BCI motor.

BCI-42.XX



- Direct current motor with permanent magnets made of ceramic bound ferrite
- Mechanical commutation through 8-piece collector
- Closed steel motor housing with die-cast zinc bearing flanges
- Operation in both directions of rotation
- Service life 3 000 h for continuous operation (S1)
- Insulation class B
- Protection class IP 40, optionally higher

Nominal data

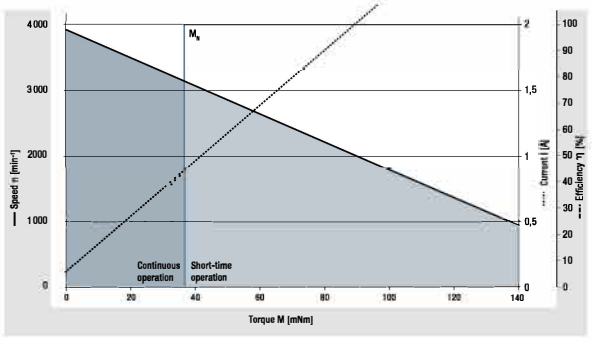
Type		BCI-42.25-A00	BCI-42.25-B00	BCI-42.40-A00	BCI-42.40-B00
Nominal voltage (U_{BN})	V DC	12	24	12	24
Nominal speed (n_N)*	rpm	3 300	3 300	3 100	3 100
Nominal torque (M_N)*	mNm	38	38	57	57
Nominal current (I_{BN})*	A	1.90	0.96	2.50	1.10
Nominal output power (P_N)*	W	13	13	19	19
Rated efficiency, approx. (ηN)	%	60	60	63	70
Free-running speed (n_L)	rpm	4 000	3 900	3 850	3 600
Free-running current (I_{BL})	A	0.30	0.19	0.27	0.17
Starting torque (M_A)	mNm	200	190	330	320
Starting current (I_A)	A	7.60	4.00	11.2	5.90
Induced voltage (U_{imax})	V/1 000 rpm	2.74	5.50	3.04	6.40
Connection resistance (R_V)	Ohm	1.54	6.05	1.08	4.10
Connection inductance (L_V)	mH	2.20	8.90	1.20	5.10
Rotor moment of inertia (J_R)	kgm² x 10^{-6}	7.40	7.40	11.5	11.5
Heat resistance (R_{th})	K/W	4.80	4.80	4.75	4.75
Protection class**		IP 40			
Permissible ambient temperature range (T_U)	°C	0 ... +40			
Weight	kg	0.40	0.40	0.50	0.50
Order No.		on request	931 4225 001	on request	931 4240 062

Subject to alterations

* at T_U max. 40°C
** Classification of protection class refers to installed state with sealing on the flange side

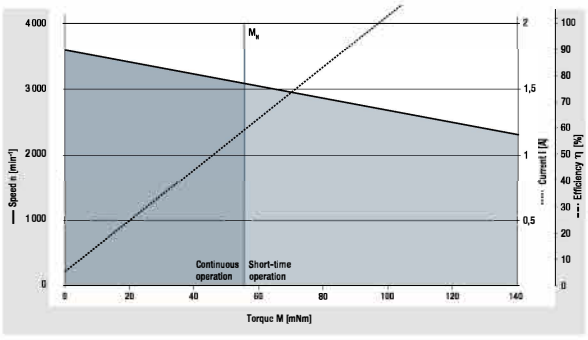
Characteristic curve

BCI-42.25, 24 V (at 25°C)



[1] Nominal data, see table

BCI-42.40, 24 V (at 25°C)

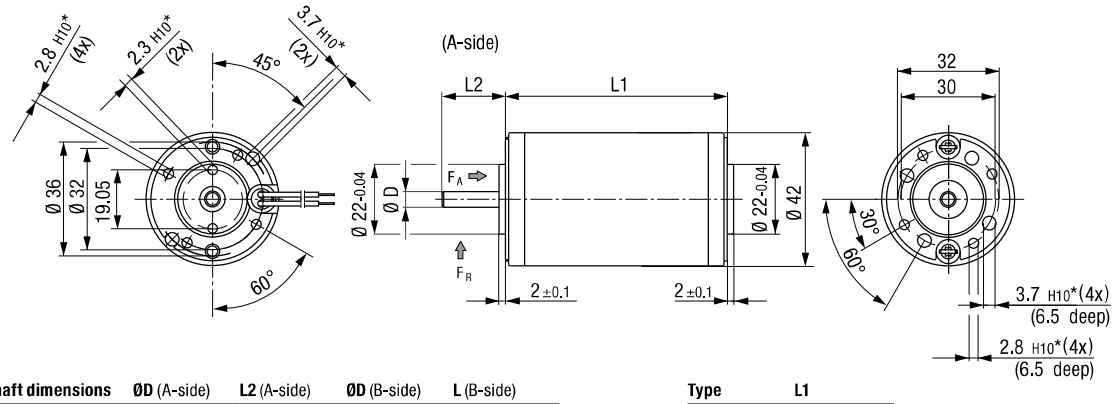


[1] Nominal data, see table

ebmpapst

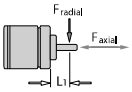
Technical drawing

Image standard type / All dimensions in mm



Shaft dimensions	ØD (A-side)	L2 (A-side)	ØD (B-side)	L (B-side)
Standard type	5_{g5}	20.0 mm	--	--
Preferred type	5_{g5}	14.5 mm	5_{g5}	15 mm

Type	L1
BCI-42.25	70 ± 0.5
BCI-42.40	85 ± 0.5



F_{axial}	30 N
F_{radial}	60 N
L1	20 mm

Permissible shaft load at nominal speed and life expectancy L_{10} of 3 000 h (at T_U 40°C).

* Blind holes for thread-forming screws according to DIN 7500

Electrical connection

Connection cable

Color	Function	
red	Power supply (+)	Cable length 300 ± 30 from motor Cable end 7 ± 2 stripped and tin-coated
black	GND (-)	

Change of the rotating direction is possible by polarity reversal of the wires

Modular construction kit

Brake system
Spring-applied braking
BFK 457-01 (page 48)



Encoder system
Magnetic encoder system
PMG 2-X (page 50)
Optical incremental encoder
HEDS 5500 / PWB AE30 (page 52)



Basic motor





Planetary gearhead
Performax® 42 (page 22)



Crown gearhead
EtaCrown® 52 (page 28)
EtaCrown®Plus 42 (page 32)



Spur gearheads
Compactline 90 (page 36)

For motor-gearbox combinations, depending on the choice of the single components, the maximum allowable torque (gearbox) can be exceeded or respectively not reached.

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