

Micro BLDC

SERVO AMPLIFIER FOR BRUSHLESS & BRUSH MOTORS

The Micro Bldc is a precision four quadrant regenerative servo drive for permanent Brushless & Brush DC servomotors.

Possible control methods include velocity and torque modes. There are many different velocity modes: tachogenerator feedback, encoder feedback, armature feedback and PWM+DIR comand.

The Micro Bldc series drives push high performance servo technology into lower power applications without compromising on reliability or package size.

► Micro Bldc advantage

- Compact drive for 1170W (3Nm) motors
- Small package, versatility, ease-of-use
- Cost-effective
- One Only Servo Amplifier For Motors:
 - * BLDC with encoder + hall
 - * BLDC with fa-coder
 - * BLDC with only hall signals
 - * Brush DC with encoder
 - * Brush DC with tachogenerator
 - * Brush DC with armature

► Standard characteristic

- Four quadrant regenerative operation
- Single supply DC voltage
- Internal setting for BLDC & BRUSH motors
- 5 diagnostic Leds (State and Alarms)
- Protections for: Over/Under voltage, max. temperature reaches, Over current, Ixt motor current, hall missing
- Power and signals extractable connectors
- 1 Differential velocity input +/-10V
- 1 Torque mode (demand current) input +/-10V
- Feedback available (series): Quadrature encoder - tachogenerator - Armature
- NPN Fault drive output
- Four Potentiometer adjustments (Speed, offset, gain, derivative)
- Acceleration/deceleration ramp



► Specifications

- Output voltage 0,9 Vdc Input
- PWM frequency 20Khz
- Operative temperature 0/+40°C
- Analog inputs range +/-10Vdc
- Current monitor +/- 8Vdc (At peak curr.)
- Velocity monitor +/- 8Vdc (At max.vel.)
- Encoder power supply (+V) +5Vdc @130mA
- Ausiliary power supply +/-10Vdc @ 4mA
- Maximum encoder frequency 300Khz
- Logic level encoder inputs ≥ +2,8V/+24V
- Start signal (Input range) +9V/+30Vdc
- Current loop bandwidth 2KHz
- Velocity loop bandwidth 150Hz
- Polution degree 2° or better

MODEL	65				100				130			
DC Voltage Supply (VDC)	65				100				130			
DC Voltage Range (VDC)	19 - 84				31 - 132				35 - 165			
Size (A)	2	4	7	10	2	4	7	10	2	4	7	10
Rated Current (A)	2	4	7	10	2	4	7	10	2	4	7	10
Peak Current (1) (A)	4	8	14	20	4	8	14	20	4	8	14	20
Rated Power (2) (W)	116	232	406	580	180	360	630	900	234	468	819	1170
Peak Power (3) (W)	232	464	812	1060	360	720	1260	1800	468	936	1638	2340

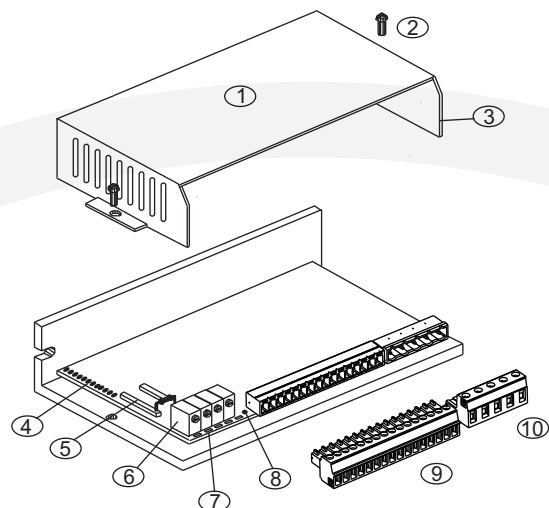
Ordering code example: **BLDC-65-7-XXX**

Product name: _____ Options
 Model: _____ Size

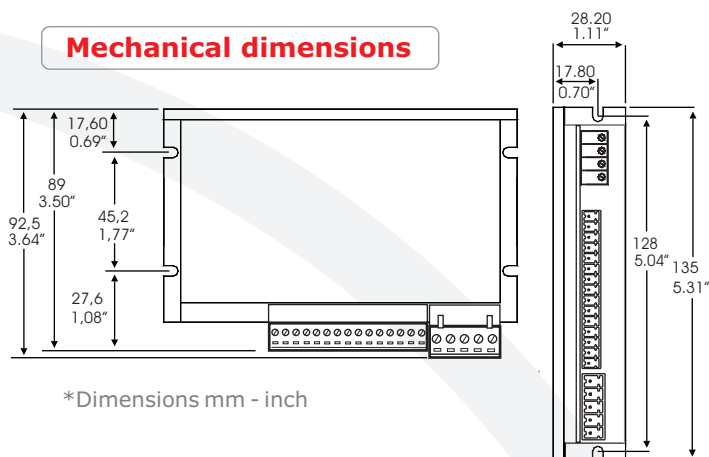
- (1) Peak current (Adc) for 2 sec.
- (2) Power of amplifier at the rated current and rated voltage
- (3) Power of amplifier at the peak current and rated voltage

Available model 12V with size 2 - 4 - 7 and 10A

► View product



Mechanical dimensions



*Dimensions mm - inch

- (1) Product Label
- (2) Fixing screw
- (3) Product Cover
- (4) Solder bridges
- (5) Adjustment zone
- (6) Calibration Potentiometers
- (7) Leds
- (8) Test (velocity monitor)
- (9) M1 Signals terminal 16 pins MC1,5/16-ST-3,81 (pitch 3,81)
- (10) Power Terminal 5 pins GMST 2.5/5-G-5,08 (pitch 5,08)

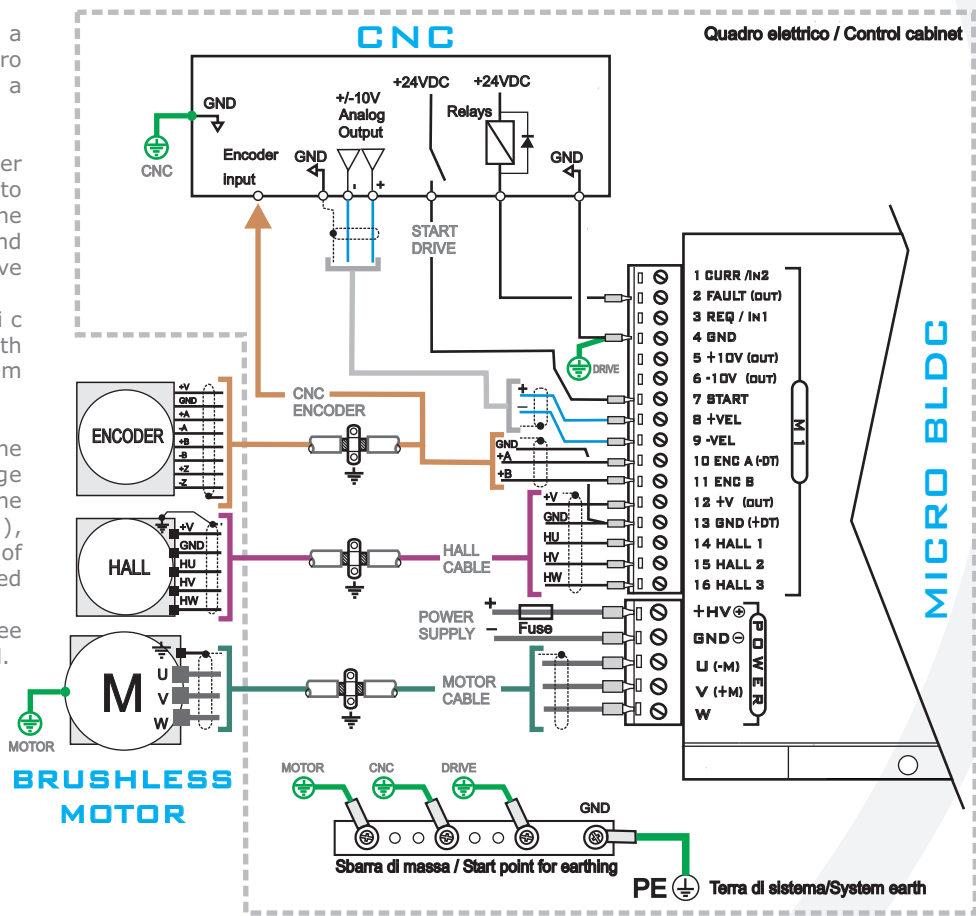
[Datasheet Micro Bldc (gb) - 2 of 2]

► Typical connection

In the figure above is shown a typical connection of the Micro bldc in combination with a brushless motor.

The encoder with line driver output is connected directly to the control. Depart from the CNC control wires +A +B and GND to the Micro bldc drive (signals in common mode). Excellent dynamic performance is obtained with encoder with resolution from 500 to 2000PPR.

It also possible to supply the encoder with the voltage available on the +5V of the drive (+V terminal 12), verifying that the absorption of the encoder does not exceed 130mA. For all other information see the Micro bldc service manual.



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Accessories: • Switching power supply 220-400Vac/55Vdc • Single/3ph transformers from 100 to 7000VA • Single/3ph bridges 600V 35A • Power supply capacitors 4700uF / 10000uF • Net filters (for CE compliance)