

# 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			
<b>Part numbers</b>	<b>80350001</b>			<b>80360001</b>			<b>80370001</b>			
Nominal operating range	V <sub>---</sub>	9 - 75			9 - 75			9 - 75		
<b>No-load characteristics</b>		<b>12V<sub>---</sub></b>	<b>24V<sub>---</sub></b>	<b>32V<sub>---</sub></b>	<b>24V<sub>---</sub></b>	<b>32V<sub>---</sub></b>	<b>48V<sub>---</sub></b>	<b>32V<sub>---</sub></b>	<b>48V<sub>---</sub></b>	<b>60V<sub>---</sub></b>
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
<b>Nominal characteristics</b>		<b>12V<sub>---</sub></b>	<b>24V<sub>---</sub></b>	<b>32V<sub>---</sub></b>	<b>24V<sub>---</sub></b>	<b>32V<sub>---</sub></b>	<b>48V<sub>---</sub></b>	<b>32V<sub>---</sub></b>	<b>48V<sub>---</sub></b>	<b>60V<sub>---</sub></b>
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
<b>Maximal characteristics</b>		<b>12V<sub>---</sub></b>	<b>24V<sub>---</sub></b>	<b>32V<sub>---</sub></b>	<b>24V<sub>---</sub></b>	<b>32V<sub>---</sub></b>	<b>48V<sub>---</sub></b>	<b>32V<sub>---</sub></b>	<b>48V<sub>---</sub></b>	<b>60V<sub>---</sub></b>
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
<b>Other characteristics</b>										
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	<b>79513105</b>
Power supply cable M16, 3 m length AWG18	<b>79298664</b>
Input-Output cable M16, 3 m length AWG24	<b>79513106</b>
CAN cable M12, 1 m length AWG26	<b>27358015</b>

### Combinations

① Choose The Motor

80350  
80360  
80370

② Choose The Gearbox

OR MOTOR + 4.5 Nm BREAK

PLANETARY GEARBOX | PM72  
1 - 2 - 3 Stages

PLANETARY GEARBOX | P81  
1 - 2 - 3 Stages

RIGHT-ANGLE WORM GEARBOX | RAD20

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#### Description:

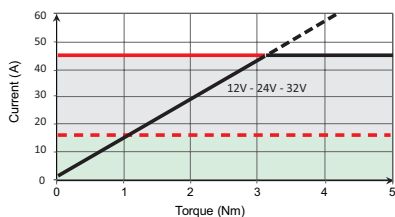
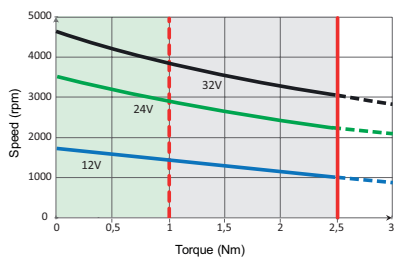
The new SQ75 DCmind Brushless motors have an integrated drive and CANopen communication bus for Motion Control applications up to 600 W nominal power and up to 6 Nm peak torque. More power, accurate precision, as well as enhanced safety and security features to secure your application.

For more information about Crouzet's SQ75 range, please visit [www.crouzet.com](http://www.crouzet.com).

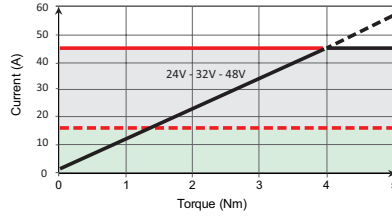
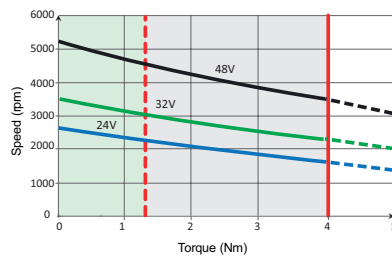
Curves

Speed-torque and current-torque

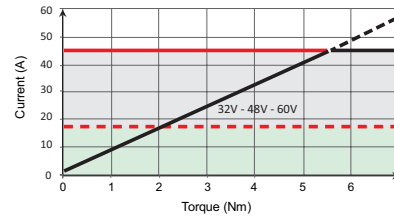
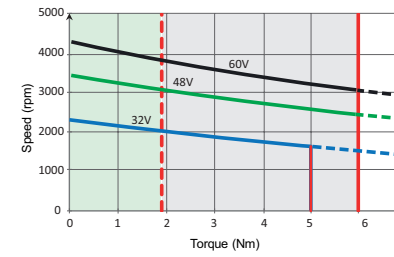
80350



80360



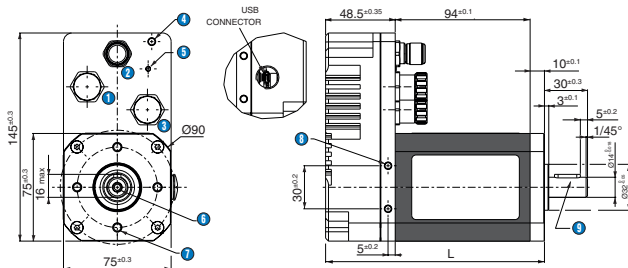
80370



--- Nominal torque  
--- Peak torque  
  Continuous running area  
  Cycling running area

Dimensions (mm)

80350 - 80360 - 80370

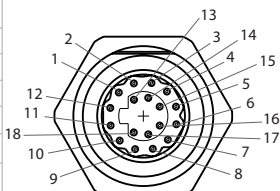


- 1 Logic connector
- 2 CAN connector
- 3 Power supply connector
- 4 M5 x 0.8 depth7
- 5 2 colors LED for motor status
- 6 M5 x 0.8 depth thread 12
- 7 M6 x 1 at 90° on Ø56 depth 10.5
- 8 M5 x 0.8 depth 11.5
- 9 Parallel key 5 x 5 x 18 DIN 6885 A

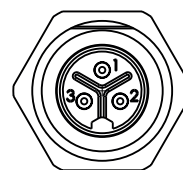
L: 80350 140.6 max - L: 80360 153.1 max - L: 80370 178.1 max

Connection

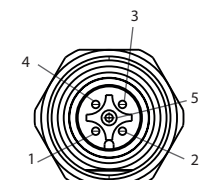
Input / Output M16 connector - 18 pins			
Pin	Description	Pin	Description
1	Optional logic supply	14	0 volt
2	0 volt	15	STO2-
3	Input 6 (analogic 1)	16	STO2+
4	Input 5 (analogic 2)	17	STO1-
5	Input 1 (digital)	18	STO1+
6	Input 2 (digital)		
7	Input 3 (digital)		
8	Input 4 (digital)		
9	0 volt		
10	Output 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](http://www.crouzet.com). Examples: special shaft - board adaptation...

Warning:

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