

DC direct-drive brushed motors

→ Ø 32 mm 3.9 Watts

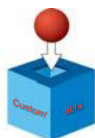
- Nominal power: 3 W
- Versions with tag or lead connection
- Versions without filter or with standard filter or class B filter built into the motor
- Versions with or without encoder, 1 or 5 pulses per revolution, built into the motor



Part numbers

	3.9 W with tags	3.9 W with leads	3.9 W with tags	3.9 W with leads
Type	82860	82860	82860	82860
Voltage	12 V	12 V	24 V	24 V
References				
Without filter	82860001	82860011	82860002	82860012
Varistor filter	82860003	82860017	82860004	82860018
With class B EMC filter	82860040	-	82860041	-
With 1 pulse/revolution encoder and varistor	82860501	-	82860502	-
With 5 pulses/revolution encoder and varistor	82860503	-	82860504	-
No-load characteristics				
Speed of rotation (rpm)	5000	5000	5000	5000
Absorbed power (W)	1.2	1.2	1.92	1.92
Absorbed current (A)	0.1	0.1	0.08	0.08
Nominal characteristics				
Speed (rpm)	3700	3700	3700	3700
Torque (mNm)	7.7	7.7	7.7	7.7
Usable power (W)	3	3	3	3
Absorbed power (W)	6.2	6.2	6	6
Absorbed current (A)	0.43	0.43	0.26	0.26
Gearbox case temperature rise (°C)	50	50	50	50
Efficiency (%)	48	48	50	50
General characteristics				
Insulation class (conforming to IEC 85)	B (130 °C)	B (130°C)	B (130 °C)	B (130°C)
Protection rating	IP40	IP40	IP40	IP40
Max. output power (W)	3.9	3.9	3.9	3.9
Start torque (mNm)	30	30	30	30
Starting current (A)	1.5	1.5	0.76	0.76
Resistance (Ω)	8	8	32	32
Inductance (mH)	10	10	41.6	41.6
Torque constant (Nm/A)	0.0214	0.0214	0.0448	0.0448
Electrical time constant (ms)	1.3	1.3	1.3	1.3
Mechanical time constant (ms)	36	36	36	36
Thermal time constant (mn)	8	8	8	8
Inertia (g.cm²)	19	19	19	19
Weight (g)	96	96	95	95
Number of segments	3	3	3	3
Service life (h)	3000	3000	3000	3000
Sintered bronze bearings	✓	✓	✓	✓
Leads connection 250 mm	-	AWG24	-	AWG24
Encoder characteristics				
Connection	AWG24	-	AWG24	-
Output current (mA)	< 20	-	< 20	-
Supply (V)	4.5 → 30 ---	-	4.5 → 30 ---	-

Product adaptations



- Special output shaft
- Pinion on output shaft
- Special supply voltage
- Special cable length
- Special ball bearings

- Special mounting plate
- Customised electronics
- Special connectors
- Shorter 1 W motor

Stocked product

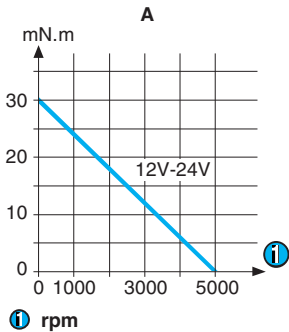
Product made to order

To order, see page 18

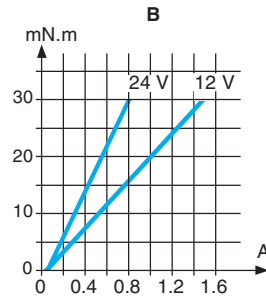


Curves

A - Torque/nominal speed curve
B - Torque/current curve
82860

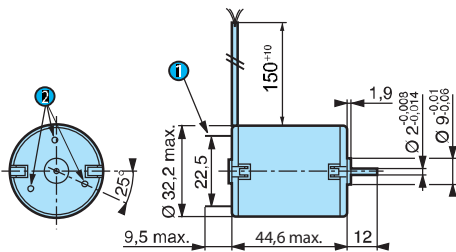


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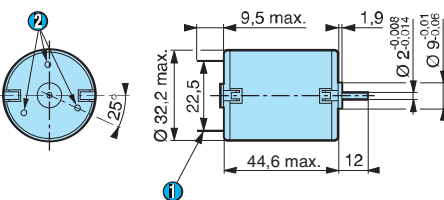
Dimensions

With encoder



- ① 2 tags NFC 20 - 120; series 2.8 x 0.5
- ② 3 holes at 120° over Ø 26 mm: use self-tapping M2.2 screws; screw depth max. 6 mm

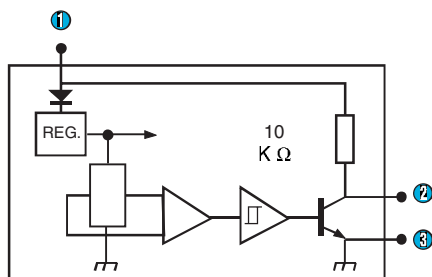
Without encoder



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Connections

Encoder



- ① Brown: +5 → +24 V (encoder power supply)
- ② Yellow: Signal output
- ③ Blue: 0 V (power supply earth)