

MINIMOTOR - MCDBS BRUSHLESS SERVOMOTORS WITH WORM GEARBOX

MCDBS 55/50-10 B3
24/48V dc 300rpm 2.7 Nm B3 mount

- Efficient and compact
- Saves separate cable runs
- Up to 13Nm rated torque
- Open Bus protocols
- Reduce machine build components



PRODUCT DESCRIPTION

MOTOR: Brushless 4-pole three-phase sinusoidal motor, totally enclosed. Rotor with NdFeB magnets. Thermal cutoff. Winding Class F. Thermal cutoff. Protection IP65 in compliance with IEC/EN 60529 standards. Bearings with reduced backlash and special grease for high temperatures.

DRIVE: Power 24 and/or 48 Vdc • Magnetic absolute encoder SSI (12bit single-turn / 16bit multi-turn) with internal buffer battery • 5 PNP digital inputs and 1 analogue input -10 +10V ext. (0-5 or 4-20mA optional) • 1 relay output (NC-NO) • USB port for parametrisation • Torque, speed, position and homing control.

GEAR UNIT: with worm screw and die-cast aluminium gearcase. 26 mm centre distance. CARO bronze crown with a hardness of 120÷160 HB. The worm is made of tempered steel, with ground thread. Seal rings in special high-temperature rubber (FKM). Lubrication with special long-lasting oil. There are 10 available gear ratios (i), from 5 to 80. Rated torque up to 9 Nm.

Version B3 - B5 (B5/S left - B5/D right).

All the models are implemented with the new "open" platform, which permits configuration with the following primary protocols: CanOpen, Ethercat, Modbus, Ethernet/IP, Profinet, Powerlink.

For full motor specifications please see motor only 'DBS' or download literature below.

N.B. To choose the right gear motor, please refer to the relevant charts for duty and maximum shaft load coefficients.

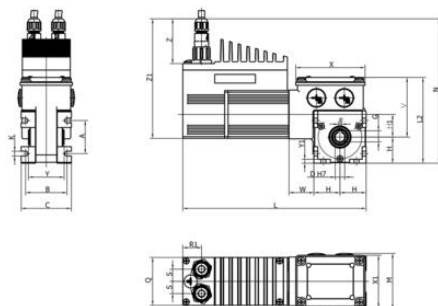
These gear motors need to be run in. Therefore, for approximately the first 30 operating hours the torque will be lower than what indicated in the data.

[Please click here for 2D and 3D drawings](#)

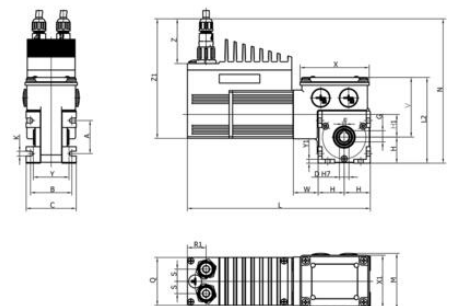
TECHNICAL DATA

Ambient temperature	-10 ... +40°C
CanOpen	Yes
CE approved	Yes
Communication	USB
Communication error protection	Yes
Digital inputs	2 pnp (24Vdc, 500kHz) , 3 pnp (24Vdc, 7kHz)
Electronic brake output	24Vdc, max 0.5A
Ethercat	Yes

Ethernet IP	Yes
Input voltage dc	24/48 Vdc
IP class	IP65
Memory error protection	Yes
Modbus RTU	Yes
Motor control algorithm	Sinusoidal brushless with 12Bit single-turn / 20Bit multi-turn absolute encoder
Nominal output frequency carrier	4/8/12 kHz
Nominal overload	200% x 60 sec
Nominal speed	300 rpm
Nominal torque	2.7
Output power	125 W
Outputs	1 NO 2A (42 Vdc)
Over voltage protection	Yes
Overcurrent protection	Yes
Overheat protection	Yes
Overload protection	Yes
Polarity reverse protection	Yes
PowerLink	Yes
ProfiNET	Yes
Rated current	8A@24V/4.2A@48V
Ratio	10:1
Under voltage protection	Yes



Model	Power (W)	Rated current (A)	Rated speed (rpm)	Rated torque (Nm)	Max. torque (Nm)	Max. speed (rpm)	Max. current (A)	Max. power (W)	Max. torque (Nm)	Max. speed (rpm)	Max. current (A)	Max. power (W)
24VDC	125	8.0	300	2.7	5.4	300	8.0	125	5.4	300	8.0	125
48VDC	125	4.2	300	2.7	5.4	300	4.2	125	5.4	300	4.2	125



Model	Power (W)	Rated current (A)	Rated speed (rpm)	Rated torque (Nm)	Max. torque (Nm)	Max. speed (rpm)	Max. current (A)	Max. power (W)	Max. torque (Nm)	Max. speed (rpm)	Max. current (A)	Max. power (W)
24VDC	125	8.0	300	2.7	5.4	300	8.0	125	5.4	300	8.0	125
48VDC	125	4.2	300	2.7	5.4	300	4.2	125	5.4	300	4.2	125

2D model selection



Electric motors

15.06.2017



Gear motor

15.06.2017



Storm gearmotors

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Brushless servomotors

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Crank products

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Others

Please see product description
above for 2D and 3D drawings