



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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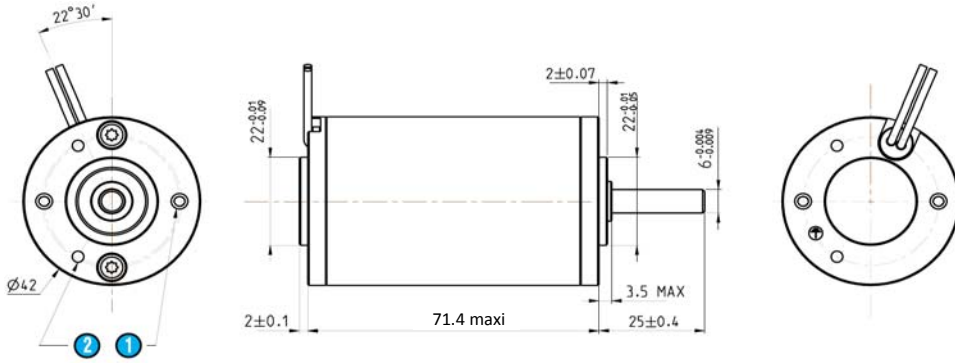
Dc mind Brush motor

Data sheet

89 810 007

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)		12 Vdc	
At no load - A			
Speed	rpm	4 200	+/-10%
Current	A	0,26	
Life (2)	h	10 000	
At max efficiency - B			
Speed	rpm	3 500	+/-10%
Torque (4)	mNm	27	
Power output	W	10	
Current	A	1,26	
Efficiency	%	65	
Life (2)	h	5 000	
At nominal load - C			
Speed	rpm	2 900	+/-10%
Torque (4)	mNm	50	
Power output	W	15	
Current	A	2,1	
Efficiency	%	60	
Life (2)	h	4 000	
Others			
Starting torque	mNm	158	
Starting current	A	6,1	
Max. output power	W	17	

Motor parameters (1)		
Allowed speed	rpm	10 000 max
Rated torque	mNm	50
Electrical time constant	ms	0,7
Mechanical time constant	ms	20
Factor torque / speed	mNm/rpm	0,03846
Dry friction	mNm	2,5
Viscous friction	mNm/krpm	1
Rotor inertia	gcm ²	75
Thermal Resistance	°W	10
Stator poles		2
Collector blades		8
Cogging torque	mNm	3
Weight (g)	g	340
Noise level	dBA	35

Winding parameters (1)			
Torque constant	mNm/A	27	+/-10%
Constant electromotive force	Volts/(rad/s)	0,027	+/-10%
Resistance	V / Krpm	2,85	+/-10%
Inductance	Ohms	2,0	+/-10%
Start voltage	mH	1,3	
Current demagnetization	Volts	0,6	
	(magnets at 150 ° C)	A	29

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	CEI60068-2-1/2	°C	-30 / 70
Storage temperature		°C	-40 / 100
Dielectric (1min 2mA 50Hz)	CEI60335	Vdc	500
Motor insulation	CEI60085	class	E (120°C)
Enameled wire insulation		class	F (155°C)
Salt spray	CEI60068-2-58	severity	2
Degree of protection	CEI60529	IP	65
EMC			
Electrostatic Discharge	CEI61000-4-2	level	3
Electrical fast transient / burst test	CEI61000-4-4	level	3
Surge test	CEI61000-4-5	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

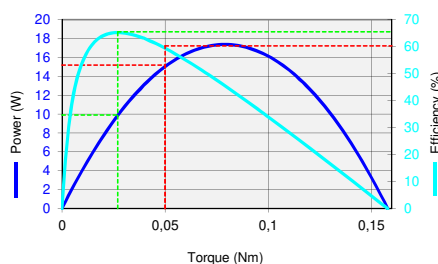
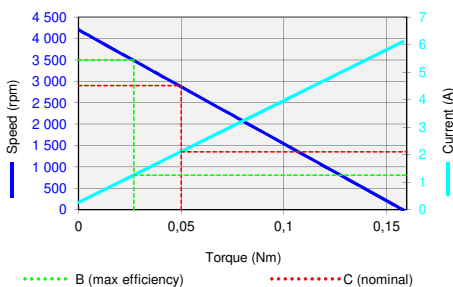
(2) Continuous cycle, one direction

(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	12		
		Current (A)			
		A	B	C	D
Speed	rpm	4 200	3 500	2 900	0
Torque (4)	mNm	0	27	50	158
Current	A	0,3	1,3	2,1	6,1
Power output	W	-	10	15	-
Efficiency	%	-	65	60	-