

# DCmind: DC DIRECT-DRIVE BRUSH MOTORS

Ø 42 mm - 51 W

- › Silent motor
- › 12 V and 24 V built in EMC filter class B
- › Excellent efficiency
- › Long life
- › IP65
- › In accordance with UL - CE - ROHS regulations



## Part numbers

|   | 12 V               | 24 V               | 48 V               |
|---|--------------------|--------------------|--------------------|
| Type  | 89850              | 89850              | 89850              |
| Voltage   | 12 V <sup>DC</sup> | 24 V <sup>DC</sup> | 48 V <sup>DC</sup> |
| <b>References</b>   |                    |                    |                    |
| Option: IP65 level  | <b>89850007</b>    | <b>89850008</b>    | <b>89850003</b>    |
| Option: holding brake 0.25 Nm, 24 V <sup>DC</sup>                           | <b>89850507</b>    | <b>89850508</b>    | <b>89850503</b>    |
| Option: 2 channels encoder 1000 pulses/revolution, 5 V <sup>DC</sup>        | <b>89850907</b>    | <b>89850908</b>    | <b>89850903</b>    |
| <b>No-load characteristics</b>  |                    |                    |                    |
| Speed (rpm)   | 4000               | 3750               | 3840               |
| Absorbed current (A)  | 0.31               | 0.14               | 0.08               |
| <b>Nominal characteristics</b>  |                    |                    |                    |
| Speed (rpm)   | 3000               | 3000               | 3000               |
| Torque (mNm)  | 110                | 110                | 110                |
| Output power (W)  | 35                 | 35                 | 35                 |
| Absorbed current (A)  | 4.1                | 1.9                | 1                  |
| Efficiency (%)  | 70                 | 76                 | 72                 |
| <b>Maximum efficiency characteristics</b>                                   |                    |                    |                    |
| Speed (rpm)   | 3500               | 3320               | 3400               |
| Torque (mNm)  | 52                 | 60                 | 60                 |
| Output power (W)  | 19                 | 21                 | 21                 |
| Absorbed current (A)  | 2.1                | 1.1                | 0.58               |
| Efficiency (%)  | 76                 | 80                 | 77                 |
| <b>General characteristics</b>  |                    |                    |                    |
| Insulation conforming to IEC60085   | Class E            | Class E            | Class E            |
| Noise level (dBA)   | 35                 | 35                 | 35                 |
| Max. output power (W)   | 44                 | 51                 | 50                 |
| Starting torque (mNm)   | 420                | 520                | 500                |
| Starting current (A)  | 15                 | 8.4                | 4.2                |
| Resistance (Ω)  | 0.8                | 2.9                | 11.4               |
| Inductance (mH)   | 0.5                | 2                  | 8                  |
| Torque constant (mNm/A)   | 29                 | 63                 | 120                |
| Electrical time constant (ms)   | 0.6                | 0.7                | 0.7                |
| Mechanical time constant (ms)   | 15                 | 12                 | 13                 |
| Inertia (g.cm <sup>2</sup> )  | 160                | 160                | 160                |
| Weight (g)  | 620                | 620                | 620                |
| Commutator segments   | 8                  | 8                  | 8                  |
| Service life (h)  | 4000               | 4000               | 4000               |
| Wires length (mm)   | 200                | 200                | 200                |
| Ball bearing  | ✓                  | ✓                  | ✓                  |
| <b>Comments</b>   |                    |                    |                    |
| IP65 level except for the output shaft. Encoder and brake options are IP20. |                    |                    |                    |

## Product adaptations, contact us

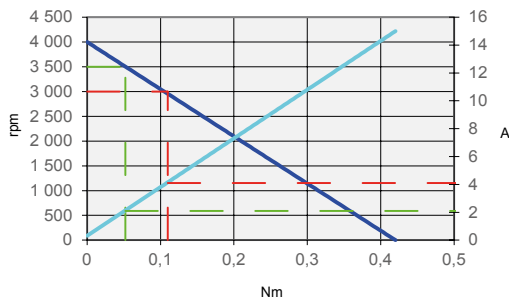


- › Special output shaft
- › Shaft with pinion, pulley, worm gear
- › Special supply voltage
- › Other wire length
- › Optical or Hall effect encoder - 1 or 2 channels
- › Specific motor mounting flange
- › Special motor connectors
- › IP67, IP69K

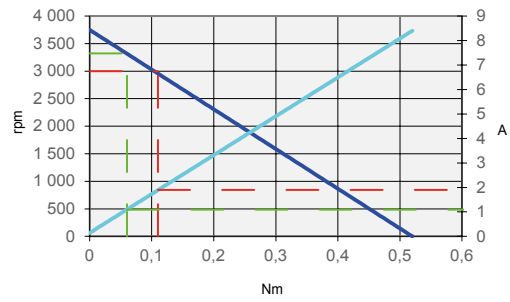
Product made to order

Curves

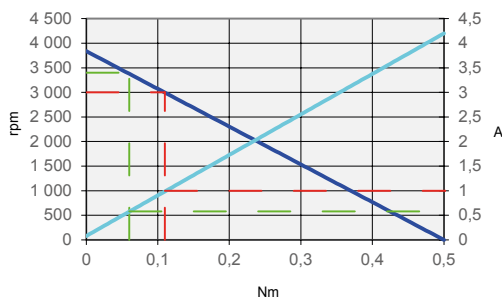
89850007 - 89850507 - 89850907



89850008 - 89850508 - 89850908

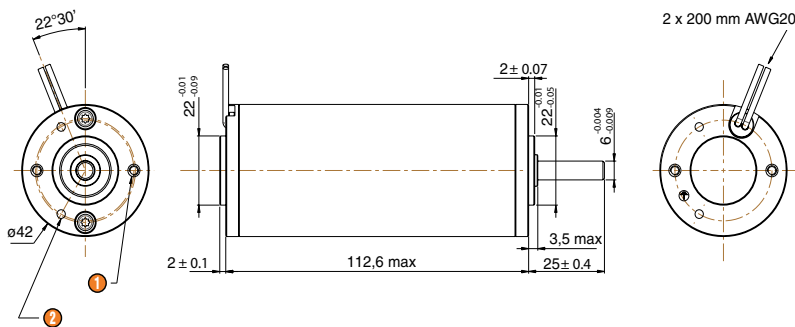


89850003 - 89850503 - 89850903



- Speed (rpm)
- Current (A)
- Torque at nominal
- Torque at maximum efficiency

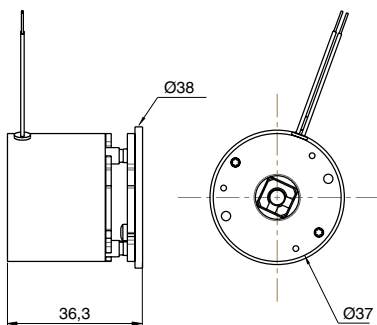
Dimensions (mm)



- ① 2 x M3 at 180° depth 5 over Ø 32
- ② 2 x Ø 2.75 at 120° depth 5 over Ø 32

Options

Holding brake 0.25 Nm



Encoder

