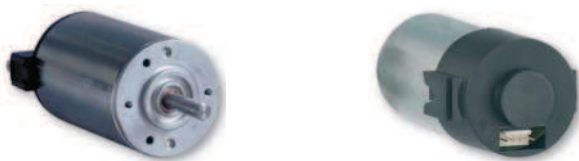


# DC direct-drive brushed motors

→ Ø 42 mm 14 to 31 Watts

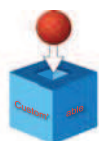
- Usable power: 12 to 22 Watts
- For high-power drive applications
- Sintered bronze bearings lubricated for life
- Power supply by 4.75 mm tags
- Interchangeable brushes
- Optional channel encoder



## Part numbers

	14 W	16 W	22 W	31 W
Type	828105	828105	828005	828005
Voltage	12 V	24 V	12 V	24 V
<b>References</b>				
Without encoder	<b>82810501</b>	<b>82810502</b>	<b>82800501</b>	<b>82800502</b>
With 1 pulse/revolution encoder	<b>82810504</b>	<b>82810505</b>	<b>82800504</b>	<b>82800505</b>
<b>No-load characteristics</b>				
Speed of rotation (rpm)	3840	3860	3920	4010
Absorbed power (W)	12	11.28	9.96	12.24
Absorbed current (A)	1	0.47	0.83	0.51
<b>Nominal characteristics</b>				
Speed (rpm)	2580	2750	2670	3070
Torque (mNm)	45	45	70	70
Usable power (W)	12	13	20	22
Absorbed power (W)	31	32	37	41
Absorbed current (A)	2.6	1.32	3.05	1.71
Gearbox case temperature rise (°C)	32	33	38	40
Efficiency (%)	39	40.8	54	54
<b>General characteristics</b>				
Insulation class (conforming to IEC 85)	F (155 °C)	F (155 °C)	F (155 °C)	F (155 °C)
Protection (IEC 529)	IP20	IP20	IP20	IP20
Max. output power (W)	14	16	22	31
Start torque (mNm)	138	156	219	298
Starting current (A)	6.2	3.4	9	6.16
Resistance (Ω)	1.94	7.06	1.33	3.9
Inductance (mH)	4.45	16.94	2.67	9.35
Torque constant (Nm/A)	0.0265	0.0532	0.0268	0.0527
Electrical time constant (ms)	2.3	2.4	2	2.4
Mechanical time constant (ms)	26	23	20	15
Thermal time constant (mn)	8	8	12	12
Inertia (g.cm <sup>2</sup> )	80	72	105	110
Weight (g)	310	310	400	400
Number of segments	8	8	8	8
Service life (h)	2000	2000	2000	2000
Sintered bronze bearings	✓	✓	✓	✓
Replaceable brushes	✓	✓	✓	✓
<b>Encoder characteristics</b>				
Output current (mA)	< 25 (25°C)	< 25 (25°C)	< 25 (25°C)	< 25 (25°C)
Supply (V)	4.5 → 30 ---	4.5 → 30 ---	4.5 → 30 ---	4.5 → 30 ---
Ambient temperature (°C)	-40 → 85°C	-40 → 85°C	-40 → 85°C	-40 → 85°C

## Product adaptations



- Special output shaft
- Pinion on output shaft
- Special supply voltage
- Special ball bearings
- Optical or Hall effect encoder
- Special mounting plate
- Special connections

Stocked product

Product made to order

To order, see page 18

## Curves

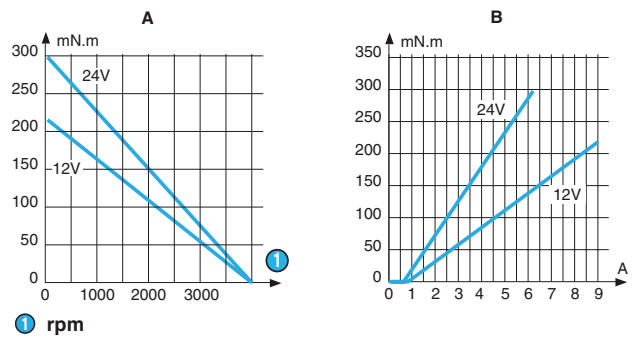
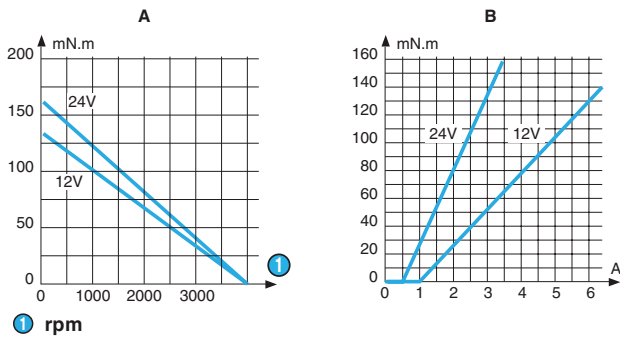
A - Torque/speed curve, B - Torque/current curve

828105

828105

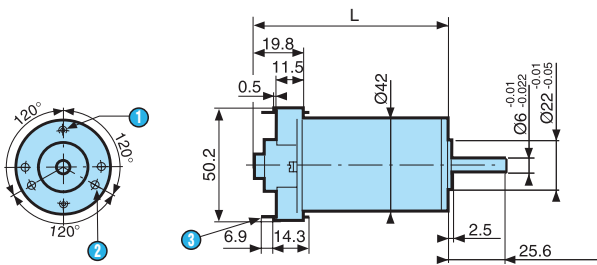
828005

828005



## Dimensions

828005 - 828105

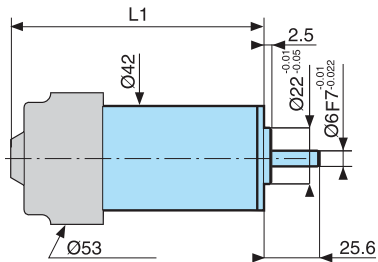


- ① 2 x M3 at 180°, depth 5 mm over Ø 32
- ② 2 holes Ø 2.75 at 120° depth 5 mm over Ø 32
- ③ 2 tags IEC 760, series 4.8 x 0.5

L: 828005: 84.8 mm max.  
L: 828105: 59.8 mm max.

## Options

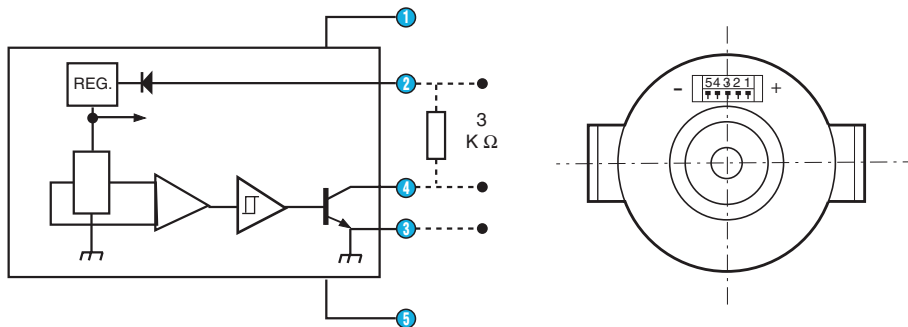
Dimensions with magnetic encoder



L1: 828005: 99.1 mm max. - L1: 828105: 84.1 mm max.

## Connections

Encoder



Connector: STOCKO MKS 3735-6-0-505

- ① Motor power supply
- ② +5 → +24 V (encoder power supply)
- ③ 0 V (encoder power supply)
- ④ Encoder signal output
- ⑤ Motor power supply

Part number of female connector to be used: STOCKO MKF 17-230 / 260 / 330 / 360