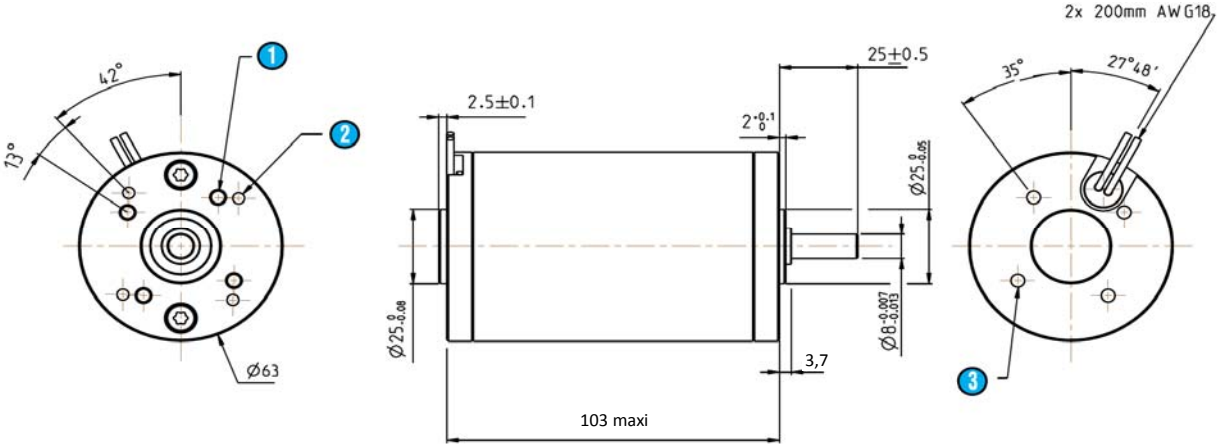
Dcmind Brush motor
Data sheet 89 830 012

Series
89 830



1. 4 x M5 at 90°, depth 10mm and 40 mm diameter
2. 4 x holes diam 3.65 at 90°, depth 8mm and 48 mm diameter
3. 4 x M5 at 90°, depth 7mm and 40 mm diameter

General characteristics

Motor characteristics at (1)	24 Vdc		
At no load - A			
Speed	rpm	3 600	+-10%
Current	A	0,23	
EMC (55022)	class	B	
Life (2)	h	20 000	
At max efficiency - B			
Speed	rpm	3 240	+-10%
Torque (4)	mNm	111	
Power output	W	38	
Current	A	1,97	
Efficiency	%	80	
EMC (55022)	class	B	
Life (2)	h	10 000	
At nominal load - C			
Speed	rpm	3 000	+-10%
Torque (4)	mNm	180	
Power output	W	57	
Current	A	3,1	
Efficiency	%	77	
EMC (55022)	class	B	
Life (2)	h	5 000	
Others			
Starting torque	mNm	1 080	
Starting current	A	17,2	
Max. output power	W	102	
Motor parameters (1)			
Allowed speed	rpm	10 000	max
Rated torque	mNm	180	
Electrical time constant	ms	1,2	
Mechanical time constant	ms	13	
Factor torque / speed	mNm/rpm	0,3	
Dry friction	mNm	7	
Viscous friction	mNm/krpm	1,5	
Rotor inertia	gcm²	380	
Thermal Resistance	°/W	6	
Stator poles		2	
Collector blades		12	
Cogging torque	mNm	9	
Weight (g)	g	1 200	
Noise level	dBA	35	

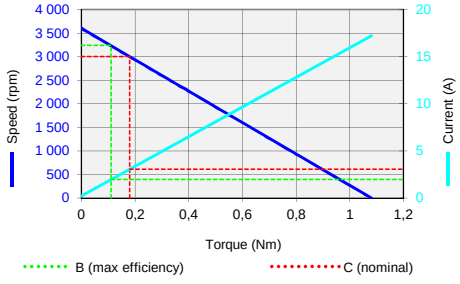
Winding parameters (1)			
Torque constant		mNm/A	63,6 +-10%
Constant electromotive force		Volts/(rad/s)	0,064 +-10%
		V / Krpm	6,66 +-10%
Resistance		Ohms	1,4 +-10%
Inductance		mH	1,7
Start voltage		Volts	0,6
Current demagnetization	(magnets at 150 ° C)	A	60

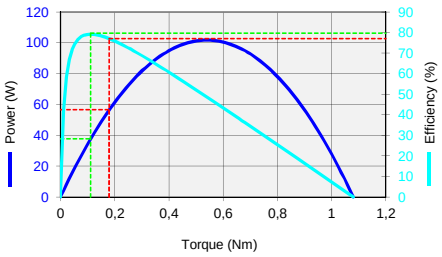
Generic parameters			
Motor for direct current supply			✓
Output shaft with ball bearings			✓
Max. Radial force	(20mm from front face)	N	150
Max. axial force(5)		N	100
Temperature range	CEI60068-2-1/2	°C	-30 / 70
Storage temperature		°C	-40 / 100
Dielectric	(1min 2mA 50Hz) CEI60335	Vdc	500
Motor insulation	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
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 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	24		
		Output data			
		A	B	C	D
Speed	rpm	3 600	3 240	3 000	0
Torque (4)	mNm	0	111	180	1 080
Current	A	0,2	2,0	3,1	17,2
Power output	W	-	38	57	-
Efficiency	%	-	80	77	-

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

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Series 89 830

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