ABOUT CROUZET

The Motion product line provides innovative engineering expertise, high quality service and a complete offer of standard direct drives, geared motors and motion control solutions for applications where performance is key. Our ability to customize solutions as per virtually any customers’ request makes us the right partner to tackle the most demanding projects.

Crouzet is a brand of InnoVista Sensors™.

With a long-term commitment to technological excellence, the engineering teams have mastered the following core technologies and know-how:
› Electromagnetism
› Thermal dynamics
› Electromechanical systems
› Electronic drives

Covering the power range from 1 to 1000 W peak (1/100 to 1HP+) and available with spur, worm or planetary gearboxes, plus adapted controllers, our offer is specifically designed for access control systems, pumps and valves, railway applications, electrical equipment, medical equipment and the industry.

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

Through its brands, Crouzet and Systron Donner Inertial, 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
To meet market expectations and provide customers with the right solutions within the shortest timeframes, Crouzet has structured its processes around the different types of product available: standard products, adapted products or products specially developed for a customer.

Introducing the adaptation wheel...

1. **STANDARD PRODUCTS**
   - Sales service
   - A full range of motors, geared motors and associated controllers. You can create your automation control applications as quickly as possible.

2. **PRODUCTS WITH ADDED VALUE**
   - Customer Adaptation Centre
   - All our standard products can have additional factory-mounted auxiliaries or accessories: connectors, leads, special terminals, customized shafts, adaptor plates, etc. Seamless integration in your equipment means you benefit from simpler logistics and optimum installation reliability.

3. **ADAPTED PRODUCTS**
   - Customer Adaptation Centre
   - Defined in 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.

4. **SPECIAL PRODUCTS**
   - Engineers and teams
   - Dedicated project
   - From the very start of a project, Crouzet’s experts work closely with your teams to develop the specification. All our design, industrialization and approval expertise goes into developing Motion Control solutions that are tailored to your requirements.
Crouzet, a specialist in customized motorization solutions, now presents its latest generation of High Performance Brushless motors with integrated electronics TNi21 and SMi21. A pioneer on the European market in 2002 with the Motomate, a Brushless motor with integrated electronics incorporating an intuitive visual programming interface, Crouzet is blazing a new trail for compact standalone applications. Crouzet, a company continually evolving to meet customer needs, has upgraded its ranges with accessories, gearboxes, part numbers and now, thanks to these electronic devices, has enhanced the performance of its products with:

- more power
- more accuracy
- more functions
- simplicity of use and ease of integration.

**TWO ELECTRONIC PILOT CONTROL DEVICES**

- The TNi21 for simpler applications, dedicated to speed and torque control.
- The SMi21, dedicated to motion control for applications that require accuracy. Thanks to a 4096-point encoder, it offers all the following control functions: position, torque, speed, direction, braking, etc.

**COMMUNICATING**

- A micro-USB socket on the motor (SMi21) can be used to link this directly to a PC.
- Option CANopen in addition available.

**BRAKING AND HOLDING**

With or without failsafe holding brake (active braking is performed by the motor electronics).

**CONTROL**

- TNi21: 4 inputs and 3 outputs, torque and speed control on analog inputs with 10-bit resolution.
- SMi21: 6 inputs and 4 outputs, the motor has a wide selection of programs which can be set via a PC (position, speed and torque) and can reach as many as 65,000 positions.

**POWER SUPPLY**

Single supply voltage needed across the whole voltage range:

- TNi21 (10 - 36 VDC)
- SMi21 (9 - 56 VDC)

**FILTERING AND PROTECTING**

- Short-circuits, undervoltages
- EMC (received and transmitted)
- Temperature
- Mechanical (vibrations, shocks, etc.)

**THE MOTOR’S INTEGRATED ELECTRONICS ALLOW YOU TO:**

**PRODUCT ADVANTAGES**

- Easy and accurate control thanks to an optimized control loop
- Improved safety with internal thermal protection
- Safe, reliable operation as a result of its excellent EMC characteristics, due to the shortest possible wiring and shielding with a metal cover

**USER ADVANTAGES**

- Save time and improve reliability due to less wiring and fewer connections.
- Control the logistic problem better with fewer part numbers to manage
- Save space thanks to a more compact solution

**GEARBOXES**

Using Crouzet gearboxes, the motor speed and torque can be adapted to your applications from 0.01 to 4000 rpm and 0.1 to 120 Nm (0.9 to 1062 in-lbs).

**INTEGRATION**

Crouzet adapts the mechanical interfaces of its solutions for perfect integration in your equipment: fixing plate, transmission shafts, special pinions.
INTEGRATED ELECTRONICS

TNi21 SPEED AND TORQUE CONTROL:
- 4 inputs, 3 outputs.
- 2 x 10-bit analog inputs for fine-tuned speed and torque control.
- 4 rejective quadrants.
- Use on its own or in combination with other motors or controlled by a PLC.
- Can be used in production immediately (without setup stage).
- Also suitable for a 12 V or 24 V battery power supply (voltage range between 10 and 36 volts).

SMi21 POSITION, SPEED AND TORQUE CONTROL:
- 6 inputs and 4 outputs, 2 of which are 10-bit analog inputs.
- Intuitive, easy-to-use setup software - with application mode for quick start-up.
- Very flexible thanks to the various programs on offer. All the parameters are adjustable and can be used to optimise application operation.
- Also suitable for a 12 V, 24 V or 48 V battery power supply (voltage range between 9 and 56 volts).
- Low power consumption when idling (1 W).
- Rotor position controlled with 4096-point encoder and use of sinusoidal vector control.
- Reprogramming and re-use of motors as required by changing the application program or by modifying the configuration.
- Firmware updating made easier with the "bootloader" function.
- Use on its own, in combination with other motors or controlled by a PLC.
- Also available with CANopen communication bus.

THE RANGE

<table>
<thead>
<tr>
<th>MOTORIZATIONS</th>
<th>Nominal usable power at 24 VDC</th>
<th>Max. usable power</th>
</tr>
</thead>
<tbody>
<tr>
<td>80140 TNi21</td>
<td>77 W</td>
<td>150 W</td>
</tr>
<tr>
<td>801495 SMi21</td>
<td>92 W</td>
<td>184 W</td>
</tr>
<tr>
<td>801595 SMi21</td>
<td>105 W</td>
<td>314 W</td>
</tr>
<tr>
<td>801896 TNi21</td>
<td>133 W</td>
<td>251 W</td>
</tr>
<tr>
<td>801897 SMi21</td>
<td>170 W</td>
<td>419 W</td>
</tr>
<tr>
<td>802897 SMi21</td>
<td>170 W</td>
<td>419 W</td>
</tr>
</tbody>
</table>

*On request
Nominal power ratings may vary according to the supply voltage.
Maximum power ratings are given for the maximum permissible motor voltage.
Example: the 80 280 SMi21 motor develops peak mechanical power of 419 W at 48 VDC.

OPTIONS AND ACCESSORIES

TNi21
- Motors available with or without mechanical brake for holding at breaking current.
- Supplied with 1 control cable and a power supply cable or with a M16 12-pin connector output including all the connections (motors 80140 and 80180).
- Accessory, shielded cable and 12-pin M16 connector.

SMi21
- Motors available with or without mechanical brake for holding at breaking current.
- Requires a standard commercially-available USB/ micro-USB cable and the setup software. This can be downloaded free of charge from the Crouzet website or ordered in the form of a "starter kit."
SMi21: DCmind SOFT SIMPLIFIED PROGRAMMING

SIMPLE AND INTUITIVE SOFTWARE
Available in several languages, with multiple possible uses, at any level of performance.

2 PROGRAMMING MODES
› Application approach: Select an application template, then set only those parameters that relate directly to your application. These programs use preset expert programs. You can fine-tune these settings by calling up the corresponding expert program.
› Expert approach: for automation system programs and settings covering a wide range of parameters. These applicative and expert programs are also available as «program manufacturer» in CANopen.

DCmind SOFT & DCmind SOFT + CANopen
Available on our website www.crouzet-motors.com, or can be supplied on a USB stick in the “starter kits”.

APPLICATIONS
Varied applications where position control, repeated movement and accuracy are key factors.

- Stepper operation, detection of thrust and proportional adjustment of forces.
- Performing cyclical operation, adjustment of speed and forces. Set to safety mode in the event of a fault.
- Several motors combined, operation without a PLC, ease of assembly.
- Operation on 12 V battery, low consumption.
- S curve pilot control and operation on 12 V backup battery.
- Speed pilot control

CHARACTERISTICS
3 languages: English, French, German. (English for CANopen)
Application programs: Valve, conveyor belt, clamp, format adjustment, peristaltic pump, etc.
Expert programs: Position, speed, torque with digital and analog inputs.

- Numerous programs are available, offering:
  - 65,000 proportional positions which can be selected by two 0/10V inputs
  - 30 independent positions which can be selected by digital encoding
  - A variety of outputs which can be selected to suit your requirements
  - The option of setting inverted inputs, selecting 0/10V or PWM operation on the analog inputs, and even setting their operating limit stops
  - The option of modifying the control loop PID parameters for difficult applications
  - Automatic detection of the reference position for position control (‘homing’ function)

- Special programs created on request, firmware updating made easier with the “Bootloader” function
- Loading programs simplified with a USB connection
- Other programs to come, please visit our website

SOME EXAMPLES OF APPLICATIONS
Format adjustment, automatic feed, synchronization, flow control, accurate dosage.
DCmind: BRUSHLESS MOTORS

Motors 38 to 145 W nominal output power range with TNi21 Speed and Torque Control

For control speed and torque applications
- Very high power density
- 4 inputs (where 2 of them analog) / 3 outputs
- Integrated electronic controls
- Holding torque function
- Battery supply compatible 12 V and 24 V

Part numbers

<table>
<thead>
<tr>
<th>Type</th>
<th>Part number</th>
</tr>
</thead>
<tbody>
<tr>
<td>38-145 W, case output</td>
<td>80140 Tn21</td>
</tr>
<tr>
<td>38-145 W, case output</td>
<td>80140BD</td>
</tr>
<tr>
<td>38-145 W, case output</td>
<td>80140K1</td>
</tr>
<tr>
<td>38-145 W, case output</td>
<td>80140K2</td>
</tr>
<tr>
<td>45-102 W, case output</td>
<td>80180 Tn21</td>
</tr>
<tr>
<td>45-102 W, case output</td>
<td>80180BD</td>
</tr>
<tr>
<td>45-102 W, case output</td>
<td>80180K1</td>
</tr>
<tr>
<td>45-102 W, case output</td>
<td>80180K2</td>
</tr>
</tbody>
</table>

Nominal power supply range (V)
- 12 V
- 24 V

Max. max. power supply (V)
- 10 - 38
- 10 - 38

Speed of rotation (rpm)
- 2500
- 3500
- 4500

Abbrated current (A)
- 0.34
- 0.35
- 0.36

Temperature range (°C)
- 0
- 40
- 40

Input impedance (Ω)
- 1
- 2
- 2

Input power (W)
- 10
- 11
- 11

Max. continuous torque (mNm)
- 80
- 100
- 110

Maximum continuous voltage (V)
- 1500
- 2500
- 3000
- 4500

Minimum voltage (V)
- 75
- 200
- 300
- 400

Brake power supply 24 V E+F AWG16 Brown

Output 1: Tachometer*                              A AWG24 Brown (6)
Output 2: Torque at max. K AWG24 Purple (7)
Output 3: Torque at max. K AWG24 Purple (7)

Dimensions (mm)

Cable output versions                                                        M16 connector version - 12 pins

Connections

Input impedance (Ω)
- 6
- 12
- 16

Powerful controlled brake (directed)

Dimensions

Shaft, pinion, pulley dimensions
- Cable wire length
- Powerful controlled brake (directed)
- Program evolution

User information

More information: see page 16

Content

- Conformity to EMC Directive in accordance with (EN 55022)
- Radiation conformity to EN 61326
- Thermal time constant (ms)
- 20
- 30
- 30

- Noise level (dBA)
- 40
- 40
- 40

- Elect. (rpm)
- 1
- 2
- 2

- Ambient operating temperature (°C)
- -30 ± 70
- -30 ± 70
- -30 ± 70

- Service factor
- 1.1
- 1.1
- 1.1

- Stalling torque
- 9
- 9
- 9

- Weight (kg)
- 0.9
- 0.9
- 0.9

- Continuous running area
- Maximum continuous torque
- Maximum peak torque

Curves

Speed / Torque 80140 Tn21 - Current / Torque 80140 Tn21

Speed / Torque 80180 Tn21 - Current / Torque 80180 Tn21

Product adaptations

- Shaft, pinion, pulley dimensions
- Cable wire length
- Powerful controlled brake (directed)
- Program evolution

User information

Notices available on website, please read it before use.
DCmind: BRUSHLESS MOTORS

Motors 34 to 192 W nominal output power range with SMI21 Position, Speed and Torque Control

- Servomotor for position, speed and torque control applications
- Large voltage supply range
- Very high power density
- Built-in electronics with 6 inputs (2 of which are analog) and 4 outputs
- Built-In 4096-pulse encoder
- With application programs already preset and saved in the motor
- Expert programs can be used to adapt to the requirements of difficult applications
- Parameters set on the PC via USB connection
- Integrated bootloader for embedding special customer firmware

Parts number

<table>
<thead>
<tr>
<th>Type</th>
<th>Parts number</th>
<th>Input / Outputs</th>
<th>Torque mode</th>
<th>Speed / Torque 80140 SMi21</th>
<th>Current / Torque 80140 SMi21</th>
<th>Speed / Torque 80180 SMi21</th>
<th>Current / Torque 80180 SMi21</th>
</tr>
</thead>
<tbody>
<tr>
<td>34 to 64 W</td>
<td>80140 SMi21</td>
<td>2</td>
<td>1</td>
<td>2400 4000 4000</td>
<td>0.33 0.33 0.33</td>
<td>2400 2400 2400</td>
<td>0.33 0.33 0.33</td>
</tr>
<tr>
<td>65 to 145 W</td>
<td>80160 SMi21</td>
<td>2</td>
<td>1</td>
<td>2400 4000 4000</td>
<td>0.33 0.33 0.33</td>
<td>2400 2400 2400</td>
<td>0.33 0.33 0.33</td>
</tr>
<tr>
<td>82 to 192 W</td>
<td>80280 SMi21</td>
<td>2</td>
<td>1</td>
<td>2400 4000 4000</td>
<td>0.33 0.33 0.33</td>
<td>2400 2400 2400</td>
<td>0.33 0.33 0.33</td>
</tr>
</tbody>
</table>

Product adaptations

- Other specific applications software
- Specific PC interface
- Special cable length
- Special shaft
- Other connectors

Product made to order

User information

Reset available on website, please read it before use.
Motors 34 to 192 W nominal output power range with SMi21 Position, Speed and Torque Control with CANopen

- Servomotor for position, speed and torque control applications
- Large voltage supply range
- Very high power density
- Built-in electronics with 6 inputs (2 of which are analog) and 4 outputs
- Built-in 4096-pulse encoder
- With application programs already preset and saved in the motor
- Expert programs can be used to adapt to the requirements of difficult applications
- Parameters set on the PC via USB and CANopen connections
- Integrated bootloader for embedding special customer firmware
- CANopen and USB work together

### Parts number

<table>
<thead>
<tr>
<th>Type</th>
<th>Voltage (V)</th>
<th>Nominal operating range (W)</th>
<th>Min. max. operating range (W)</th>
<th>Speed of rotation (rpm)</th>
<th>Absolute current (A)</th>
<th>Input power (W)</th>
<th>Speed of rotation (rpm)</th>
<th>Torque (Nm)</th>
<th>Absolute current (A)</th>
<th>Input power (W)</th>
<th>Speed of rotation (rpm)</th>
<th>Torque (Nm)</th>
<th>Absolute current (A)</th>
<th>Input power (W)</th>
</tr>
</thead>
<tbody>
<tr>
<td>34 to 94 W</td>
<td>24 V</td>
<td>80140 SMi21 CAN</td>
<td>2000</td>
<td>24 V</td>
<td>14000</td>
<td>300</td>
<td>300</td>
<td>1500</td>
<td>500</td>
<td>250</td>
<td>2000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60 to 145 W</td>
<td>24 V</td>
<td>80180 SMi21 CAN</td>
<td>2400</td>
<td>24 V</td>
<td>10000</td>
<td>300</td>
<td>300</td>
<td>1500</td>
<td>500</td>
<td>250</td>
<td>2000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>80 to 192 W</td>
<td>24 V</td>
<td>80280 SMi202 CAN</td>
<td>2400</td>
<td>24 V</td>
<td>10000</td>
<td>300</td>
<td>300</td>
<td>1500</td>
<td>500</td>
<td>250</td>
<td>2000</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### User information

Notice available on website, please read it before use.
GEARBOXES FOR DCmind BRUSHLESS RANGE

4 to 120 Nm

- Planetary and worm gearboxes
- Shafts on ball bearings
- Long service life
- IP65

Gearboxes

<table>
<thead>
<tr>
<th>Type</th>
<th>Planetary Ø 52</th>
<th>Planetary Ø 62</th>
<th>Planetary Ø 81</th>
</tr>
</thead>
<tbody>
<tr>
<td>610495</td>
<td>810496</td>
<td>810497</td>
<td>810410</td>
</tr>
<tr>
<td>610496</td>
<td>810496</td>
<td>810497</td>
<td>810410</td>
</tr>
<tr>
<td>610497</td>
<td>810496</td>
<td>810497</td>
<td>810410</td>
</tr>
<tr>
<td>610410</td>
<td>810496</td>
<td>810497</td>
<td>810410</td>
</tr>
</tbody>
</table>

Associated motors

<table>
<thead>
<tr>
<th>Part number</th>
<th>Part number</th>
<th>Part number</th>
<th>Part number</th>
</tr>
</thead>
<tbody>
<tr>
<td>80140</td>
<td>801495</td>
<td>801496</td>
<td>801410</td>
</tr>
<tr>
<td>801495</td>
<td>801496</td>
<td>801497</td>
<td>801410</td>
</tr>
<tr>
<td>801496</td>
<td>801497</td>
<td>801498</td>
<td>801410</td>
</tr>
<tr>
<td>801497</td>
<td>801498</td>
<td>801499</td>
<td>801410</td>
</tr>
<tr>
<td>801498</td>
<td>801499</td>
<td>801500</td>
<td>801410</td>
</tr>
<tr>
<td>801410</td>
<td>801501</td>
<td>801502</td>
<td>801410</td>
</tr>
</tbody>
</table>

Part numbers

- Planetary Ø 52 gearboxes: Metal gears on all stages. IP65 apart from the output shaft.
- Planetary Ø 62 gearboxes: On the first stage, the planet gears are made of composite materials which improve efficiency and service life. On the other stages, the metal gears turn on needle bearings. IP65 apart from the output shaft.
- Planetary Ø 81 gearboxes: All gears are metal and turn on needle bearings, resulting in excellent robustness and a very long service life. IP65 apart from the output shaft.
- Worm gearboxes: This gearbox combines a tempered steel worm and a hard bronze helical gear wheel, thus ensuring a long service life. The wheel is coated with grease, ensuring an excellent slip coefficient and good heat dissipation. O-rings and lipseals are used in combination with a compression spring to create a tight seal at the gearbox output shaft and the motor input shaft. IP65 gearbox.

The casing is made of aluminium to maximise heat exchanges with its supporting surface on the machine. However, due to the high power that can be transmitted by this gearbox and the low efficiency inherent in large worm gearbox reduction ratios, make sure that the gearbox casing temperature does not exceed 75°C during operation. The output shaft can be placed on the right or left, or can be a double shaft (shaft output on both sides).

Made to order products, available on request

- Special shafts
- Other reduction ratios
- Other fixing holes
- Special mounting flange
**DCmind BRUSHLESS DIRECT MOTOR TNI21 & SMI21**

**CABLE OUTPUT OR WITH CONNECTOR**

### Dimensions (mm)

- **L0140 - L0160 - L0200 - TNi21 version output cable with or without brake**
  - L0140: 92 max.
  - L0160: 113 max.
  - L0200: 112 max.
  - 4 x M5 at 90°, depth 6 over Ø 40
  - Command cable 6 x AWG24 / 500 mm
  - Power cable 2 x AWG16 / 500 mm

- **L0140 - L0160 - TNi21 version connector M16 - 12 pins with or without brake**
  - L0140: 123 max.
  - L0160: 143 max.
  - 4 x M5 at 90°, depth 6 over Ø 40
  - USB connection type B
  - Command cable 10 x AWG24 / 500 mm
  - Power cable 2 x AWG16 / 500 mm

- **L0140 - L0160 - L0200 - SMI21 with or without brake**
  - L0140: 123 max.
  - L0160: 143 max.
  - 4 x M5 at 90°, depth 6 over Ø 40
  - CAN connector - M12
  - Micro-USB B connector
  - Input/output connector - M16 - Hummel
  - Voltage supply connector - M16 - Hummel
  - Earth: M6 threaded hole - 10mm thread depth

### DCmind BRUSHLESS GEARED MOTOR TNI21

**CABLE OUTPUT**

### Dimensions (mm)

- **L01405 - TNi21 + P52 with or without brake**
  - L1 1 stage: 55.3 ± 0.5
  - L2 2 stages: 69.5 ± 0.5
  - L3 3 stages: 83.7 ± 0.5
  - L0140: 92 max.
  - L0160: 123 max.
  - Parallel key 4 x 4 x 16 DIN 6885 A
  - M6 x 12
  - 4 x M5 at 90°, depth 10 over Ø 40
  - Command cable 6 x AWG24 / 500 mm
  - Power cable 2 x AWG16 / 500 mm

- **L01406 - L01806 - TNi21 + P62 with or without brake**
  - L1 1 stage: 52.1 ± 0.7
  - L2 2 stages: 67.9 ± 0.7
  - L3 3 stages: 83.8 ± 0.7
  - L0140: 92 max.
  - L0160: 112 max.
  - L0180: 143 max.
  - Parallel key 5 x 5 x 18 DIN 6885 A
  - M6 x 12
  - 4 x M5 at 90°, depth 10 over Ø 40
  - Command cable 6 x AWG24 / 500 mm
  - Power cable 2 x AWG16 / 500 mm

- **L01697 - L02097 - TNi21 + P61 with or without brake**
  - L1 1 stage: 70.5 ± 0.8
  - L2 2 stages: 90.2 ± 0.6
  - L3 3 stages: 113.8 ± 0.6
  - L0180: 112 max.
  - L0190: 123 max.
  - Parallel key 6 x 6 x 28 DIN 6885 A
  - M6 x 12
  - 4 x M5 at 90°, depth 12 over Ø 40
  - Command cable 6 x AWG24 / 500 mm
  - Power cable 2 x AWG16 / 500 mm

- **L01410 - L01610 - L02010 - TNi21 + RAD10 with or without brake**
  - L1: 80140: 123 max
  - L2: 80140: 135 max
  - L1: 80180: 143 max
  - L2: 80140: 164 max
  - 4 x M5 threaded holes on 40mm diameter, 4.5 mm thread depth
  - CAN connector - M12
  - Micro-USB B connector
  - Input/output connector - M16 - Hummel
  - Voltage supply connector - M16 - Hummel
  - Earth: M6 threaded hole - 10mm thread depth
DCmind BRUSHLESS GEARED MOTOR TNi21
WITH CONNECTOR

Dimensions (mm)

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>801495 - TN21 + P52 M16 connector with or without brake</td>
<td>1. Parallel key 4 x 4 x 16 DIN 6885 A 2. M4 x 10 3. 4 x M5 at 90°, depth 10 over Ø 40</td>
</tr>
<tr>
<td>801496 - TN21 + P62 M16 connector with or without brake</td>
<td>1. Parallel key 5 x 5 x 18 DIN 6885 A 2. M5 x 12 3. 4 x M5 at 90°, depth 10 over Ø 52</td>
</tr>
<tr>
<td>801897 - TN21 + P81 M16 connector with or without brake</td>
<td>1. Parallel key 6 x 6 x 28 DIN 6885 A 2. M6 x 16 3. 4 x M6, depth 12 over Ø 65</td>
</tr>
<tr>
<td>801410 - TN21 + RAD10 M16 connector with or without brake</td>
<td>1. Parallel key 4 x 4 x 20 DIN 6885 A 2. M4 x 10 3. 4 x M5, depth 8 over Ø 40</td>
</tr>
</tbody>
</table>

DCmind BRUSHLESS GEARED MOTOR SMi21
CABLE OUTPUT

Dimensions (mm)

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>801495 - SM21 + P52 with or without brake</td>
<td>1. Parallel key 4 x 4 x 16 DIN 6885 A 2. M4 x 10 3. 4 x M5 at 90°, depth 10 over Ø 40 4. Command cable 12 x AWG26 / 500 mm 5. Power cable 2 x AWG16 / 500 mm</td>
</tr>
<tr>
<td>801496 - SM21 + P62 with or without brake</td>
<td>1. Parallel key 5 x 5 x 18 DIN 6885 A 2. M5 x 12 3. 4 x M5 at 90°, depth 10 over Ø 52 4. Command cable 12 x AWG26 / 500 mm 5. Power cable 2 x AWG16 / 500 mm</td>
</tr>
<tr>
<td>801897 - SM21 + P81 with or without brake</td>
<td>1. Parallel key 6 x 6 x 28 DIN 6885 A 2. M6 x 16 3. 4 x M6, depth 12 over Ø 65 4. Command cable 12 x AWG26 / 500 mm 5. Power cable 2 x AWG16 / 500 mm</td>
</tr>
<tr>
<td>801410 - SM21 + RAD10 with or without brake</td>
<td>1. Parallel key 4 x 4 x 20 DIN 6885 A 2. M4 x 10 3. 4 x M5, depth 8 over Ø 40 4. Command cable 12 x AWG26 / 500 mm 5. Power cable 2 x AWG16 / 500 mm</td>
</tr>
</tbody>
</table>
## 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.

---

### AMERICAS

<table>
<thead>
<tr>
<th>Country</th>
<th>Tel.</th>
<th>Fax</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>CANADA</td>
<td>+1 (855) 929-5465</td>
<td>+1 (855) 2461-00-23</td>
<td><a href="mailto:americas.custserv@crouzet.com">americas.custserv@crouzet.com</a></td>
</tr>
<tr>
<td>MEXICO</td>
<td>+1 (855) 929-5465</td>
<td>+1 (855) 2461-00-23</td>
<td><a href="mailto:americas.custserv@crouzet.com">americas.custserv@crouzet.com</a></td>
</tr>
<tr>
<td>USA</td>
<td>+1 (855) 929-5465</td>
<td>+1 (855) 2461-00-23</td>
<td><a href="mailto:americas.custserv@crouzet.com">americas.custserv@crouzet.com</a></td>
</tr>
<tr>
<td>COUNTRIES NOT LISTED</td>
<td>+1 (855) 929-5465</td>
<td>+1 (855) 2461-00-23</td>
<td><a href="mailto:americas.custserv@crouzet.com">americas.custserv@crouzet.com</a></td>
</tr>
</tbody>
</table>

### EUROPE / MIDDLE EAST / AFRICA

<table>
<thead>
<tr>
<th>Country</th>
<th>Tel.</th>
<th>Fax</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>BELGIUM</td>
<td>+32 (0) 2 620 06 05</td>
<td>+32 (0) 2 461-00-23</td>
<td><a href="mailto:klantenservice@crouzet.com">klantenservice@crouzet.com</a></td>
</tr>
<tr>
<td>SWITZERLAND</td>
<td>+41 (0) 225 87 57 90</td>
<td>+41 (0) 565 88 02 75</td>
<td><a href="mailto:kundenservice@crouzet.com">kundenservice@crouzet.com</a></td>
</tr>
<tr>
<td>FRANCE</td>
<td>+33 (0) 475 802 101</td>
<td>+33 (0) 475 828 900</td>
<td><a href="mailto:relationsclient@crouzet.com">relationsclient@crouzet.com</a></td>
</tr>
<tr>
<td>THE NETHERLANDS</td>
<td>+31 (0) 20-654 52 20</td>
<td>+33 (0) 475 828 900</td>
<td><a href="mailto:relationsclient@crouzet.com">relationsclient@crouzet.com</a></td>
</tr>
<tr>
<td>GERMANY / AUSTRIA</td>
<td>+49 (0) 2103/985920</td>
<td>+49 (0) 2103/860-222</td>
<td><a href="mailto:kundenservice@crouzet.com">kundenservice@crouzet.com</a></td>
</tr>
<tr>
<td>UNITED KINGDOM</td>
<td>+44 (0) 2076 600 025</td>
<td>+33 (0) 475 828 900</td>
<td><a href="mailto:customer.relation@crouzet.com">customer.relation@crouzet.com</a></td>
</tr>
<tr>
<td>ITALY</td>
<td>+39 (02) 38 594 099</td>
<td>+39 (02) 82 952 104</td>
<td><a href="mailto:assistenzaclient@crouzet.com">assistenzaclient@crouzet.com</a></td>
</tr>
<tr>
<td>COUNTRIES NOT LISTED</td>
<td>+39 (02) 38 594 099</td>
<td>+39 (02) 82 952 104</td>
<td><a href="mailto:assistenzaclient@crouzet.com">assistenzaclient@crouzet.com</a></td>
</tr>
</tbody>
</table>

### ASIA / PACIFIC

<table>
<thead>
<tr>
<th>Country</th>
<th>Tel.</th>
<th>Fax</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHINA</td>
<td>+86 (21) 8025 7166</td>
<td>+86 (21) 6107 1771</td>
<td><a href="mailto:china@crouzet.com">china@crouzet.com</a></td>
</tr>
<tr>
<td>INDIA</td>
<td>+91 (80) 4113 2204/05</td>
<td>+91 (80) 4113 2206</td>
<td><a href="mailto:india@crouzet.com">india@crouzet.com</a></td>
</tr>
<tr>
<td>SOUTH KOREA</td>
<td>+82 (2) 2679 6312</td>
<td>+82 (2) 2679 9888</td>
<td><a href="mailto:korea@crouzet.com">korea@crouzet.com</a></td>
</tr>
<tr>
<td>EAST ASIA PACIFIC</td>
<td>+86 (21) 8025 7177</td>
<td>+86 (21) 6107 1771</td>
<td><a href="mailto:eap@crouzet.com">eap@crouzet.com</a></td>
</tr>
</tbody>
</table>

---

**Error**: The table seems to be incomplete or incorrect as it contains entries for countries that are not listed in the main body of the text. The correct information is provided in the main body of the text. The table should only include countries that have corresponding contact information listed in the main body.