

Brushless DC Motors

Series BG 40

Due to the compact design and high power output, DC motors are particularly suitable for industrial applications such as:

- Office equipment and data processing systems
- Mechanical engineering applications
- Pumps, compressors and agitators
- Industrial fans
- Medical equipment
- Welding equipment
- Positioning systems
- Automation systems
- Packaging machines

Design features

- The motors are extremely robust.
- The bearing end-plates are made of die-cast aluminium.
- The motors can be mounted in any position, and the shafts can rotate in both directions.
- Insulation to VDE 0530, category E.

Construction

Series BG40 and BG 62 are brushless DC motors. The rotor body consists of high-quality "NEODYM" magnets, and the external stator consists of three windings.

In order to develop a three-phase drive signal, the position of the rotor must be detected, and this is accomplished by three Hall-effect sensors which monitor a magnet attached to the rotor shaft.

Electronic commutation for the 3-section motor winding is achieved using bipolar output stages consisting of 6 power transistors.

The rotor shaft is supported with ball bearings, and can absorb high radial and axial forces.

Power data	BG 40 x 25		BG 40 x 50	
Nominal voltage	12 VDC	24 VDC	12 VDC	24 VDC
Nominal speed (min ⁻¹)	2710	3230	3010	3650
Nominal torque (Ncm)	4,7	4,65	7,6	7,8
Nominal current (A)	2,4	1,3	3,9	2,05
No load speed (min ⁻¹)	4560	4890	4610	4770
No load current (A)	0,83	0,4	1,12	0,5
Starting current (A)	5,9	3,9	10,4	8,15
Starting torque (Ncm)	13,4	16,7	24	37
Nominal power (W)	13,4	15,7	23,9	29,8
Moment of inertia (gcm ²)	34	34	64	64
Weight (kg)	0,45	0,45	0,6	0,6

The lower power-range BG 40 series motors extend the wide product palette of electronically-commutated motors available from *Dunkermotoren*. The motors are available in two lengths.

A wide range of auxiliary components are available:

- Planetary and worm gears
- Brakes
- Digital incremental encoders.

For electronic speed control and commutation, a multi purpose single-quadrant controller BGE 3007 is available.

The brushless DC motors of the series BG 40 stand out for their small size.

Therefore, they are particularly well suited for applications in the field of office and data systems, medicine and automation technologies, e.g. pumps, compressors, mixing and spindle drives.

Standard program

The standard voltage of the BG 40 motor series is 24 VDC. This is the preferred motor voltage, however, other input voltages are available. Please contact the factory or our representatives for special voltage versions. We will be pleased to advise on availability.



