BL BoardLock™ Family

Available in AT, ATHD, ATM and ATP Versions

Amphenol Sine Systems' **BoardLock™ Family** combines flanged or flangeless, 180° straight or 90° right angle pin-oriented, wire-to-board versatility with the proven reliability of the A Series™ environmentally-sealed thermoplastic connection system with a maximum current rating up to 100A. Featuring a compact, durable, low-profile and lightweight design, perfect for power or data signal applications. All **BoardLock™** product lines accept A Series™ components and are compatible with other industry standard mating connectors.

Potential Applications

Power & Signal Connectivity, Data Acquisition, HVAC Systems, Farming Implementation, Boating, Sealed Environments, Heavy Equipment, Transportation, Industrial, Off-Road and Harsh Environments

IP67 IP68 IP69K

Features

- Flanged or Flangeless
- 180° Straight or 90° Right Angle Pin Orientation
- Snap Lock or Screw Boss Mounting
- Potted or Unpotted

BoardLock™ Family Specifications Overview

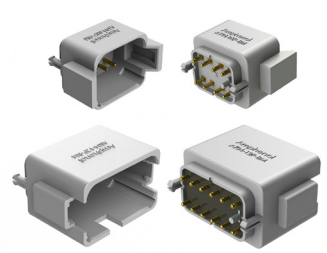
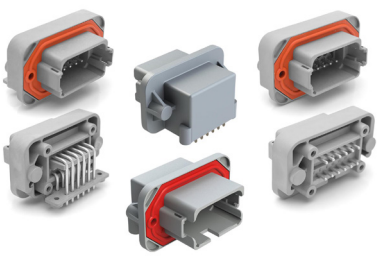
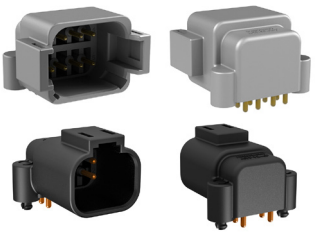
Positions	1, 2, 3, 4, 6, 8, 12, and 13 (See individual series)
Current Rating	7.5A to 100A (See individual series)
Pin Orientation	180° Straight or 90° Right Angle
Mounting Type	Snap Lock or Screw Boss (See individual series)
Flange	Flange or Flangeless (See individual series)
Contact Material/Plating	Copper Alloy/Gold, Nickel or Tin Plating
Contact Milivolt Drop	See individual series
Contact Termination	Direct Solder
Contact Types	Machined, PC Tail
Housing Material	Thermoplastic
Insulation Resistance	1000 megohms minimum at 25°C
IP Rating	(AT, ATM) IP67 mated; (ATFHD) IP69K mated; (ATP) IP68 (1M in water for 24 hrs)
Keying Options	See individual series

Mating Cycles	100 Cycles
Operating Voltage	250 VDC
Seal Material	Silicone Rubber (See individual series)
Temperature Range	-55°C to +125°C at rated current
Shock	No latch disengagement or discontinuity shall be the result when subjected to 50 g's in each of three axis (X, Y & Z)
Thermal Shock	Subjected to 10 cycles at -55°C to +125°C with no cracking, chipping or other damage detri-mental to the normal operation of the connector
Vibration	Continued continuity without degradation to mechanical or physical attributes following vibration. (Max acceleration 20 g's at Sine sweep of 10-2000Hz)

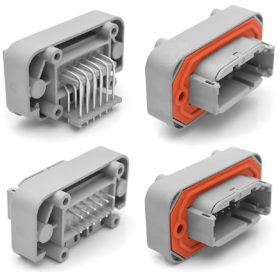
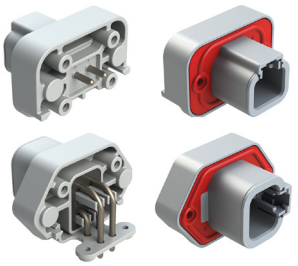
A ASeries™ Family

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

BoardLock™ Family Comparison Chart

Series	BL BoardLock™ AT	BL BoardLock™ AT13/15	BL BoardLock™ ATF13
Image			
Positions	2, 3, 4, 6, 8 and 12	2, 4, 6, 8, 12 and 13	2, 3, 4, 6, 8 and 12 13 (Mixed Power and Signal)
Current Rating	2, 3, 4, 6, 8. 12 pos: Size 16, 13A	2, 4, 6, 8. 12 pos: Size 16, 13A 13 pos: Size 16, 13A; Size 12, 25A	2, 3, 4, 6, 8. 12 pos: Size 16, 13A 13 pos: Size 16, 13A; Size 12, 25A
Pin Orientation	180° Straight	**AT13**: 90° Right Angle **AT15**: 180° Straight	90° Right Angle
Mounting Type	Snap Lock	Screw Boss	Snap Lock or Screw Boss
Flange	Flangeless	Flanged	Flangeless
Contact Material/Plating	Copper Alloy/Gold, Nickel Plating	Copper Alloy/Gold, Tin Plating	Copper Alloy/Gold, Tin Plating
Contact Milivolt Drop	100 mV drop max at 13A current	2, 4, 6, 8, 12 pos: 100mV drop max at 13A current 13 (11+2) pos: 100mV drop max at 13A/25A current	100 mV drop max at 13A current
Contact Termination	Direct Solder	Direct Solder	Direct Solder
Contact Types	Machined, PC Tail	Machined, PC Tail	Machined, PC Tail
Dielectric Value	Less than 2 milliamps current leakage @ 1500 volts AC	Less than 2 milliamps current leakage @ 1500 volts AC	Less than 2 milliamps current leakage @ 1500 volts AC
Housing Material	Thermoplastic	Thermoplastic	Thermoplastic
Insulation Resistance	1000 megohms minimum at 25°C	1000 megohms minimum at 25°C	1000 megohms minimum at 25°C
IP Rating	IP67 mated condition	IP67 mated condition	IP67 mated condition
Keying Options	Available in 8, 12 pos only	Available in 6, 8, 12 pos only	Available in 6, 8, 12 pos only
Mating Cycles	100 Cycles	100 Cycles	100 Cycles
Operating Voltage	250 VDC	250 VDC	250 VDC
Seal Material	n/a	Silicone Rubber	n/a
Temperature Range	-55°C to +125°C at rated current	-55°C to +125°C at rated current	-55°C to +125°C at rated current
Shock	No latch disengagement or discontinuity shall be the result when subjected to 50 g's in each of three axis (X, Y & Z)	No latch disengagement or discontinuity shall be the result when subjected to 50 g's in each of three axis (X, Y & Z)	No latch disengagement or discontinuity shall be the result when subjected to 50 g's in each of three axis (X, Y & Z)
Thermal Shock	Subjected to 10 cycles at -55°C to +125°C with no cracking, chipping or other damage detrimental to the normal operation of the connector	Subjected to 10 cycles at -55°C to +125°C with no cracking, chipping or other damage detrimental to the normal operation of the connector	Subjected to 10 cycles at -55°C to +125°C with no cracking, chipping or other damage detrimental to the normal operation of the connector
Vibration	Continued continuity without degradation to mechanical or physical attributes following vibration. (Max acceleration 20 g's at Sine sweep of 10-2000Hz)	Continued continuity without degradation to mechanical or physical attributes following vibration. (Max acceleration 20 g's at Sine sweep of 10-2000Hz)	Continued continuity without degradation to mechanical or physical attributes following vibration. (Max acceleration 20 g's at Sine sweep of 10-2000Hz)

BoardLock™ Family Comparison Chart

Series	BoardLock™ ATFHD	BoardLock™ ATM13/15	BoardLock™ ATP13/15
Image			
Positions	Single Pole	2, 3, 4, 6, 8, and 12	2 and 4
Current Rating	100A	7.5A	25A
Pin Orientation	90° Right Angle	**ATM13**: 90° Right Angle **ATM15**: 180° Straight	**ATP13**: 90° Right Angle **ATP15**: 180° Straight
Mounting Type	Screw Boss	Screw Boss	Screw Boss
Flange	Flangeless	Flanged	Flanged
Contact Material/Plating	Mating End: Gold or Nickel; PCB End: Tin	Copper Alloy/Gold, Tin Plating	Copper Alloy/Gold, Tin Plating
Contact Milivolt Drop	100 mV drop max at 100A current	100 mV drop max at 7.5A current	100 mV drop max at 25A current
Contact Termination	Direct Solder	Direct Solder	Direct Solder
Contact Types	Machined, PC Tail	Machined, PC Tail	Machined, PC Tail
Dielectric Value	Less than 2 milliamps current leakage @ 3000 volts AC	Less than 2 milliamps current leakage @ 1500 volts AC	Less than 2 milliamps current leakage @ 1500 volts AC
Housing Material	Thermoplastic	Thermoplastic	Thermoplastic
Insulation Resistance	1000 megohms minimum at 25°C	1000 megohms minimum at 25°C	1000 megohms minimum at 25°C
IP Rating	IP69K	IP67 mated condition	IP68 (1M in water for 24 hrs)
Keying Options	Not Applicable	Available in 8, 12 pos only	Not Applicable
Mating Cycles	100 Cycles	100 Cycles	100 Cycles
Operating Voltage	250 VDC	250 VDC	250 VDC
Seal Material	Silicone Rubber	Silicone Rubber	Silicone Rubber
Temperature Range	-55°C to +125°C at rated current	-55°C to +125°C at rated current	-55°C to +125°C at rated current
Shock	No latch disengagement or discontinuity shall be the result when subjected to 50 g's in each of three axis (X, Y & Z)	No latch disengagement or discontinuity shall be the result when subjected to 50 g's in each of three axis (X, Y & Z)	No latch disengagement or discontinuity shall be the result when subjected to 50 g's in each of three axis (X, Y & Z)
Thermal Shock	Subjected to 10 cycles at -55°C to +125°C with no cracking, chipping or other damage detrimental to the normal operation of the connector	Subjected to 10 cycles at -55°C to +125°C with no cracking, chipping or other damage detrimental to the normal operation of the connector	Subjected to 10 cycles at -55°C to +125°C with no cracking, chipping or other damage detrimental to the normal operation of the connector
Vibration	Continued continuity without degradation to mechanical or physical attributes following vibration. (Max acceleration 20 g's at Sine sweep of 10-2000Hz)	Continued continuity without degradation to mechanical or physical attributes following vibration. (Max acceleration 20 g's at Sine sweep of 10-2000Hz)	Continued continuity without degradation to mechanical or physical attributes following vibration. (Max acceleration 20 g's at Sine sweep of 10-2000Hz)

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