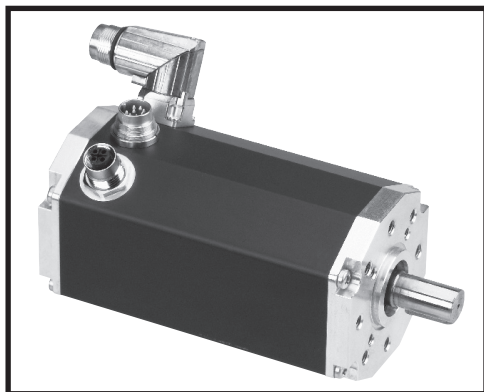


Brief introduction BG 75 PI



1 Description

- Brushless DC - drive with integrated parameterizing motioncontroller
- comfortable PC operating interface (Drive Assistant)
- integrated incremental encoder with 4096 increments / u
- 5 digital inputs and 2 digital outputs, alternative 2 analog / 3 digital inputs and 2 digital outputs
- precast application orientated mode
- Control range 1 bis 5000 min_1
- Control voltage 10 - 50 V

2 Spezifikation

Mechanical data

Temperature range of motor	-20°C...+100°C housing temperature
Recommended ambient temperature range	0°C...50°C
Relative humidity (non-condensing)	Max. 90 %
Degree of protection *)	IP50 (in special versions, up to IP65)
Connector plug 12-pin (logic)	Round plug to DIN 45326, Binder, Series 723
Connector plug 4-pin (power stage)	Round plug M17, Intercontec
Connector plug 5-pin (parametrization interface)	Round plug M12, Binder, Series 763 Art.No. 09-3443-00-05

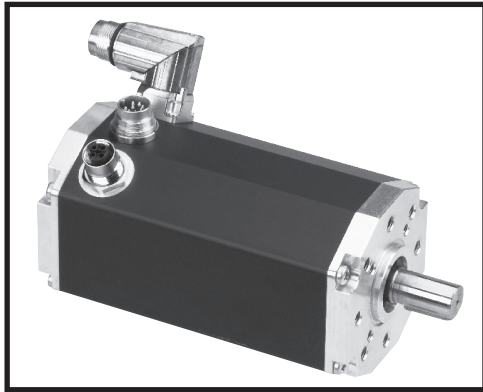
Electrical data

Permissible speed range	0...5000 rpm
Permissible motor voltage	10...50 VDC
Low-voltage cut-off motor	< 10 VDC
Permissible control voltage	24 VDC +/- 20%
Low-voltage cut-off logic	< 18 VDC
Permissible ripple	Max. 5%
Fuse	required externally
Over-temperature cut-off	> 115°C temperature of output stage PCB
Max. peak current in intermediate circuit	50 A
Current draw of 24V logic supply	70 mA + DOs

Power data

	BG 75x25 PI		BG 75x50 PI		BG 75x75 PI
Nominal voltage (V)	24	40	24	40	40
Nominal power (W)	220		330		440
Nominal torque (Ncm)	60		90		120
Rated speed (rpm)	3500		3500		3500
Pulses per round	4096		4096		4096
Nominal current (A)	11.7	7.0	16.8	10.1	12.9
Demagnetization current (A)	48	28	66	40	52
Weight (g)	ca. 1900		ca. 2500		ca. 3200

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3 Details

The brief introduction describes the mechanical and electrical data, as well as the connector assignment of the drive.

It is to pay attention to the safety regulations and preventive measures which have to be used.

The brief introduction does not contain a manual of the drive.

The complete manual BG 75 PI can be requested or is available via download in the internet.

Liability exclusion

For damage or injuries from inappropriate, negligent or wrong handling of the drive, the manufacturer don't be liable.

Modification

Technical changes or changes at the drive may be made only with explicit, written permission of the company Dunkermotoren.

Service & Support

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Homepage: www.dunkermotoren.de

4 Safety

Proper use

The BG 75 PI is a vendor part and may be used in the configuration described in machines and plant (industrial sector).

The drive must be securely mounted and must only be used with the cables and accessories specified by Dunkermotoren.

The drive may only be put into service after the complete system has been installed with due attention to EMC aspects.

Transport and conditions of storage

Check the drive with distribution for damages. To ensure trouble-free operation, appropriate methods of transport and conditions of storage must be employed.

The drive have to be stored, protected from dust, dirt and moisture.

Pay attention to the climate conditions given in the table „Mechanical data“ (Storage temperature and humidity).

Group of persons

The drive must only be installed and adjusted by qualified persons in accordance with the relevant standards.

Qualified persons are familiar with the relevant standards, rules, and accident-prevention regulations which must be observed when working with such equipment. Qualified persons are those who:

- on the basis of their experience, can recognise and avoid potential dangers;
- are familiar with the accident-prevention regulations for the equipment employed; and
- are able to connect circuits and install equipment in accordance with the standards and regulations.

Ballast circuit

During braking operations, kinetic energy is stored as electrical energy in an intermediate part of the regulation circuit. This can cause excessive voltage in the intermediate circuit, which, in an extreme case, could cause damage to electrical components.

For prevention a bridge rectifier and a smoothing capacitor (Construction unit for the smoothing of voltage fluctuations) should be used.



Warning

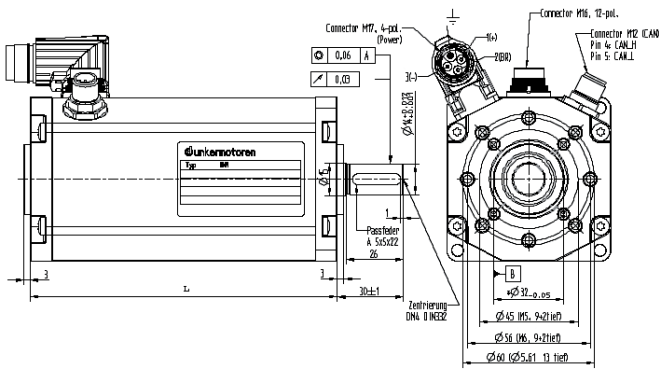
If there is frequent heavy braking, the ballast resistor, and in consequence other circuit components, may be overloaded and damaged if appropriate measures are not taken to prevent excessive voltage (see „Smoothing capacitor“, above, possibly external brake resistor).

Wiring

Consider the local regulations for wiring, protection and EMC.

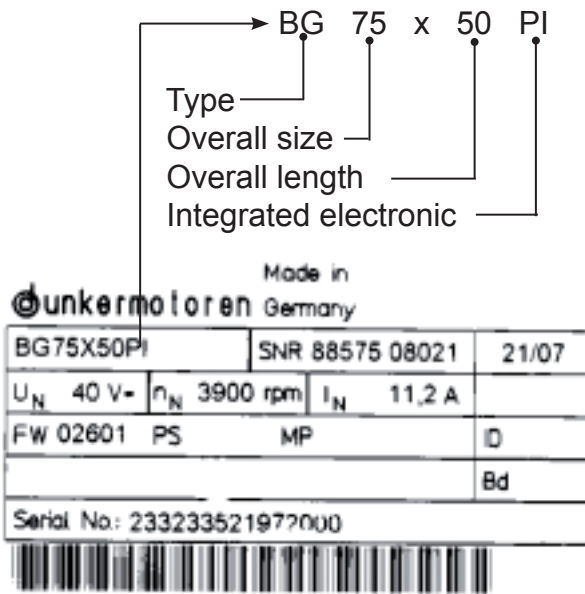
Use only specified cables of the company Dunkermotoren.

5 Drive dimension



	L
BG 75x25	115 ± 0.3
BG 75x50	140 ± 0.3
BG 75x75	165 ± 0.3

6 Identification



SNR = code number U_N = Nominal voltage

n_N = Rated speed I_N = Nominal current

The identification plate is on the drive and provides for orientation (Exact data are to be read under „Specification“).

7 Installation/terminal assignment



Attention

It is important to use two separate power supply units, one for the power of the motor and one for the electronic (+24V). Both power units have a common earth (-0). In case of active braking additional voltage/ current will be generated. The integrated electronic could be destroyed.



Attention

During installation, ensure that connectors are not damaged. Bent pins can cause a short circuit and destroy the drive.

For commissioning a starter kit is needed, this contains:

- USB-adapter
- 5-pin CAN bus connector
- Software Drive Assistant

WARNING: The starter kit is not in the scope of supply and must be ordered separately.

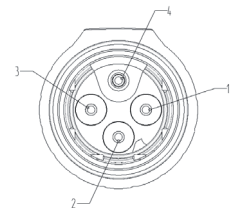
1. Attach the 5-pin cable between the USB-adapter and the parameter interface of the drive.
2. Attach the USB-adapter to the PC and wait for connection.

NOTE: The parametrization software „Drive Assistant“ is not explained in this brief introduction. Further details can be looked up in the instruction manual BG 75 PI.

8 Connector plug

Motor power supply:

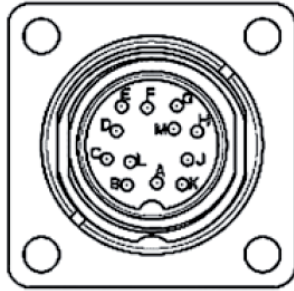
Round plug, Intercontec
The 4-pin connector serves for the motor power stage.



Connector pin	Connection	Lead colour in connection cable with 4-pin right-angle connector (*)
1	+ (motor power)	black
2	Ballast resistor	black
3	P GND (0V)	black
4	Earth wire	yellow/green

Power supply electronic and signal interface:

Round plug to DIN 45326, Binder, Serie 723
The 12-pin Drive connector serves for the supply of the electronic control with 24 VDC and the logic.

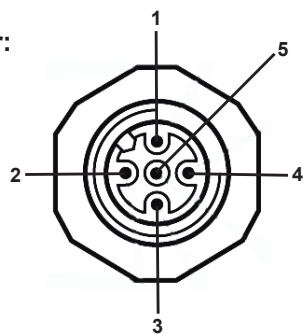


Connector pin	Connection	Lead colour in connection cable with 12-pin right-angle connector (*)
A	IN0	yellow
B	IN1	blue
C	IN2	brown
D	IN3	green
E	OUT1	grey
F	OUT2	grey-pink
G	AI (+)	pink
H	AI (-)	violet
J	Uc (+24V) Logic	red
K	GND (0V) Logic	black
L	IN4	red-blue
M	OUT3	white

(*) Lead colours refers to standard connection cables of Dunkermotoren.

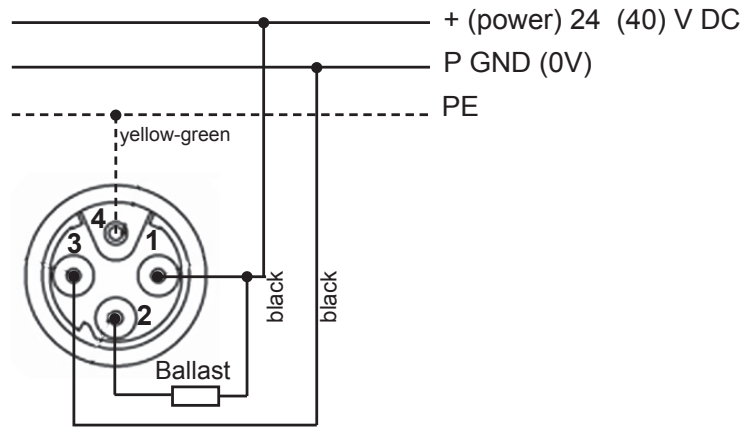
Parametrization connector:

Round plug M12, Binder, Series 763, Art.No. 09-3443-00-05
The 5-pin connector serves for the attachment to the CAN-Bus.



9 Connection schematic

Motor power supply:



Power supply electronic and signal interface:

