

MagnaMate™ Family Overview

The **MagnaMate™ ATHP Series** is a rugged thermoplastic power connector series featuring the surety and high performance contact technology of RADSOK®. Designed for various "xEV" applications, **MagnaMate™** is IP67 and available in single or two-pole housings with rated current from 20A to 180A. **MagnaMate™** includes optional integrated HVIL safety features and EMI shielding protection which can withstand temperatures ranging from -40°C to +130°C.

IP67

MagnaMate™ ATHP



MagnaMate™ ATHP Standard is designed to withstand the extreme conditions of the trucking, agricultural, mining, construction, and marine industries, and features Amphenol's advanced RADSOK® contact technology.

Potential Applications: Inverters, Power Electric Box, Junction Box, xEV Battery

MagnaMate™ ATHP Mini



MagnaMate™ ATHP Mini is a compact, low-profile two pole thermoplastic power connector which features four (4) keying options for multi polarization. Designed to withstand the extreme conditions of the trucking, agricultural, mining, construction, and marine industries.

Potential Applications: Power Converters, Hybrid Electric Vehicles, Heavy Equipment Electrification, 2 and 3-Phase Motors, Starter Generators, Process Control/Automation

MagnaMate™ ATHP QL



MagnaMate™ QL ATHP (Quick Lok) connectors compact form factor deliver loads of 130A or 180A for cable outer diameters up to 15.2mm. The definitive front latch design allows for multiple angles of connector engagement providing ease of mating in blind mate or confined spaces achieving IP67 ingress protection. The MagnaMate™ QL ATHP high-voltage connector system is easy to assemble, cost effective and was developed for use in ancillary units such as air-conditioning, electrical heating systems, or AC/DC converters, and for battery charging applications. **QL (Quick Lok) is available in both Black and Orange housings.**

Potential Applications: Electrical Air Condition, Battery Charger, Electrical Heater

ASeries™ Family



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

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Individual MagnaMate™ Series Comparison Chart

Series	MagnaMate™ ATHP		MagnaMate™ ATHP Mini			MagnaMate™ ATHP QL	
Image							
Sample Part Numbers	ATHP042P08EL16	ATHP062S08EL16	ATHP042P25EL		ATHP062S25EL	ATHP041P08NN	ATHP061RS08NN
Positions	2		2			1	
Current Rating	180A		20A	25A	35A	130A	180A
Wire Range/mm2	50mm 2		2.5mm2	4.0mm2	6.0mm2	35mm2	50mm2
Cable OD Range	15.5-16.5mm		4.8-5.8mm & 6.5-7.5mm			10.7-11.7mm	14.2-15.2mm
Operating Voltage	1000V AC/DC						
Contact Resistance	<0.3mΩ		<2.0mΩ			<0.3 mΩ	
HVIL	Optional		Optional			N/A	
EMC Shielding	Available					N/A	
Housing	Thermoplastic UL94 VO						
IP Rating	IP67 mated						
48 HR Salt Spray Test	Passed						
Keying Options	N/A		A, B, C, D			Black, Orange	
Temperture Range	-40°C to + 130°C					-55°C to + 125°C	
Mating Cycles	100 Cycles					50 Cycles	
Seal Material	Silicone Rubber						
Contact Material	Copper Alloy/Various Plating Options Available						
Thermal Cycle	No cracking, chipping or leaking after 20 test cycles from:						
	-40°C to +130°C		-40°C to +130°C			-55°C to + 125°C	
Vibration	No unlocking or unmating. Exhibits no mechanical or physical damage after sinusoidal vibration levels of 20G's at 10 to 2000 Hz in each of the three mutually perpendicular planes. No electrical discontinuities longer than 1 microsecond.						
Fluid Resistence	Connectors show no damage when exposed to most fluids used in industrial application.						

RADSOK®



- Socket cylinder within female contact has several equally spaced longitudinal beams twisted into a hyperbolic shape
- As a male pin is inserted, axial members in the female half deflect, imparting high current flow across the connection with minimal voltage loss
- The hyperbolic, stamped grid configuration ensures a large, coaxial, face-to-face surface area engagement
- Ideal for crimp termination applications requiring repeated mating cycles and high current with a low multi-volt drop

For more information, contact: Customer Service, +1 800 394 7732, csr@amphenol-sine.com

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