
Body Finish	Consult factory for available finishes	Ni Plated
Contact Finish	Ni / Au	Ni / Au

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HERMETIC SEAL

E: hermeticseal.info@ametek.com

T: +1 626 443 8931

www.hermeticseal.com

SEALTRON™

AMETEK ENGINEERED INTERCONNECT AND PACKAGING

SEALTRON

E: sealtron.info@ametek.com

T: +1 513 733 8400

www.sealtron.com

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