

DCmind BRUSHLESS MOTORS

SQ75 motor with integrated SMi22 CANopen electronic board



- > DC Brushless motor for position, speed and torque control applications
- > High precision thanks to the 4096 position per turn magnetic encoder
- > CANopen Communication bus (CiA 301 compliant and implemented with CiA 402 drive profile)
- > Enhanced safety via 2 Safe Torque Off (STO) inputs
- > IP67 & IP69 direct drive according to IEC 60259 (except front face & shaft output)
- > Protection against wrong polarity



General characteristics

| Type | 80350 | | | 80360 | | | 80370 | | |
|--------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Part numbers | 80350001 | | | 80360001 | | | 80370001 | | |
| Nominal operating range | V ₋₋₋ 9 - 75 | | | V ₋₋₋ 9 - 75 | | | V ₋₋₋ 9 - 75 | | |
| No-load characteristics | 12V₋₋₋ | 24V₋₋₋ | 32V₋₋₋ | 24V₋₋₋ | 32V₋₋₋ | 48V₋₋₋ | 32V₋₋₋ | 48V₋₋₋ | 60V₋₋₋ |
| Speed of rotation | rpm 1 700 | 3 230 | 4 500 | 2 601 | 3 270 | 5 000 | 2 300 | 3 420 | 4 320 |
| Absorbed current | A 1.1 | 1 | 2.4 | 1 | 1 | 0.9 | 1 | 1 | 1 |
| Standby current ± 10 % | mA 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 |
| Nominal characteristics | 12V₋₋₋ | 24V₋₋₋ | 32V₋₋₋ | 24V₋₋₋ | 32V₋₋₋ | 48V₋₋₋ | 32V₋₋₋ | 48V₋₋₋ | 60V₋₋₋ |
| Speed ± 10 % | rpm 1 380 | 3 000 | 3 845 | 2 230 | 2 960 | 4 540 | 2 000 | 3 130 | 3 890 |
| Torque | N.m 1 | 1 | 1 | 1.3 | 1.3 | 1.3 | 1.9 | 1.9 | 1.9 |
| Absorbed current | A 15.4 | 15.4 | 15.4 | 14.4 | 14.4 | 14.4 | 15.1 | 15.1 | 15.1 |
| Output power ± 10 % | W 145 | 314 | 400 | 304 | 403 | 618 | 398 | 623 | 700 |
| Efficiency | % 78 | 85 | 82 | 85 | 87 | 87 | 80 | 86 | 78 |
| Maximal characteristics | 12V₋₋₋ | 24V₋₋₋ | 32V₋₋₋ | 24V₋₋₋ | 32V₋₋₋ | 48V₋₋₋ | 32V₋₋₋ | 48V₋₋₋ | 60V₋₋₋ |
| Speed | rpm 1 000 | 2 310 | 3 100 | 1 650 | 2 160 | 3 540 | 1 650 | 2 340 | 3 170 |
| Torque | N.m 2.5 | 2.5 | 2.5 | 4 | 4 | 4 | 5 | 6 | 6 |
| Output power ± 10 % | W 262 | 600 | 750 | 691 | 905 | 1 483 | 864 | 1 470 | 1 800 |
| Absorbed current | A 34.5 | 34.5 | 34.5 | 42 | 42 | 42 | 40 | 44 | 44 |
| Efficiency | % 60 | 74 | 68 | 67 | 69 | 71 | 67 | 70 | 68 |
| Other characteristics | | | | | | | | | |
| Cogging Torque | mNm 45 | 45 | 45 | 50 | 50 | 50 | 55 | 55 | 55 |
| Weight | Kg 2.4 | 2.4 | 2.4 | 2.7 | 2.7 | 2.7 | 3.3 | 3.3 | 3.3 |

Accessories

| Description | Part numbers |
|--|-----------------|
| Starter kit: Dcmind Soft+CANopen software - Power/logic/CAN 3 m cables - USB to CANopen adaptor - CAN terminal resistor - CAN double connector | 79513105 |
| Power supply cable M16, 3 m length AWG18 | 79298664 |
| Input-Output cable M16, 3 m length AWG24 | 79513106 |
| CAN cable M12, 1 m length AWG26 | 27358015 |

Combinations

① Choose The Motor

② Choose The Gearbox

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Description:

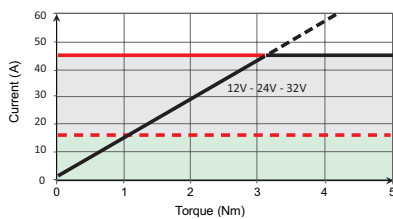
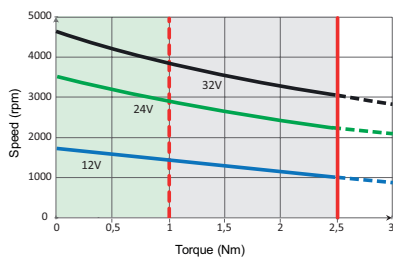
The new SQ75 DCmind Brushless motors have an integrated drive and CANopen communication bus for Motion Control applications up to 600 W nominal power and up to 6 Nm peak torque. More power, accurate precision, as well as enhanced safety and security features to secure your application.

For more information about Crouzet's SQ75 range, please visit www.crouzet.com.

Curves

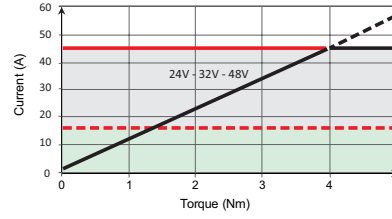
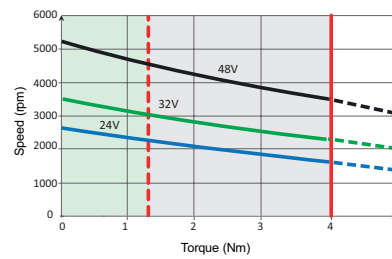
Speed-torque and current-torque

80350



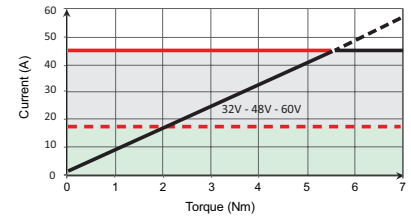
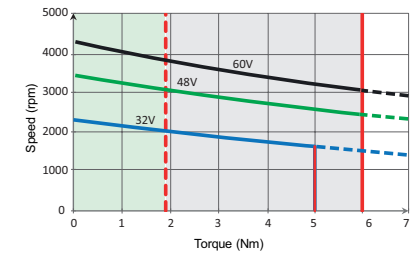
--- Nominal torque
 — Peak torque

80360



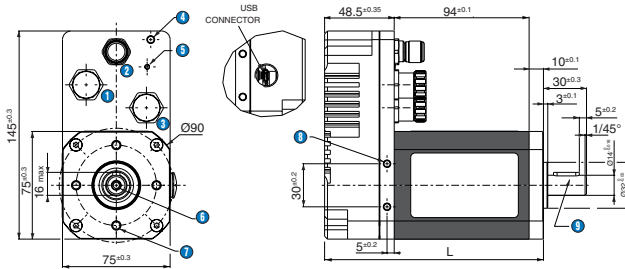
--- Continuous running area
 — Cycling running area

80370



Dimensions (mm)

80350 - 80360 - 80370

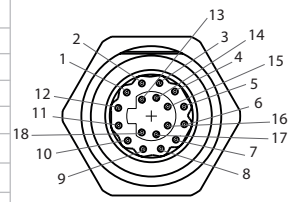


- 1 Logic connector
- 2 CAN connector
- 3 Power supply connector
- 4 M5 x 0.8 depth 7
- 5 2 colors LED for motor status
- 6 M5 x 0.8 depth thread 12
- 7 M6 x 1 at 90° on Ø56 depth 10.5
- 8 M5 x 0.8 depth 11.5
- 9 Parallel key 5 x 5 x 18 DIN 6885 A

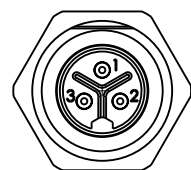
L: 80350 140.6 max - L: 80360 153.1 max - L: 80370 178.1 max

Connection

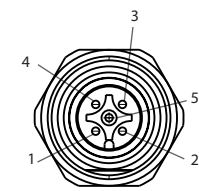
| Input / Output M16 connector - 18 pins | | | |
|--|--------------------------|-----|-------------|
| Pin | Description | Pin | Description |
| 1 | Optional logic supply | 14 | 0 volt |
| 2 | 0 volt | 15 | STO2- |
| 3 | Input 6 (analogic 1) | 16 | STO2+ |
| 4 | Input 5 (analogic 2) | 17 | STO1- |
| 5 | Input 1 (digital) | 18 | STO1+ |
| 6 | Input 2 (digital) | | |
| 7 | Input 3 (digital) | | |
| 8 | Input 4 (digital) | | |
| 9 | 0 volt | | |
| 10 | Output 1 (digital - PMW) | | |
| 11 | Output 2 (digital - PMW) | | |
| 12 | Output 3 (digital) | | |
| 13 | Output 4 (digital) | | |



| Pin | Power supply M16 - 3 pins |
|-----|---------------------------|
| | Description |
| 1 | Output ballast |
| 2 | +VDC |
| 3 | 0 volt |



| Pin | CAN - M12 - 5 pins |
|-----|--------------------|
| | Description |
| 1 | Not connected |
| 2 | Not connected |
| 3 | CAN_GND |
| 4 | CAN_H |
| 5 | CAN_L |



User information

Product User Manual available on website, please read it before use.

Products on request

Please contact our Design LAB on www.crouzet.com. Examples: special shaft - board adaptation...

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