

Amphenol Air LB

Your Satisfaction. Everyday. Everywhere.



COMPANY PRESENTATION

Amphenol Air LB, one of the Amphenol group's french subsidiaries, is a world leading manufacturer in the fields of electrical & optical interconnection systems and cabling & attachment accessories for the most demanding applications.

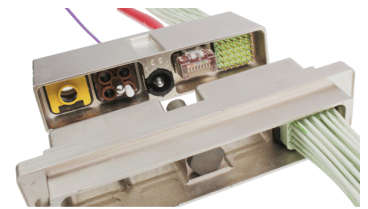
Brochure 04/24 - V6.0



OUR PRODUCTS

RECTANGULAR CONNECTORS

- SIM series 2 connectors
- SIM monomodule connectors
- SIM series 3 connectors
- 1900SIM connectors
- 3559 Push Pull connectors
- ASR connectors
- 1900 connectors
- Plates
- H-PAC connector
- Optical connector with MT Ferrule



SIM connector (EN4165)



H-PAC Connector



SIM Monomodule connector



Space MT connector



1750 modules



CC5516 Light cable clamp

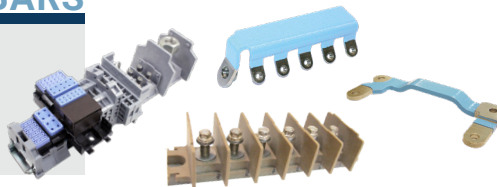
QUICK JUNCTION MODULES

- 1750 modules
- 1758 grounding modules
- 1765 component carrier modules
- 1100 modules
- 1130 modules with inserted components
- 1174 circular groundind modules
- 1119 splices
- 1200 modules
- 1777 modules



TERMINAL BLOCKS & BUS BARS

- Modular assemblies (BJT / BJL)
- 3240 / 3242 monoblock assemblies
- Distribution bars & Bus bars



RELAY SOCKETS & ADAPTERS

- NFC & ASNE relay sockets
- H400 / H600 relay sockets
- Sockets for light



FIXING ACCESSORIES

- CC5516 Light & CC1339 Light clamps
- Pipe clamps
- Fixing brackets



SPECIAL PRODUCTS

- Docking plugs
- Nuclear splices and modules
- ...



OUR MARKETS

AEROSPACE



- Commercial aircraft (transport of passengers and goods)
- Hybrid / electrical aircraft
- Commercial helicopters
- Business aircraft
- Avionics, cabin service systems, seats and interiors, engines and nacelles

URBAN AIR MOBILITY



- Cockpit
- Passengers
- Wings
- Power Generation & Propulsions
- Power Distribution
- Optical & Electrical Systems

DEFENCE



- Military aeronautics, aircraft and helicopters
- C4ISR
- Missiles and weapons
- Ground vehicles
- UAVs / drones
- Radars

MARINE



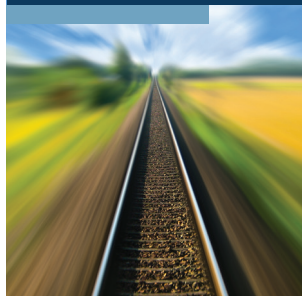
- Military ships
- Commercial ships
- Submarines

SPACE



- Satellites
- Launchers

RAIL & MASS TRANSIT



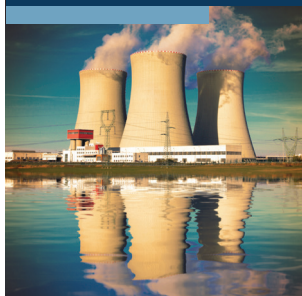
- Rolling stock
- Ground / Signal

INDUSTRY



- Machines tools and robotics
- Instrumentation
- Automotive
- Automatism
- Measures

ENERGY



- Nuclear power plants
- Fossil fuel thermal plants
- Wind turbines

OUR CHALLENGE: mastering processes

QUALITY & ENVIRONMENT

We implemented various processes aiming at **Operational Excellence**, **Customer Satisfaction** and our **Commitment to the Environment**.

**A.P.Q.P standard
applied since 2003
(EN9145)**

Advanced Planning
Quality Product

**Shop floor
management tools
implemented**

We are now certified for rigorous, transparent and effective results obtained.



We are focused on the respect of the environmental standards, especially REACH and RoHS regulations.



LOGISTICS POLICY

We make everyday use of a panel of controls, analysis and processes targeting **Logistics Excellence**.

Daily analysis of backlog
with internal commitment of achievement

Daily analysis of missings
to act immediately and ensure deliveries at requested date

E.R.P.: Weekly analysis
taking into consideration customer's supply plans

We take pride of the most significant award given by our customers.



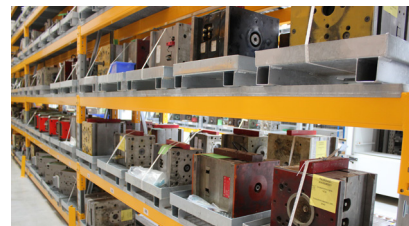
AIRBUS classification
for our overall on time delivery of
99,6% for more than 12 months



CUSTOMERS classification
for our rate on requested date delivery of
97% these last years

DESIGN / DEVELOPMENT / INNOVATION CENTRE

To address requirements and specifications issued by our customers, WeB have a very strong and dedicated team of Design, Development and Methods engineers capable of putting together unique and innovative combinations of products and technologies. In parallel an innovation unit develops the technologies of the future.



INTEGRATED PRODUCTION CAPABILITIES

We have a large number of manufacturing equipments from the latest generation for an optimum mastering of manufacturing processes and can also rely on the global network of Amphenol production sites (over 5 continents including low production cost and dollar zones).

Engineering: R&D, Methods & Innovation

Prototyping: Machining, Assembly & Optical workshop

Production - Injection: Molding, Overmolding & Bi-injection

Production - Assembly: Ultrasonic welding, Plasma treatment, Laser marking, Potting, Stamp marking...

Laboratory: Electrical, mechanical and optical testings & Climate chamber



OUR EXPERTISE: mastering technologies

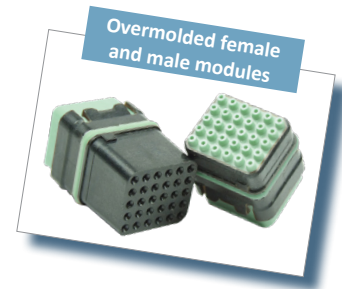
BONDING VS OVERMOLDING

Comparison of 2 generations of SIM series as an example

- Traditional concept requiring multiple operations of assembly
- Each step is a different process (plasma, primary, gluing, bonding, curing)



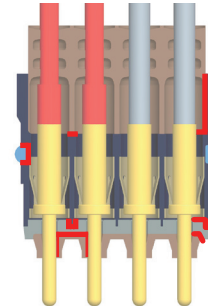
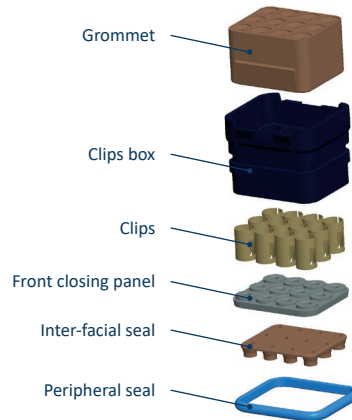
Multiple causes for potential problems



Traditional gluing method and associated factors of risks

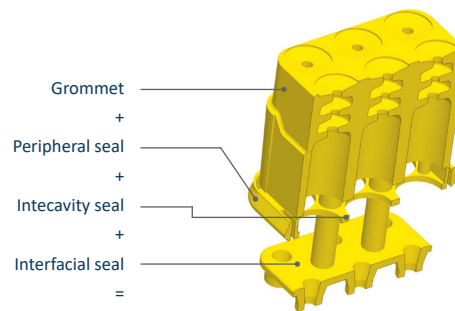
Humidity ingress

Arcing



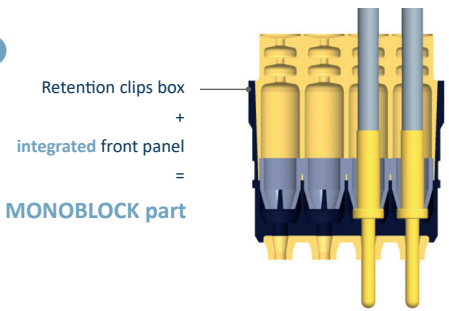
- Molding problems
 - Polishing problems
 - Plasma problems
 - Primary problems
 - Gluing problems (migration of glue into cavities under pressure during process may lead to cavities partially filled)
 - Polymerisation of gluing
- Risk of humidity ingress leading to arcing

1



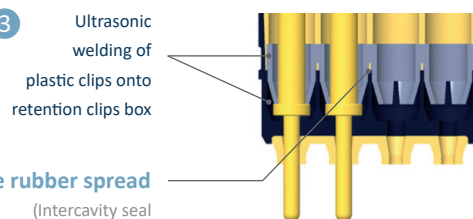
1 overmolded element in 1 single operation

2



1 MONOBLOCK part

3



Silicone rubber spread (intercavity seal)

1 overmolded element +
1 monoblock element +
Plastic clips

END RESULT:
Optimized design for second to none performances



Key features

- Full control of processes
- Simplified manufacturing processes

1 monoblock element

- 1 over-molded process
- No weak point
 - No layers of glue
 - No creepage
 - No added-after peripheral seal

Silicon rubber spread

Use of sealing plugs optional

Second to none performances

Most of risks associated to production such as molding, polishing, plasma, primary, gluing, compression and curing become non existent

- No risk of disbonding under mechanical stress
- Possible cavity fill during gluing process becomes irrelevant

- No risk of cavity humidity ingress
- No risk of arcing
- Optimum sealing of module inside connector shell
- Peripheral seal overmolded from inside/out: up to 75 cycles guaranteed

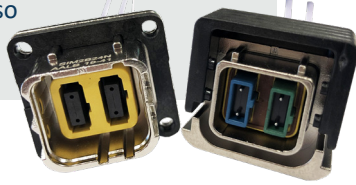
- No sealing problem between cavities: no creepage
- "Full material" overall performances: 1 shot overmolding
- Improved dielectric performances: 2 to 3 times superior to current standards

- Time saving during cable harness wiring
- Cost saving
- Quick implementation

OUR TECHNOLOGIES & SOLUTIONS

OPTIC / HIGH SPEED

Our range includes a wide variety of optical connectors and SIM modules equipped with optical contacts (different standards), with physical or lensed contact (Expanded beam), or with MT ferrules from 12 to 48 ways. Thanks to our optical workshop, we can also supply your custom optical cable assemblies.



POWER

Meeting the growing power needs of the military and aerospace industry requires high-performance power solutions suited for the most demanding applications. We offer a wide range of rectangular and circular power connectors, as well as power distribution systems (assemblies, electrical bars...) meeting the most stringent requirements.



MINIATURIZATION & DENSITY

For decades, we have been offering a large number of products designed to save space: optimized low profile, miniaturized or compact products to reduce space requirements, connectors with high contact density to reduce space requirements per point.



QUICK INSTALL / QUICK MATE

Beyond electrical, optical and mechanical performance, the question of ease of use, assembly or integration plays a central role in the design and development of our products. We offer standard or custom solutions: for quick locking (push-pull, snap-in, slide-in, quick-lock, without tool...), for quick fixing (quick-mount, quick-install, clip on, 3 points, with pins, without tool...).



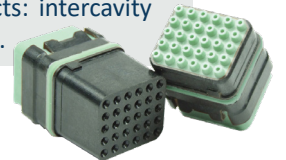
WEIGHT SAVING

Widely made of high performance composite and silicone materials, our connectors and accessories offer extreme weight saving compared to equivalent metallic products. Our products are especially suited for the aerospace industry (aircraft, helicopters, eVTOLs...), but also for embedded applications where weight limitation provides reduction of energy consumption (rail & mass transit, armored vehicles, surface ships or submarines...).



SEALING

Specializing in molding and overmolding, we offer a wide range of connectors and accessories made with overmolded composite materials (high performance silicone) and that offer best-in-class sealing performances compared to bonded equivalent products: intercavity sealing, interfacial and peripheral sealing.



MODULARITY

Our range of modular connectors makes it possible to integrate different types of modules within the same connector shell, aiming to create a custom solution completely adapted to the needs and fully scalable over time. Possible mix of different contact technologies Signal & Power, RF, Quadrx or Coax contacts, RJ45 Ethernet, Fiber Optics...



SHIELDING

We propose a wide range of composite and metallic connectors with plating for EMC applications: Bright nickel, Olive drab cadmium, Black nickel, PTFE nickel and many other alternatives... Consult us!

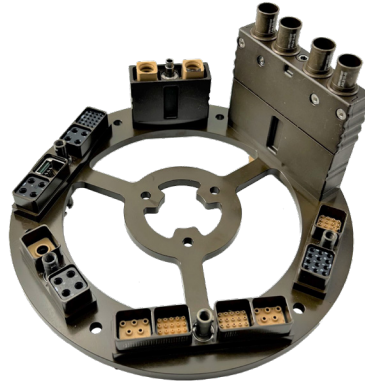


OUR KNOW-HOW

STRUCTURE CONNECTORIZATION

Connectorization refers to the principle of «integrating connectors onto structural elements», aiming to reduce part numbers and integration time while optimizing space and simplifying the supply chain (one part, one supplier to track).

- Monoblock machining -> **Time saving on assembly** ⌚
- Removing fasteners -> **FOD reduction** 🛡️
- Single part number -> **Supply chain simplification** 🌐
- Juxtaposition of connectors -> **Space saving** 📏
- Design optimization -> **Weight saving** ⚖️



REENGINEERING

When one PN becomes obsolete, when an original supplier let down giving up its intellectual property on a component... We can redesign an original product.

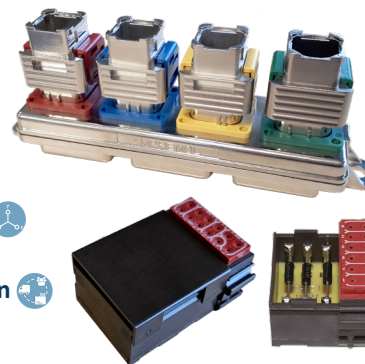
- No need to redesign / requalify all the system -> **Cost saving** 💰
- We redesign an interchangeable product -> **Time saving** ⌚
- **Customized and stable solutions** 🤝



ELECTRONIC PACKAGING

We extend our expertise in the field of **Electronic Packaging** in offering integrated solutions combining passive components within connector shells.

- Optimization of space requirements (design) -> **Space saving** 📏
- Reduced integration time -> **Time saving** ⌚
- Single part number and provider -> **Supply chain simplification** 🌐
- **Customized and stable solutions** 🤝

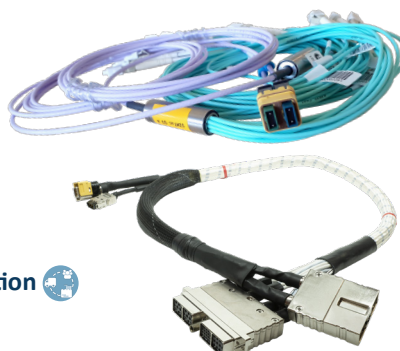


CABLE ASSEMBLIES

We offer **Electrical and Optical Cable Assemblies** capabilities that we design from:

- cable assemblies plans/drafts
- specifications

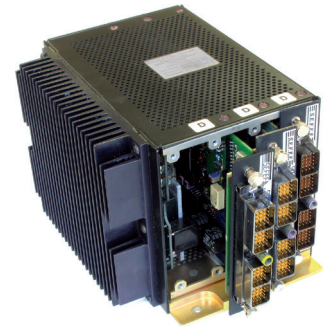
- Reduced integration time -> **Time saving** ⌚
- Single part number and provider -> **Supply chain simplification** 🌐
- **Customized and stable solutions** 🤝



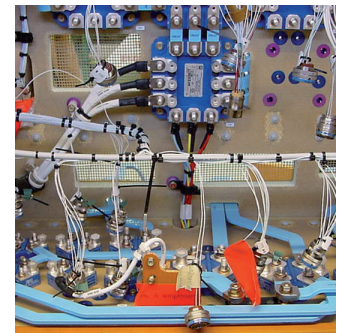
Some applications...



Terminal blocks / 1777 modules



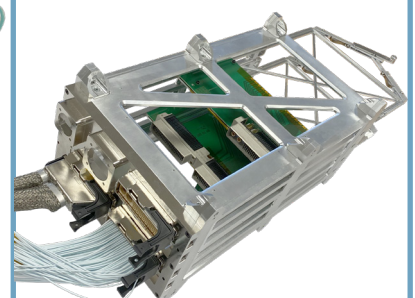
Electronic box / SIM EN4165



Power distribution equipment /
Bus bars



Electrical and optical cable assemblies



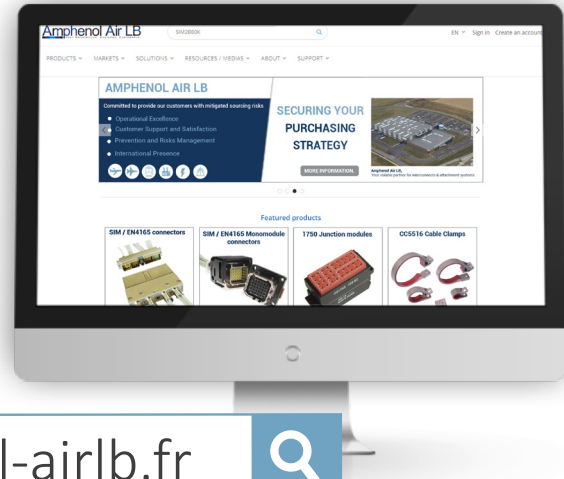
Equipment / Quick install connectors
with direct mounting on structure

Amphenol Air LB

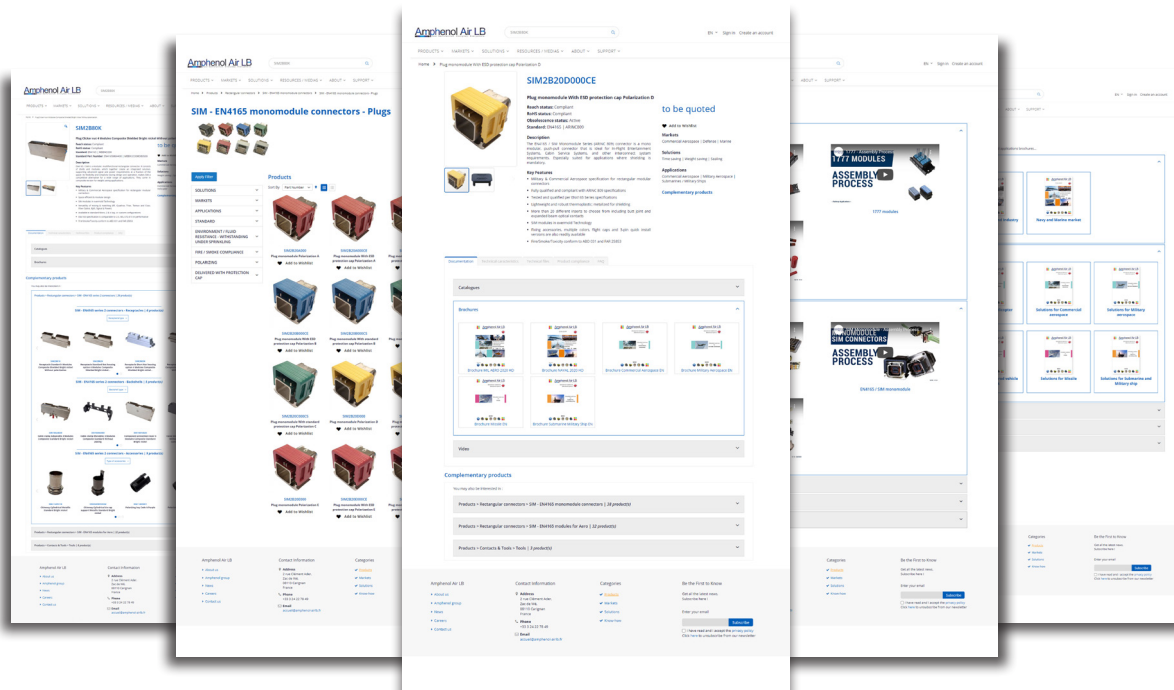
Your Satisfaction. Everyday. Everywhere.

VISIT OUR WEBSITE!

- Search engine by reference
- Complementary products
- Catalogues and technical data
- 3D .PDF and .STP files
- Equivalent standard part numbers
- Reach / RoHS statuts and certificates



www.amphenol-airlb.fr



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