BMAC-H

Digital Indexer and high power amplifier

Description:

BMAC-H module is a digital indexer with a high voltage microstep amplifier and an integrated DSP controller. It can drive any bipolar stepper motor (4, 6 or 8 wires). Thanks to its smart processing unit, BMAC-H is suitable for both simple mono-axis applications and complex mutli-axis systems.

Its 45V/7ARMS amplifier stage makes it ideal to drive NEMA23 and NEMA34 stepper motors. Sinusoidal current generation provides good resonance immunity.

The motor can be driven in open-loop mode or in self-switched closed-loop mode thanks to an external encoder. Autocom® provides motor stall protection, extended speed range and torque control without external PID controller.

BMAC-H implements an internal sequencer, 8 opto-isolated digital I/Os and 1 analog input. The module can work in standalone mode with up to 500 commands stored in nonvolatile memory.

Technical specifications:

	BMAC-H
Supply voltage	24-45VDC
Nominal current	7ARMS max per phase
Max speed	4000RPM
Resolution	50µstep/step 10 000 positions per rev. for a 200steps per rev. motor
Digital IOs	8 IO optoisolated
Analog input	1 differential (0-10V)
Encoder input	biphase incremental encoder. Differential RS422 (A, /A, B, /B, Z, /Z, 0V)
Communication	RS485 optoisolated, 9600 to 115 200 bauds with USB or CANopen DSP402
Sequencer	500 commands memory
Sequencer protections	Supply (Overvoltage, overcurrent) Motor (Overcurrent, short-circuit) Temperature
Dimensions	130 x 110 x 75.5 mm
Weight	745g
Certifications	RoHs, CE marking, UL PCBs

Features

> 7A stepper motor driver. Open loop or closed loop control.

> "S curve" velocity profile for smooth motion without resonance.

> Optimized current management to minimize thermal losses.

> Smart move functions.

> Interpolation mode for multi-axis (2D and 3D) applications.

> UBS/485 or CANopen protocol.

> Hardware and Software end-stops. User configurable.

> Integrated sequencer. PLC-like functions.

> DSP controller

> Ballast for energy dissipation (option)

References

BMAC-H (BMAC-H USB/RS485)

BMAC-H-C (BMAC-H CAN)

SPxxx-48 (Supply voltage 48V xxx watts)

MICB9010 (ballast)

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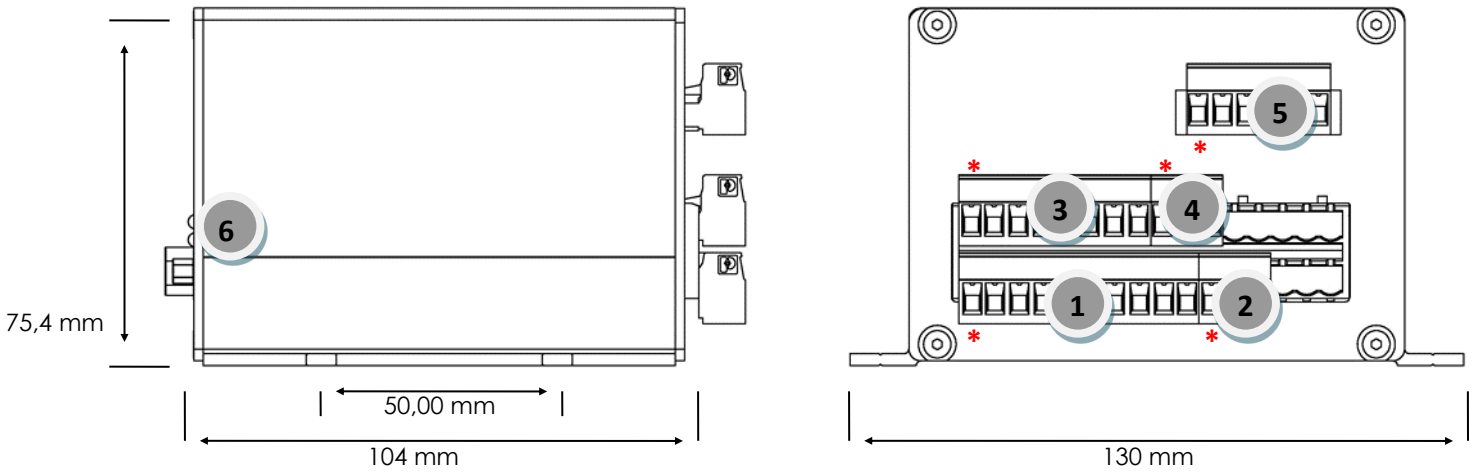
Sequencer:

- The internal sequencer integrated to BMAC-H allows automatic movements and module actions. Up to 500 commands can be stored and executed without PC or PLC.
- With a PC or a PLC, BMAC-H can be controlled by a classic **serial link**. An easy and reliable communication protocol is implemented. An easy **USB** access is also available. BMAC-H can include a **CANopen** protocol, it is 100% compliant with the DS402 Motion Control standard.
- BMAC-H is compatible with **MI motion TOOLBOX** which allows a direct control of axis from a PC. This component .NET is easily integrable in classic development tools Visual Studio or Labview.

Dimensions and Pinout:



1. DIGITAL I/O	2. RS485/CAN	3. ENCODER	4. ANALOG	5. POW/MOT	6. SUBD
0V_IO *	/Z CANL *	0V_COD *	0V ANA *	0V *	Reserved
I/O8	Z CANH	COD /I	-IANA	+V	/Z CANL
I/O7	0V	COD I	+IANA	A-	0V 485 CAN
I/O6		COD /B		A+	Reserved
I/O5		COD B		B-	GND
I/O4		COD /A		B+	Reserved
I/O3		COD A			Z CANH
I/O2		+5V COD			Reserved
I/O1					Reserved
+V_IO					

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