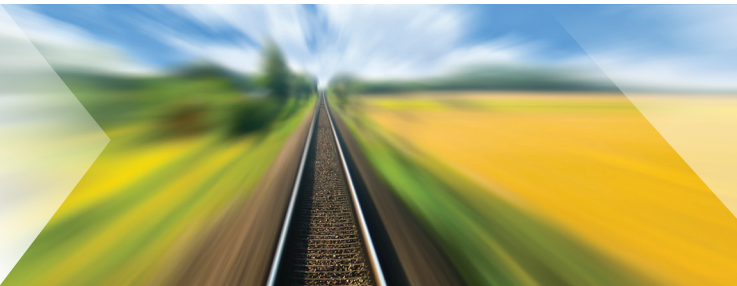




# Amphenol Air LB

Your Satisfaction. Everyday. Everywhere.



Interconnect solutions  
& attachment systems  
for **Rail Mass Transit  
& Industry**



Version 2023





## COMPANY PROFILE

As part of Amphenol Corporation, Amphenol Air LB France is an engineering company located in the North-East of France, close to the Belgian and Luxembourg borders.

Amphenol Air LB design, manufacture and market electrical, electronic and fibre optic connectors as well as fixing accessories systems.

Our products are designed for harsh environments for the Rail Mass Transit, Industry, Aeronautics, Defence and Marine markets.



- Total surface: **9 000 sqm**
- Possibility of extension: **+ 12 000 sqm**
- Quality certifications: **ISO14001, ISO9001, EN9100, GRAMS, OEA**

A proactive approach regarding environment matters.

Amphenol Air LB is focused on the respect of the environmental standards, especially **REACH** and **RoHS** regulations.



*Learn how Amphenol Air LB interconnect solutions will enable your organization to succeed.*

*Ours is entirely at your service.*

**CONTACT US!**

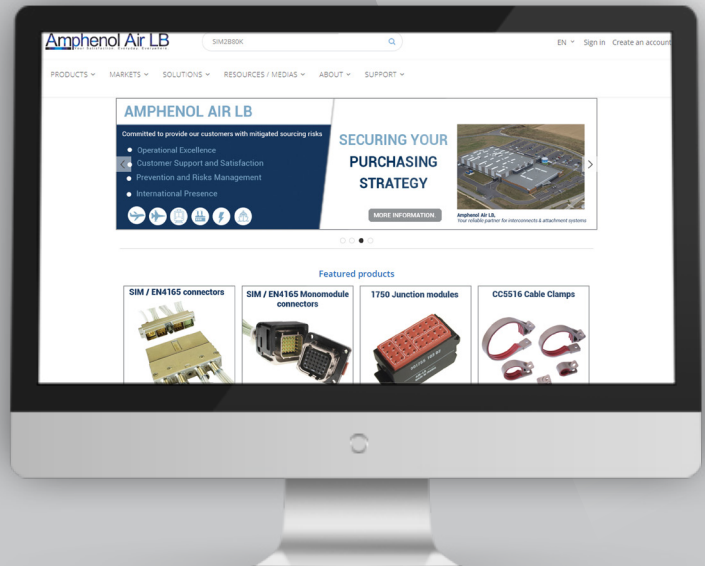




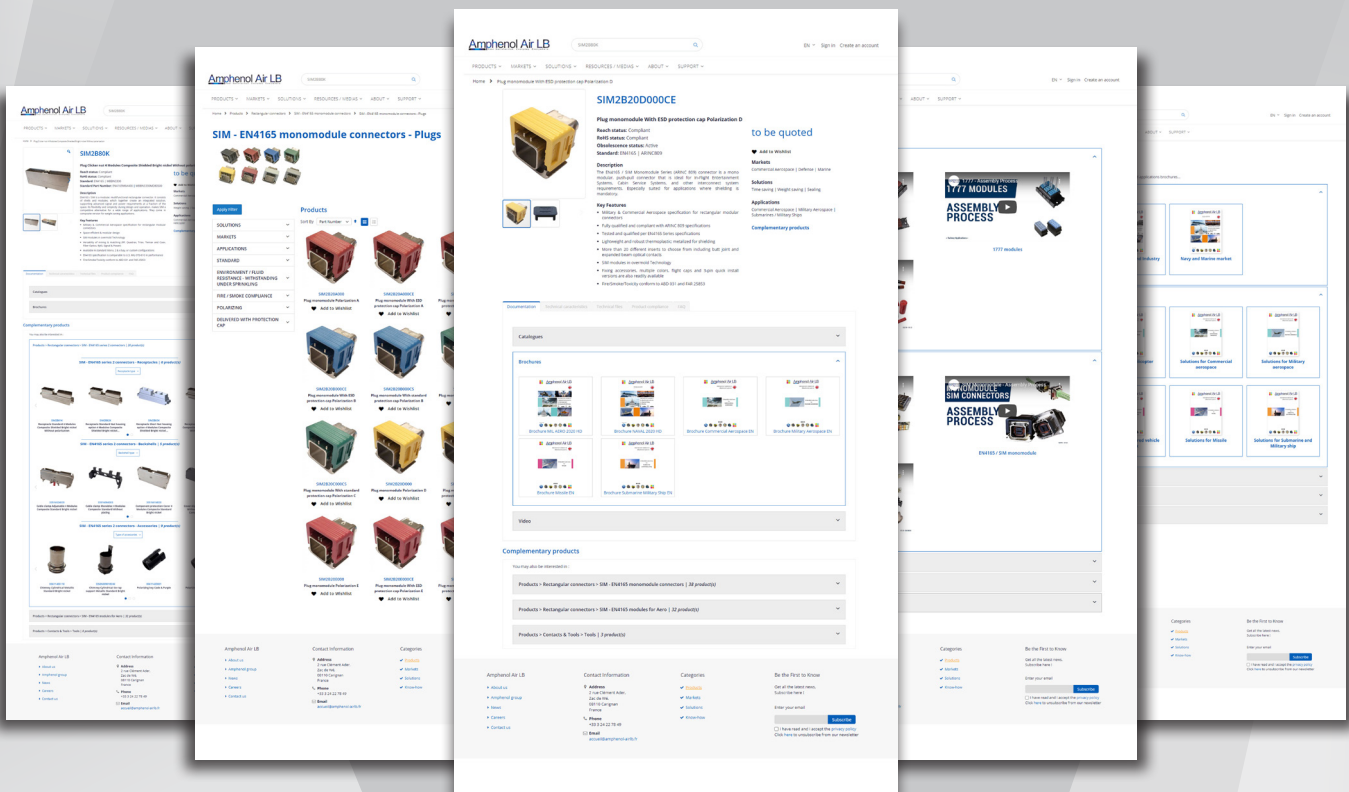
## OUR WEBSITE

### VISIT OUR NEW WEBSITE!

- Search engine by reference
- Complementary products
- Catalogues and Technical Data
- 3D .PDF and .STP files
- Equivalent standard part numbers
- Reach / RoHS status and certificates



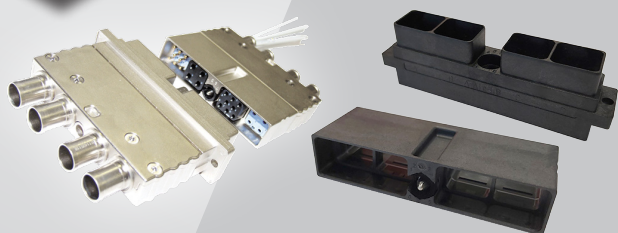
www.amphenol-airlb.fr







## CONNECTORS TO MATE



### SIM / EN4165 Series 2

EN4165 / SIM modular connectors are fitted with overmolded SIM modules offering best-in-class dielectric and sealing performances. They come in composite version for weight saving applications or in metallic version for robust applications. Available with modules from 30 contacts size 23 (5 Amps) up to 1 contact size 8 (up to 80 Amps).

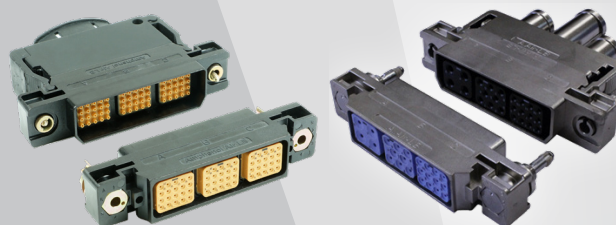
- Overmolding technology: second to none dielectric and sealing performances
- Lightweight and robust thermoplastic
- With or without plating
- Versatility of mixing & matching Signal & Power, RF (Quadrax, Triax, Twinax and Coax) or Fiber Optic
- EN4165 qualified, comparable to U.S. MIL-STD-810 in performance



### Monomodule SIM / EN4165 / ARINC 809

The EN4165 / SIM Monomodule series is a single module connector, fitted with overmolded SIM modules offering best-in-class dielectric and sealing performances. With lightweight composite shells they are especially suited where weight and space saving is mandatory. Multiple color coding, backshells and accessories available. Available with modules from 30 contacts size 23 (5 Amps) up to 1 contact size 8 (up to 80 Amps).

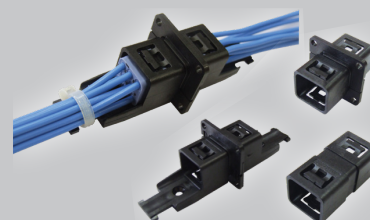
- Overmolding technology: second to none dielectric and sealing performances
- Lightweight and robust thermoplastic
- With or without plating
- Fixing accessories, multiple colors, flight caps and 3-pin quick install versions are also readily available



### 1900SIM

1900SIM is a '3 modules' rectangular connector providing versatility and high density within a small form factor. They are fitted with overmolded SIM modules offering best-in-class dielectric and sealing performances. They come in composite version for weight saving applications. Available with modules from 30 contacts size 23 (5 Amps) up to 1 contact size 8 (up to 80 Amps).

- Overmolding technology: second to none dielectric and sealing performances
- Lightweight and robust thermoplastic
- With or without plating
- Versatility of mixing & matching Signal & Power, RF (Quadrax, Triax, Twinax and Coax) or Fiber Optic
- Many accessories and backshells available



### SIM Splice Series

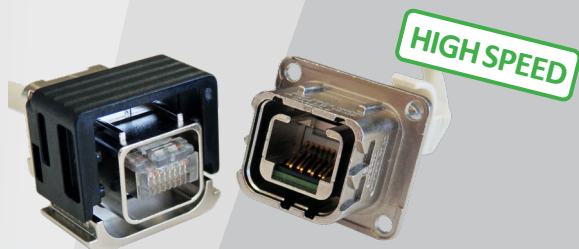
This modular composite splice provides a reliable and simple connection between two EN4165 / SIM modules. Available with or without cable clamp, and/or flange, the SIM splice can be fixed on/under a structure or feed-through. It can be fitted with the whole range of EN4165 / SIM modules. In-Seat Modular & Flexible Wiring; Quick install interconnect, splicing.

- Space efficient & modular design
- Compatible with the whole range of EN4165 / SIM modules
- SIM modules in overmolding technology
- Fire / Smoke / Toxicity conform to ABD0031 and FAR 25853





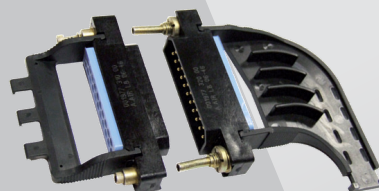
## CONNECTORS TO MATE



### SIM Monomodule with RJ45 module

SIM module for RJ45 Cat6a 10Gb can be used with the whole range of EN4165 / SIM Monomodule connectors. Available for cable-to-cable or cable-to-PCB applications. Rear accessories are available to provide a sealed connection.

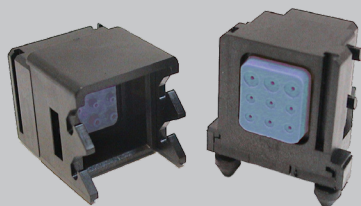
- RJ45 - 10 Gb
- Cat6a (TIA 568C2)
- Ea class (ISO 11801)
- Versions cable-to-cable and cable-to-PCB



### 1977 Series (derived from EN3545)

The 1977 connector is a composite rectangular connector available with various contact arrangements. Includes sizes 20 to 8 crimp removable contacts for Copper cable. Standard and overmolded rear grommet and interfacial seal. Configurable keying and locking posts providing 36 options.

- Comply with RMT standards
- Overmold technology offering excellent sealing performances
- Fire/Smoke/Toxicity conform to EN45545 (HL3 R22)



### PSU Connectors 3559 Series

The 3559 connectors series is a mono modular, push-pull connector especially suited for applications where shielding is not necessary.

- Lightweight and robust thermoplastic
- Compatible with the whole range of EN4165 / SIM modules
- SIM modules in overmolding technology
- Feed-thru and 3-pin quick install versions are readily available
- Fire / Smoke / Toxicity conform to ABD0031 and FAR 25853



### HeavyMate / SIM Series

SIM interconnect / distribution solution in a heavymate shell according to NFF 61-030.

- Plate fitted with industrial SIM modules
- Cable cross section from 0.25mm<sup>2</sup> to 2.5mm<sup>2</sup>
- For MIL C 39029/EN3155 crimp contacts
- Compartmenting possible

#### SOLUTIONS:



Weight saving



Time saving



Space saving



Modularity



Seal IP68 / 69K



Cost saving

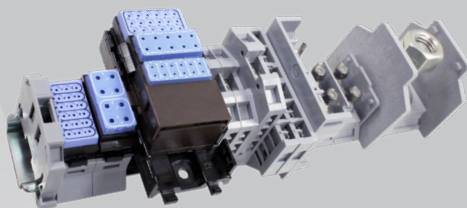
## CONNECTORS FOR DISTRIBUTION



### Modules 1777 Series

1777 series consists of quick junction modules for signal and low current distribution, where sealing (IP66 / IP68 and IP69K), space and weight-saving are prime requirements. Specifically suited for wiring optimization, then offering weight and cost savings, these track-mounted modules (on metallic or composite track) are available from 8 contacts size 12 up to 36 contacts size 22 in different contact configurations.

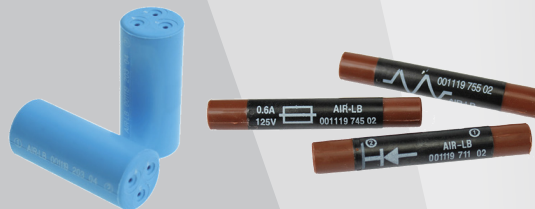
- Compact design
- Overmold technology offering excellent sealing performances
- Suited to save cable linear meters, then cost and weight
- Versatility of mixing on metallic or composite tracks
- Fire/Smoke/Toxicity conform to EN45545 (HL3 R22)



### ARC Terminal Blocks Series

Designed for signal or power distribution purposes, the terminal blocks are made of individual junction block mounted on rails (NF or DIN standard) and maintained by 2 end stops. 2 technologies available: Fast on type (BJL versions), Stud type (BJT versions).

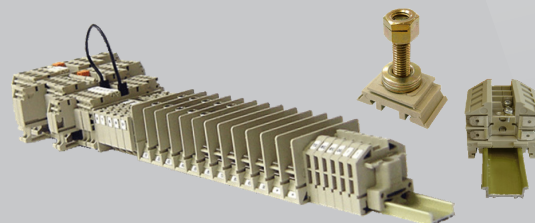
- ARC (Amphenol Rail Compound) material version
- 2 technologies available: Fast on type (BJL) and Stud type (BJT)
- NF or DIN rail
- Conform to NFF61-017
- Winterized application (from -60°C to +100°C)
- Meet and exceed international main directives and standards
- Custom design
- Can be mixed with 1777 modules on the same rail



### Splices 1119 Series

In-line junctions 1119 series are available in 1 to 4 contacts versions, for copper or aluminum cable contacts, and also exist in components carrier versions (diodes, resistors or fuses inserted). Fully sealed, compact, thin and easy to use, they are perfectly suited in a cable harness, to easily insert a component and change a signal, or simply to repair a damaged wire.

- Thin design
- Overmold technology offering excellent sealing performances
- Fire/Smoke/Toxicity conform to ABD0031 and FAR 25853



### Terminal Blocks Series

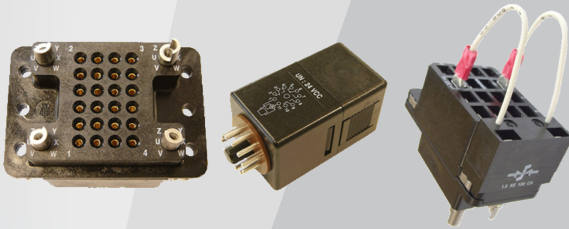
Designed for signal or power distribution purposes, the terminal blocks are made of individual junction block mounted on rails (NF or DIN standard) and maintained by 2 end stops. 3 technologies available: Fast on type (BJL versions), Stud type (BJT versions) or Spring clamp type (BJC versions).

- Conform to NFF 61-017
- Temperature range from -40°C to 100°C (-60°C for ARC versions)
- Fire/Smoke/Toxicity conform to NFF16101/102 Exigence 3, EN45545 HL3R22





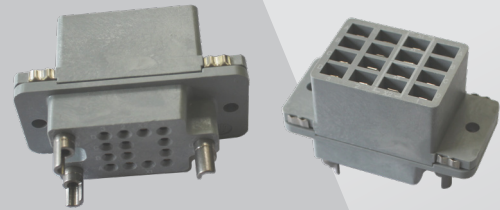
## INTERFACE CONNECTORS



### Relay Sockets Series

Adaptation device between a Relay and a Cable harness (fast-on tabs connection), RMT relay sockets (H400 & H600 models) are widely used by European train manufacturers and signalling equipments manufacturers. Also available : clamping carrier blocks (for Diodes).

- 4 and 6 PDT
- Robust and compact composite design
- For 16 and 24 connections
- Many keying polarization
- Fire / Smoke / Toxicity: NFF16101/102 Exigency 3, EN45545 (EL10 R26)



### ARC Relay Sockets Series

Adaptation device between a Relay and a Cable harness (fast-on tabs connection), RMT relay sockets (H400 & H600 models) are widely used by European train manufacturers and signalling equipments manufacturers.

- ARC material
- For application up to -60°C
- 4 and 6 PDT
- Robust and compact composite design
- For 16 and 24 connections
- Many keying polarization
- Fire / Smoke / Toxicity: NFF16101/102 I2 F2 Exigency 3, EN45545 (R22 HL3), NFPA130

#### SOLUTIONS:



Weight saving



Time saving



Space saving



Modularity



Seal IP68 / 69K



Cost saving



## ATTACHMENT SYSTEMS

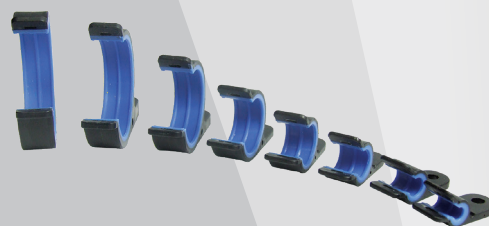
### Accessories for cable harness fixing on structure



#### LB Clamps

Lightweight alternative to metal cable clamp offering a versatile solution for reduced weight and installation time, while offering cable protection over time.

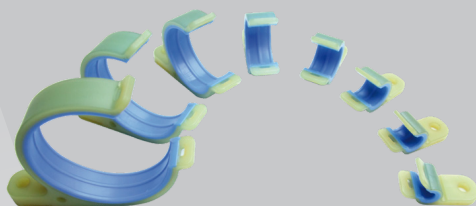
- Up to 73% lighter than metal clamps
- Quick installation
- Pre-locking
- Overmolded product: safety over time
- Stackable
- 10 sizes available



#### ABS1339 Clamps

ABS1339 Clamps provide routing, support and fixing for cable harnesses of various diameters. Different materials and configurations are available depending on the temperature and routing of the conduits (including versions for use inside the fuel tank).

- Pre-installation feature
- Greater wire bundle diameter variance
- High grade material
- Impressive weight savings vs. metal clamps
- 8 sizes available



#### Industrial Cable Clamps

Cable clamps provide routing, support and fixing for cable harnesses of various diameters for industrial and RMT applications.

- Pre-Installation feature
- Greater wire bundle diameter variance
- High grade material
- Impressive weight savings vs. metal clamps
- 8 sizes available







## FOCUS ON INNOVATIONS

### OPTICAL SOLUTIONS

All our optical modules are suited for the whole range of EN4165 / SIM connectors range. Many versions and technologies are available.

#### MPO

Connectors IEC61754-7  
With MT ferrule



#### Luxcis®

EN4830 for contacts EN4639-10X



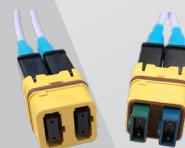
#### Elio®

EN4701 for contacts EN4531-101



#### SIMTac® 03

Module fitted with 2 connectors  
With 2 MT ferrules



#### SIMTac® 08

Module fitted with 1 connector  
in a size 8 cavity  
With MT ferrule



### AMPHENOL RAIL COMPOUND (ARC)

Innovative material for the RMT market. One unique material for all applications!

#### ORIGINS

Support the actors of RMT markets on the long term by developing a new range of terminal blocks with a new material complying and exceeding all national and international standards in terms of Fire, Smoke and Toxicity.

#### APPLICATIONS

Use for the whole range of terminal blocks (BJT, BJL and BJC) in order to offer to RMT constructors and operators products suitable for integration into equipments where various standards may be required.



by 2 majors national operators  
and 1 major train builder

#### RESULTS

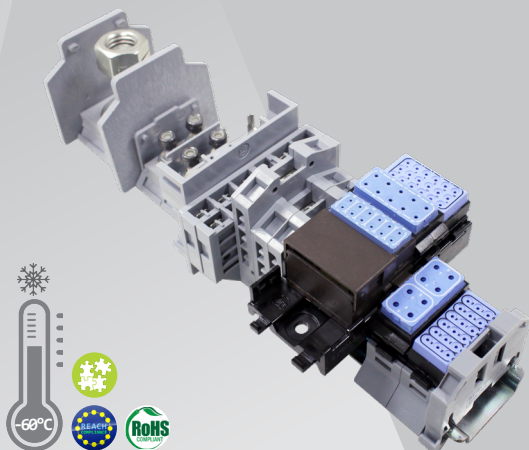
The ARC. complies with:

- EN45545-2: April 2013 R22 HL3
- DIN5510 Cat.S3
- NFF16-101/102 Cat.A1 I2 F2 Ex.3
- EN60695-11-10:UL94V0
- NFPA130

+ Specific requirements of European national standards different from those of the common European standard

+ An extended scope of use in cold environment (-60°C permanently)

+ Current REACH & RoHS rules



#### SOLUTIONS:



Weight saving



Time saving



Space saving



Modularity



Seal IP68 / 69K



Cost saving

## OUR KNOW-HOW

### ELECTRONIC PACKAGING

We extend our expertise in the fields of **Electronic Packaging** offering an integrated solution combining passive components within connector shells.



- Optimization of space requirements (design) -> **Space saving**
- Reduced integration time -> **Time saving**
- One part number and one provider only to manage -> **Supply chain simplification**
- Customized and stable solutions

### STRUCTURE CONNECTORIZATION

You want to reduce number of piece parts and part numbers? Think **Connectorization of Structural Elements**.

We have various design options to propose that will meet your requirements and simplify your procurement. Custom design is possible.



- 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**



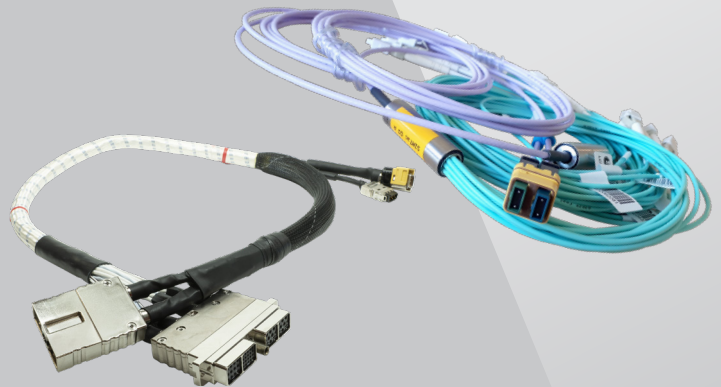
## OUR KNOW-HOW




### CABLE ASSEMBLIES

We can also offer you our **Electrical and Optical Cable Assemblies** capabilities.

Consult us with:

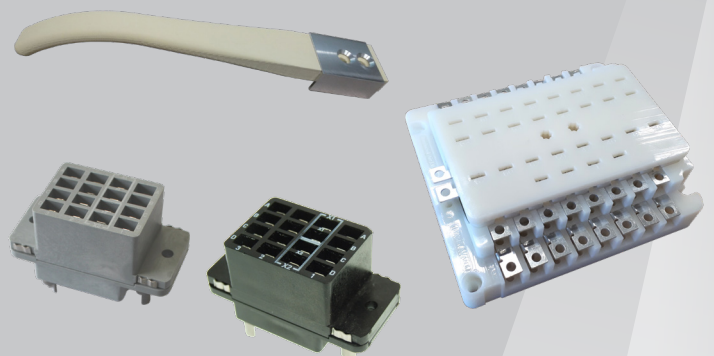
- your Cable Assemblies plans/drafts
- your specifications






- Reduced integration time -> **Time saving** 
- One part number and one provider only to manage -> **Supply chain simplification** 
- **Customized and stable solutions** 

### REENGINEERING

When one PN becomes obsolete within your system...  
When your original supplier let you down giving up its intellectual property on the component...  
We can **redesign your original product**.



- You do not need to redesign / requalify all your system -> **Cost saving** 
- We redesign an interchangeable product -> **Time saving** 
- **Lasting and reliable solution and partner** 

#### SOLUTIONS:



Supply chain simplification



FOD reduction



Customized and stable solutions





## Headquarters

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## More divisions on

[www.amphenol.com](http://www.amphenol.com)

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or download them online



[www.amphenol-airlb.fr](http://www.amphenol-airlb.fr)

