Innovation by SOURIAU
Aerospace Market

SOURIAU
Connection Technology
Decades of Know-how and Expertise have allowed SOURIAU to become a Preferred Partner to Worldwide Air Framers and Major Equipment Manufacturers in the Aerospace Industry.
Credentials in Innovation

Lightweight Hermetic

- Hermetic aluminum circular connectors with copper or fiber optic contacts.
- D-Sub, Micro-D, Nano-D and microComp® connectors in aluminum shell, laser weldable housing on equipment box.

Filtering/Lightning Protection

- Unique know-how in filtering (EMI-RFI and ESD), in lightning and electromagnetic pulse (EMP) protection.
- High performance composite lightweight filtered connectors.
- All major MIL-STD ranges (ARINC, 38999...) available with filtering and lightning protection.

Miniaturization/High-Density

- World’s smallest circular connectors (38999 type) with crimp contacts.
- The first Micro-D range in composite with gauge 26 removable contacts. Lightweight and high reliability solutions for replacing metal Micro-D or D-Sub.
Credentials in Innovation

**High Speed Network**

- Creator of Ethernet Quadrax for harsh environments. A patented SOURIAU design widely used in aerospace industry.
- ELIO® Fiber Optic butt-joint technology. Leading technology in aerospace industry. The «most-flown» fiber optic contacts in commercial aviation.

**Power Transmission**

- Full range of power connectors for «All-Electric Aircraft»: electro-hydraulic actuators, power supplies, generators, motors....
- Power contact design enabling high-vibration, high-temperature from 40 to 1,000 Amp.

**Composite/Weight Saving**

- World leader in high-performance 38999 Series III with composite shells.
- In-house mastery of plating adhesion for outstanding shielding effectiveness and lightning protection.
- Proven and qualified by all major Airframers (Boeing, Airbus...).
Credentials in Innovation

Quick Connect/Disconnect

- 38999 blind mate series for rack and panel.
- 38999 push-pull or quick release with a lanyard.
- Next generation of MIL-STD-1760, field repairable, improved design for high vibration +20° angle of separation.

Micro-Packaging Housing

- Fully laser-weldable and lightweight with aluminum / titanium / kovar.
- Thermal management fully integrated with heat-sink elements.

Firewall/High-Temperature

- Fire resistant feedthrough up to 1,000°C.
- Power or signal cable bulkhead with ceramic insert.
Credentials in Innovation

Robotics & Deep Space Activity

- Pioneer of connection / disconnection in space environment.
- Supplier of remote handling interconnects for Space Station robotic arms. Mission proven umbilicals in the most prestigious planet exploration programs: Mars, Titan and Mercury.

Complex Interconnect Solution

- Pioneer of umbilical connectors for launch vehicles throughout the world.
- Complex interconnect integrating electric, air cooling, fluids, in a single system.

RoHS Solution

- The first cadmium free QPL supplier.
- SOURIAU’s superior black zinc nickel plating process proven in mass production.
- Available in all SOURIAU connector ranges.
Advanced Interconnect Technologies for Civil Aviation

Airframe
- ARINC Series
- Bus Bar
- Bulkhead Connectors
- Composite MIL-DTL 38999 Series III
- D-Subminiature Connectors
- EN 3646
- Fiber Optic ARINC 801 ELIO®
- Filter & Lightning Protection
- Grounding Modules
- MIL-DTL-38999 Series I, II, III
- Modular Interconnect Solutions
- PCB Terminal Blocks
- Pressure Seal Connectors
- Power Distribution Systems
- RoHS Connectors
- Terminal Junction Modules

Power & Actuation
- Backshells
- EN 2997
- Feeder
- Filter & Lightning Protection
- High Vibration 38999 Series III
- Hermetics Firewall
- Lightweight Hermetics
- MIL-C-26482 Series 1, 2
- MIL-C-83723 Series
- MIL-DTL-38999 Series I, II, III
- Power Connectors
Aircraft Cabin & IFE
- ARINC Series
- Blind Mate
- Composite MIL-DTL 38999 Series III
- Data Bus Interconnects & Couplers
- D-Subminiature Connectors
- Fiber Optic ARINC 801 ELIO®
- High Speed Ethernet Quadrax
- Lighting Connectors
- Micro D Connectors, microComp®
- Modular Interconnect Solutions
- Push Pull Connectors
- Terminal Blocks
- Terminal Junction Modules

Avionics & Flight Management
- ARINC Series
- Blind Mate
- Data Bus Interconnects & Couplers
- D-Subminiature Connectors
- Fiber Channel Data Bus
- Fiber Optic ARINC 801 ELIO®
- Filter & Lightning Protection
- Grounding Modules
- High-Density Rectangular Connectors
- High-Speed Ethernet Quadrax
- Lightweight Hermetics
- Micro D Connectors, microComp®
- Modular Interconnect Solutions
- NAFI Connectors
- RF Connectors
- Rugged RJ45, USB
- Terminal Junction Modules

Engines & Controls
- Backshells
- EN 2997
- ESC 10, 11, 15, 16
- FADEC Shorting Plugs
- Feeder (Power)
- Filter & Lightning Protection
- Firewall Feedthrough
- Hermetic Connectors
- High-Speed Ethernet Quadrax
- High Vibration 38999 Series III
- Lightweight Hermetics
- MIL-C-83723 Series
- MIL-DTL-38999 Series I, II, III
- Power Connectors

Radar & Detection
- Fiber Channel Data Bus
- Filter & Lightning Protection
- Lightweight Hermetics
- Micro Packaging Boxes
- NAFI Connectors

SOURIAU
Connection Technology
## Advanced Interconnect Technologies for Military Aerospace

### Power & Actuation
- Backshells
  - EN 2997
  - High Vibration 38999 Series III
- Feeder (Power)
- Filter & Lightning Protection
- Hermetics Firewall
- Lightweight Hermetics
- MIL-C-26482 Series 1, 2
- MIL-C-83723 Series
- MIL-DTL-38999 Series I, II, III
- Power Connectors

### Radar & Detection
- Fiber Channel Data Bus
- Filter & Lightning Protection
- Lightweight Hermetics
- Micro D Connectors, microComp®
- Micro Packaging Boxes
- NAFI Connectors

### Weapons Systems
- Blind Mate
- Composite MIL-DTL-38999 Series III
- Data Bus Interconnect 1553B
- D-Subminiature Connectors
- Fiber Channel Data Bus
- High-Speed Ethernet Quadrax
- Micro D Connectors, microComp®
- MIL-STD-1760
- Push-Pull Connectors
- Quick Connect Disconnect
- RoHS Connectors
- Umbilical Connectors
Airframe

ARINC Series
Bus Bar
Bulkhead Connectors
Composite MIL-DTL 38999 Series III
D-Subminiature Connectors
EN 3646
Fiber Optic ARINC 801 ELIO®
Filter & Lightning Protection
Grounding Modules
MIL-DTL-38999 Series I, II, III
Modular Interconnect Solutions
PCB Terminal Blocks
Pressure Seal Connectors
Power Distribution Systems
RoHS Connectors
Terminal Junction Modules

Avionics & Flight Management

ARINC Series
Blind Mate
Data Bus Interconnects & Couplers
D-Subminiature Connectors
Fiber Channel Data Bus
Fiber Optic ARINC 801 ELIO®
Filter & Lightning Protection
Grounding Modules
High-Density Rectangular Connectors
High-Speed Ethernet Quadax
Lightweight Hermetics
Micro D Connectors, microComp®
Modular Interconnect Solutions
NAFI Connectors
RF Connectors
Rugged RJ45, USB
Terminal Junction Modules

Engines & Controls

Backshells
EN 2997
ESC 10, 11, 15, 16
FADEC Shorting Plugs
Feeder (Power)
Filter & Lightning Protection
Firewall Feedthrough
Hermetic Connectors
High-Speed Ethernet Quadax
High Vibration 38999 Series III
Lightweight Hermetics
MIL-C-83723 Series
MIL-DTL-38999 Series I, II, III
Power Connectors

SOURIAU
Connection Technology
Advanced Interconnect Technologies for Space

- Launcher
- Satellite

- Space Station
- Planet Exploration

✓ Non-Explosive Actuator

✓ Cryogenic LOX-LH2

✓ Circular Space Grade

✓ Remote Handling

✓ Rectangular Space Grade

✓ Air Cooling

✓ Umbilical

✓ Bulkhead

✓ By-Pass

✓ 38999 Series III Class G

✓ 8976 Series

✓ 8944

✓ 8907

✓ D-Sub.microComp®
Advanced Interconnect Technologies for Airframe

- Fuselage
- Wings

- Wiring Bay
- Cockpit

- Terminal Blocks

- Grounding Modules

- Rack & Panel

- Panel Bulkhead

- Power Distribution

- Lightweight Hermetics

- Lightwave

- Rack & Panel

- D-Subminiature

- Lightweight

- 8559 Series

- RB Modules

- 209-208 Series

- Power circular

- EN 3646

- ARINC

- 38999 Bulkhead

- 8630 - 8635 Series

- 8525 Series

- Lightweight Composite
Advanced Interconnect Technologies for Avionics & Flight Management

- Navigation
- Communications
- Computers
- Electronic Boxes

- Ethernet Quadrax

- Rack & Panel
- Fiber Optic

- Lightweight
- Butt Joint ELIO®

- Miniature Rectangular
- 38999 Composite

- PCB Connectors

- Filtered ARINC

- NAFI Ranges

SOURIAU
Connection Technology
Box Interconnect Solutions
Inside/Outside

- Input/Output Front Panel
- PCB & Board Level Connectors

- Rack & Panel Connectors
- Blindmate Connectors

✓ Input/Output Front Panel Circular Connectors Variations

- Circular Double Flange
  - 26482
  - 38999
  - EN 2997

- Rectangular
  - D-Sub
  - Micro-D
  - microComp®
  - Nano-D
  - Microminiature 38999

- Rack & Panel
  - ARINC 600
  - DoD 700

✓ PCB Contact Terminations

- 90° Contact
- Straight Signal
- Surface Mount
- Tin Plated
- Power
- Ethernet Quadrax
Advanced Interconnect Technologies for Fuel Management

- Fuel Tank & Circulation
- Refueling System
- Pump & Valve
- Gages & Sensors

✓ Bulkhead

✓ Fuel Tank Harness

✓ Sealed Wire

✓ Blind Mate

✓ Fuel Resistant

✓ Hermetics

✓ Lightweight Hermetics

✓ Hermetic Fiber Optic

✓ Power Circular

✓ Butt Joint ELIO®
Advanced Interconnect Technologies for Power & Actuation

- Servo Valves
- Electro-Hydraulic Actuators
- Landing Gear
- Flight Control Surface

✓ Hermetics

✓ High Power
- Up to 1000 Amp
- 38999 Power Hermetic

✓ Servovalve Connector

✓ EN Connectors
- EN 2997 Series
- SN 1542

✓ Power Supply
- Feeder

✓ Ethernet Quadrax
- Ethernet Contacts

✓ Titanium/Stainless Steel
- 38999 Series III

✓ Filter/Lightning
- EN 2997, 38999 Class K

✓ Rack & Panel
- ARINC

- souriau
  Connection Technology
Advanced Interconnect Technologies for Aircraft Cabin/IFE

- Galley
- IFE Network
- Seat Interconnect
- Lighting

- Rack & Panel
- Power Supply
- Fiber Optic
- Ethernet Quadrax
- D-Subminiature
- Miniature Rectangular

- ARINC 600
- Butt Joint ELIO®
- Power Contacts
- Ethernet Contacts
- microComp® Quick Latch
- 8630 - 8635 Series
Advanced Interconnect Technologies for Radar & Detection

- Active Radars
- Digital Detection
- Electronic Boxes
- Electromagnetic Seekers
- Thermal Management

- Micropackaging

- Lightweight

- Miniaturization

- Filter/Lightning

- Hermetics

- Fiber Channel Data Bus
Advanced Interconnect Technologies for Weapon Systems

- Mission/Stores Interface
- Infrared Seekers
- Aircraft/Stores Interface
- Microelectronics Hermetic Packaging

- Quick Connect/Disconnect
- Lightweight
- Umbilical
- MIL-STD-1760
- Hermetic MicroPackaging
- Miniaturization

- 38999 Push-Pull
- 38999 Composite
- 8916 Series
- Advanced 8D36
- Microelectronics Box
- Rectangular & Circular
The SOURIAU R&D Leading Edge

From its origin SOURIAU's strategy is based on innovative interconnect solutions. The company growth is driven by innovation and consequently a high percentage of its revenues is allocated to R&D.

150 people in R&D, mastering capabilities in:
- Contacts for Signal & Power transmission
- Network protocols and physical layers
- Fiber Optic contacts and transceivers
- Shielding, crosstalk
- Standardization know how (Mil Spec.)
- Composite raw materials
- Simulation SW for Mechanics, Molding
- Radiation, High pressure
- Corrosion, sealing
- Hermeticity
- High temperature, fire resistant
- RoHS plating

50 people in Process Engineering:
- New products, industrialization, continuous improvements, total quality

CAD and simulation tools operating in a worldwide network offer an efficient access to our Databases and unique source of know-how.
SOURIAU has over 60 years of existence in interconnect solutions and has created many original concepts such as the bayonet coupling in 1942 or the first RoHS-QPL in 2009.
SOURIAU offers more than 100,000 product configurations designed for complex, integrated aerospace and defense systems, with the ability to provide customized solutions as required.

Examples of enhanced solutions matching technological trends:

- Truly hermetic receptacle with butt joint ELIO® contacts in aluminum shell
- Filtered ARINC with removable contacts
- Integrated electronics as TVS diodes in composite connectors for lightning protection
# Global Supplier of International Standards

70 years of active participation in creating norms in international committees

<table>
<thead>
<tr>
<th>1942: Creator of Bayonet Connector</th>
<th>2009: First QPL Zinc Nickel - RoHS</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Connector Image" /></td>
<td><img src="image" alt="Connector Image" /></td>
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</table>

## SOURIAU offers the complete catalog of major international ranges (table of equivalence)

<table>
<thead>
<tr>
<th>SOURIAU Series</th>
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<tr>
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<tr>
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<tr>
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<td>MIL-DTL-38999 Series III Class: Y</td>
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<tr>
<td>8D Bronze (JVS) G Series 10</td>
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<tr>
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</tr>
</tbody>
</table>

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CIRCULAR

RECTANGULAR
Hermetic micro-packages with embedded heat sinks provide excellent thermal dissipation properties to enhance the reliability of the electronics even in extreme mechanical and thermal environments.

- **Truly hermetic** ✓ Leak rate $< 10^{-9}$ atm.cm$^3$.s$^{-1}$
- **Enhanced reliability** ✓ Dissipate heat through hermetically brazed heat sinks
- **Wide array of combinations available** ✓ Titanium + CuMo, Titanium + CuW, Kovar+Cuw
- **Laser weldable connectors** ✓ No solder joint fatigue for an enhanced reliability, Easy maintenance
- **Versatility of I/O connectors** ✓ All type of hermetic feedthroughs: signal, power, RF, D-Sub, Micro-D, Nano-D.
Hermetic aluminum 38999 butt joint feedthrough with a leak rate less than $10^{-9}$ atm.cm$^3$/s. A dB loss of 0.3 dB: very superior performance compared to lens beam design.

- **Truly hermetic**: ✓ Leak rate $< 10^{-9}$ atm.cm$^3$/s
- **Weight saving**: ✓ Aluminum shell
  Save 30 to 40% of weight vs. Stainless Steel
  Revolution to save weight!
- **Single and Multi Mode**: ✓ Unique multiway hermetic fiber optic feedthrough in the world
- **Intermateable with SOURIAU’s butt joint ELIO® connectors**: ✓ Airbus A380 spec ABS1379 qualified
  Intermateable with ARINC 801 and EN4531 standards
Ultra rugged, compact lightweight hermetic micro-Ds with copper alloy contacts with a leak rate less than $10^{-9}$ atm.cm³/s. These connectors are capable of performing at extreme temperature and are built to exceed the requirement of MIL-PRF-83513.

- **Truly hermetic** ✓ Leak rate $< 10^{-9}$ atm.cm³/s
- **Weight saving** ✓ Aluminum shell
  - Save 30 to 50% of weight vs. Stainless Steel
  - Titanium shells also available
- **Laser weldable** ✓ No solder joint fatigue for an enhanced reliability
- **Outstanding conductivity** ✓ Built with copper alloy contacts
  - Conductivity 5 times better than regular Fe/Ni contacts
Hermetic Fuel Tank Connector with Removeable Contacts

Removeable crimp contacts associated with hermetic design and with materials suitable for continuous fuel immersion makes the connector ideal for tank wall applications.

- **High hermeticity performance** ✓
  - Glass to metal sealing:
    - leakage of less than $10^{-9}$ atm. cm³/s

- **Removeable crimp contacts** ✓
  - A technology combining crimp contacts with glass beads
  - RoHS: no lead used
  - Long lifetime: superior to solder cup contacts in kerosene immersion
  - Easy MRO: contact replacement.

- **Long term fuel immersion materials** ✓
  - Performances guaranteed for minimum 90.000 hours in fuel immersion.

- **Wide availability:** ✓
  - EN3646 (Airbus Qualified Products)
  - EN2997, EN3645, MIL-DTL-38999.

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MIL-DTL-38999, EN3646, EN2997
Fuel Tank Connectors
38999 Series III
Bulkhead 8DB

Economic Solution for Panel Bulkhead

Easy integration ✓ Standard 38999 mounting interface (Square Flange, Jam Nut).

Easy modular assembly and connection. Time saving for maintenance. The ideal interconnect solution for aircraft pressurized/non pressurized panels.

Reinforced sealing ✓ Feedthrough sealing even when unmated ($10^{-6}$ atm.cm$^3$.s$^{-1}$).
Permanent sealing barrier on panel (O rings).

Reinforced sealing ✓ Glass fused hermetic version available ($<10^{-8}$ atm.cm$^3$.s$^{-1}$) for fuel tanks/ space systems.

A large platform available ✓ All 38999 Series III layouts (signal and power contacts).
38999 Series
Resin Sealed

Cost Effective Sealing Solution

The best value for money.

- **Weight saving ✓**  
  Lightweight compared with hermetic versions.

- **Reinforced sealing ✓**

- **Excellent shock resistance ✓**  
  Better than hermetic glass seals.

- **Socket contact ✓**  
  Sealing with female contacts available.

![Image of connector parts](image-url)
Economic & Superior Sealed Wire Feedthrough

Easy installation ✓ Allows a bundle of cables to cross through the bulkhead without any contact junction. All cables are individually sealed inside the feedthrough.

A full range available ✓ 38999 shell sizes from # 9 to 25

Reinforced sealing ✓ Gas environment: from $10^{-4}$ to $10^6$ atm.cm$^3$/s depending on cable diameter. Liquid environment: $<< 10^6$ atm.cm$^3$/s depending on cable diameter.

SOURIAU
Connection Technology
Safety cable routing thanks to a fire stop design.

Ceramic insulator ✓ Fire resistant: 1000°C during 20 min. under vibrations

Front of the fireseal during test
Rear of the fireseal after test

Space saving ✓ Compared to standard bulkhead connectors

Airbus ABS 0681 ✓ Proven design with floating nuts for blind mating (ABS1536)
8535 - 8536
Integrated Backshell Connector

Stainless steel screw coupling connector designed for use in aviation harsh environments. Perfect for engines and landing gear.

**Harsh environment connector**
- High vibration resistance.
- High temperature resistance (260° C).
- Fire proof (1100° C).

**Integrated backshell**
- Compact and light weight.
- Direct connection of the EMI braid and heat shrink boot on connector:

  ![Diagram of connector components]

  - Heat shrink boot
  - EMI braid
  - Integrated backshell
  - Clamp collar

- Blind mate connection possibility (8536 Series / ESC16 Series).

**Fully interchangeable and intermateable**
- 8535 Series with BACC 63 CM-CN, EN2997, MIL-C-83723 Series III & ESC10 connectors.
- 8536 Series with ESC11 connectors.
Power contacts are attached directly to the board with screws for an optimized connection. Available in size 6 contacts (Ø 4.6mm) and size 4 contacts (Ø 5.74mm).

- **Safe & Quick** ✓ Avoid soldering of contacts: no heat applied - no risk of damaging the connector; quicker fit in the equipment.
- **Robust** ✓ True mechanical link between PCB and contacts.
- **Compact** ✓ Tapped contacts for direct and low profile connections.
38999 Series
Power Contacts

Power Supply in Harsh Environments

Designed to be used in severe environments, and resistant to fluids, high shock and vibration.

- **A wide range**
  - From composite to steel, all shell materials and platings. Hermetic version available.

- **Contact performance**
  - High current: 20% more intensity compared to standard contacts. Operating at high vibration and temperature levels.

- **User friendly**
  - Easy maintenance with removeable contacts.

- **High power offer**
  - High power available up to 600 AMP.

- **A wide range available**
  - In all circular (38999, EN2997) and rectangular (ARINC ...) ranges with #8 cavities. Same cavity for power, coax, triax and ELIO® fiber optic.
38999 Series III
High Power Contacts

38999 High Power (up to 600 A)

Designed to meet the harshest military requirements where high power and shielding are requested.

Superior contact technology ✓ Proven contacts design with a silver plated braid. High contact endurance; low contact resistance. No microcut under vibration.

Modular design for easy installation ✓ Removable backshell: straight, right angle or bar bus. Backshell termination: for thread or shrink boot. Possible to crimp various cables (Ø from 50 to 240 mm).

Smart safety equipment ✓ Pin contact is equipped with a plastic cap to avoid electrical shocks. Recessed engagement point to avoid any electric arc during mating/unmating.

Shell sizes available ✓ Size 19 (250A); size 23 (400A); size 25 (600A).
ARINC
Power Contact

Up to 100 Amp. per Contact in Standard ARINC

Designed to bring high power transmission into standard rack & panel rectangular connectors.

- Up to 100 Amp.
- At 100 Amp., the allowed maximum ambient temperature is 75° C

A wide range available

- In both ARINC 600 and 700, all planforms with #8 cavities

SOURIAU
Connection Technology
Quadrax contacts with robust MIL-DTL-38999 compliant screw coupling system for networks and high vibration environments.

High speed ✓ One Quadrax contact replaces two Twinax contacts. Data rate up to 1 Gbit/sec.

A wide range available ✓ In all circular (38999, EN 2997...) and rectangular (ARINC...) ranges with #8 cavities. Same cavity for power, coax, triax and ELIO® fiber optic.

A flexible range ✓ Available in 100 and 150 ohms (grounded or not).
38999 Series
ELIO® Fiber Optic Contacts

ELIO® Fiber Optic Contact

Easy mounting optical link for severe applications.

Flight proven ✓ The only Airbus qualified fiber optic technology: ABS1379, ABS1213, ARINC 801 and EN4531 qualified.

Robust connection ✓ Withstanding the most severe vibrations with excellent optical performance (0.3 dB).

User friendly contact ✓ Easy cleaning: no part to remove. No tool needed for insertion / extraction of the contacts in the connector.

A wide range available ✓ In all planforms with # 8 cavities. Up to 24 ELIO® contacts in 38999 size 25.
## Ethernet Connectors for Harsh Environments

Rugged RJ45 / USB-A / USB-B solutions.

<table>
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<th>Feature</th>
<th>Details</th>
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<tr>
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<td>A &amp; B types, connectors available on MIL-C-26482 Series I, MIL-DTL-38999 Series III.</td>
</tr>
<tr>
<td>IP 67 sealing</td>
<td>In mated conditions.</td>
</tr>
<tr>
<td>USB data transmission</td>
<td>USB - A &amp; B types - according to the «Bus» specification, Rev 2.0.</td>
</tr>
<tr>
<td>RJ45 data transmission</td>
<td>RJ45 - 10 BaseT, 100 BaseTX and 1000 BaseT networks, CAT 5E per TAI/EIA 568B and ClassD per ISO/IEC 11801.</td>
</tr>
</tbody>
</table>
Shell to Shell Solutions for Shielding Effectiveness

1. Ground Blade
2. Ground Finger
3. Ground Spring

Shell Continuity
The signal integrity solution: EMI-RFI/Transient Protection/Noise Free Data signal.

- Protection from indirect effect of lightning or NEMP ✓
- Custom shell design ✓
  - To house electronic components.
- Re-moveable contacts ✓
  - In case of damage to reduce maintenance costs.
- Intermateable with standard plugs ✓
  - Available in ARINC and DoD (MIL-C-83527) ranges.

Integration of extra signal processing components as TVS diodes or Transorb DO160 section 22, MIL-C-461E.

T1=6.4 microseconds ± 20%
T2=59 microseconds ± 20%
Lightning Protection - Rigid PCB Mount

The signal integrity solution: EMI-RFI/Transient Protection/Noise Free Data signal.

- Protection from indirect effect of lightning or NEMP ✓
  Integration of extra signal processing components as TVS diodes or Transorb DO160 section 22, MIL-C-461E.

- Safe PCB mount ✓
  Double flange receptacle design to secure PCB mount.

- Custom shell design ✓
  To house electronic solutions with PCB design.

- Intermateable with standard plugs ✓
  Available in all EN 2997 range«Engine Connectors».
**EMI-RFI Filters and Lightning Protection in Composite Shell**

- **Save weight**: ✓ Composite shells are light-weight.
- **Save space**: ✓ Complete filter solution in standard shell. No need for filter PCBs inside equipment. Smaller equipment envelope required.
- **Excellent filter performance**: ✓ Excellent performance, comparable to aluminum shell EMI-RFI filter connectors.
- **Highly corrosion resistant**: ✓ 2000 hours salt spray in either Nickel or Olive-Drab finish.
- **Wide range of layouts available**: ✓ SOURIAU EMI-RFI Filter 38999 Series III connectors are available in aluminum, marine bronze, and stainless steel shells.
Sealed Rack & Panel for Blind Connection

A quick connection in hard-to-reach areas.

Blind connection ✓ Easy & fast connection without any coupling/uncoupling between a float-mounting unit & a fixed unit.

Float-mounting unit: Rack ✓ Female contacts - crimp Angular orientation with a key

Misalignment catching ✓
38999 Series III
Push-Pull Connector 8D8

Push-Pull with High Vibration Performance

- Easy to connect-disconnect ✓
- High performance locking system ✓
  - Very high performance coupling with ball locking concept, check of locking by free ring when mated.
- High vibration performance ✓
  - Up to 44g — ideal for mil-aero and space applications.

Ideal for restricted space mating
Easy to connect & disconnect

Simple push to connect - pull to disconnect.

Safe release

With ± 10° range angle of separation.

Mechanical locking confirmation

When the connector is mated the coupling ring rotates providing confirmation of a secure connection.

High performance locking system

With ball locking device, no risk of jamming or damage of the locking mechanism.

High vibration performance

Up to 44g - ideal for missiles, inter-stage separation, space probes, UAVs.
Self-alignment / blind connector mating / safe operational solution to weapon releases.

Safe quick disconnect at high speed ✓ Robust unlocking system : 9.15m/s ± 10%.

Field repairable ✓ Damaged coupling mechanism can be removed and fully replaced without need to disassemble the electric harness or cable backshell.

High vibration performances ✓ Random: 44 G RMS, Sine: 60G with angular separation up to 20° (maximum)
8BA Series
Miniature Connectors

Miniature Connector with Break Away Release

Connector ideally designed for quick disconnecting under harsh environment.

**Excellent properties** ✓ Proven design ensures a perfect shielding and is vibration resistant (30g at 125°C).

**Design flexibility** ✓ 3 different sizes and 6 different layouts available with #22 and #26 contacts (up to 9#26 in shell 6).

**Robustness** ✓ Stainless Steel shell available (1500 matings) together with aluminum.

**Cadmium free alternative** ✓ Zinc nickel plating available together with Nickel and Cadmium.

**Integrated backshell** ✓ Cost and space saving (PCB backshell available).
38999 Series
Bayonet Connector 8LTA

The Smallest 38999 with Bayonet Coupling

Design derived from the MIL-DTL-38999, the 8LTA is ideal where both space saving and high density are required.

A compact solution ✓ The smallest connector available on the market (shell size 03) with integrated backshell.

A high density solution ✓ Up to 5 contacts in 38999 size 03. 9 contacts in size 07.

Cadmium free ✓ IP67 on mated connector, Available in Zinc Nickel.
Composite micro Ds with Crimp Contacts

Composite rectangular shells & inserts ✓ 60% lighter than a high density D-Sub

Miniature design ✓ 40% smaller than a high density D-Sub

Removable # 26 contacts ✓ Ensure repairability unlike current micro D offerings. Increased prototyping flexibility in harness manufacturing

High vibration performance ✓ Vibration performance exceeds micro D 8 hours 44g random vibration

A full product range available ✓ 9 layouts, from 7 to 104 contacts
8525 / EN3646 Range & Extension

Hermetic version ✓ Stainless steel
Hermeticity: $1.10^{-7}$ ATM cm$^3$/s

Shunted version ✓ Standard shell
EN3646

PC Tail version ✓ Standard

Fuel tank version ✓ Spec: 053
Immersion in kerosene (JP5)

Etherent version ✓ Qualified ABS1054, ABS1057
38999 Series III Composite Connector

The only connector combining weight saving, high corrosion resistance and RoHS.

- **Qualified by major Airframers** ✓
  Excellent lightning strike performances thanks to high shielding effectiveness.

- **In-house plating** ✓
  Fully automated process with large volume capacity guaranties best in class quality.

- **Robust connector** ✓
  Suitable for applications with high vibration. High corrosion resistance: 2000 hours salt spray withstanding.
Easy Mount Re-usable Fixing Plates

«Cost saving solution.»

User friendly ✓ 1 fixing plate replaces 8 fixing elements (nuts+washers). Front or rear mounting on panel. Special «open» shape for connector mounting with harness.

Safe mounting ✓ Fixing plates with self locking nuts.

Easy maintainance ✓ No risk of loosing elements (Foreign Object Detection).

A complete offer ✓ 3 different versions: 2,3 or 4 holes, several finishes available.
38999 Series
Clinch Nuts

Clinch Nut Solution for Box Mount

Equivalent mounting retention of the receptacle ensured with only 4 clinch nuts. Designed for severe applications.

- User friendly ✓ Easy to install.
- Less fixing parts ✓ Elimination of nuts and washers.
- A wide range available ✓ In major circular ranges (38999, 26482, EN 2997 and also in ARINC rectangular rack & panel.)
Specially designed for PCB applications in harsh environment, decoupling vibration from the board.

**Excellent mechanical performance** ✓  Standoffs integrated into the connector. No risk of breaking contacts and no risk of micro-cuts.

**Design flexibility** ✓  Square flange or Jam nut versions available. Versatile contact length options.

**A wide range** ✓  Available in aluminum from shell size 9 to 25.

**User friendly** ✓  Easy to assemble & time saving.
38999 Series III
Black Zinc Nickel

The RoHS Alternative to Replace Cadmium

The best value for money solution.

- **Souriau Zn Ni** ✓ Alternate to cadmium.
- **RoHS compliant** ✓ A unique SOURIAU plating process compliant with RoHS regulation for cadmium and Cr6+ restriction.
- **The first QPL qualified** ✓ The first solution which has been qualified by US Defense authority (DSCC).
- **High corrosion resistance** ✓ 500 hours salt spray.
- **Available in mass production** ✓ Available for the whole 38999 Series III aluminum range.
Customer Coverage through Worldwide Sales Network

SOURIAU is recognized as one of the top international manufacturers of connectors for harsh environment and is continuously strengthening its leading position through its solid structure as an international group. Today the SOURIAU group has a strong global presence and operates 24 facilities (10 production sites and 14 offices) on 4 continents:
  15 in Europe,
  4 in Americas,
  4 in Asia
  1 in Africa.

Our international presence is reinforced by 23 franchised and value added distributors in 14 countries.

We also rely upon an extensive network of distributors and resellers worldwide. This coverage, together with a strong commitment towards service, ensures rapid responses to the specific needs of our customers.