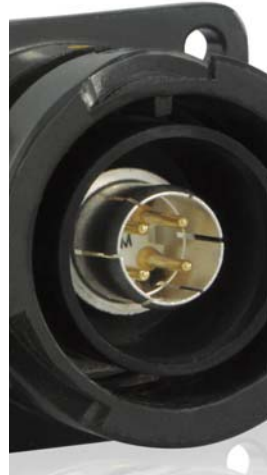


**SOURIAU**

**SOURIAU**

[www.railway-connectors.com](http://www.railway-connectors.com)



Railway Interconnect Solutions

## SOURIAU: a worldwide market leader

SOURIAU is a recognised worldwide market leader in the design and manufacture of connectors and interconnect systems for severe environments. SOURIAU has developed a dedicated range of ruggedised and reliable connectors for the railway market, fully compliant with railway standards, RoHS, as well as fire and smoke requirements.



SMS IP

VGE1 Elio

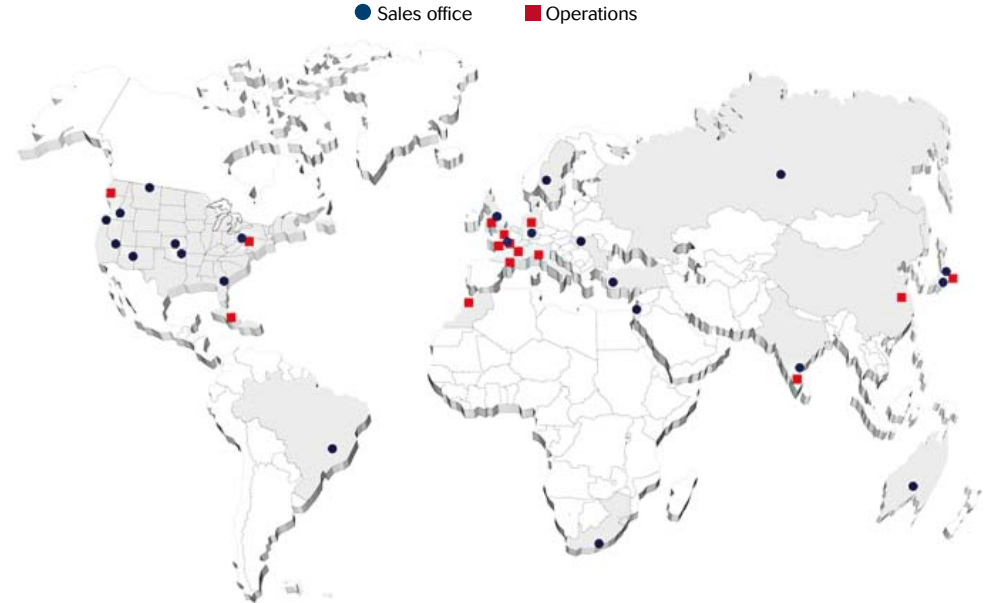


For more than 50 years, SOURIAU has become a trusted name by major railway equipment manufacturers, their subcontractors, also signalling and infrastructure companies.

SOURIAU has been IRIS certified since 2009.

## SOURIAU: a high service level

- A local presence with highly trained sales engineers working closely with our customers.
- A worldwide distribution network.



## SOURIAU connectors: the best compromise between technology, safety, reliability and cost

SOURIAU connectors are designed to integrate new functions such as Ethernet network, weight reduction, mixed signal-power in compliance with environmental protection.

### STANDARDISATION



- ✓ 1 contact for 10 connector series
  - +
  - ✓ Same crimping tools
  - +
  - ✓ Simplified process
  - =
- Best compromise between technology and cost

### HIGH SPEED DATA TRANSMISSION



- ✓ Optical Fiber
  - +
  - ✓ Quadrax technology
  - +
  - ✓ Custom solutions
  - =
- High technology for real-time information

### ENVIRONMENT AND SAFETY

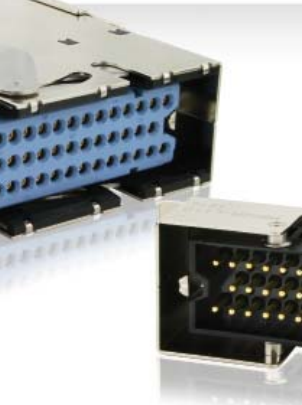


- ✓ International safety standards
  - +
  - ✓ Lightweight material
  - +
  - ✓ Eco-design
  - =
- Efficiency and safety for railway equipments

## SOURIAU's connectors on railway equipments

- 1 Closed electrical operating areas
- 2 Cabin and interiors
- 3 Closed electrical operating areas with forced filtered ventilation
- 4 Outdoor static applications
- 5 Outdoor dynamic applications
- 6 Outdoor highly dynamic applications
- Signalling equipments





**MB**  
 29 / 44 / 52 contacts #16  
 Reinforced shielding  
 Secure lever locking  
 500 matings / unmatings



## 1/ Closed electrical operating areas

- Indoor and outdoor weather protected vehicle cubicles.
- Minimum severity of service conditions required:
  - OV2PD2 / EN 50124
  - Cat. 1B / EN 61373
  - Fire, smoke and toxicity compliance.



**SMS FLAME RETARDANT**  
 2 to 36 contacts #16  
 220V – 13 Amps  
 HL3/R23 – EN45545 (2009)  
 I3F2 – NFF16-101/16-102



**UTS / UTO**  
 3 to 23 contacts #16  
 110V – 13 Amps  
 HL2/R23 – EN45545 (2009)  
 I2F3 – NFF16-101/16-102



**SMS IP**  
 3 / 6 / 12 contacts #16  
 500V – 15 Amps  
 HL3/R23 – EN45545 (2009)  
 I3F2 – NFF16-101/16-102



**MSG**  
 41 / 50 / 59 contacts #16  
 5 Quadrax / 4 Octrax  
 Low profile I/O connector  
 Wire-to-wire / PCB  
 6U / 3U rack sizes



### SMS IP

3 / 6 / 12 contacts #16  
 500V – 15 Amps  
 HL3/R23 – EN45545 (2009)  
 I3F2 – NFF16-101/16-102  
 500 matings / unmatings



ALSTOM Transport / M. Sponchi / TDMA - C. Sano

## 2/ Cabin and interiors

- Examples: passenger vehicle compartment and driver cabin.
- Minimum severity of service conditions required
  - OV2PD2 / EN 50124
  - IP 2X
  - Cat. 1B / EN 61373
  - Fire, smoke and toxicity compliance.



### SMS FLAME RETARDANT

2 to 36 contacts #16  
 220V – 13 Amps  
 HL3/R23 – EN45545 (2009)  
 I3F2 – NFF16-101/16-102  
 500 matings / unmatings



### UTO

3 to 48 contacts #16  
 110V – 13 Amps  
 HL2/R23 – EN45545 (2009)  
 I2F3 – NFF16-101/16-102  
 500 matings / unmatings



### 8525

3 to 60 contacts #20 #16  
 110V – 13 Amps  
 I2F1 – NFF16-101/16-102  
 High contact density  
 500 matings / unmatings



### UTS

3 to 23 contacts #16  
 110V – 13 Amps  
 HL2/R23 – EN45545 (2009)  
 I2F3 – NFF16-101/16-102  
 250 matings / unmatings





**VGE1 / FER1**  
10 to 60 contacts #16, 12, 8  
220V to 500V – 15 to 30 A  
I2F3 – NFF16-101/16-102  
IP66 / IP67  
Quadrx Ethernet Cat.6



SOURIAU

### 3/ Closed electrical operating areas with forced filtered ventilation

- Examples: machinery compartment.
- Minimum severity of service conditions required
  - OV2PD3 / EN 50124
  - IP 65 - salt spray resistance
  - Cat. 1B / EN 61373
  - Fire, smoke and toxicity compliance.



**SMS IP**  
3 / 6 / 12 contacts #16  
500V – 15 Amps  
HL3/R23 – EN45545 (2009)  
I3F2 – NFF16-101/16-102



**38 999**  
High contact density  
Many layouts  
Fiber optic version  
I2F1 – NFF16-101/16-102  
5 shell materials



**UTO**  
3 to 48 contacts #16  
110V – 13 Amps  
HL2/R23 – EN45545 (2009)  
I2F3 – NFF16-101/16-102



**UTS**  
3 to 23 contacts #16  
110V – 13 Amps  
HL2/R23 – EN45545 (2009)  
I2F3 – NFF16-101/16-102  
250 matings / unmatings



### FER1

10 / 19 / 37contacts #16  
 220V – 15 Amps  
 I2F3 – NFF16-101/16-102  
 IP66 / IP67  
 Quadrax Ethernet Cat.6



ALSTOM Transport / PSautotec

## 4/ Outdoor static applications

- Examples: under car body, roof in non weather-protected locations.
- Minimum severity of service conditions required
  - OV2PD3 / EN 50124
  - IP 65 - Min. 240h salt spray resistance
  - Cat. 1B / EN 61373
  - Fire, smoke and toxicity compliance.



### VGE1

10 to 60 contacts #16, 12, 8  
 220V to 500V – 15 to 30 A  
 Quadrax Ethernet Cat.6  
 I2F3 – NFF16-101/16-102  
 IP66 / IP67



### 38 999

High contact density  
 Many layouts – 110V  
 I2F1 – NFF16-101/16-102  
 IP67  
 5 shell materials



### VGE1 ELIO

4 / 6 / 8 Fiber optic contacts  
 For multimode fiber  
 I2F1 – NFF16-101/16-102  
 IP66 / IP67



### 838

7 to 61 contacts  
 220V to 500V – 15 to 180 A  
 I2F3 – NFF16-101/16-102  
 IP66 / IP67  
 Quadrax Ethernet Cat.6



**838 QUADRAX**  
2 to 4 Quadrax  
I2F3 – NFF16-101/16-102  
IP66 / IP67  
500H salt spray resistant  
Ethernet Cat.6



## 5/ Outdoor dynamic applications

- Examples: inter-vehicle.
- Minimum severity of service conditions required
  - OV2PD3 / EN 50124
  - IP 66 - Min. 240h salt spray resistance
  - Cat. 1B / EN 61373
  - Fire, smoke and toxicity compliance.



**38 999**  
High contact density  
Many layouts – 110V  
I2F1 – NFF16-101/16-102  
IP67  
5 shell materials



**FER1**  
10 / 19 / 37contacts #16  
220V – 15 Amps  
I2F3 – NFF16-101/16-102  
IP66 / IP67  
Quadrax Ethernet Cat.6



**8D ELIO**  
1 to 24 F.O. contacts  
Easy to install  
Easy to clean  
I2F1 – NFF16-101/16-102  
5 shell materials



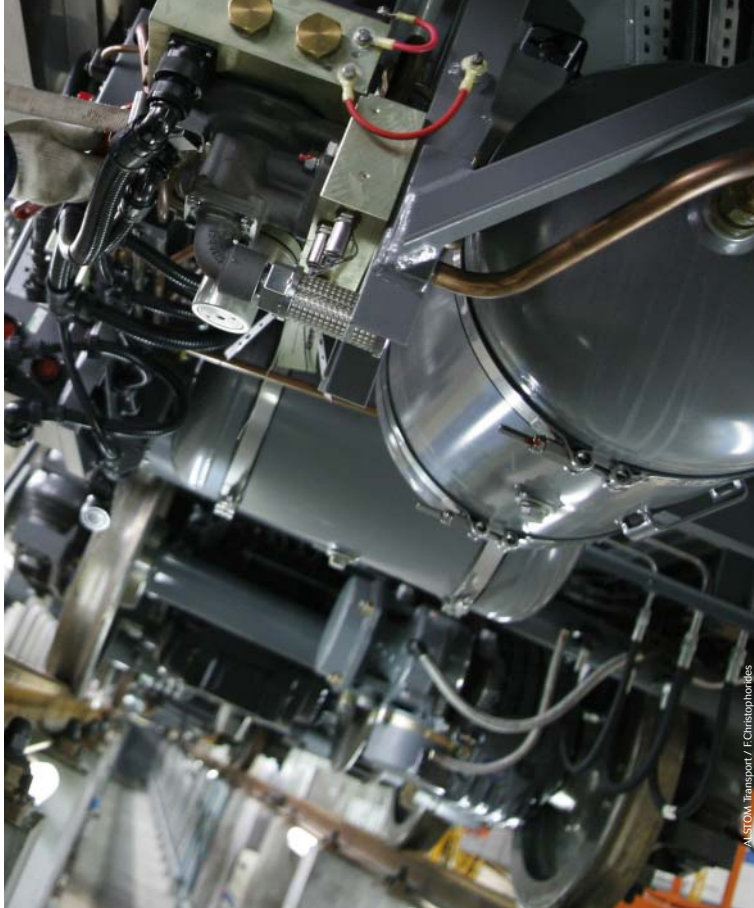
**838**  
7 to 61 contacts  
220V to 500V – 15 to 180 A  
I2F3 – NFF16-101/16-102  
IP66 / IP67





### VGE1 QUADRAX

1 Quadrax  
Ethernet Cat.6  
I2F3 – NFF16-101/16-102  
IP66 / IP67  
500H salt spray resistant



ASTOM, Transport / F.Christophorides

## 6/ Outdoor highly dynamic applications

- Examples: bogie.
- Minimum severity of service conditions required
  - OV2PD3 / EN 50124
  - IP 66 - Min. 240h salt spray resistance
  - Cat. 2 / EN 61373
  - Fire, smoke and toxicity compliance.



### VGE1

10 to 60 contacts #16, 12, 8  
220V to 500V – 15 to 30 A  
I2F3 – NFF16-101/16-102  
IP66 / IP67



### FER1

10 / 19 / 37contacts #16  
220V – 15 Amps  
I2F3 – NFF16-101/16-102  
IP66 / IP67  
Quadrax Ethernet Cat.6



### 838 QUADRAX

2 to 4 Quadrax  
I2F3 – NFF16-101/16-102  
IP66 / IP67  
500H salt spray resistant  
Ethernet Cat.6



### 838

7 to 61 contacts  
220V to 500V – 15 to 180 A  
I2F3 – NFF16-101/16-102  
IP66 / IP67



**MSG**

41 / 50 / 59 contacts #16  
 5 Quadrax / 4 Octrax  
 Low profile I/O connector  
 Wire-to-wire / PCB  
 6U / 3U rack sizes



**Signalling equipments**

Examples: ATC monitoring, sensors, beacons, trackside boxes.  
 Severity of service conditions required depending on the equipment localisation (on board, trackside...)



**VGE1 ELIO**  
 4 / 6 / 8 Fiber optic contacts  
 For multimode fiber  
 I2F1 – NFF 16-101/16-102  
 IP66 / IP67



**8D ELIO**  
 1 to 24 F.O. contacts  
 Easy to install  
 Easy to clean  
 I2F1 – NFF16-101/16-102  
 5 shell materials



**VGE1 / FER1**  
 10 to 60 contacts #16, 12, 8  
 220V to 500V – 15 to 30 A  
 I2F3 – NFF 16-101/16-102  
 IP66 / IP67  
 500H salt spray resistant  
 Quadrax Ethernet Cat6



**MB**  
 29 / 44 / 52 contacts #16  
 Reinforced shielding  
 Secure lever locking  
 500 matings / unmatings