

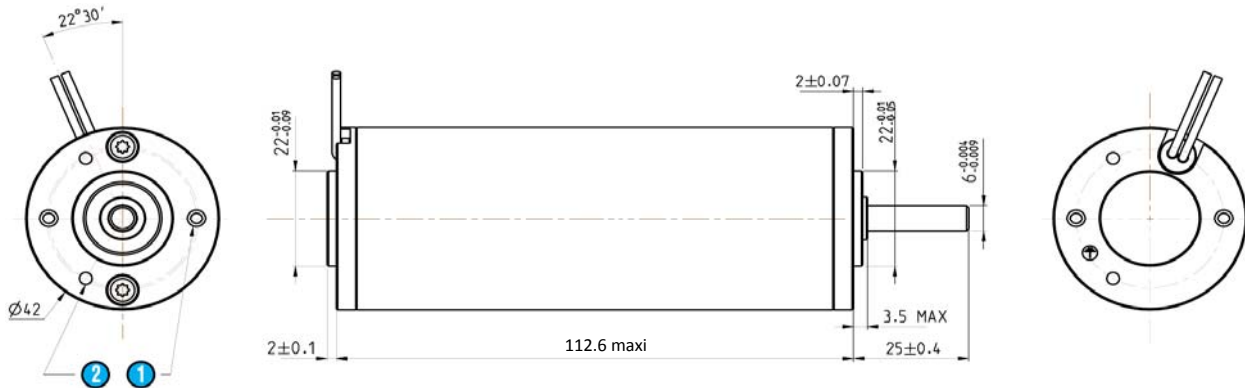
Dc mind Brush motor

Data sheet

89 850 008

Series

89 850



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 | 3 750 | +10% |
| Current | A | 0,14 | |
| EMC (55022) | class | B | |
| Life (2) | h | 10 000 | |
| At max efficiency - B | | | |
| Speed | rpm | 3 320 | +10% |
| Torque (4) | mNm | 60 | |
| Power output | W | 21 | |
| Current | A | 1,1 | |
| Efficiency | % | 80 | |
| EMC (55022) | class | B | |
| Life (2) | h | 5 000 | |
| At nominal load - C | | | |
| Speed | rpm | 3 000 | +10% |
| Torque (4) | mNm | 110 | |
| Power output | W | 35 | |
| Current | A | 1,9 | |
| Efficiency | % | 76 | |
| EMC (55022) | class | B | |
| Life (2) | h | 4 000 | |
| Others | | | |
| Starting torque | mNm | 520 | |
| Starting current | A | 8,4 | |
| Max. output power | W | 51 | |
| Motor parameters (1) | | | |
| Allowed speed | rpm | 10 000 | max |
| Rated torque | mNm | 110 | |
| Electrical time constant | ms | 0,7 | |
| Mechanical time constant | ms | 12 | |
| Factor torque / speed | mNm/rpm | 0,14667 | |
| Dry friction | mNm | 4,5 | |
| Viscous friction | mNm/krpm | 1,4 | |
| Rotor inertia | gcm ² | 160 | |
| Thermal Resistance | °/W | 9 | |
| Stator poles | | 2 | |
| Collector blades | | 8 | |
| Cogging torque | mNm | 8 | |
| Weight (g) | g | 620 | |
| Noise level | dBA | 35 | |

| Winding parameters (1) | | | |
|------------------------------|----------------------|-------|------|
| Torque constant | mNm/A | 63 | +10% |
| Constant electromotive force | Volts/(rad/s) | 0,063 | +10% |
| | V / Krpm | 6,54 | +10% |
| Resistance | Ohms | 2,9 | +10% |
| Inductance | mH | 2 | |
| Start voltage | Volts | 0,7 | |
| Current demagnetization | (magnets at 150 ° C) | A | 35 |

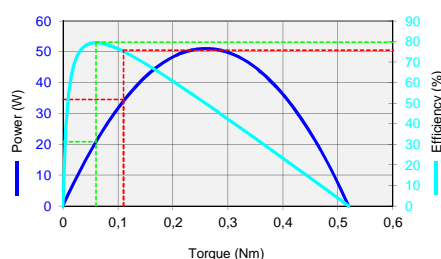
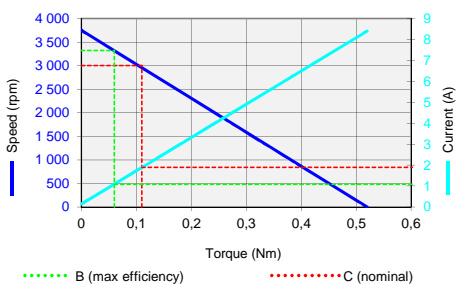
| Generic parameters | | | |
|--|----------------|----------|-----------|
| Motor for direct current supply | | | ✓ |
| Output shaft with ball bearings | | | ✓ |
| Max. Radial force (20mm from front face) | N | 100 | |
| Max. axial force(5) | N | 70 | |
| Temperature range | CEI60068-2-1/2 | °C | -30 / 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 | 24 |
| | | Output data | |
| | | A | B |
| Speed | rpm | 3 750 | 3 320 |
| Torque (4) | mNm | 0 | 60 |
| Current | A | 0,1 | 1,1 |
| Power output | W | - | 21 |
| Efficiency | % | - | 80 |