

DC direct-drive brushed motors

→ Ø 63 mm 33 and 67 Watts

- Long service life
- Usable power: 27 to 50 W
- For low-speed, high-power drive applications
- With 2 ball bearings
- Power supply via 2 output leads



Part numbers

	33 W	33 W	67 W	67 W
Type	828300	828300	828305	828305
Voltage	12 V	24 V	12 V	24 V
References				
Without encoder	82830009	82830010	82830501	82830502
With 1 pulse/revolution 2-channel encoder	82830046	82830047	-	-
With 5 pulses/revolution 2-channel encoder	82830048	82830049	-	-
With 12 pulses/revolution 2-channel encoder	82830050	82830051	-	-
No-load characteristics				
Speed of rotation (rpm)	2100	2100	3400	3660
Absorbed power (W)	4.8	4.8	12.6	12
Absorbed current (A)	0.4	0.2	1.05	0.5
Nominal characteristics				
Speed (rpm)	1500	1500	2630	2770
Torque (mNm)	172	172	170	170
Usable power (W)	27	27	47	50
Absorbed power (W)	43	45	72	72
Absorbed current (A)	3.6	1.9	6	3
Gearbox case temperature rise (°C)	50	50	46	50
Efficiency (%)	62	60	65	69.4
General characteristics				
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)	33	33	67	67
Start torque (mNm)	600	600	750	700
Starting current (A)	12	6.2	23.1	11.8
Resistance (Ω)	1	3.9	0.52	2.03
Inductance (mH)	1.4	6.4	1.19	4.68
Torque constant (Nm/A)	0.0517	0.1	0.034	0.0619
Electrical time constant (ms)	1.4	1.64	2.3	2.3
Mechanical time constant (ms)	19	19	33	33
Thermal time constant (mn)	37	37	20	18
Inertia (g.cm ²)	514	492	520	500
Weight (g)	840	840	840	840
Number of segments	12	12	12	12
Service life (h)	5000	5000	4000	4000
Ball bearings	✓	✓	✓	✓
Wires length (mm)	200	200	200	200
Encoder characteristics				
Current consumption (mA)	0.15 → 15	0.15 → 15	0.5 → 15	0.15 → 15
Output current (mA)	< 20 (25°C)	< 20 (25°C)	< 20 (25°C)	< 20 (25°C)
Supply (V)	4.5 → 35 ---	4.5 → 35 ---	4.5 → 35 ---	4.5 → 35 ---
Ambient temperature (°C)	-25 → +85	-25 → +85	-25 → +85	-25 → +85

Accessories

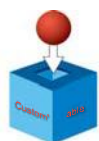
Connection

Pre-assembled female connector, casing 179228-3, tags 179227-1 and leads AWG24 250 mm

Code

79209895

Product adaptations



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

- Optical or Hall effect encoder - 1 or 2 channels - other resolutions
- Special mounting plate
- Special connectors
- EMC filter

Stocked product

Product made to order

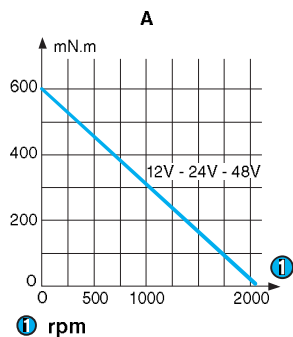
To order, see page 18



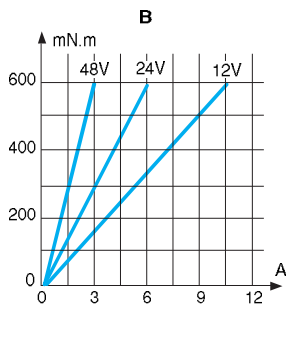
Curves

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

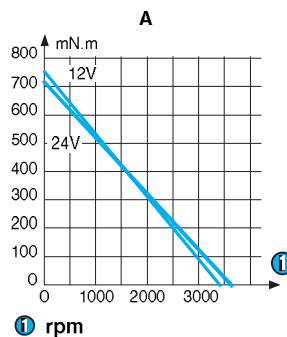
828300



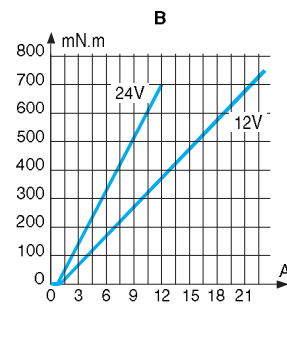
828300



828305

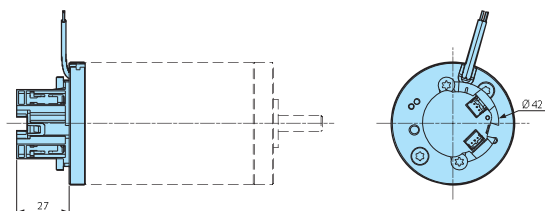


828305

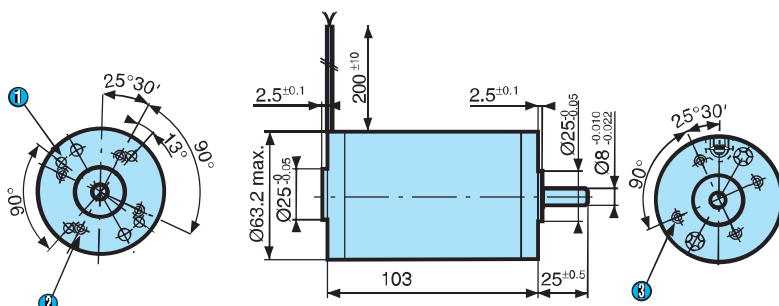


Dimensions

Encoder on types 828300 - 828305



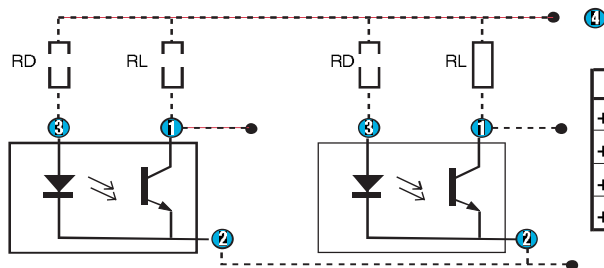
828300 - 828305 without encoder



- ① 4 holes $\varnothing 3.65 \pm 0.05$ at 90° over $\varnothing 48$
- ② 4 holes M5 over $\varnothing 40$ mm depth 7 mm
- ③ 4 holes M5 over $\varnothing 40$ mm depth 7 mm

Connections

Encoder



V DC	RD	RL
+ 5 V	190 Ω - 1/4 W	1,5 K Ω - 1/4 W
+ 12 V	560 Ω - 1/2 W	3,9 K Ω - 1/4 W
+ 24 V	1200 Ω - 1 W	8,2 K Ω - 1/4 W
+ 30 V	1500 Ω - 1 W	10 K Ω - 1/4 W

- ① Signal output
- ② 0 V --- (encoder power supply earth)
- ③ Emitting diode
- ④ Power supply V ---