

# DCmind: DC direct-drive brush motors

→ Ø 63 mm - 209 W

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



## Part numbers

	24 V	48 V	90 V	120 V
Type	89890	89890	89890	89890
Voltage	24 V $\overline{---}$	48 V $\overline{---}$	90 V $\overline{---}$	120 V $\overline{---}$
<b>References</b>				
Option: IP65 level	<b>89890011</b>	<b>89890003</b>	<b>89890004</b>	<b>89890005</b>
Option: holding brake 0.5 Nm, 24 V $\overline{---}$	<b>89890511</b>	<b>89890503</b>	<b>89890504</b>	<b>89890505</b>
Option: 2 channels encoder 1000 pulses/revolution, 5 V $\overline{---}$	<b>89890911</b>	<b>89890903</b>	<b>89890904</b>	<b>89890905</b>
<b>No-load characteristics</b>				
Speed (rpm)	4000	3780	3700	3730
Absorbed current (A)	0.34	0.16	0.09	0.07
<b>Nominal characteristics</b>				
Speed (rpm)	3430	3370	3320	3350
Torque (mNm)	290	290	290	290
Output power (W)	104	102	101	102
Absorbed current (A)	5.4	2.53	1.34	1.01
Efficiency (%)	80	84	84	84
<b>Maximum efficiency characteristics</b>				
Speed (rpm)	3660	3480	3410	3430
Torque (mNm)	179	207	218	230
Output power (W)	69	75	78	83
Absorbed current (A)	3.5	1.9	1	0.82
Efficiency (%)	82	84	84	84
<b>General characteristics</b>				
Insulation conforming to IEC60085	Class E	Class E	Class E	Class E
Noise level (dBA)	35	35	35	35
Max. output power (W)	209	265	269	281
Starting torque (mNm)	2000	2680	2780	2875
Starting current (A)	35.3	22.2	12.1	9.4
Resistance ( $\Omega$ )	0.7	2.2	7.4	12.8
Inductance (mH)	0.73	3.3	12	21
Torque constant (mNm/A)	57	122	232	308
Electrical time constant (ms)	1.1	1.5	1.6	1.6
Mechanical time constant (ms)	13	9	9	9
Inertia (g.cm <sup>2</sup> )	650	650	650	650
Weight (g)	1600	1600	1600	1600
Commutator segments	12	12	12	12
Service life (h)	5000	5000	5000	5000
Wires length (mm)	200	200	200	200
Ball bearing	✓	✓	✓	✓
<b>Comments</b>				

IP65 level except for the output shaft. Encoder and brake options are IP20.

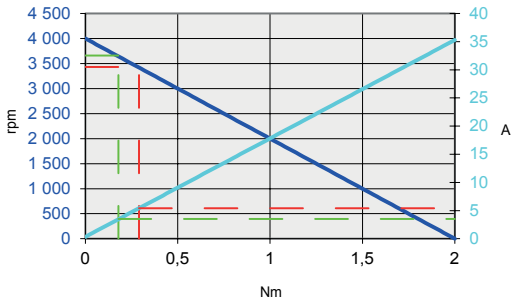
## Product adaptations, contact us

- 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

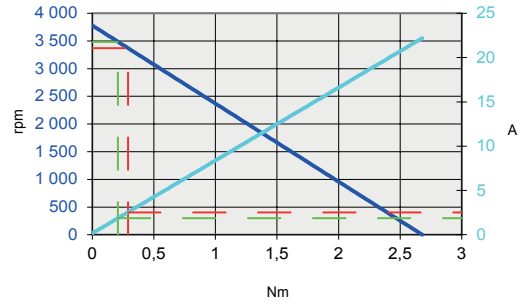


## Curves

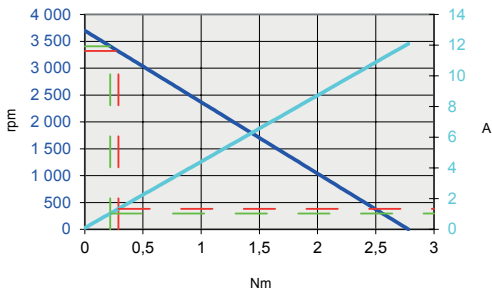
89890011 - 89890511 - 89890911



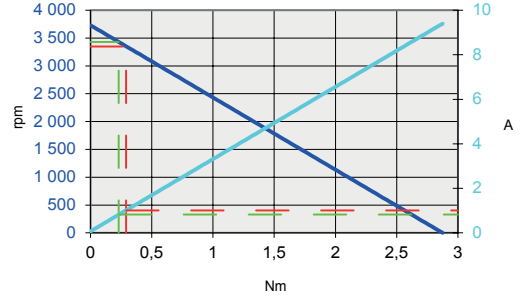
89890003 - 89890503 - 89890903



89890004 - 89890504 - 89890904

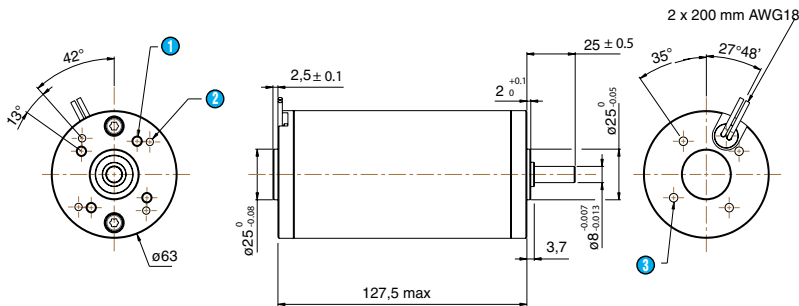


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- Speed (rpm)
- Current (A)
- Torque at nominal
- Torque at maximum efficiency

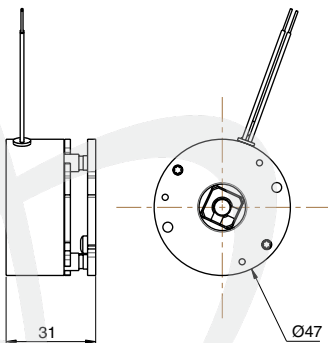
## Dimensions (mm)



- ① 4 x M5 at 90° depth 10 over  $\varnothing$  40
- ② 4 x  $\varnothing$  3.65 at 90° depth 8 over  $\varnothing$  48
- ③ 4 x M5 at 90° depth 7 over  $\varnothing$  40

## Options

### Holding brake 0.5 Nm



### Encoder

