



# Railways

## DETECTION, SWITCHING & MOTION CONTROL SOLUTIONS

# ABOUT CROUZET

Since 1921, Crouzet has been committed to designing, manufacturing and supplying efficient components for automated systems to serve a wide range of applications in the Aerospace & Defense market and in many Industrial equipment markets with a specific focus on applications such as Access control, Railway, Nuclear and Industrial valves markets.

Crouzet's product lines include Automation and Control devices, Motion products, Switches and Position Sensors, Cockpit Controls and Electrical Protection solutions.

Crouzet has a heritage of close collaboration with customers in the development of adapted products to fully customized solutions.

Driven by innovation and customer satisfaction our teams are focused on delivering the right products and services for the right application, always meeting, often exceeding customers' expectations.

Crouzet is your trusted partner of choice to face industrial challenges of today and tomorrow.

Crouzet is a brand of InnoVista Sensors™.



InnoVista Sensors™ is a worldwide industrial specialist of sensors, controllers and actuators for automated systems.

Through its brand, Crouzet, InnoVista Sensors™ offers a wide range of reliable, efficient and customizable components dedicated to the Aerospace & Defense, Transportation and Industrial markets and segments.

Thanks to the recognized expertise of its teams and a strong innovation policy, InnoVista Sensors™ brings performance enhancing solutions to its customers worldwide.

InnoVista Sensors™: your trusted partner of choice to face industrial challenges of today and tomorrow.

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

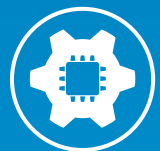
## Designs & Manufactures



Sensors



Controls



Actuators

## For



Aerospace  
& Defense



Transportation

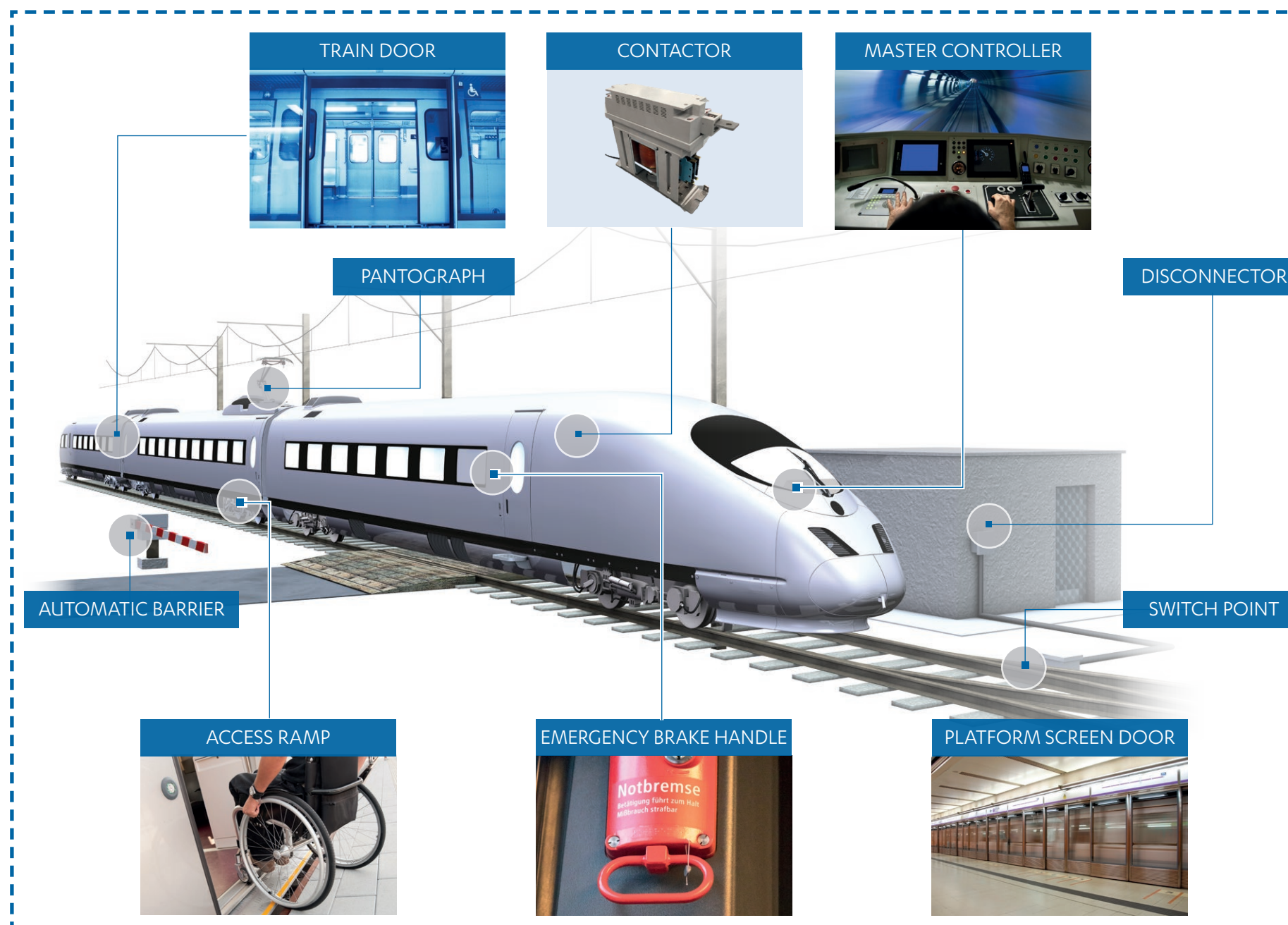


Industry



# CROUZET IN THE RAILWAY SECTOR

Actively involved in the railway industry for over 50 years, Crouzet has built up a solid reputation as a reliable manufacturer of safety critical components for various rolling stock segments and some fixed installations.



## CUSTOMER BENEFITS

### Safety & Security

- › Robust products compliant to railway standards & approved to customers' specification
- › Harsh environment resistance & long operating life
- › Custom adaptation center for tailor-made solutions

### Norms



### Efficiency & Cost-Effectiveness

- › Global solutions of detection, switching, motion & remote control from one supplier
- › Reduced maintenance thanks to easy-integration, low-noise & low-vibration motors
- › Worldwide presence with European & Asian production sites

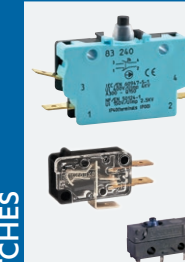
### Proven Expertise

- › Extensive knowledge of railway applications through partnerships with the key players – Alstom-Siemens, Bombardier, CRRC, Fuji, Hitachi, Kangni, Knorr-Bremse Group, Secheron, Vossloh, Wabtec Group...
- › Best practices shared
- › Member of French Railway Industry (FIF) & Railway Supply Institute (RSI)



Courtesy of Steven Engineering, Inc - (800) 258-9200 - sales@steveneng.com - www.stevenengineering.com

## Microswitches



- › Largest range of the market
- › Ratings from 1 mA to 16 A / AC or DC
- › Tag terminals or lead/cable output
- › IP40 to IP69 protection
- › Changeover SPDT with separate NO/NC circuit
- › Positive opening operation of NC contacts
- › Wide range of actuators and mounting accessories
- › Long life up to 10 M cycles

## Limit Switches



- › Robust construction with metal housing
- › Ratings from 1 mA to 10 A / AC or DC
- › Cable output, halogen free on request
- › IP66 to IP69 protection
- › Changeover SPDT with separate NO/NC circuits
- › Positive opening operation of NC contact
- › Wide range of actuating heads
- › Long life up to 10 M cycles

## DCmind Brushless Motors



- › Large range up to 600 W (nominal power) and 6 Nm (peak torque)
- › Integrated electronics
- › User-friendly software: DCmind soft + CANopen with expert & applicative programs
- › CANopen available, other communication buses on demand
- › Encoder 4096 position per turn, other encoder option on demand
- › IP54, up to IP65, IP67 & IP69 (please contact us)

## DCmind Brush Motors



- › Exceptionally quiet: 35 dBA
- › Service life up to 24,000 hours at no-load
- › 5000 hours at rated load
- › More than 80 % efficiency
- › Output power up to 104 W
- › IP65, up to IP67 & IP69 (please contact us)

## Gearboxes



- Planetary**
  - › Max torque 120 Nm
  - › Ratios 5 to 393
- Worm**
  - › Max torque 10 Nm
  - › Ratios 5 to 100
- Parallel Shaft**
  - › Please contact us

## Timers



- › Power supply from 12 to 240 V in one unit
- › 1 or 2 relays outputs 8 A, or high Power 16 A output
- › 17.5 & 22.5 mm DIN rail mount or 35 mm plug-in
- › Recognized quality and reliability ensures the correct operation of equipment

## Logic Controllers



- › Resin protected board
- › 12 to 40 I/Os
- › Digital and analog inputs
- › Vibration resistant
- › Extended temperature range (+70°C)
- › Outputs via removable connectors
- › IP50 seal (connectors)
- › DB 9-pin programming port via standard RS 232 cable

AUTOMATION

# INNOVATIVE SOLUTIONS FOR INCREASED SAFETY

Technology is an important element in improving rail safety. Our electromechanical solutions are designed by using the latest technology for applications where failure is not an option.

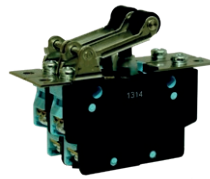
## DETECTION SWITCH

### ► PBX SWITCH

The PBX is a safety switch which guarantees the forced opening of NC contacts in the event of a short circuit and/or welding due to an overcurrent.



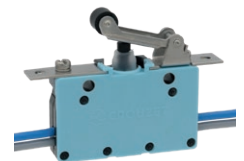
In-line quick-connect terminals



Two-pole DPDT assembly with linked levers



Wires output on bottom



Wires output on left and right

### Why choose PBX switch ?

- › High reliability
- › Long overtravel for easy installation
- › Numerous combinations possible thanks to large range of variants and accessories
- › Large adaptation capabilities for specific applications (low & high current)
- › Extended mechanical & electrical life

GET MORE INFORMATION



## MOTION CONTROL

### ► DCmind BRUSH & BRUSHLESS MOTORS

Crouzet offers a comprehensive range of DC brush or brushless motors and gearbox combinations designed to meet the customer's specific needs, as well as an easy-to-use dedicated software for application set-up.



### Why choose our DC motors ?

- › Complete all-in-one solution (motor + gearbox + electronics)
- › Adjustable closing force
- › Integrated security function to enable passengers to quickly leave the train in emergency case
- › Small size for space-restricted applications
- › Reduced maintenance

GET MORE INFORMATION



**AMERICAS**
**CANADA**

Tel.: +1 (855) 929-5465  
americas.custserv@crouzet.com

**MEXICO**

Tel.: +1 (855) 929-5465  
americas.custserv@crouzet.com

**USA**

+1 (855) 929-5465  
americas.custserv@crouzet.com

**COUNTRIES NOT LISTED**

+1 (855) 929-5465  
americas.custserv@crouzet.com

**EUROPE / MIDDLE EAST / AFRICA**
**BELGIUM**

Tel.: +32 (0) 2 620 06 05  
Fax: +32 (0) 2 461 00 23  
klantenservice@crouzet.com

**FRANCE**

Tel.: +33 (0) 475 802 101  
Fax: +33 (0) 475 828 900  
relationclient@crouzet.com

**GERMANY / AUSTRIA**

Tel.: +49 (0) 2103/9385930  
Fax: +49 (0) 2103/980-222  
kundenservice@crouzet.com

**ITALY**

Tel.: +39 (02) 38 594 099  
Fax: +39 (02) 82 952 104  
assistenzaclienti@crouzet.com

**SPAIN / PORTUGAL**

Tel.: +34 (91) 215 80 95  
Fax: +34 (93) 2 20 02 05  
atencionalcliente@crouzet.com

**SWITZERLAND**

Tel.: +41 (0) 225 67 57 90  
Fax: +41 (0) 565 88 02 75  
kundenservice@crouzet.com

**THE NETHERLANDS**

Tel.: +31 (0) 20-654 52 20  
klantenservice@crouzet.com

**UNITED KINGDOM**

Tel.: +44 (0) 2076 600 025  
customer.relation@crouzet.com

**COUNTRIES NOT LISTED**

Tel.: +33 (0) 475 802 102  
Fax: +33 (0) 475 828 900  
customer.relation@crouzet.com

**ASIA / PACIFIC**
**CHINA**

Tel.: +86 (21) 8025 7166  
Fax: +86 (21) 6107 1771  
china@crouzet.com

**INDIA**

Tel.: +91 (80) 6762 4501/500  
india@crouzet.com

**SOUTH KOREA**

Tel.: +82 (2) 2679 8312  
Fax: +82 (2) 2679 9888  
korea@crouzet.com

**EAST ASIA PACIFIC**

Tel.: +86 (21) 8025 7177  
Fax: +86 (21) 6107 1771  
eap@crouzet.com

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