

BG-Motor

BG 2212

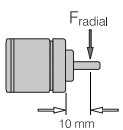


- 1-phase, 1-core internal rotor motor.
- EC technology.
- Dynamically balanced rotor with 4-pole, plastic bonded ferrit magnet.
- Determination of rotor position via Hall sensor.
- Precision ball bearing for long service life and silent running.
- Integrated operating electronics for open loop speed-controlled operation.

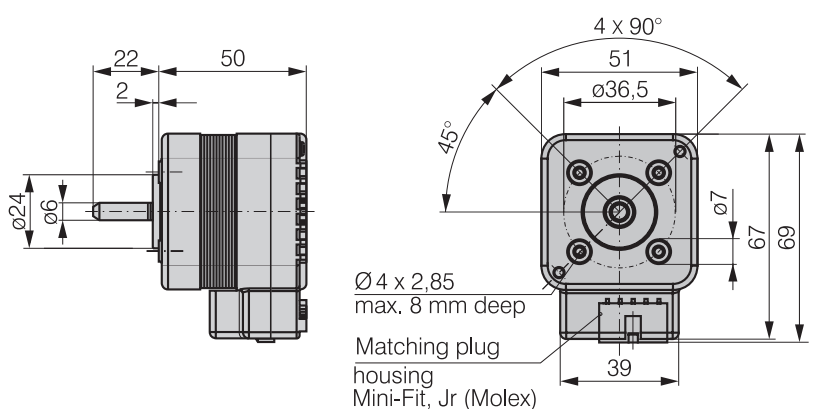
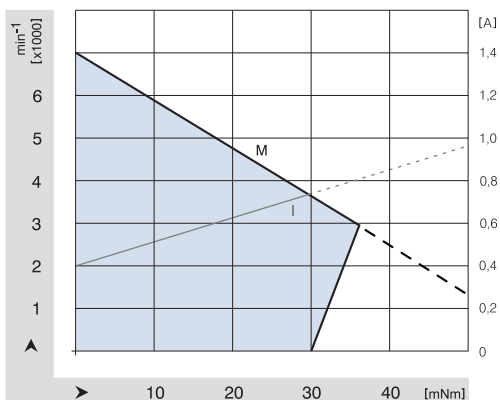
ebm-papst • Landshut

Nominal Data

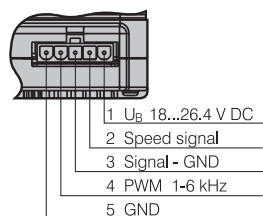
| Type | | BG 2212 |
|--|-------------------------------|----------------|
| Nominal voltage (U_{BN}) | V DC | 24 (18...26.4) |
| Nominal speed (n_N) | min^{-1} | 3 000 |
| Nominal torque (M_N) | mNm | 36 |
| Nominal current (I_{BN}) | A | 0.8 |
| Nominal output power (P_N) | W | 11.5 |
| Free-running speed (n_L) | min^{-1} | 7 000 |
| Free-running current (I_{BL}) | A | 0.4 |
| Induced voltage (U_{imax}) | V/1000 min^{-1} | 4.7 |
| Average starting torque | mNm | 26 |
| Max. starting current | A | 2.0 |
| Rotor moment of inertia (J_R) | $\text{kgm}^2 \times 10^{-6}$ | 3.0 |
| Thermal resistance (R_{th}) | K/W | 9.0 |
| Direction of rotation (of motor shaft) | | <=> |
| Protection class | | IP 20 |
| Ambient temperature range (T_U) | °C | 0 ... +40 |
| Motor mass (m) | kg | 0.3 |
| Order No. | | - |



F_{axial} 4 N
 L_1 10 mm
 Life expectancy $L_{10} =$
 20 000 h at nominal speed.



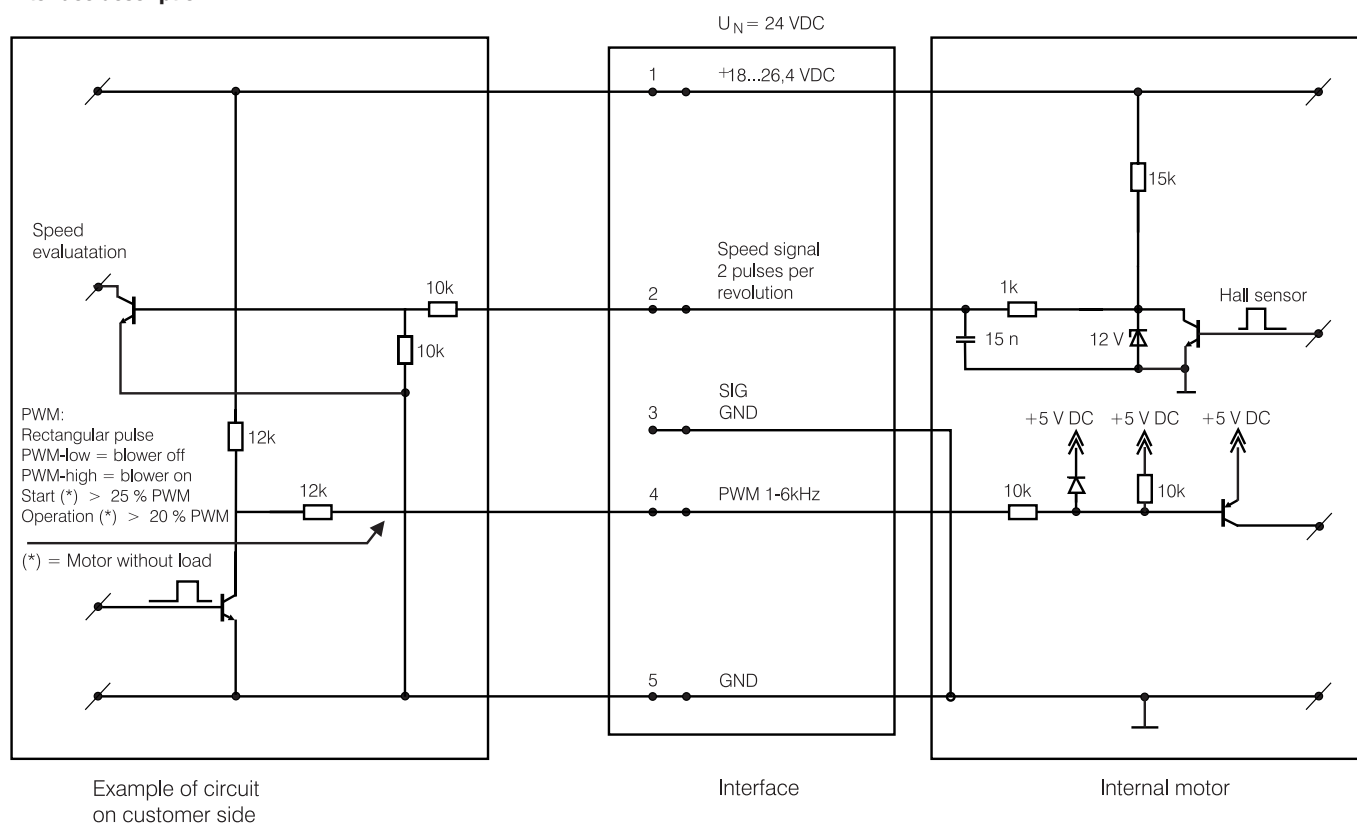
Pin connection



Operating electronics

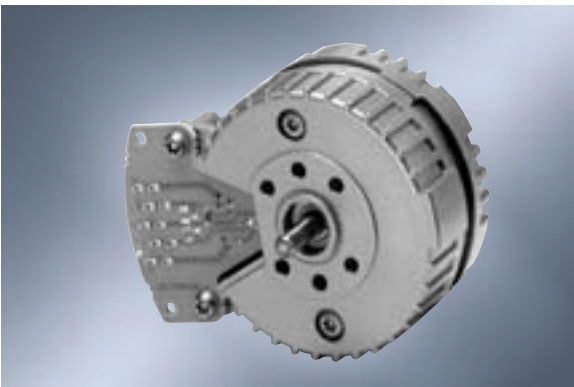
- In motor completely integrated commutation electronics, for speed-controlled operation.
- The power supply and signal interface are via 5 way connector.
- Set value input PWM signal
- Speed ACTUAL value output with 2 pulses per revolution

Interface description



BG-Motor

BG 3612



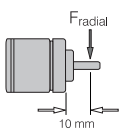
- 1-phase, 1-core internal rotor motor.
- EC technology.
- Dynamically balanced rotor with 4-pole, plastic bonded ferrit magnet.
- Determination of rotor position via Hall sensor.
- Precision ball bearing for long service life and silent running.
- Operating via external operating electronics.

ebm-papst • Landshut

Nominal Data

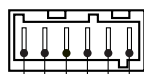
Type BG 3612

| | | 24 V | 230 V |
|--|-------------------------------|-----------|-----------|
| Nominal voltage (U_{BN}) | V DC | 24 | 230 |
| Nominal speed (n_N) | min^{-1} | 4 600 | 4 600 |
| Nominal torque (M_N) | mNm | 80 | 80 |
| Nominal current (I_{BN}) | A | 2.4 | 0.29 |
| Nominal output power (P_N) | W | 39 | 39 |
| Free-running speed (n_L) | min^{-1} | 9 000 | 9 000 |
| Free-running current (I_{BL}) | A | 1.6 | 0.17 |
| Induced voltage (U_{imax}) | V/1000 min^{-1} | 3.3 | 34.9 |
| Average starting torque | mNm | 55 | 75 |
| Max. starting current | A | 4.5 | 0.8 |
| Rotor moment of inertia (J_R) | $\text{kgm}^2 \times 10^{-6}$ | 16 | 16 |
| Thermal resistance (R_{th}) | K/W | 3.0 | 3.0 |
| Direction of rotation (of motor shaft) | | <=> | <=> |
| Protection class | | IP 00 | IP 00 |
| Ambient temperature range (T_U) | °C | 0 ... +40 | 0 ... +40 |
| Motor mass (m) | kg | 0.5 | 0.5 |
| Order No. | | - | - |



F_{radial} 10 N
 L_1 10 mm
 Life expectancy L_{10} =
 20 000 h at nominal speed.

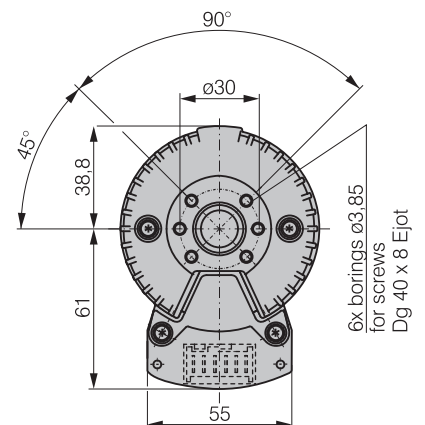
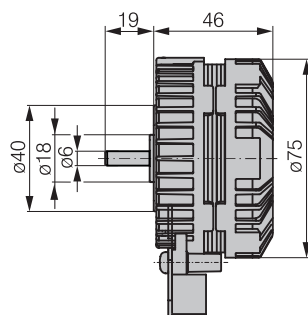
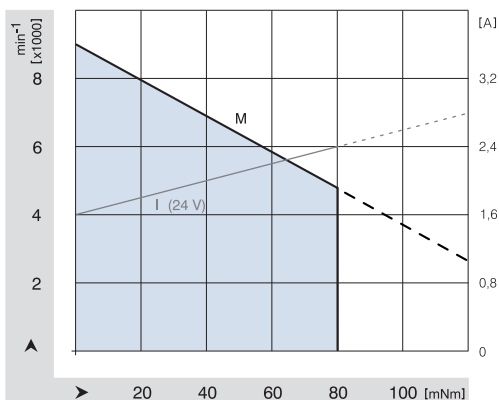
Plug 5- or 6-pole



View from the plug side 6-pole connection
 Matching mating connector (5- or 6-pole) e.g. Lumberg
 3611 05 K31 5-pole; 3611 06 K31 6-pole

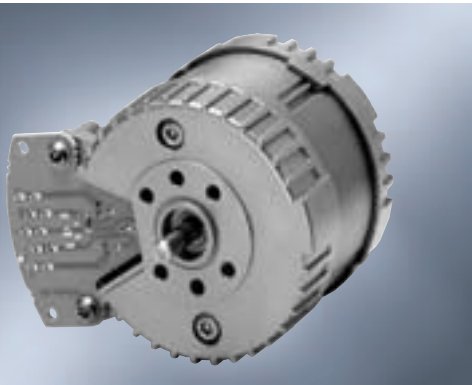
- 1 Motor 2
- 2 S Hall-Signal "out"
- 3 + Hall-Signal VCC
- 4 - Hall-Signal GND
- 5 Motor 1
- 6 PE (optional)

Operating electronics:
 KOM 4-1 / 24 V DC;
 Operating electronic for
 230 V AC on request



BG-Motor

BG 3633

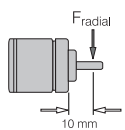


- 1-phase, 1-core internal rotor motor.
- EC technology.
- Dynamically balanced rotor with 4-pole, plastic bonded ferrit magnet.
- Determination of rotor position via Hall sensor.
- Precision ball bearing for long service life and silent running.
- Operating via external operating electronics.

ebm-papst • Landshut

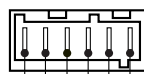
Nominal Data

| Type | | BG 3633 |
|--|--------------------------------|-----------|
| Nominal voltage (U_{BN}) | V DC | 230 |
| Nominal speed (n_N) | min^{-1} | 4 400 |
| Nominal torque (M_N) | mNm | 150 |
| Nominal current (I_{BN}) | A | 0.42 |
| Nominal output power (P_N) | W | 69 |
| Free-running speed (n_L) | min^{-1} | 11 000 |
| Free-running current (I_{BL}) | A | 0.33 |
| Induced voltage (U_{imax}) | $\text{V}/1000\text{min}^{-1}$ | 48 |
| Average starting torque | mNm | 150 |
| Max. starting current | A | 1.6 |
| Rotor moment of inertia (J_R) | $\text{kgm}^2 \times 10^{-6}$ | 37 |
| Thermal resistance (R_{th}) | K/W | 2.7 |
| Direction of rotation (of motor shaft) | | <=> |
| Protection class | | IP 00 |
| Ambient temperature range (T_U) | $^{\circ}\text{C}$ | 0 ... +40 |
| Motor mass (m) | kg | 0.9 |
| Order No. | | - |



$F_{\text{radial}} = 10 \text{ N}$
 $L_1 = 10 \text{ mm}$
 Life expectancy $L_{10} = 20\,000 \text{ h}$ at nominal speed.

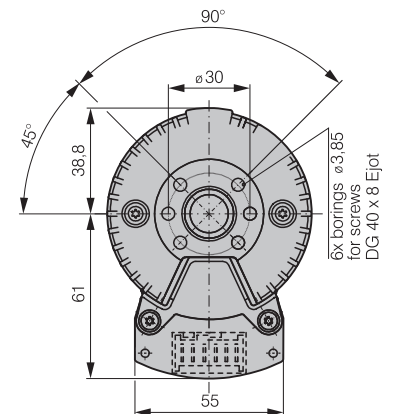
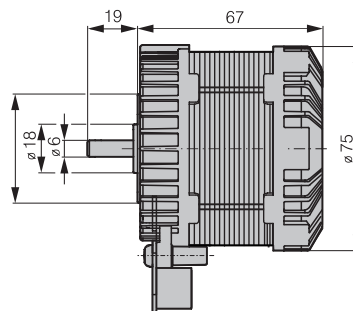
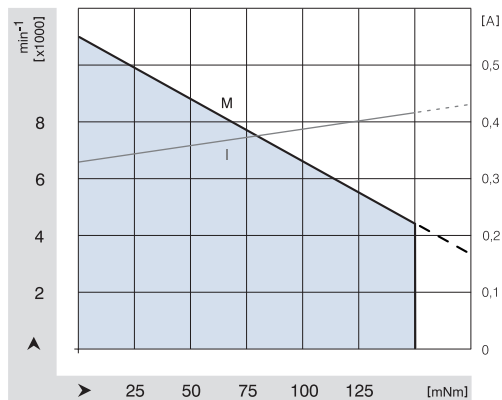
Plug 5- or 6-pole



View from the plug side 6-pole connection
 Matching mating connector (5- or 6-pole) e.g. Lumberg
 3611 05 K31 5-pole; 3611 06 K31 6-pole

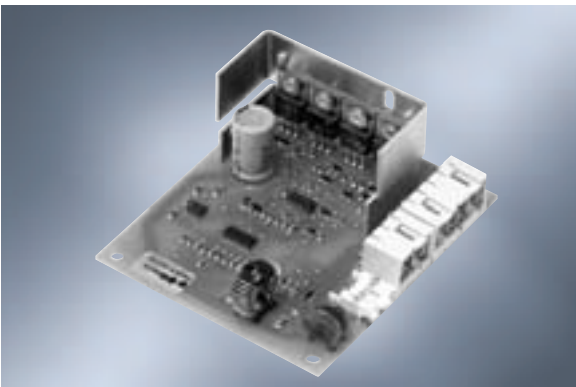
- 1 Motor 2
- 2 S Hall-Signal "out"
- 3 + Hall-Signal VCC
- 4 - Hall-Signal GND
- 5 Motor 1
- 6 \downarrow PE (optional)

Operating electronics:
 Operating electronic for 230 V AC on request



BG-Motor

Electronics KOM 4-1



- Operating electronics for open loop speed controlled operation of EC motors BG 36, 24 V version.
- Power supply, signal interface and motor connection via 3 separate plugs.
- Version for 230 V AC on request.

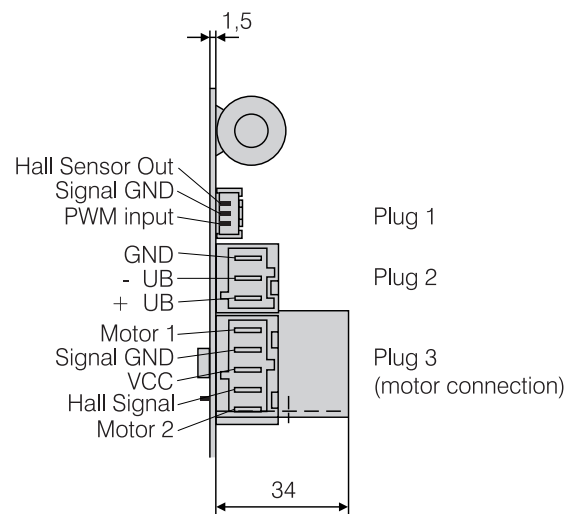
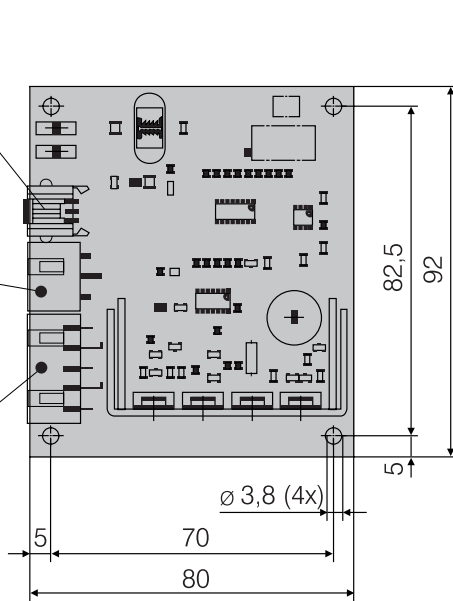
ebm-papst • Landshut

Pin connection

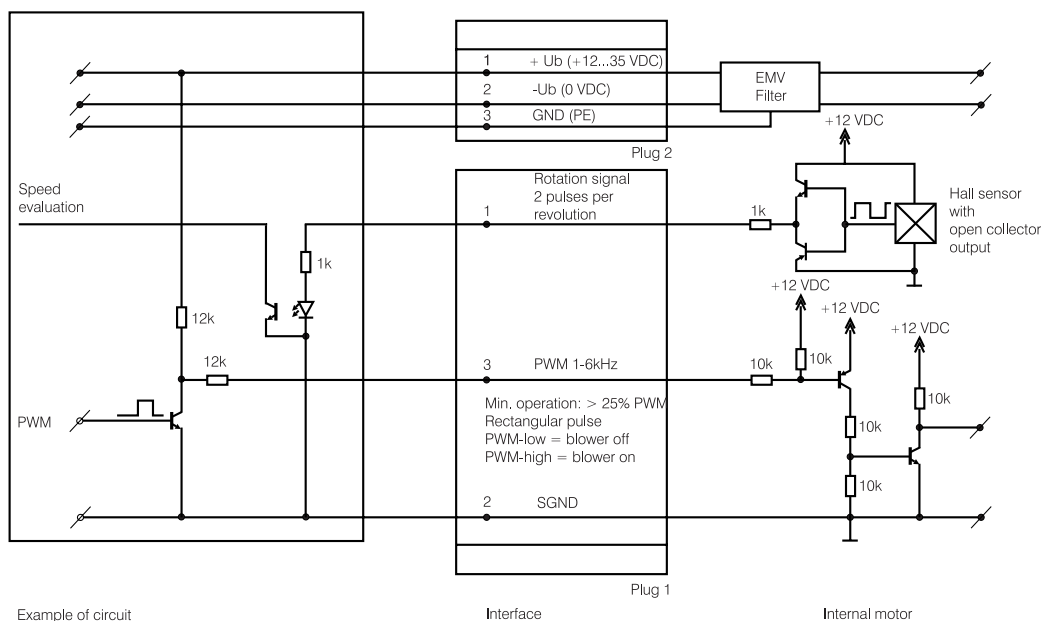
Plug housing
No. 3853 03 00 02
Lumberg
matching
mating connector:
No. 3820 03 00 02
Lumberg

Plug housing
No. 3642 03 K01
Lumberg
matching
mating connector:
No. 3611 03 K01
Lumberg

Plug housing
No. 3642 05 K30
Lumberg
matching
mating connector:
No. 3611 05 K30
Lumberg



Interface description



Example of circuit
on customer side