

## Outdoor High Speed Data Transmission

The ruggedized solution for outdoor data transmission in harsh environments facing increasing new needs of data information.

2 technical solutions for outdoor High Speed Data Transmission ✓

Standard version with 4 contacts Ø 2.0 mm  
Quadrax version with 2 cells

Excellent Data Transmission ✓

1 Gbps per Quadrax contacts  
100 Mbps with standard contacts

Compliant to railway standards ✓

NFF61030  
I2F3 according to NFF16101 & NFF16102  
(Fire & smoke standards)

Standardization oriented ✓

Standard shell  
Standard contacts  
Standard accessories



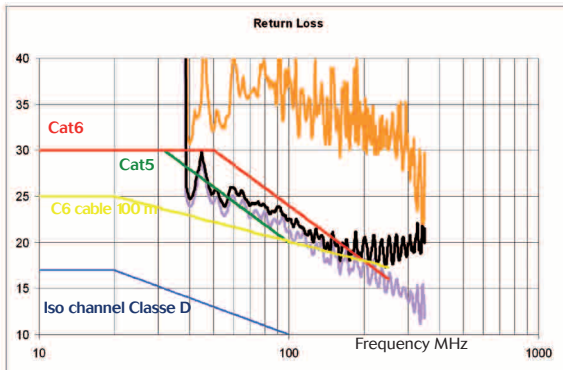


## Technical features

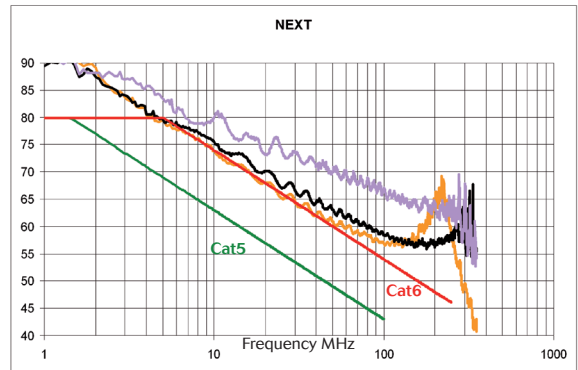
Mechanical, electrical and environmental features according to NFF61030 Railway standards.

### Data Transmission

- Standard version with 4 contacts Ø2.0mm: Cat5 - 100 Mbps

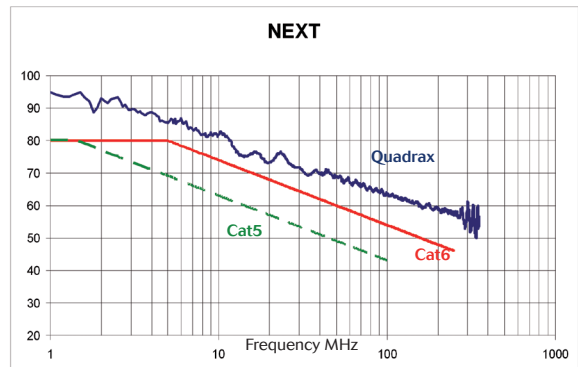
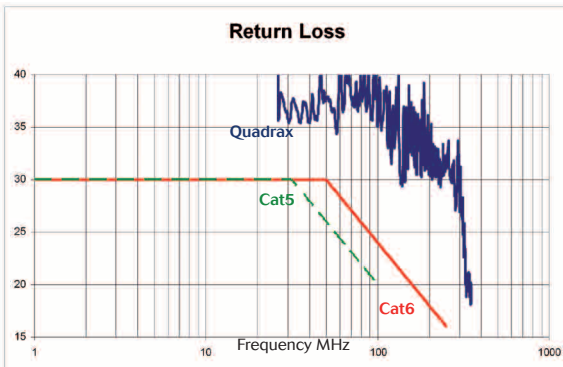


Quad cable configuration



Quad cable configuration

- Quadrax version: Cat6 - 1 Gbps



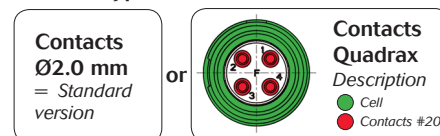
## Mechanical

- **Shell:** Aluminium alloy
- **Conductive shell plating**
- **Locking system:** screw with clicker
- **Insulator:** Hard thermoplastic in accordance with NFF16101-16102 exigence I2F3 (Fire & smoke emissions) for installations on equipments category A1 UL94-V0
- **Removable coding system** enables the operator to choose between 12 different key orientations - delivered in position 1
- **Both male & female insulators** can fit in either the plugs or the receptacles
- **Endurance:** 500 mating/unmating

- **Contacts:**
  - Copper alloy, silver or gold plated
  - Crimp type

## Electrical

- **Contact type:**



- **Contact resistance:**
  - Contacts Ø2.0 mm:  $\leq 2 \text{ m}\Omega$
  - Quadrax:  $\leq 6 \text{ m}\Omega$  (contacts #20)  $\leq 2 \text{ m}\Omega$  (cell)

- **Withstanding voltage:**
  - Contacts Ø2.0 mm: 3250 Vrms
  - Quadrax:  $\geq 1000\text{V}$  (between contacts #20)  $\geq 500\text{V}$  (between cell / contacts #20)
- **Insulation resistance:**
  - Contacts Ø2.0 mm:  $\geq 5000 \text{ M}\Omega$  under 500 Vdc
  - Quadrax:  $\geq 3000 \text{ M}\Omega$  (contacts #20)
- **Service voltage per layout:** 380 Vrms max.

## Environmental

- **Temperature range:** -40°C to +100°C
- **Salt spray resistance:** 96 hours (NFC 20711)
- **Sealing:** IP66 and IP67 (with adapted backshell)

# 838 Series



## Ordering information

### 838 standard version with 4 contacts ø 2.0 mm

Type*	838 0 E 1 E 09 1 B M 0 A											
Coupling type	0: Screw coupling with coding option											
Connector type	E: Receptacle						F: Plug					
Shell type	0: Square flange receptacle without panel gasket 1: Square flange receptacle with panel gasket 0: Plug without clicker locking 1: Plug with clicker locking											
Shell size	E											
Contact layout	09: 4 contacts ø 2.0 mm											
Contact gender	1: Male crimp contact						5: Female crimp contact					
Contact type	L: Connector supplied without contact						B: Contacts ø 2.0 mm					
Backshell type	G: Straight backshell for PMA flexible tube M: Without backshell, nor accessories N: Boot V: Straight backshell with sealing gland						W: Straight backshell with cable clamp and sealing gland T: Backshell with low profile sealing gland U: Backshell T type with shielding termination Z: Backshell for shielding termination					
Index	0 to 20											
Insert	A: Thermoplastic insert											

\*Delivered without contact

### 838 Quadrax version with 2 Quadrax cells

Type*	838 0 E 1 C 02 1 R M 0 A											
Coupling type	0: Screw coupling with coding option											
Connector type	E: Receptacle						F: Plug					
Shell type	0: Square flange receptacle without panel seal 1: Square flange receptacle with panel seal 0: Plug without clicker locking 1: Plug with clicker locking											
Shell size	C											
Contact layout	02: 2 Quadrax contacts											
Contact gender	1: Male crimp contact						5: Female crimp contact					
Contact type	R: Quadrax contacts											
Backshell type	G: Straight backshell for PMA flexible tube M: Without backshell, nor accessories N: Boot V: Straight backshell with sealing gland						W: Straight backshell with cable clamp and sealing gland T: Backshell with low profile sealing gland U: Backshell T type with shielding termination Z: Backshell for shielding termination					
Index	0 to 20											
Insert	A: Thermoplastic insert											

\*Delivered without contact

## Contacts

### Contact ø 2.0 mm (standard version)

Contact type	Male		min.	max.
8380 722	Passivated silver	Cable size: (mm <sup>2</sup> )	0.6	1.5
8380 726	Gold		0.6	1.5
8380 970	Passivated silver		1.34	2.61
	<b>Female</b>			
8380 725	Passivated silver		0.6	1.5
8380 727	Gold		0.6	1.5
8380 973	Passivated silver		1.34	2.61

Other contact versions, please contact us.

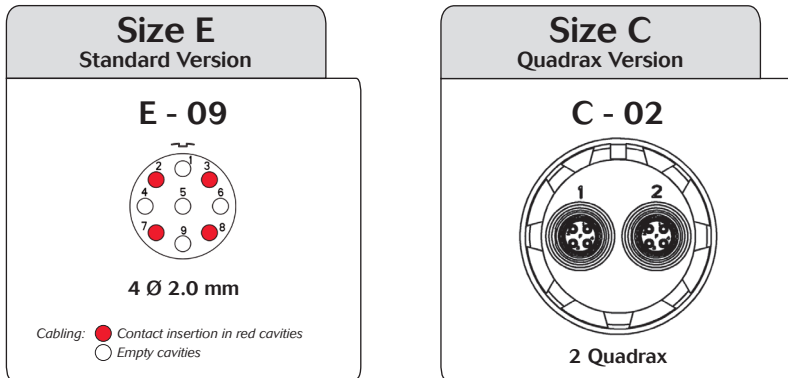
### Quadrax contact

Contact type	Male		min.	max.
8380 2035A	Copper alloy	Cable size: (mm <sup>2</sup> )	0.21	0.93
	<b>Female</b>			
8380 2034A	Copper alloy		0.21	0.93

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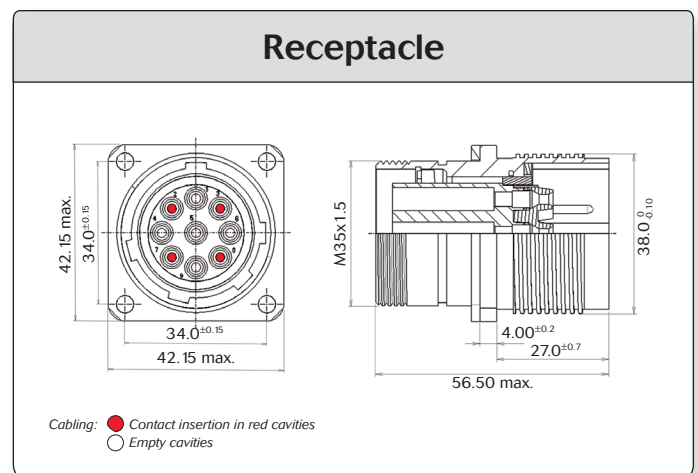
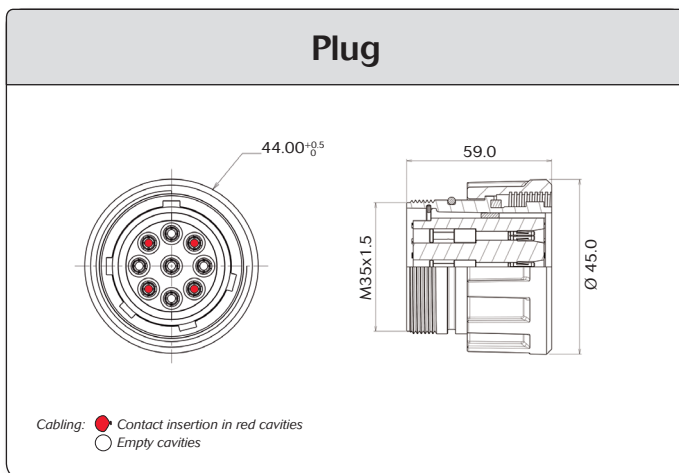


## Contact layouts (from front face of female connector)

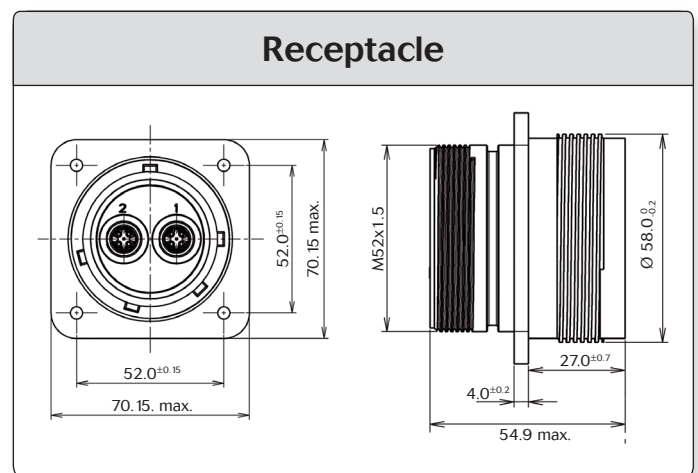
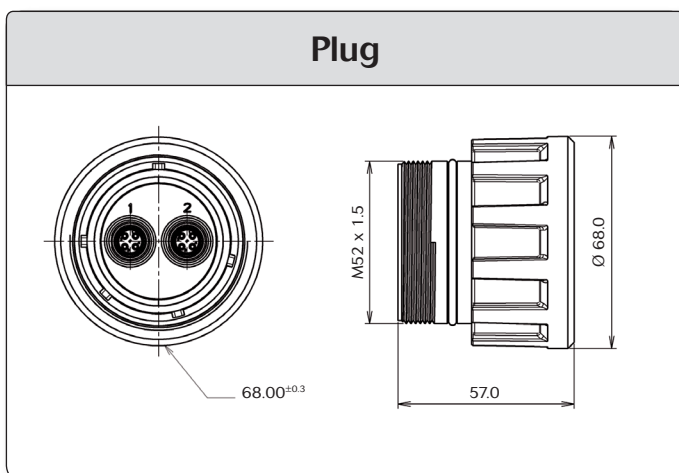


## Range presentation

838 size E standard version with 4 contacts  $\varnothing$  2.0 mm (standard version)



838 size C Quadrax version with 2 Quadrax cells

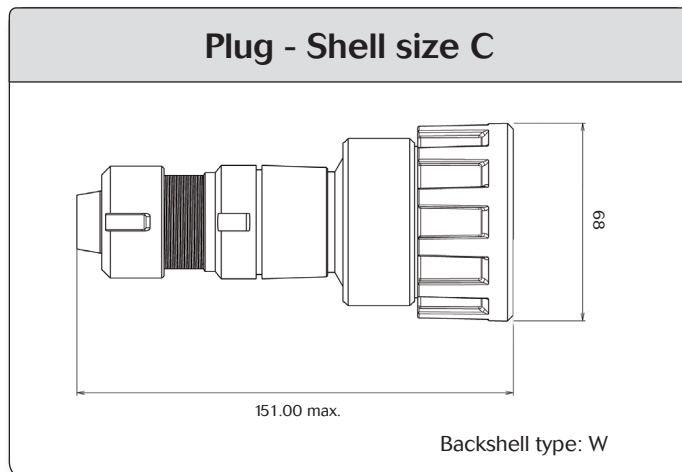
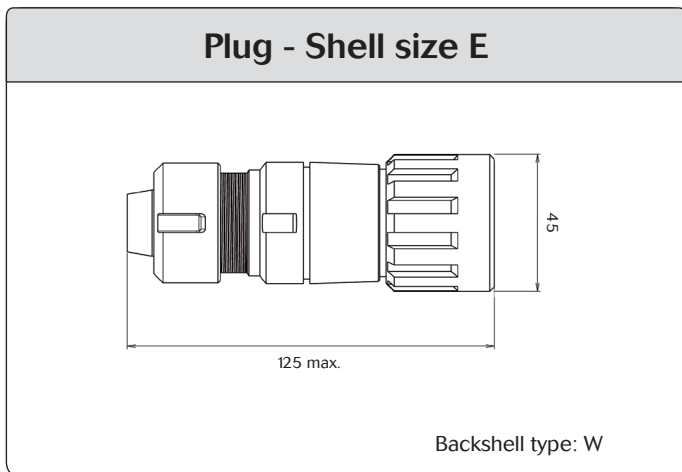


Note : all dimensions are in mm

# 838 Series

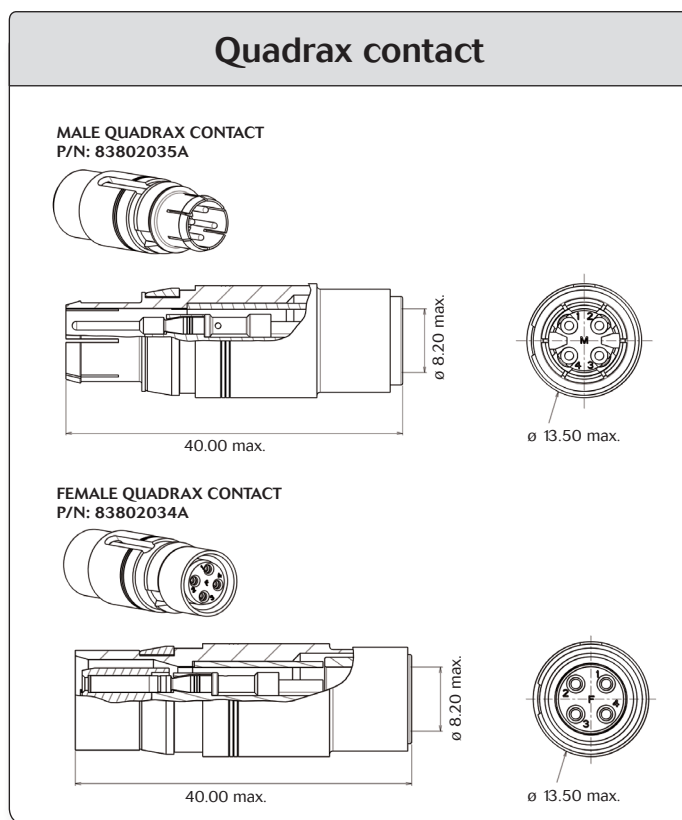
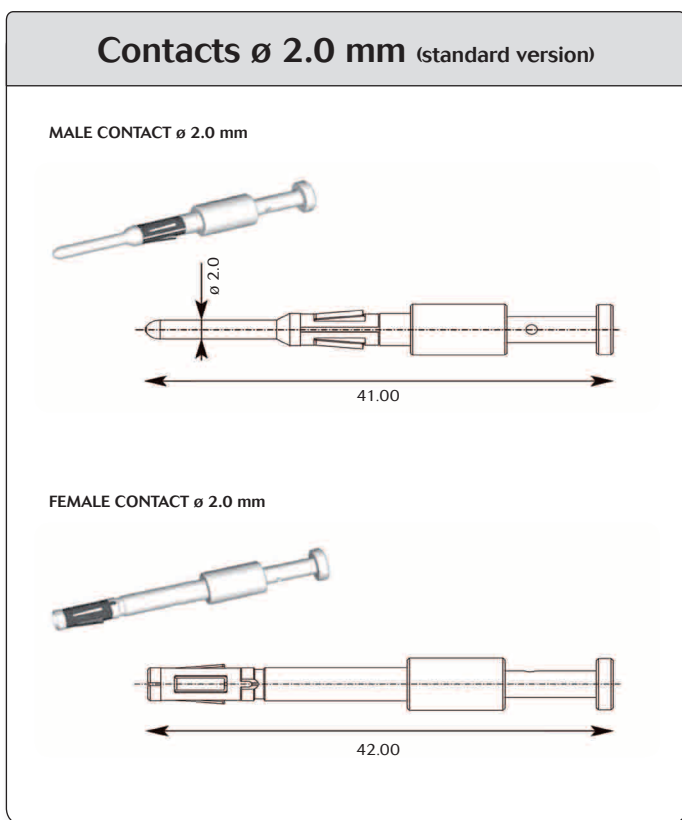


## Example of connector with backshell



For other backshell types, please refer to the 838 catalog.

## Contacts



Note : all dimensions are in mm

For further information, visit our website [www.railway-connectors.com](http://www.railway-connectors.com)  
or contact us at [contactindustry@souriau.com](mailto:contactindustry@souriau.com)

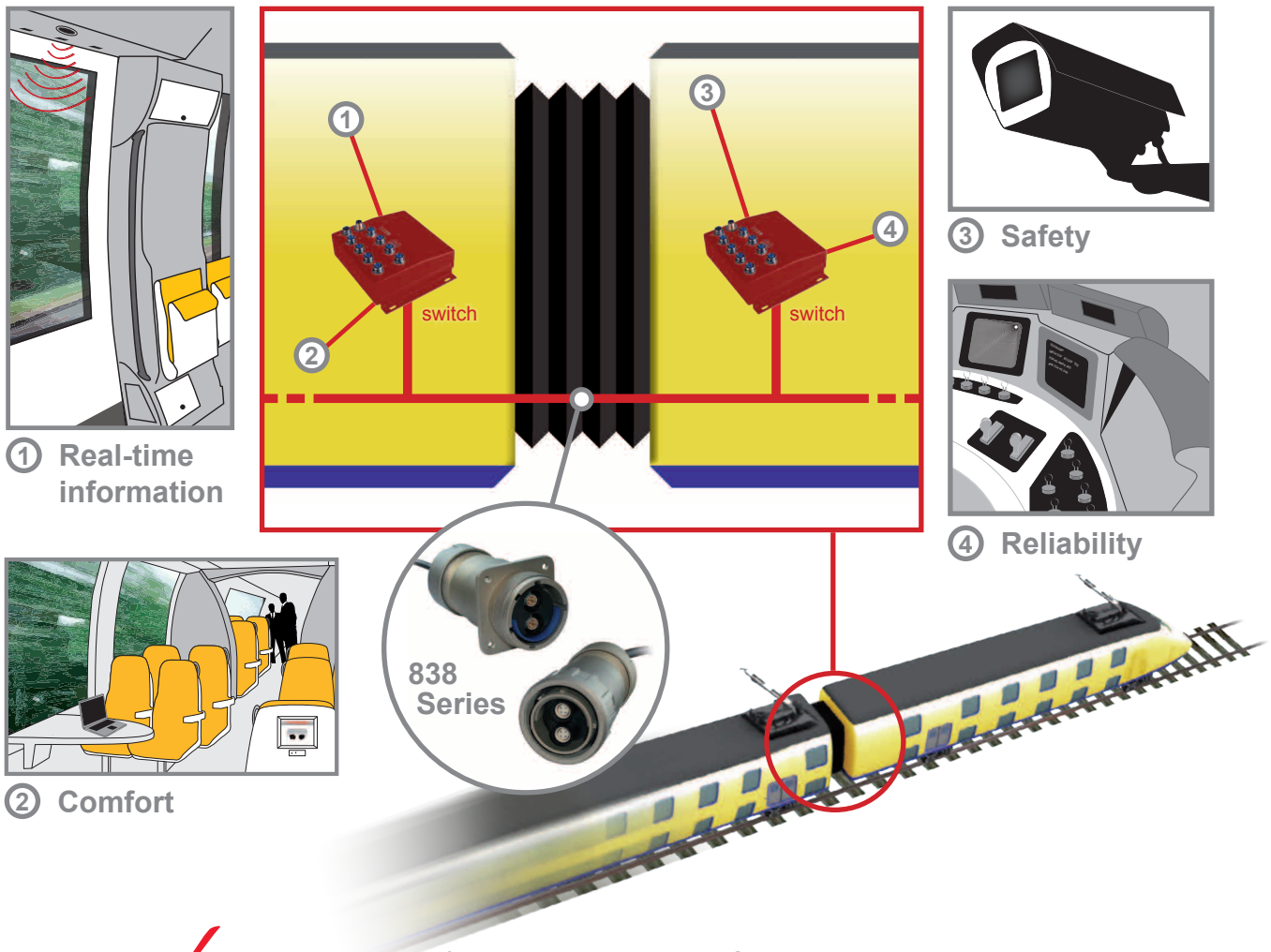
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## Dedicated for Railway Applications

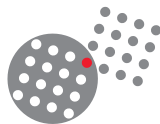


Railway applications are using more & more data transmission to improve **Safety** (e.g. videosurveillance), **Comfort** (e.g. WIFI, entertainment), **Reliability** (e.g. train service indicators) and **Real-time information** (e.g. passenger counting system).

Souriau's **High Speed Connection** product range has been designed to link all these new equipments along trains.



- ✓ For all types of networks: Ethernet, CAN open, MVB etc.
- ✓ From 100 Mbps to 1 Gbps
- ✓ NFF61030 compliant
- ✓ Fire & smoke standards compliant
- ✓ Designed for railway cables



**SOURIAU**  
Connection Technology