OVERVIEW
PRODUCT LINES

AUTOMATION & CONTROL
MOTION
SWITCHES & POSITION SENSORS
ELECTRICAL PROTECTION
COCKPIT CONTROLS
ABOUT CROUZET

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

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

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, and often exceeding customers’ expectations.

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

Crouzet is a company 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

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EXCELLENCE OVERVIEW

OUR MARKETS

Aerospace & Defense
Railway
Automotive

Access Control
Nuclear
Other Industrial Applications

OUR QUALITY SYSTEM

Quality Management

• ISO 9001
• ISO 14001
• ISO 18001

Automotive

• ISO/TS 16949

Nuclear

• EDF certification
• RCC-E

Aerospace

• AS/EN 9100
• NADCAP
• EASA approved (Part 21G & Part 145)

Hazardous Locations

• ISO/IEC80079-34
  (ATEX/IECEX)

ADAPTATION WHEEL

Crouzet has developed extensive expertise in adapting its products based on standard ranges, including the necessary project planning skills when it involves a new program.

SPECIAL PRODUCT

From the very start of a project, Crouzet’s team experts work closely with your teams to develop the specifications. All our design, industrialization and approval expertise go into developing solutions. We focus our design, manufacturing and qualification expertise on developing a new product designed to meet your requirements.

STANDARD PRODUCT

A full range of microswitches, limit switches, manually operated switches, motors and geared motors, including AC synchronous, brush and brushless DC and stepper motors, are immediately available so that you can design your system as quickly as possible.

ADAPTED PRODUCT

Complete coordination between your project teams and our specialists, these adapted products have exactly the right levels of performance and functionality you need for your applications. All projects are different, so we adapt the performance and functionality of each product to your requirements, ensuring the success of your most complex applications.

PRODUCT WITH ADDED VALUE

All our standard products can have additional factory-mounted auxiliaries or accessories, including connectors, leads, special terminals, fixings, levers, software etc. Seamless integration into your equipment means you benefit from simpler logistics and optimum installation reliability.
Our experience in physical and electrical values has resulted in an offer which includes timers, monitoring relays, counters, microcontrollers and PLCs.

As a pioneer in the simplification of programming, we offer the easiest-to-use and most adaptable solution for specialized needs.

TELECONTROLLER

Connect your equipment to the 3G GPRS network wherever you are.

Automatic alerts via text message and e-mail minimize the downtime of machines and systems.

Simple monitoring and Control via text message.

Receive data reports via text message or datalogs via email or FTP via CSV (Excel) file.

Adapt your application along the way of its lifecycle thanks to the remote application program update feature via FTP.

LOGIC CONTROLLER

Highly visible blue LCD with 4 lines of 18 characters and configurable backlighting.

Allow the use of the entire library of specific functions blocks of the software workshop.

Parameter setting: possibility to choose the adjustable parameters on the front panel.

SOFTWARES

Visual programming and a wide choice of pre-programmed function blocks for the most intuitive and easy-to-use software, even for new users, and it is free.

COMPLEMENTARIES PRODUCTS: EM4, MILLENIUM EVO, MILLENIUM 3

- Human/Machine Interface Components
- Position Detectors
- Pressure Switches
- Electro-Pneumatic Valves
- Pneumatic Logic Components
- Industrial Vacuum Components

MARKETS & APPLICATIONS

- Building Equipment
- Water and Waste Treatment
- Industrial OEMs
- Renewable Energy
- Access Control
MOTION

We provide a complete offer of direct drives, geared motors and motion control solutions for applications where performance is key. Our customized solutions meet most customers’ demanding specifications where security, reliability and precision are crucial.

POSITION, SPEED AND TORQUE REGULATION

<table>
<thead>
<tr>
<th>MOTORS</th>
<th>Industrial Brush</th>
<th>DCmind Brush</th>
<th>DCmind Brushless</th>
<th>Stepper</th>
<th>Synchronous</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ø 32 / Ø 42 Ø 63</td>
<td>Ø 42 / Ø 63</td>
<td>SQ57 SQ75</td>
<td>Ø 35 / Ø 37 / 65</td>
<td>Ø 35 / Ø 37 / 65</td>
<td></td>
</tr>
</tbody>
</table>

Nominal Power (W)

- Ø 32 / Ø 42 Ø 63: 0.5 – 95
- Ø 42 / Ø 63: 15 → 104
- SQ57 SQ75: 66 → 600
- Ø 35 / Ø 37 / 65: 0.5 → 5
- Ø 35 / Ø 37 / 65: 0.3 → 3
- Ø 35 / Ø 37 / 65: 0.2 → 0.4

Voltage

- Ø 32 / Ø 42 Ø 63: 12 / 24 / 48 VDC
- Ø 42 / Ø 63: 12 → 120 VDC
- SQ57 SQ75: 9 → 75 VDC
- Ø 35 / Ø 37 / 65: 3 → 64 VDC

Nominal Speed (rpm)

- Ø 32 / Ø 42 Ø 63: 3000 → 3700
- Ø 42 / Ø 63: 3000
- SQ57 SQ75: 3000
- Ø 35 / Ø 37 / 65: 1500

Nominal Torque (Nm)

- Ø 32 / Ø 42 Ø 63: 2.2 → 270
- Ø 42 / Ø 63: 50 → 290
- SQ57 SQ75: 125 → 1900
- Ø 35 / Ø 37 / 65: 15 → 300

Noise Level (dBA)

- Ø 32 / Ø 42 Ø 63: 55
- Ø 42 / Ø 63: 35
- SQ57 SQ75: 45 / 50
- Ø 35 / Ø 37 / 65: 35

Service Life (hrs)

- Ø 32 / Ø 42 Ø 63: Up to 5 000
- Ø 42 / Ø 63: Up to 5 000
- SQ57 SQ75: 20 000
- Ø 35 / Ø 37 / 65: 20 000

Gearboxes

- Ø 32 / Ø 42 Ø 63: More information
- Ø 42 / Ø 63: Connector Cable Lead Terminal
- SQ57 SQ75: Connector Cable Lead Terminal
- Ø 35 / Ø 37 / 65: Connector Cable Lead Terminal

CONTROL ELECTRONICS

<table>
<thead>
<tr>
<th>Integrated</th>
<th>External</th>
</tr>
</thead>
<tbody>
<tr>
<td>TNi21</td>
<td>SMi21</td>
</tr>
<tr>
<td>SMi22</td>
<td>BDE 30</td>
</tr>
<tr>
<td>BDE 40</td>
<td></td>
</tr>
</tbody>
</table>

Compatible models

- SQ57
- SQ75
- SMi22

Speed Torque

- Ø 32 / Ø 42 Ø 63: 4096
- Ø 42 / Ø 63: 4096
- SQ57 SQ75: 9000
- Ø 35 / Ø 37 / 65: 600

Position (c/t)

- Ø 32 / Ø 42 Ø 63: 4096
- Ø 42 / Ø 63: 4096
- SQ57 SQ75: 4096
- Ø 35 / Ø 37 / 65: 4096

Programming

- DCmind Soft & CANopen
- DCmind Soft + CANopen
- PWM or 0 → 10 V

Communication Bus

- CANopen Option
- CANopen Standard

Voltage

- Ø 32 / Ø 42 Ø 63: 10 → 36 VDC
- Ø 42 / Ø 63: 9 → 75 VDC
- SQ57 SQ75: 9 → 75 VDC
- Ø 35 / Ø 37 / 65: 10 → 36 VDC

Maximum Current (A)

- Ø 32 / Ø 42 Ø 63: 17
- Ø 42 / Ø 63: 17
- SQ57 SQ75: 78
- Ø 35 / Ø 37 / 65: 14

Adaptations

- Programs: Custom firmware as per customer specifications

GEARBOXES

<table>
<thead>
<tr>
<th>Spur gear</th>
<th>Planetary</th>
<th>Worm</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 models</td>
<td>7 models</td>
<td>2 models</td>
</tr>
<tr>
<td>Torque (Nm)</td>
<td>0.5 → 6</td>
<td>0.8 → 120</td>
</tr>
<tr>
<td>Power (W)</td>
<td>0.2 → 50</td>
<td>8 → 600</td>
</tr>
<tr>
<td>Service Life (Mr)</td>
<td>1 → 10</td>
<td>50</td>
</tr>
<tr>
<td>Ratios</td>
<td>4 → 4500</td>
<td>4 → 308</td>
</tr>
<tr>
<td>Options</td>
<td>Shafts: stainless steel, pulleys, pinions, special bearings etc.</td>
<td></td>
</tr>
</tbody>
</table>

MARKETS & APPLICATIONS

- Railway
- Medical
- Valves and Pumps
- Energy Distribution
- Industrial Automation
- Access Control
- Agriculture and Forestry

DCMIND SOFT: SIMPLIFIED*

DCMIND SOFT (SMI21) & DCMIND SOFT+CANOPEN (SMI21 & SMI22) FOR DCMIND BRUSHLESS

- Precise configuration of the position, speed and torque
- The most user-friendly software on the market
- Two programming modes: application & expert
- Application programs: dosing, valves, machinery, conveyor belt, access control

* Free software on our website (motors.crouzet.com) or can be supplied on a USB stick in the «starter kit».

INFO

INFO

INFO

INFO

INFO
**SWITCHES & POSITION SENSORS**

As specialist in snap action technologies our offer includes microswitches, limit switches and manually operated switches which are adaptable in terms of connectors, lever or body size.

High quality and reliability products are crucial in harsh environments with severe constraints.

### DETECTION & SENSING

<table>
<thead>
<tr>
<th>MICROSWITCHES</th>
<th>LIMIT SWITCHES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Series</strong></td>
<td><strong>Standard</strong></td>
</tr>
<tr>
<td>V55</td>
<td>8387</td>
</tr>
<tr>
<td>V52</td>
<td>8388</td>
</tr>
<tr>
<td>V44</td>
<td>83589</td>
</tr>
<tr>
<td>V45</td>
<td>83777</td>
</tr>
<tr>
<td>V3320</td>
<td>83778</td>
</tr>
<tr>
<td>V3328</td>
<td>8399Nuc</td>
</tr>
<tr>
<td>V3329</td>
<td>8399Ex</td>
</tr>
</tbody>
</table>

#### Key features
- Hermetically sealed
- Customizable
- Multi-pole functions
- Contactless detection with integrated electronics
- Customizable
- Contactless detection with external electronics
- Built-in test capability

#### Max Rating @ 250 Vac (A)

<table>
<thead>
<tr>
<th>Limit Switches</th>
<th>Standard</th>
<th>Harsh Environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 A</td>
<td>8 A</td>
<td>4 A</td>
</tr>
<tr>
<td>1 A</td>
<td>1 A</td>
<td></td>
</tr>
</tbody>
</table>

#### Sealing level
- IP66
- IP67
- IP68

#### Double break
- Za
- Zb

#### Operating temperature
- -40 °C +70 °C
- -40 °C +85 °C
- -55 °C +125 °C
- -55 °C +250 °C
- -40 °C +200 °C

#### Approval
- UL
- CE

### MANUALLY OPERATED SWITCHES

- Pushbuttons, Momentary and/or Maintained, up to 4 poles
- Toggles, Maintained and/or Momentary, up to 4 poles
- Multiway, Momentary
- Rockers, Momentary and Maintained
- Triggers, Momentary

### CUSTOMIZED SOLUTIONS

- Dedicated application
- Customer specific product
- Innovation & industrialization
ELECTRICAL PROTECTION

KEY FEATURES:
- Intrinsic fail-safe
- Multiple terminal options
- Signal contacts
- Illuminated front panel
- Qualification documentation for FAA or EASA certification
- Single channel
- CAN 2.0 bus communication
- Adaptable to customers’ requirements

<table>
<thead>
<tr>
<th>ELECTROMECHANICS, MECHATRONICS, ELECTRONICS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Circuit Breaker</td>
</tr>
<tr>
<td><img src="image1" alt="Circuit Breaker" /></td>
</tr>
</tbody>
</table>

- **Power supply**: 28 VDC & 115 VAC, 28 VDC & 115 VAC, 28 VDC & 115 VAC
- **Mechanical life**: 1 M ➞ 7 M FH, 20 000 FH, 20 000 FH
- **Quick installation**: Pushfit, Pushfit & PWB, NA
- **Weight**: < 20 g, 1000 - 4000 g, 170 ➞ 250 g
- **Operating temperature**: -55 ➞ +125 °C, -55 ➞ +85 °C, -55 ➞ +70 °C

MORE INFORMATION

MARKETS & APPLICATIONS
- Commercial Aircrafts
- Business Jets
- Military Aircrafts
- Helicopters
- Ground Vehicles

COCKPIT CONTROLS

THE DETAILS THAT MAKE THE DIFFERENCE

**FLIGHT CONTROLS**

<table>
<thead>
<tr>
<th>Pushbutton</th>
<th>Multiway</th>
<th>Pilot Grip</th>
<th>Control Wheel</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image4" alt="Pushbutton" /></td>
<td><img src="image5" alt="Multiway" /></td>
<td><img src="image6" alt="Pilot Grip" /></td>
<td><img src="image7" alt="Control Wheel" /></td>
</tr>
</tbody>
</table>

- **Key features**: 1, 2, 3, 4 pole, Sealed versions, More than 200 electrical combinations, Tactile effect, Silver & gold terminals, Different hat shape and color, Ergonomy and functions access, Aluminium castings or injected in advanced plastic composite, Highest level of finishing, Comfort and aesthetics, Best in class quality, Leather finishing
- **Operating force**: 8N ➞ 16N, 3N ➞ 8N, 90 daN, 150 daN
- **Mechanical life**: 300 000, 500 000, 35 000 FH, 35 000 FH
- **Water proofness**: DO 260 cat W, DO 260 cat W, DO 260 cat W, DO 260 cat W
- **Weight**: 3.6 g ➞ 7.7 g, 7.3 g ➞ 15.7 g, 420 g ➞ 780 g, 960 g ➞ 1 250 g
- **Operating temperature**: -55 °C ➞ +85 °C, -55 °C ➞ +85 °C, -55 °C ➞ +85 °C, -55 °C ➞ +85 °C

MORE INFORMATION
## Warning:

The product information contained in this catalogue is given purely as information and does not constitute a representation, warranty or any form of contractual commitment. Crouzet Automatismes SAS and its subsidiaries reserve the right to modify their products without notice. It is imperative that we should be consulted over any particular use or application of our products and it is the responsibility of the buyer to establish, particularly through all the appropriate tests, that the product is suitable for the use or application. Under no circumstances will our warranty apply, nor shall we be held responsible for any application (such as any modification, addition, deletion, use in conjunction with other electrical or electronic components, circuits or assemblies, or any other unsuitable material or substance) which has not been expressly agreed by us prior to the sale of our products.

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