



Aerospace Market



The Most Innovative Connector Supplier in the Aerospace Market



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 Quadrx
- Lighting Connectors
- Micro D Connectors, *microComp*®
- Modular Interconnect Solutions
- Push Pull Connectors
- Terminal Blocks
- Terminal Junction Modules

Radar & Detection

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

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 Quadrx
- 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 Quadrx
- High Vibration 38999 Series III
- Lightweight Hermetics
- MIL-C-83723 Series
- MIL-DTL-38999 Series I, II, III
- Power Connectors

Advanced Interconnect Technologies for Military Aerospace

Weapons Systems

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

Radar & Detection

Fiber Channel Data Bus
Filter & Lightning Protection
Lightweight Hermetics
Micro D Connectors, *microComp*®
Micro Packaging Boxes
NAFI Connectors

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

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 Quadrx
- 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 Quadrx
- 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

✓ Cryogenic LOX-LH2



✓ Non-Explosive Actuator



✓ Circular Space Grade



✓ Remote Handling



✓ Rectangular Space Grade



✓ Air Cooling



✓ Umbilical



Advanced Interconnect Technologies for Airframe

- Fuselage
- Wings

- Wiring Bay
- Cockpit

✓ Terminal Blocks



✓ Grounding Modules



✓ Power Distribution



✓ Rack & Panel



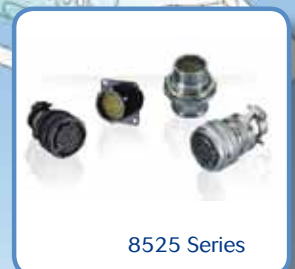
✓ Lightweight Hermetics



✓ Panel Bulkhead



✓ EN 3646



✓ D-Subminiature



✓ Lightweight



Advanced Interconnect Technologies for Avionics & Flight Management

- ▶ Navigation
- ▶ Communications

- ▶ Computers
- ▶ Electronic Boxes

✓ Ethernet Quadrax

✓ Rack & Panel



✓ Fiber Optic



✓ Lightweight



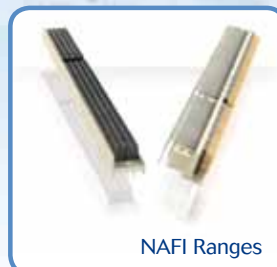
✓ Miniature Rectangular



✓ Filter/Lightning



✓ PCB Connectors



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

- ▶ Rack & Panel
 - ARINC 600
 - DoD 700

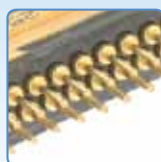
- ▶ Rectangular
 - D-Sub
 - Micro-D
 - *microComp*®
 - Nano-D
 - Microminiature 38999

- ▶ PCB
 - NAFI 1
 - NAFI 2

✓ PCB Contact Terminations



90° Contact



Straight Signal



Surface Mount



Tin Plated



Power



Ethernet Quadrx

Advanced Interconnect Technologies for Engines & Controls

- ▶ FADEC
- ▶ Control Units

- ▶ Detection
- ▶ Ignition Boxes

✓ Engine Connectors

✓ High Temperature/Firewall



✓ Hermetics



✓ Power Supply



✓ Titanium/Stainless Steel



✓ Ethernet Quadrax



✓ Filter/Lightning



Advanced Interconnect Technologies for Fuel Management

- ▶ Fuel Tank & Circulation
- ▶ Refueling System

- ▶ Pump & Valve
- ▶ Gages & Sensors

✓ Bulkhead



8DB Series

✓ Hermetics



8526 Series

✓ Fuel Tank Harness



8915 Series

✓ Sealed Wire



8PS Series

✓ Fuel Resistant



38999,
EN3646, EN2997 Series

✓ Blind Mate



8LT Series

✓ Lightweight Hermetics



Power Circular

✓ Hermetic Fiber Optic



Butt Joint ELIO®

Advanced Interconnect Technologies for Power & Actuation

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

✓ Hermetics



✓ Servovalve Connector



✓ EN Connectors



✓ High Power



✓ Power Supply



✓ Filter/Lightning



✓ Ethernet Quadrx



✓ Rack & Panel



✓ Titanium/Stainless Steel



Advanced Interconnect Technologies for Aircraft Cabin/IFE

- ▶ Galley
- ▶ IFE Network

- ▶ Seat Interconnect
- ▶ Lighting

✓ Rack & Panel



ARINC 600

✓ Power Supply



Power Contacts

✓ Fiber Optic



Butt Joint ELIO®

✓ Ethernet Quadrax



Ethernet Contacts

✓ Miniature Rectangular



microComp® Quick Latch

✓ D-Subminiature



8630 - 8635 Series

Advanced Interconnect Technologies for Radar & Detection

- ▶ Active Radars
- ▶ Digital Detection

- ▶ Electronic Boxes
- ▶ Electromagnetic Seekers

✓ Thermal Management



Heat Sink Box

✓ Micropackaging



Hermetic Box

✓ Hermetics



D-Sub, Micro D & Nano D

✓ Lightweight



38999 Composite

✓ Filter/Lightning



38999, 26482, EN 2997

✓ Miniaturization



microComp®

✓ Fiber Channel Data Bus



FCDB

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



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

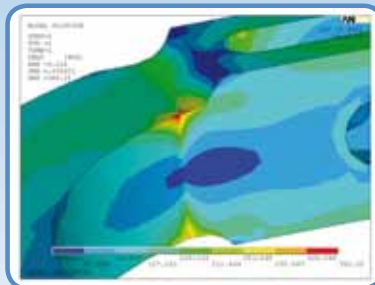
50 people in Process Engineering:

- New products, industrialization, continuous improvements, total quality

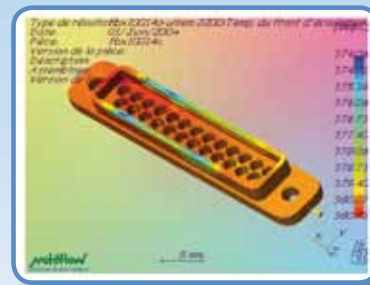
CAD and simulation tools operating in a worldwide network offer an efficient access to our Databases and unique source of know-how.

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.



Stress test



Thermal dissipation

► 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

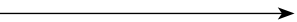
1942: Creator of Bayonet Connector

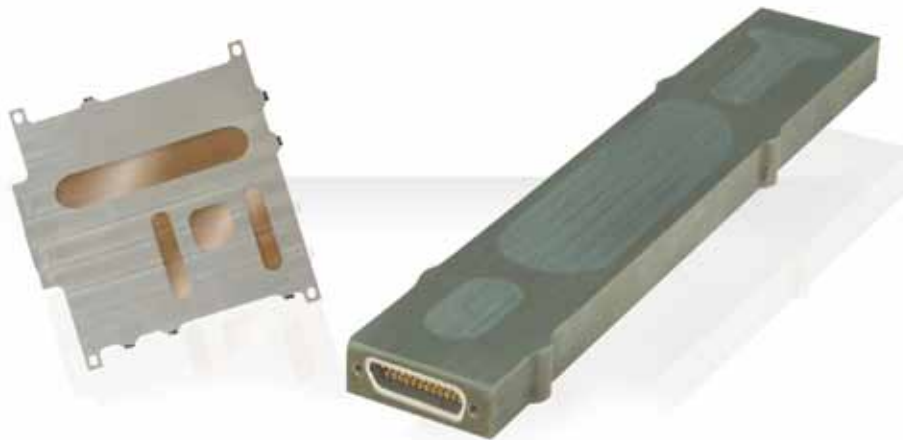
2009: First QPL Zinc Nickel - RoHS



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

	SOURIAU Series	Mil-Spec	EN	BACC	Others VG, HE, CECC, JN, JSF, ESC
CIRCULAR	851	MIL-C-26482 G Series 1	—	—	VG 95328, HE 301B
	8525	—	EN 3646	—	HE 302
	8526	MIL-C-26482 Series 2	—	—	CECC75 201001, HE 312
	8LT	MIL-DTL-38999 Series I	—	—	HE 308
	8ST	—	EN 3372	—	VG 96912, JN 1003
	8T	MIL-DTL-38999 Series II	—	—	VG 96912, HE 309
	8D Aluminum	MIL-DTL-38999 Series III Class: F, W	EN 3645	—	JN 1034
	8D Composite	MIL-DTL-38999 Series III Class: J, M, X	EN 3645	BACC 63CT-CU	JSF C51
	8D Stainless Steel	MIL-DTL-38999 Series III Class: K, S	EN 3645	BACC 63DB-DC	—
	8D Titanium	—	—	—	JSF C114, JSF C116
	8D Hermetic	MIL-DTL-38999 Series III Class: Y	EN 3645	—	—
	8D Bronze (JVS)	—	—	—	CECC 75.201.00
	8533 Series	—	EN 2997	BACC 63CM-CN	ESC 10, JN 1024
	8534-8535-8536 Series	—	—	—	ESC 11, ESC 15, ESC 16
RECTANGULAR	8630-8635 Series	MIL-DTL-24308	—	—	—
	ARINC 600 Series	ARINC	—	—	—
	S700 Series	MIL-C-83527	EN 3682	—	—
	8602 NAFI	MIL-C-28754	—	—	—





Hermetic Micro-Packaging with Heat Sinks

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.cm³.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.



The First Truly Hermetic Aluminum 38999 Butt Joint ELIO® Feedthrough

Hermetic aluminum 38999 butt joint feedthrough with a leak rate less than 10^{-9} atm.cm³/s. A dB loss of 0.3 dB: very superior performance compared to lens beam design.

Truly hermetic



Leak rate < 10^{-9} atm.cm³/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



The Only Laser Weldable Hermetic Micro-D with Copper Contacts

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.
 cm^3/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.

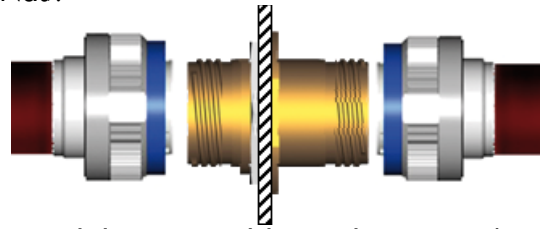


Economic Solution for Panel Bulkhead

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.cm³.s⁻¹).
Permanent sealing barrier on panel (O rings).

Reinforced sealing



Glass fused hermetic version available ($<10^{-8}$ atm.cm³.s⁻¹) for fuel tanks/ space systems.

A large platform available



All 38999 Series III layouts (signal and power contacts).



Cost Effective Sealing Solution

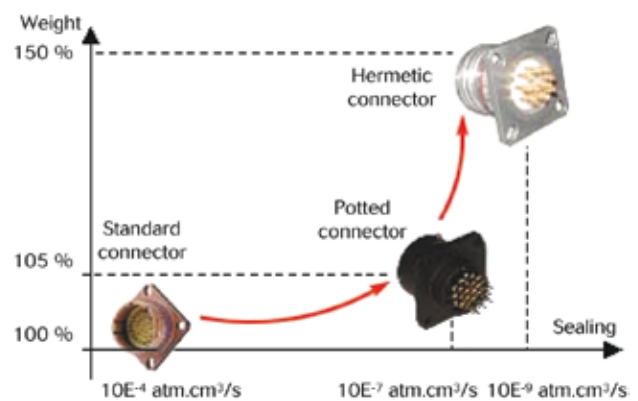
The best value for money.

Weight saving



Lightweight compared with hermetic versions.

Reinforced sealing



Excellent shock resistance

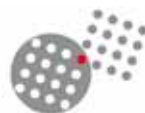


Better than hermetic glass seals.

Socket contact



Sealing with female contacts available.



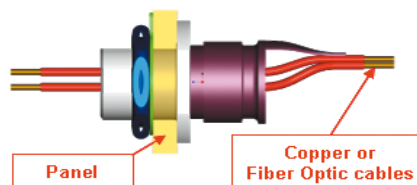
SOURIAU
Connection Technology



Economic & Superior Sealed Wire Feedthrough

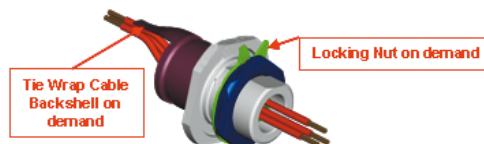
Easy installation ✓

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.cm³/s depending on cable diameter.
Liquid environment: $\ll 10^{-6}$ atm.cm³/s depending on cable diameter.



Cable Routing Fire Resistant Feedthrough

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)





Integrated Backshell Fire Proof Connector

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

Harsh environment connector

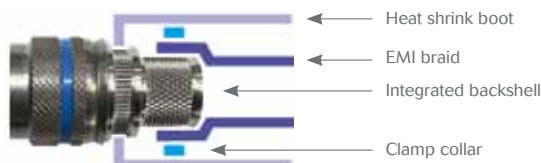


High vibration resistance.
High temperature resistance (260° C).
Fire proof (1100° C).

Integrated backshell



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

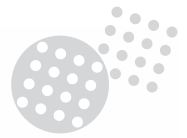


Blind mate connection possibility (8536 Series / ESC16 Series).

Fully interchangeable and intermateable



8535 Series with BACC 63 CM-CN, EN2997, MIL-C-83723 Series III & ESC10 connectors.
8536 Series with ESC11 connectors.



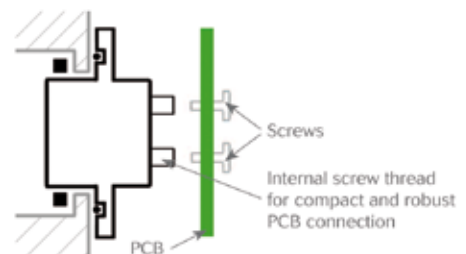
Firewall Connector for Power Supply Adapted to PCB Solutions

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

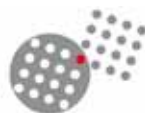


True mechanical link between PCB and contacts.

Compact



Tapped contacts for direct and low profile connections.



SOURIAU
Connection Technology



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.

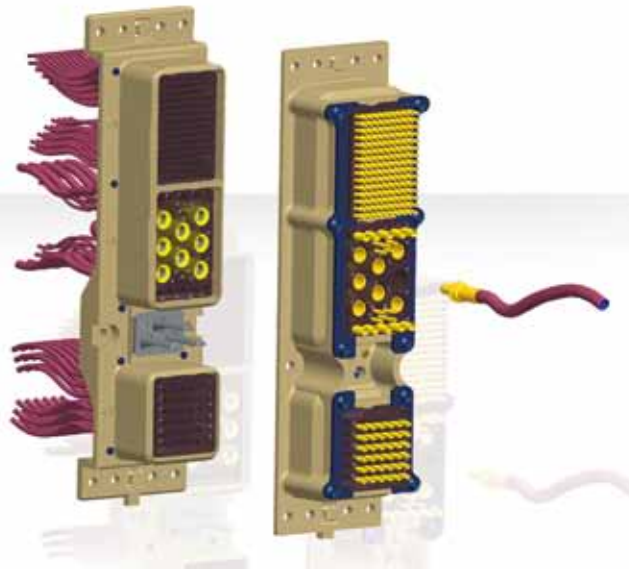
Shell sizes available



Size 19 (250A); size 23 (400A); size 25 (600A).



SOURIAU
Connection Technology

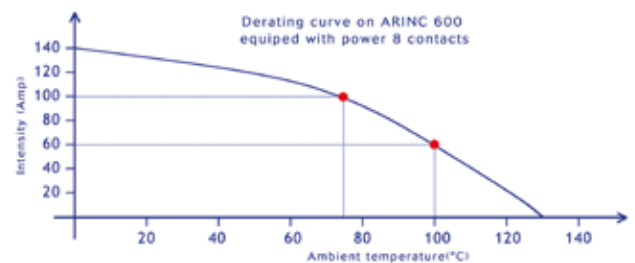


Up to 100 Amp. per Contact in Standard ARINC

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

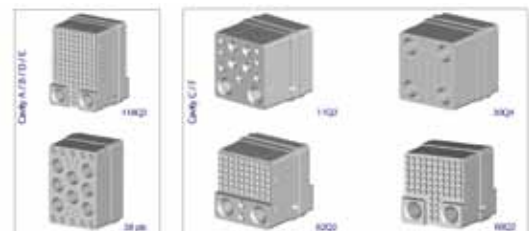
Up to 100 Amp. ✓

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





Quadrax for Full Duplex Ethernet Link

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).



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.

RJ45 / USB connectors



A & B types, connectors available on MIL-C-26482 Series I, MIL-DTL-38999 Series III.

IP 67 sealing



In mated conditions.

USB data transmission



USB - A & B types - according to the «Bus» specification, Rev 2.0.

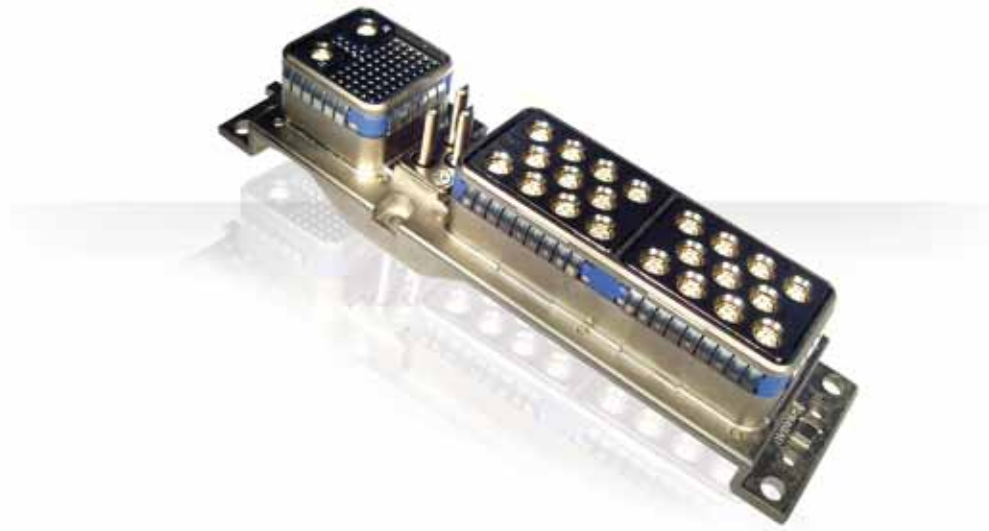
RJ45 data transmission



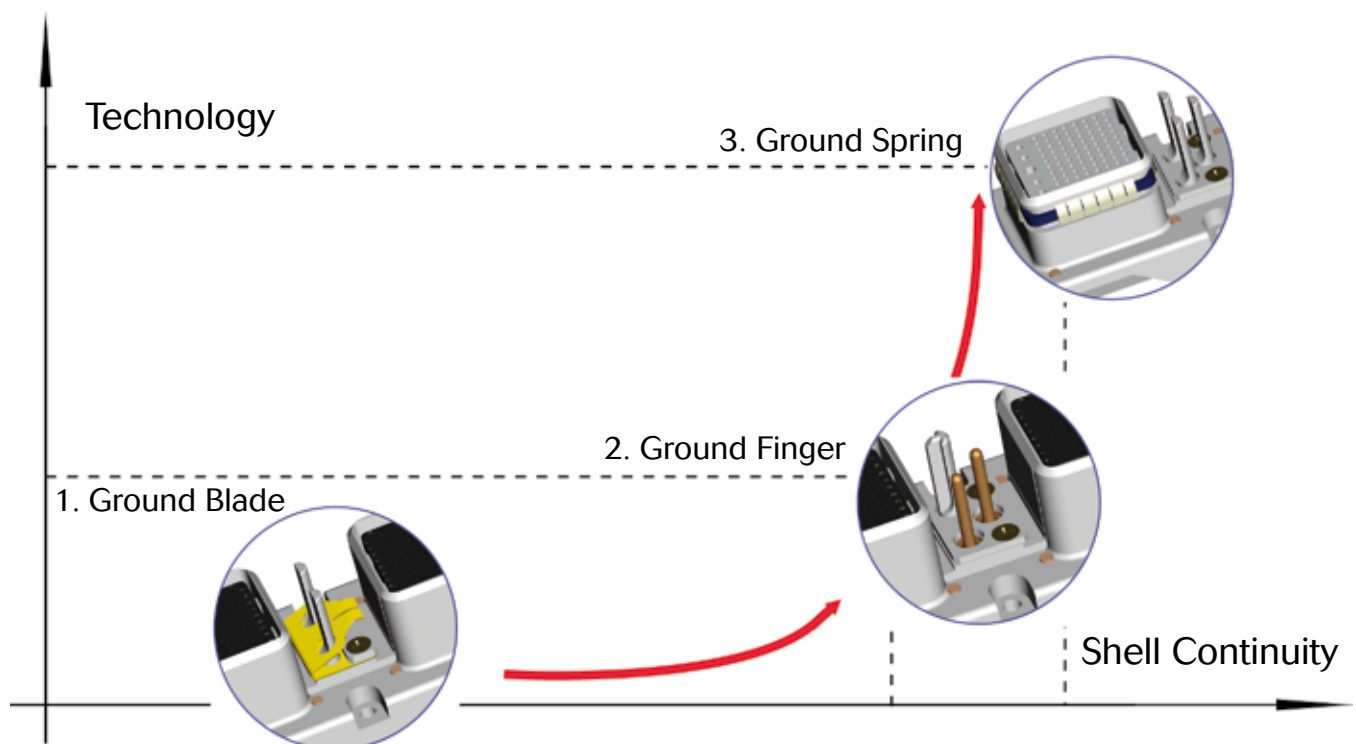
RJ45 - 10 BaseT, 100 BaseTX and 1000 BaseT networks, CAT 5E per TAI/EIA 568B and ClassD per ISO/IEC 11801.



SOURIAU
Connection Technology



Shell to Shell Solutions for Shielding Effectiveness





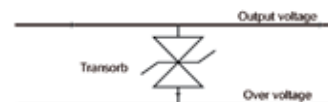
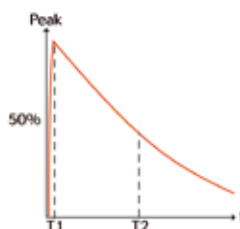
Lightning Protection - Re-movable Contacts

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.



T1=6.4 microseconds \pm 20%
T2=59 microseconds \pm 20%

Custom shell design



To house electronic components.

Re-moveable contacts

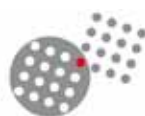


In case of damage to reduce maintenance costs.

Intermateable with standard plugs



Available in ARINC and DoD (MIL-C-83527) ranges.



SOURIAU
Connection Technology



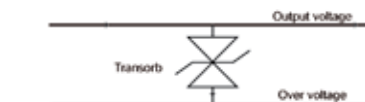
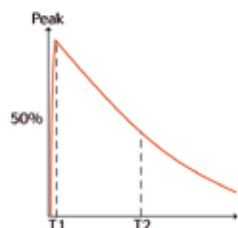
Lightning Protection - Rigid PCB Mount

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.



T1=6.4 microseconds \pm 20%
T2=59 microseconds \pm 20%

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

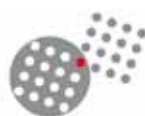


Available in all EN 2997 range«Engine Connectors».



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.

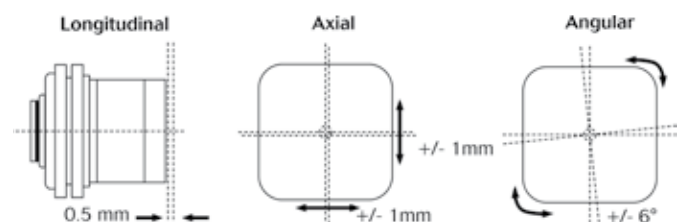
Float-mounting unit: Rack



Female contacts - crimp
Angular orientation with a key



Misalignment catching





Push-Pull with High Vibration Performance

Easy to connect-disconnect



Ideal for restricted space mating

High performance locking system

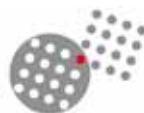


Very high performance coupling with ball locking concept, check of locking by free ring when mated.

High vibration performance



Up to 44g — ideal for mil-aero and space applications.



SOURIAU
Connection Technology



High Performance 38999 Quick Release

Easy to connect & disconnect



Simple push to connect - pull to disconnect.



Safe release



With $\pm 10^\circ$ 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.



Field Repairable / MIL-STD-1760 Umbilical

Self-alignment / blind connector mating / safe operational solution to weapon releases.

Safe quick disconnect at high speed



Robust unlocking system : $9.15\text{m/s} \pm 10\%$.



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)





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).

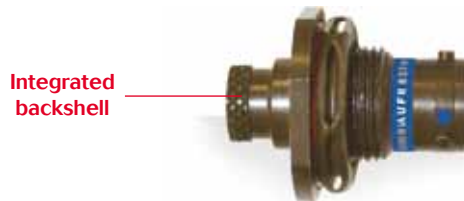


The Smallest 38999 with Bayonet Coupling

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 reparability 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
Hermeticity: 1.10^{-7} ATM cm³/s



Stainless steel



Passivated

Shunted version



Standard shell
EN3646



available: 16-26;
14-19; 10-06

PC Tail version



Standard



Potted version
Hermeticity :
 1.10^{-7} Atm cm³/s

Fuel tank version
Immersion in kerosene (JP5)



Spec: 053



Spec: 022

Ethernet 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 guarantees best in class quality.

Robust connector



Suitable for applications with high vibration. High corrosion resistance: 2000 hours salt spray withstanding.



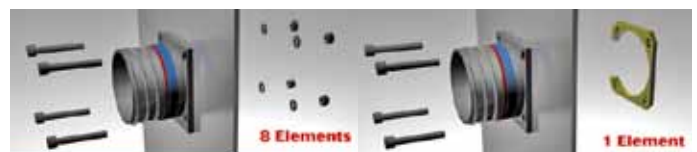
Easy Mount Re-usable Fixing Plates

«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 loosening elements (Foreign Object Detection).

A complete offer



3 different versions: 2,3 or 4 holes, several finishes available.



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.



Before: 12 elements
(4 screws + 4 nuts + 4 washers)

After: only 4 elements
(4 screws)

A wide range available



In major circular ranges (38999, 26482, EN 2997 and also in ARINC rectangular rack & panel.



Double Flange Solution for PCB Mount

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.





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.

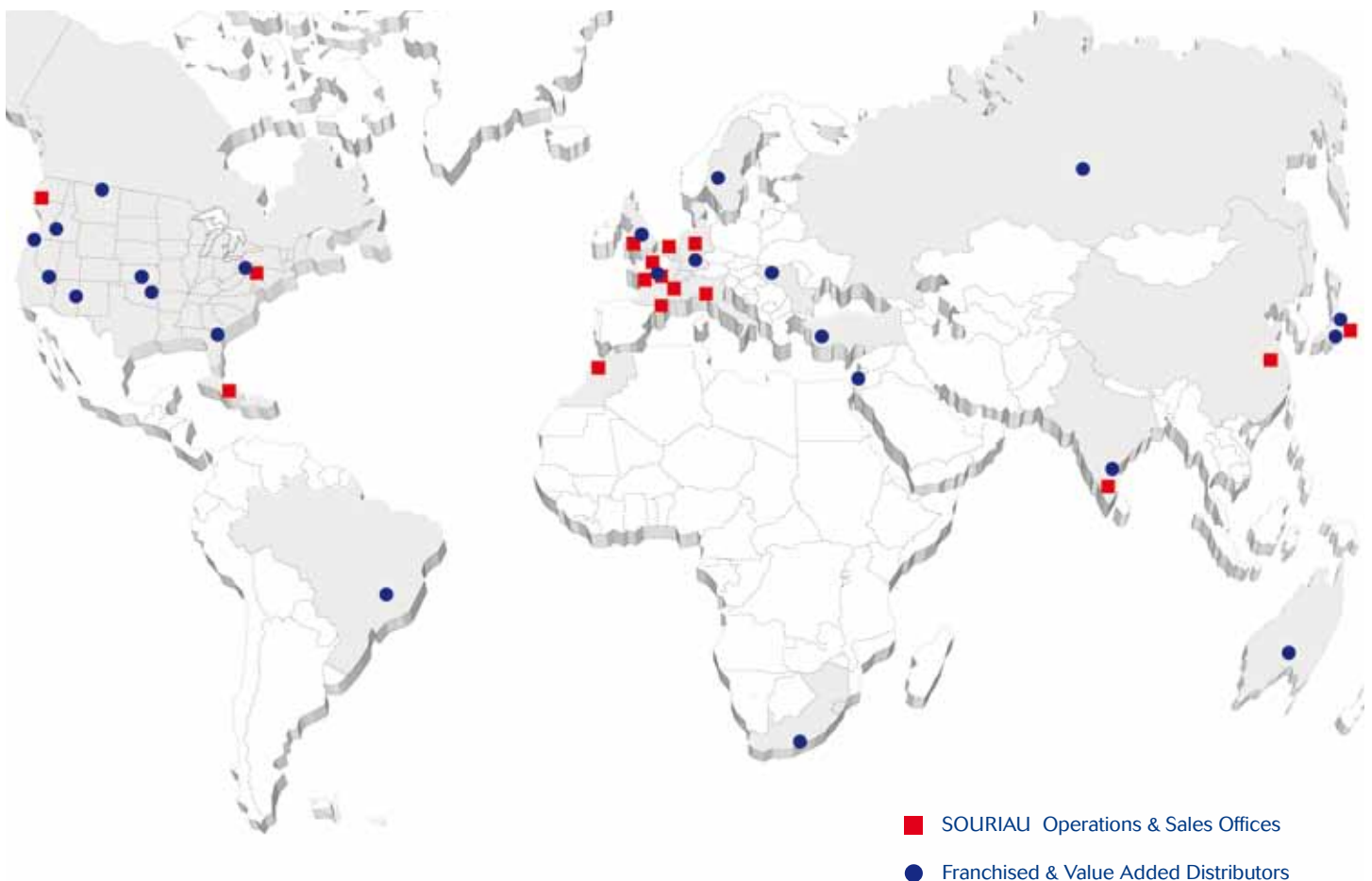
Customer Coverage through Worldwide Sales Network

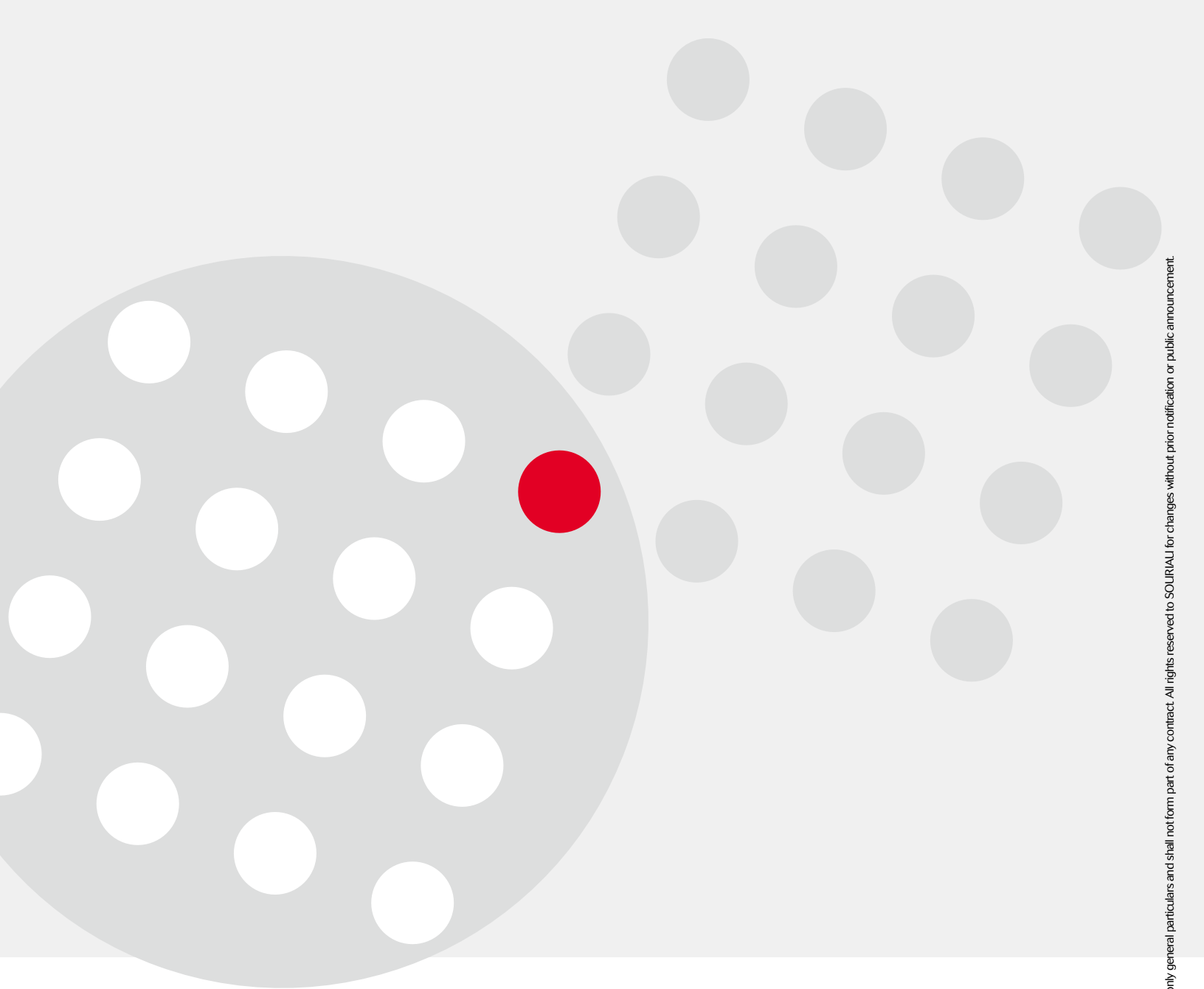
SOURIAU is recognized as one of the top international manufacturers of connectors for harsh environment and is continuously strengthening its leading position through its solid structure as an international group. Today the SOURIAU group has a strong global presence and operates 24 facilities (10 production 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.





www.souriau.com

