

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 o 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

GENERAL DATA

Nominal speed	300 rpm
Nominal torque	2,7 Nm
Input voltage dc	24/48 Vdc
Digital inputs	2 pnp (24Vdc, 500kHz) , 3 pnp (24Vdc, 7kHz)
Outputs	1 NO 2A (42 Vdc)
Output power	125 W
Rated current	8A@24V/4.2A@48V A

Nominal overload	200% x 60 sec
Motor control algorithm	Sinusoidal brushless with 12Bit single-turn / 20Bit multi-turn absolute encoder
Nominal output frequency carrier	4/8/12 kHz
Electronic brake output	24Vdc, max 0.5A
Ambient temperature	-10 ... +40°C

SAFETY FEATURES

IP class	IP65
CE approved	Yes
Over voltage protection	Yes
Under voltage protection	Yes
Overheat protection	Yes
Memory error protection	Yes
Polarity reverse protection	Yes
Overcurrent protection	Yes
Communication error protection	Yes
Overload protection	Yes

COMMUNICATION

Communication	USB
Ethercat	Yes
CanOpen	Yes
ProfiNET	Yes
Ethernet IP	Yes
Modbus RTU	Yes
PowerLink	Yes
Ratio	10:1

