

■ ■ 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 multi-axis systems.

Its 45V/7A_{RMS} 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 non-volatile memory.



■ ■ Technical specifications

	BMAC-H
Supply voltage	24-45VDC
Nominal current	7A _{RMS} max per phase
Max speed	4000RPM
Resolution	50µstep/step 10.000 positions per rev. for a 200steps per rev. motor
Digital IOs	8 I/O opto-isolated
Analog input	1 differential
Encoder input	Biphase incremental encoder differential RS422 (A ₊ /A ₋ , B ₊ /B ₋ , Z ₊ /Z ₋ , 0V)
Communication	RS485 optoisolated, 9600b to 115200bauds with USB or CANopen
Sequencer	500 commands memory
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 multiaxes (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)

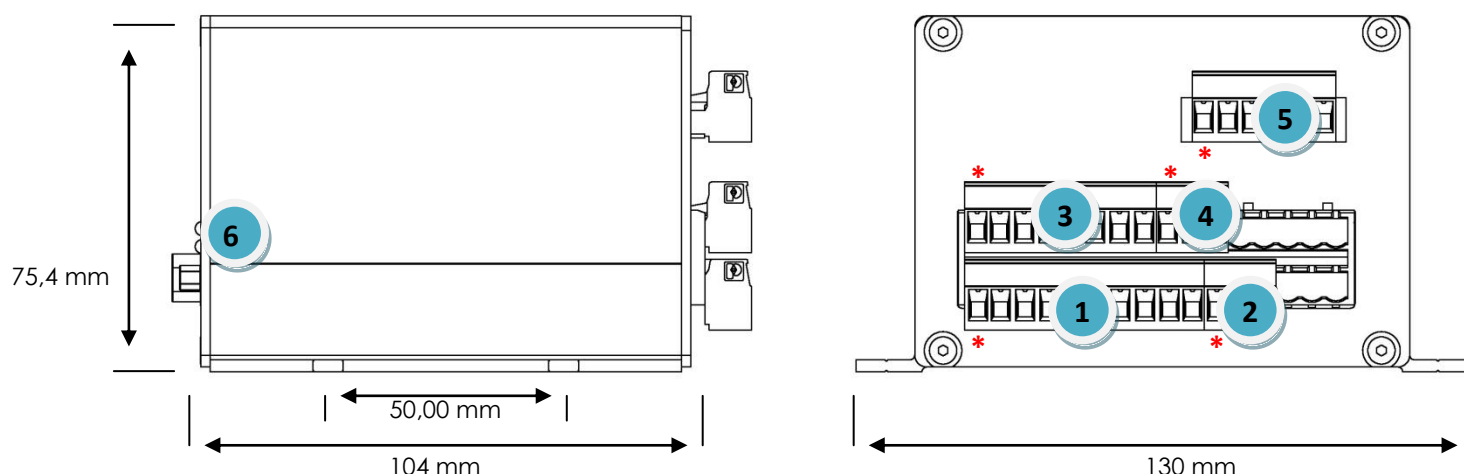
BMAC-H-C (BMAC-H CAN)

SPxxx-48 (Supply voltage 48V xxx watts)

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



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					Reserved

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