

Amphenol 2022



Amphenol Corporation

THE 2ND LARGEST INTERCONNECT COMPANY IN THE WORLD

- Amphenol Corporation was founded in 1932, Chicago. The 2nd largest interconnect company in the world, Head office is in Connecticut.
- > 1991 listed on NYSE. Because of its perfect performance, Feb 10th 2006 was named as "Amphenol Day".
- > More than 88,000 employees worldwide.
- > Total sales 2021: US\$10.9 billion





R. Adam Norwitt

President and Chief Executive Officer





Market Leader in Interconnect





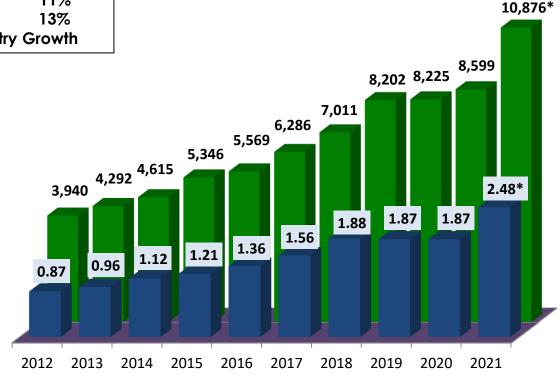


Excellent Record of Achievements

- Industry leading growth for over a decade
- Industry leading operating profit margins in all business cycles
- Strong cash flow generation
- Successful acquisition program in consolidating industry

Net Sales (\$ in millions)
Adjusted Diluted EPS (\$)⁽¹⁾ (2)





⁽¹⁾ Adjusted for stock split effective October 2021

⁽²⁾ Excluding one-time items
* New reocrd







High Performance Strategy



Technology Diversity Global Low Cost



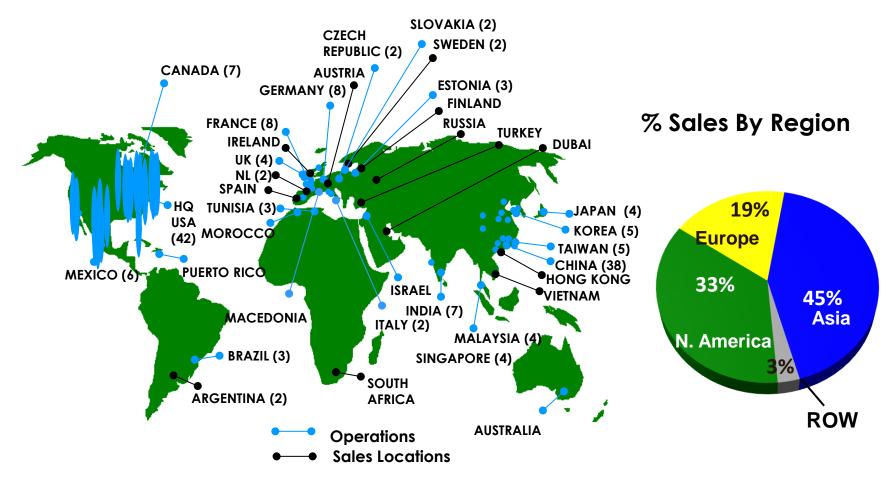








Expanding Global Presence



88,000+ Employees







MORE PRODUCT BETTER SERVICE GLOBAL CONNECTOR

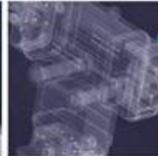












Allo CHINA - 2022

www.amphenol-sine.com.cn www.amphenol-cz.cn







AllO China

Amphenol International Industrial Operation includes three business units that are called as Sine, CATI and AAL.

Our products sold at home and abroad. They are widely used in industrial diagnostic, automotive, electric vehicle, overloaded connections, telecommunications, audio, military fields and so on.

- Gross area 10000 m²
- Area
- Production 5000 m²
- Warehouse 2000 m²
- Others (office etc.) 2000 m²
- Over 500+ employees







Workplace in Changzhou























Ecomate - RT360 Series

RT360 industrial circular connectors are designed to meet the requirements of MIL-C-26482 series military specification. Based on our superior build quality, high-performance capabilities, it has been developed to be completely compatible with all other existing standard products industry-wide. This series is a wide used connectors for the automotive, electric vehicles, robotics, military, welding industries and other demanding interconnect applications.

- Operating Temperature: -40° C to +105° C or -40° C to +125° C
- Suitable For Indoor and Outdoor Applications
- 500 Mating Cycles
- IP67&IP69K rated in mated condition
- Circular metal bayonet lock. Able to withstand extreme vibration and mechanical shock.
- Alternate keying positions available. Five positions (N, W, X, Y, Z)
- EMI/RMI shielding capability with appropriate backshell / Unshielded capability with plastic end cap
- UL1977. ROHS compliant







RT Series



- 8 shell sizes & 23 insert configurations
- With standard insert arrangements & mixed power and signal arrangements.
- 8 contact size, Rated Voltage 500V AC/DC, 45A, 10~12AWG
- 2.5mm contact size, Rated Voltage 500V AC/DC, 23A, 12~14AWG
- 16 contact size, Rated Voltage 500V AC/DC, 13A, 14~26AWG
- 20 contact size, Rated Voltage 250V AC/DC, 7.5A (machined),
 5A(stamped & formed), 20~30AWG







RTOW Series



- Mated with MIL-C-26482 series connector
- 5 shell sizes & 5 insert configurations
- High density arrangements from 6~32 contacts.
- 20 contact size, Rated voltage 250V AC/DC, Rated current
 7.5A(machined), 5A(stamped & formed), 20~30AWG



RTS Series

- 6 shell sizes
- With standard insert arrangements & mixed power and signal arrangements.
- 8 contact size, Rated voltage 500V AC/DC, Rated current 45A, 10~12AWG
- 2.5mm contact size, Rated voltage 500V AC/DC, Rated current 23A, 12~14AWG
- 16 contact size, Rated voltage 500V AC/DC, Rated current 13A, 14~26AWG
- 20 contact size, Rated voltage 250V AC/DC, Rated current
 7.5A(machined), 5A(stamped & formed), 20~30AWG





FLS Series



- 3 shell sizes
- With standard insert arrangements & mixed power and signal arrangements.
- 8 contact size, Rated voltage 500V AC/DC, Rated current 45A, 10~12AWG
- 2.5mm contact size, Rated voltage 500V AC/DC, Rated current 23A, 12~14AWG
- 16 contact size, Rated voltage 500V AC/DC, Rated current
 13A, 14~26AWG
- 20 contact size, Rated voltage 250V AC/DC, Rated current
 7.5A(machined), 5A(stamped & formed), 20~30AWG









- 4 Shell Sizes High Reliability
- Features Amphenol's **RADSOK®** contact technology
- Single Pole High Power Arrangements; 3.6mm-10mm Contact Sizes
- 3.6mm contact size, Rated voltage 630V AC/DC, Rated current 86A
- 6.0mm contact size, Rated voltage 630V AC/DC, Rated current 120A
- 8.0mm contact size, Rated voltage 630V AC/DC, Rated current 180A
- 10.0mm contact size, Rated voltage 630V AC/DC, Rated current 300A



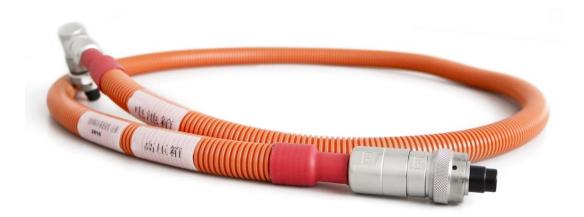




Cable assembly with RTHP connectors













Applications of RT360 series



















Applications of RT360 series



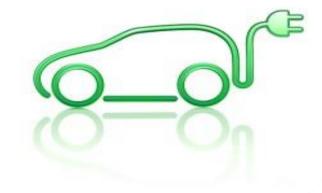






















• Country: Japan

• **Application:** Electric car batteries

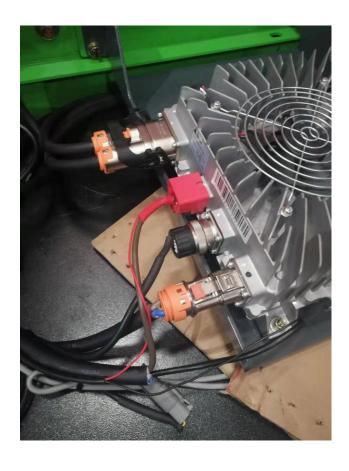
• **Product:** P80939, P80940











Country: China

• Application: Electric climbing vehicle

• **Product:** RT14-12











Country: China

Application: Battery pack

• Product: RT12-8



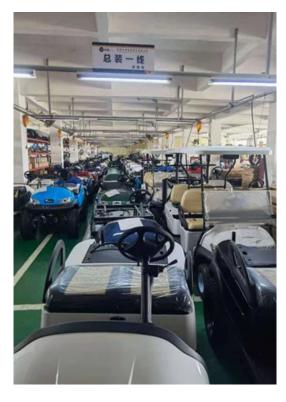












Country: China

Application: PDU distribution box,

excellence golf cart

• **Product:** RT22-28













- Country: China
- **Application:** Power battery system
- Product: RTS/AT2P/ATP2P













- Country: India
- Application: Electric vehicle wiring

harness

Product: RTS/AT2P/ATP2P











Country: China

Application: Battery Pack

Product: RT 16-19, AT 6PIN



















• **Application**: Electric off-road motor

Product: RT 4P, 9P &RTOW 10 P























Country: China

Application : EV Car

• **Product:** RTS 10-6 & RT 12-8





• Country: China

Application : EV Car(lin-box)

• **Product:** RT 12-2, 12-4, 12-8, 14-3,14-4















Country: China

• Application : OBC

Product: RT 2P,4P,6P & 8P













Country: China

Application: Motor low voltage signal line

• **Product:** RT 16-19











Country: China

• **Application**: Rail transit gate control system

Product: RT series









• Country: China

Application: The control system of maglev train

Product: RT series













Country: China

• **Application**: EMU controller and smoke control system

Product: AEM & RT series













• Country: China

• **Application**: Cable assembly on EV BUS

• **Product:** RT series













Country: China

• Application: Electric motor control system

• **Product:** RTHP0161P*, RTHP6161S*













• Country: China

Application: Battery park

Product: RTHP6161









RT360 series success story



Country: China

Application: High-voltage board

Product: RTHP16-1/RT-1619/RT-164/RT-144







RT360 series success story

Country: China

Application : Machine controller

• **Product**: RTHP16-1



Country: China

• **Application**: Battery

Product: RTHP16-1







RT360 series success story

• Country: China

Application: Robot wire harness

Product: RT series



• Country: China

Application : Robot

Product: RT series



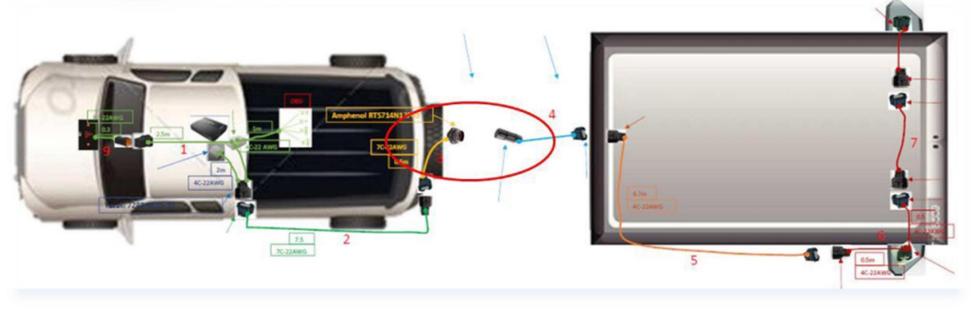








- Country: China
- **Application:** Automotive Monitoring Systems
- **Product:** RTS 14-12









A series connectors

Designed with SAE-J2030, Amphenol Sine connectors A series are a high-performance, cost-effective solution able to be used in a variety of interconnect applications: Heavy Duty, Transportation, Marine, Diagnostic, Military, Alternative Energy and Agricultural.

- Operating Temperature: : -55° C to +125° C
- Suitable For Indoor and Outdoor Applications
- 100 Mating Cycles
- IP67&IP69K rated in mated condition
- UL1977. ROHS compliant



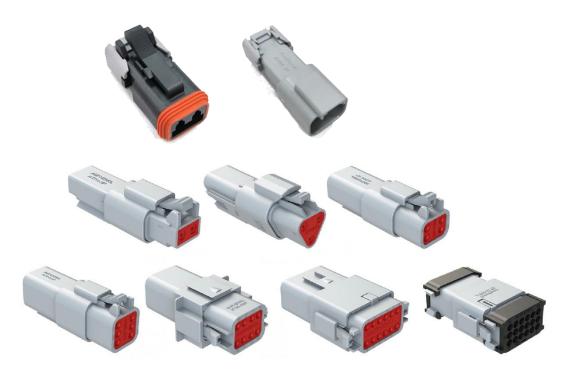






AT Series

- 2, 3, 4, 6, 8, 12, 15, 18 positions available
- Rating voltage: 250V AC/DC according to IEC
 500V AC/DC according to UL 1977
- 16 contact size, 13A, 14~20AWG
- Wire to panel, wire to wire available
- Thermoplastic, Flammability Rating: UL94, V-0







ATM Series



- 2, 3, 4, 6, 8, 12 positions available
- Rating voltage: 250V AC/DC according to IEC
 500V AC/DC according to UL 1977
- 20 contact size, 7.5A, 16~22AWG
- Wire to panel, wire to wire available
- Thermoplastic, Flammability Rating: UL94, V-0

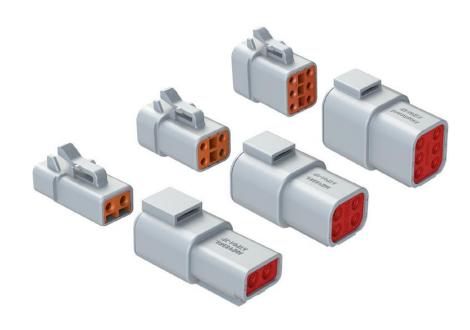






ATP Series

- 2, 4, 6 positions available
- Rating voltage: 250V AC/DC according to IEC
 500V AC/DC according to UL 1977
- 12 contact size, 25A, 10~14 AWG
- Wire to panel, wire to wire available
- Thermoplastic, Flammability Rating: UL94, V-0









ATV Series

- 18 positions available
- Rating voltage: 250V AC/DC according to IEC
 500V AC/DC according to UL 1977
- 16 contact size, 13A, 14~20AWG
- Wire to panel, wire to wire available
- Thermoplastic, Flammability Rating: UL94, V-0













ATV Series

Technical Data

Application: BMS and Controller Box

- 38 positions available
- Rating voltage: 250V AC/DC according to IEC
 500V AC/DC according to UL 1977
- 16 contact size, 6 power contacts, 13A, 14~26AWG
 32 power contacts, 2A, 20~22AWG
- Wire to panel available
- Thermoplastic, Flammability Rating: UL94, V-0













AHD Series

- 6,9 positions available
- Rating voltage: 250V AC/DC according to IEC
 500V AC/DC according to UL 1977
- 6 position: match with 12 contact size, 25A, 10~14AWG
- 9 position: match with 16 contact size, 13A, 14~20AWG
- High-performance, cost-effective
- SAE J1939 protocol standard
- Ideal for controlled/uncontrolled environmental conditions









AHDP Series

- 24 Shell: 7, 9, 18, 19, 21, 23, 27, 29, 31, 35, 47,91 positions available
- 18 Shell: 6, 8, 14, 20, 21 position available
- Rating voltage: 250V AC/DC according to UL 1977
- 4 contact size, 100A, 6AWG
- 8 contact size, 60A, 10~12AWG
- 12 contact size, 25A, 10~14AWG
- 16 contact size, 13A, 14~20AWG
- 20 contact size, 7.5A, 16~22AWG
- High density signal and mixed power insert configurations
- Bulkhead mounting or In-line
- Reverse and standard arrangements

















AHDM Series

- 24 Shell: 7, 9, 18, 19, 21, 23, 27, 29, 31, 35, 47,91 positions available
- 18 Shell: 6, 8, 14, 20, 21 position available
- Rating voltage: 250V AC/DC according to UL 1977
- 4 contact size, 100A, 6AWG
- 8 contact size, 60A, 10~12AWG
- 12 contact size, 25A, 10~14AWG
- 16 contact size, 13A, 14~20AWG
- 20 contact size, 7.5A, 16~22AWG
- High density signal and mixed power insert configurations
- Bulkhead mounting or In-line
- Reverse and standard arrangements





Plastic PanelMate connectors













- AT series 2, 3, 4, 6, 8, 12, 18 positions: 16 contact size, 13A
- AT series 13 position: 12 contact size, 25A; 16 contact size, 13A
- ATP series 2 and 4 positions: 12 contact size, 25A
- ATV series 18 positions: 16 contact size, 13A
- ATM series 12 positions: 20 contact size, 7.5A
- ATHD series 8# 12# panel waterproof connector
- Harsh environment applications







Flange Mount series





- AT series 2, 3, 4, 6, 8, 12 positions: 16 contact size, 13A
- ATM series 12 position: 20 contact size, 7.5A
- Harsh environment applications





ATHD Series

- Single position
- Rating voltage: 250V AC/DC according to IEC
 600V AC/DC according to UL 1977
- 4 contact size, 100A, 6AWG
- 8 contact size, 60A, 8~10AWG
- 12 contact size, 25A, 10~14AWG
- Wire to panel, wire to wire available











AT Speed Splices series

➤ Our AT Speed Splices offer a unique single terminal solution, which is designed to protect connections from dirt, dust, and water immersion up to 1 meter. Used in harsh environments, such as the construction, mining, marine, and agricultural industries, Jiffy Splices are easy to install and help quickly repair damaged electrical connections on equipment at the jobsite. options.

- Single position
- 12 contact size, 25A, 12~14AWG
- 16 contact size, 25A, 12~14AWG











PCB series

The AT Family offers printed circuit board (PCB) connectors that are heavy duty environmentally sealed connectors designed for wire-to-circuit board connections. Available in a variety of styles for the AT and ATM connector series, Amphenol PCB connectors cover a range of pin counts from 2 to 12 and wire gauges from 14 to 22. Many of the connectors are available in straight or 90° pin options.



- AT series 2, 4, 6, 8, 12, 13, 18 positions
- ATM series 2, 3, 4, 6, 8, 12 positions
- ATP series 2,4 positions
- Straight or 90° pin options







Hyperbuss series

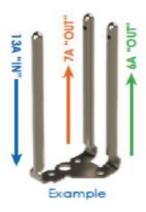
> HYPERBUSS is bussing product which based on our AT series, all power or data to be fed into a connector through one or more terminals. Provide multiple independent electrical circuits. The connectors are available in multiple buss configurations using standard size 16 contacts, with plating options in nickel or gold.

A single HYPERBUSS connector can replace several standard connectors or splices, saving space,

wiring, and weight.

HYPERBUSS product be able to mating with AT plug, meet all performance specifications for AT series

- AT series 2, 4, 6, 8, 12 positions
- Distribute the current







Extended Body AT Plugs Designed for Overmolding

Custom Cable Assemblies are available for any application, and carry with them the capabilities of being overmolded in any size or length necessary. 2 pin, 4 pin, 6 pin, 8 pin and 12pin overmold connectors are available now, which are developed for overmolding cable assembly easily.













With diode and resistor series

- Amphenol AT connectors with diodes and resistors are useful anywhere you need to regulate power or protect a device against a potential power surge.
- > A diode allows current to flow in one direction only. By preventing current from traveling a circuit in the wrong direction, a diode can protect an electronic device from damage.
- Resistors protect sensitive electronics by limiting the amount of electricity that can flow to the device through the resistor, and therefore preventing power spikes.

Technical Data

• AT series 2, 4 positions available.







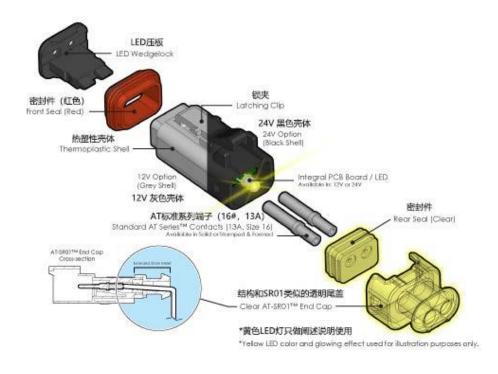
2 position LED optional

Designed for electromechanical applications where a visible LED light is integrated into a 2 position plug allowing the user to determine the device is receiving power. Environmentally sealed, field serviceable and cost effective while reducing costly trouble shooting time. 12V and 24V versions available. Diode protected.













ARMOR IPX series

- ARMOR IPX product that accept snap-in headers are available. The enclosure features a through hole mounting flange.
- Existing PCB connectors: ATM 2x12/12 pin, AT 12,24,36,48 pin















Boots

➤ Boots provide a professional looking finishing touch for A series connectors. Made of durable plastic, these slip-on boots are not only aesthetically appealing, but also provide increased protection from dirt, paint overspray, and pressure washing. The plastic boots are rated from -29° C to +100° C and offer a slip-on design making installation quick and easy.











ARC Series

The ARC series is a series of rectangular connectors currently available in 24/40/70 holes with 16# terminals. The connector does not require a wedge lock. Terminals are inserted and removed in the same way as the AHDP series. Terminals are removed using AT11-310-1605.





ATHP Series



- Features Amphenol's RADSOK® contact technology
- HVIL with shielding and unshielded solutions
- Rating voltage: 1000V AC/DC
- Test voltage: 5000V AC/DC
- Current rating of 20A for the 2.5mm² wire, 25A for the 4mm² wire, 35A for the 6mm² wire, 180A for the 50mm² wire.
- Mating cycles: 250+
- IP67 & IP 69K rated in mated condition



ATHP Series













Technical Data

- Quick lock and press-to-release design
- 360° rotating plug
- Various termination option(Threaded, Crimp, Busbar)
- Compact robust design
- Rating voltage: 1000V AC/DC
- 8.0mm contact, 50mm² @ 180A

35mm² @ 130A

25mm² @ 120A

- Mating cycles: 200+
- IP67 rated in mated condition







Optional accessories







































Custom Cable Assembly - signal transmission







Applications of A series

Automotive



HEAVY EQUIPMENT



Diagnostics



AGRICULTURE



Mining



POWER GENERATION



WATER RESISTANT



HARSH ENVIRONMENT



Railway







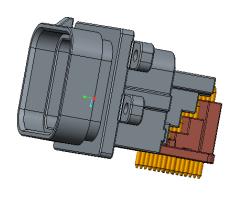


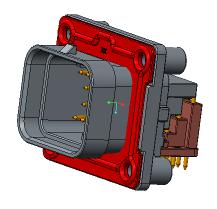




Application: Intelligent control box

• **Product:** AT 26pin















• Country: China

• **Application:** Solar Panel for Vehicle

Product: ATP 2P





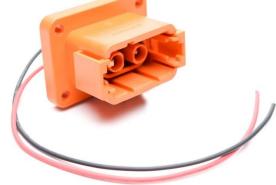


• Country: China

Application: Battery pack

• **Product:** ATHP 2.5



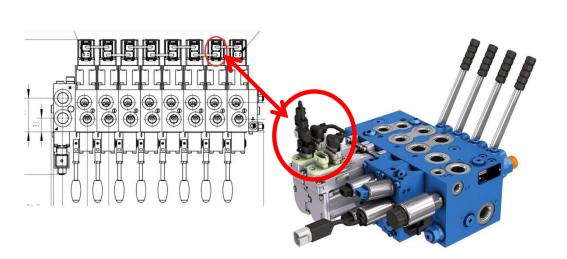












- Country: China
- Application: Hydraulic equipment
- Product: AT series











• Country: China

Application: LED Light for Vehicle

Product: AT 2-6P & ATP 2/4P











- Country: South Africa
- **Application:** Automobile
- Product: AHDP & AHDM

















- Country: Japan
- Application: Excavator
- **Product:** A series















• Application: Agricultural machinery

• **Product:** AT13/AT15











Country: China

Application: Engine cable harness

Product: Cylinder piercing parts (A series customized)











- Country: China
- Application: Heavy truck engine wiring harness
- **Product:** AT series









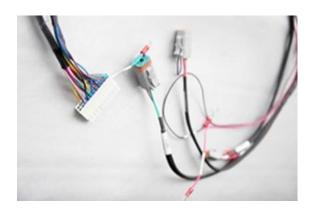


- Country: China
- **Application:** High pressure box ,Electric sanitation vehicle
- **Product:** AT04-2P-PM11







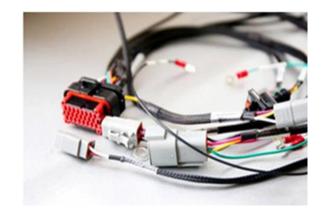


Country: China

• **Application:** On-board gating system wiring harness

Product: AT series











Country: China

Application: Transformer

• **Product:** ATM 6P, 12P











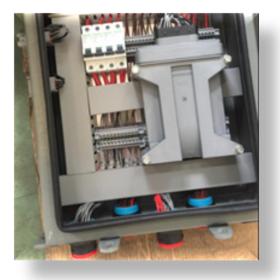
• Country: China

• Application: Mining equipment

Product: AT 4pin, 12pin & AHDP series

















- Application Area: Europe
- Application: Record the speed, distance and location for Bus
- **Product**: AHD series











- Country: China
- Application: New energy vehicle high voltage control box
- **Product:** AT panel & RT series











Product: ATV 18PIN

















Application: Cotton Picker transmission wire harness

Product: AT LED 2PIN











Servo control connectors - Motion series

The M Series™ MotionGrade™ DIN Style Connectors are ideally suited for advanced servo drive encoder feedback applications, packaging, robotic, printing, machine tool, medical and automation environments where control signal transmission or power are required in a robust and compact delivery system.

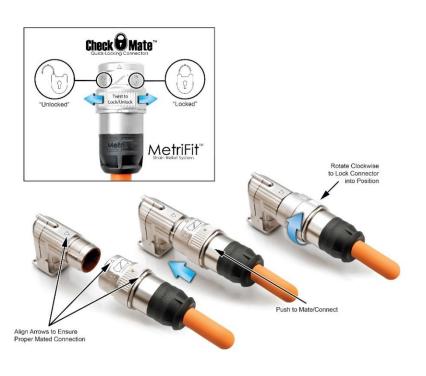


The first generation M23 threaded connectors

- 6, 8, 9, 12, 16, 17 and 19 positions available
- 10A Max Current; 160V (12 pos), 125V (16-17 pos); 18-26AWG (12-17 pos)
- 30A Max Current; 630V Max Voltage; 14-16AWG (6-9 pos)
- Standard Design: Fixed rear insertion design
- Standard Design: Back cap removal
- Standard Design: Installation occurs from the bottom of base through the back of the shell.
- Standard Design: Traditional connector assembly
- Standard Design: Extraction tools required
- UL1977. ROHS Compliant



The second generation Checkmate series



CheckMate™ Quick-Locking System

- 6, 8, 9, 12, 16, 17 and 19 positions available.
- Enhanced next generation anti-vibration dual-ratcheting coupling system.
- Checkmate™ is intermateable and compatible with rival M23 quick coupling products.
- Distinctive alignment arrows with lock/unlock identifiers (ensures a solid connection every time)

MetriFit™ Strain Relief System

The Metrifit™ Strain Relief System provides maximum 360° EMI/RFI shielding, with advanced sealing capability (IP67) suitable for harsh environments. Tamper proof design ensures a safe and secure system.





The third generation Elite series



M23 Elite Connectors

- 6, 8, 9, 12, 16, 17 and 19 positions available
- 10A Max Current; 160V (12 pos), 125V (16-17 pos); 18-26AWG (12-17 pos)
- 30A Max Current; 630V Max Voltage; 14-16AWG (6-9 pos)
- UL1977, file no. is E336830 & E491265.
- Elite Design: Top loading insert design; Front cap removal
- Elite Design: Loose piece insert for hand held installation ease
- Elite Design: Alignment tabs on the insert to help guide the insert into place
- Elite Design: Two flange size options to choose from
- Elite Design: No extraction tools required







M40 Series



M40 Standard Connectors

- 6 and 8 positions available
- 75A Max Current; 630V Max Voltage; 8-12AWG





Hybrid Series



Hybrid DMCTM Connectors

- 2 Power + PE + 1 Signal + 4 Quad Element Ethernet
- 18A (2.0mm), 1A (1.0mm), 0.5A (Quad Element) Max Current
- 850V (2.0/1.0mm Contacts), 30VDC (Quad Element) Max. Voltage
- UL1977, file no. is E336830.





Custom cable assembly-M23 & M40







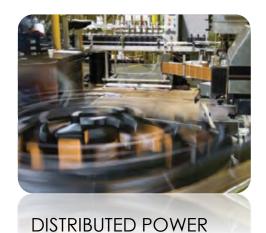
Applications of Motion series



INDUSTRIAL



















Servo control connectors success story





- Country: Worldwide
- **Application:** Power/Signal Distribution, VFD, Servo Motor
- Product: PowerBoss Lite/Mini/Motion Cable Assy











Servo control connectors success story



Country: China

Application: Industry robot

Product: M23 standard series









Servo control connectors success story

• Country: Japan

Application: Servo Motors

Product: M23 Hybrid DMC



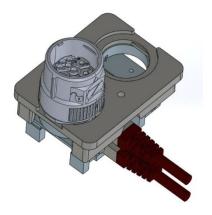


Country: North America

 Application: Power/Control for Welding Systems

Product: M23 connector and cable assembly







Factory Automation

Our Factory Automation - Distributed Power and Control product lines were developed in response to the need for robust, streamlined and scalable products for use in robotic and material handling systems, such as: conveyors, sorting, automated storage and retrieval, packaging, overhead transport, palletizing and any other options imaginable.







Custom Molded Cable Assembly Solutions

Amphenol Sine Systems offers custom molded cable assembly solutions across all our standard product lines. If one of our standard products doesn't fit your specific needs, our Engineers will work with you to custom design a solution specific to your application. Whether you are looking for a customized connector solution, a complete turn-key cable assembly solution, custom wiring to simplify machine assembly or a specific mold color, Amphenol Sine Systems is your one source for proven, reliable and innovative results.









Custom Cable Assembly Solutions

Diagnostic







Custom Ethernet Cable Assembly Solutions

M12 & M22

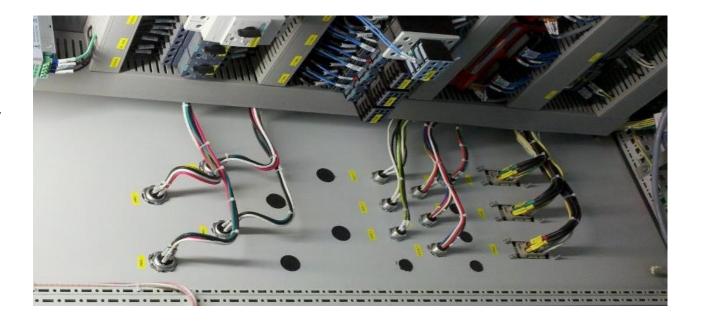






Cable Assembly success story

- Country: China
- **Project:** plate Cabinet cable assembly
- Product: cable assembly







Quality System Certification















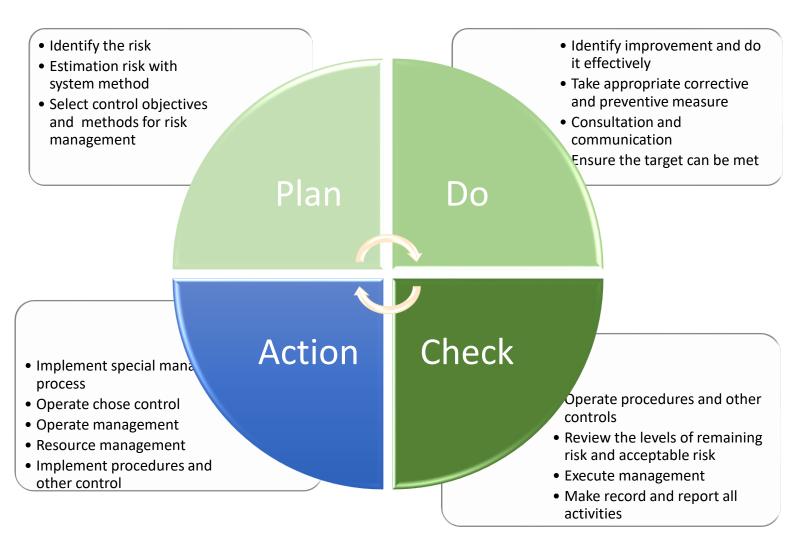








Continuous Improvement & Perfect Pursue





Quality Control

Supplier Control

- Estimate supplier
- Regular Audit
- Continuous track on quality
- Quality improvement plan

Qualified Supplier
First Safeguard

Stock Control

- Kindee system
- Incoming Inspection
- Appearance Inspection
- Key parameter check
- Certification, validity, packaging, normative testing, etc

Incoming Meterials Control

Secondly Safeguard

Process Control

- Small batch inspection
- Sampling during
- production
- Process & quality
- control
- FG OQC inspection
- Label tracking
- PM & Calibration

Process Control
Thirdly Safeguard

Customer Support

- Customer complaints response and report
- Customer site inspection support
- Customer
 Satisfaction
 Research & follow

Customer Follow up

Last Safeguard





AllO China Main customers



















































































AllO China Main customers





































































