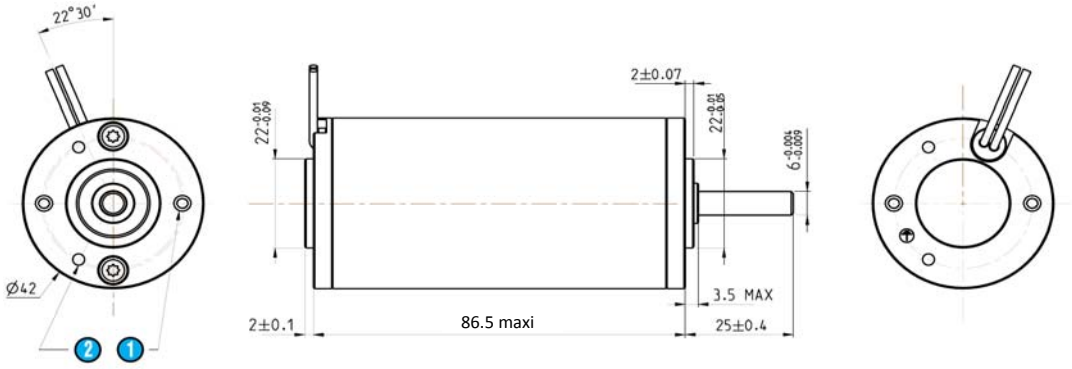
Dcmind Brush motor
Data sheet 89 800 003

Series
89 800



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) 48 Vdc			
At no load - A			
Speed	rpm	3 930	+-10%
Current	A	0,07	
Life (2)	h	10 000	
At max efficiency - B			
Speed	rpm	3 450	+-10%
Torque (4)	mNm	48	
Power output	W	17	
Current	A	0,49	
Efficiency	%	74	
Life (2)	h	5 000	
At nominal load - C			
Speed	rpm	3 150	+-10%
Torque (4)	mNm	75	
Power output	W	25	
Current	A	0,72	
Efficiency	%	72	
Life (2)	h	4 000	
Others			
Starting torque	mNm	377	
Starting current	A	3,3	
Max. output power	W	39	
Motor parameters (1)			
Allowed speed	rpm	10 000	max
Rated torque	mNm	75	
Electrical time constant	ms	0,9	
Mechanical time constant	ms	12	
Factor torque / speed	mNm/rpm	0,09615	
Dry friction	mNm	3	
Viscous friction	mNm/krpm	1,2	
Rotor inertia	gcm²	110	
Thermal Resistance	°/W	10	
Stator poles		2	
Collector blades		8	
Cogging torque	mNm	6	
Weight (g)	g	450	
Noise level	dBA	35	

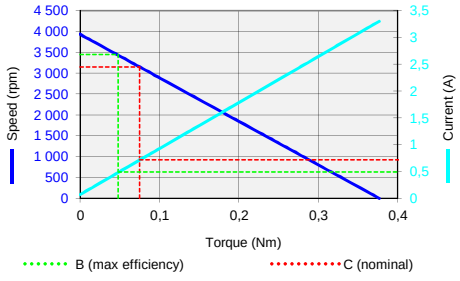
Winding parameters (1)			
Torque constant		mNm/A	115 +-10%
Constant electromotive force		Volts/(rad/s)	0,115 +-10%
		V / Krpm	12,08 +-10%
Resistance		Ohms	14,5 +-10%
Inductance		mH	13
Start voltage		Volts	1,1
Current demagnetization	(magnets at 150 ° C)	A	11

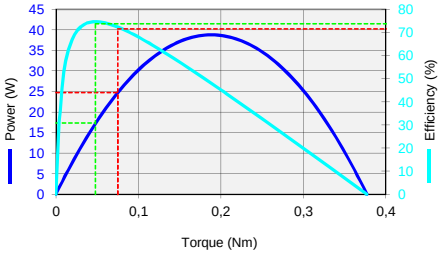
Generic parameters			
Motor for direct current supply			✓
Output shaft with ball bearings			✓
Max. Radial force	(20mm from front face)	N	100
Max. axial force(5)		N	70
Temperature range	CEI60068-2-1/2	°C	-30 / 70
Storage temperature		°C	-40 / 100
Dielectric	(1min 2mA 50Hz) CEI60335	Vdc	500
Motor insulation	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 transsient / burst test	CEI61000-4-4	level	3
Surge test	CEI61000-4-5	level	2
Without EMC filter			✓

Approvals			
Designed in accordance with UL			1004
ROHS	2002/95/CE		✓
EC			✓

Values without tolerences, 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	48		
		Output data			
		A	B	C	D
Speed	rpm	3 930	3 450	3 150	0
Torque (4)	mNm	0	48	75	377
Current	A	0,1	0,5	0,7	3,3
Power output	W	-	17	25	-
Efficiency	%	-	74	72	-

Specifications subject to change without notice. Updated february 29, 2012.

Crouzet Automatismes
2 rue du Docteur Abel BP59
26902 Valence CEDEX 9 France

Crouzet

www.crouzet.com

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