

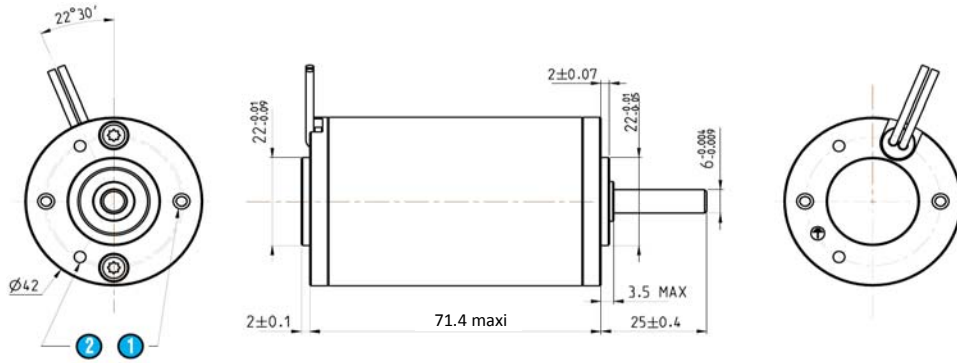
Dc mind Brush motor

Data sheet

89 810 008

Series

89 810



① 2 x M3 at 180°, depth 5 mm and 32mm diameter

② 2 x holes of 2,75 mm diameter, at 120°, depth 5 mm and 32mm diameter

General characteristics

Motor characteristics at (1) 24 Vdc	
At no load - A	
Speed	rpm 4 000 +10%
Current	A 0,11
Life (2)	h 10 000
At max efficiency - B	
Speed	rpm 3 300 +10%
Torque (4)	mNm 30
Power output	W 10
Current	A 0,6
Efficiency	% 72
Life (2)	h 5 000
At nominal load - C	
Speed	rpm 2 920 +10%
Torque (4)	mNm 50
Power output	W 15
Current	A 1
Efficiency	% 64
Life (2)	h 4 000
Others	
Starting torque	mNm 190
Starting current	A 3,3
Max. output power	W 20

Motor parameters (1)	
Allowed speed	rpm 10 000 max
Rated torque	mNm 50
Electrical time constant	ms 0,8
Mechanical time constant	ms 17
Factor torque / speed	mNm/rpm 0,0463
Dry friction	mNm 3
Viscous friction	mNm/krpm 1
Rotor inertia	gcm ² 75
Thermal Resistance	°W 11
Stator poles	2
Collector blades	8
Cogging torque	mNm 3
Weight (g)	340
Noise level	dBA 35

Winding parameters (1)	
Torque constant	mNm/A 56 +10%
Constant electromotive force	Volts/(rad/s) 0,056 +10%
Resistance	V / Krpm 5,88 +10%
Inductance	Ohms 7,3 +10%
Start voltage	mH 6
Current demagnetization	Volts 0,9
	(magnets at 150 ° C) A 14

Generic parameters	
Motor for direct current supply	✓
Output shaft with ball bearings	✓
Max. Radial force (20mm from front face)	N 100
Max. axial force(5)	N 70
Temperature range	°C -30 / 70
Storage temperature	°C -40 / 100
Dielectric (1min 2mA 50Hz)	Vdc 500
Motor insulation	class E (120°C)
Enameled wire insulation	class F (155°C)
Salt spray	severity 2
Degree of protection	IP 65
EMC	
Electrostatic Discharge	level 3
Electrical fast transient / burst test	level 3
Surge test	level 2
Radiated emission	class B
Approvals	
Designed in accordance with UL	1004
ROHS	2002/95/CE
EC	✓
Designed for medical machines using the standard	EN60601-1

Values without tolerances, are average production values.

(1) Cold motor, 20 ° C ambient temperature

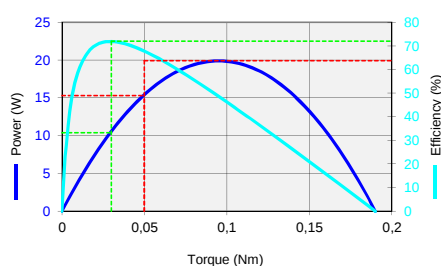
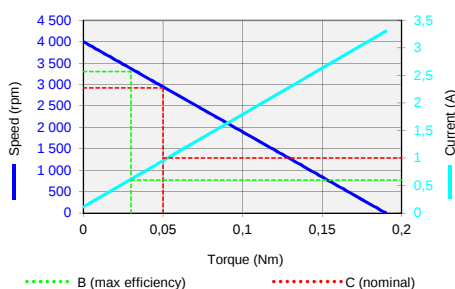
(2) Continuous cycle, one direction

(3) Continuously rated torque, zero radial and axial loads

(4) Max torque for continuous operation at 20 ° C, decrease this value for higher ambient temperature

(5) Pinion or pulley fitting are done at the Crouzet factory, before final assembly.

Curves



Performance / Motor curves (1)	
Voltage supply	Vdc 24
	Current (A)
Speed	rpm 4 000 3 300 2 920 0
Torque (4)	mNm 0 30 50 190
Current	A 0,1 0,6 1,0 3,3
Power output	W - 10 15 -
Efficiency	% - 72 64 -

Mouser Electronics

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Crouzet:

89810008