

CC-AMB-1500



Controller for driving ultra-high-speed permanent-magnet synchronous motors (PMSM) with active magnetic bearing.



- Integrated drive control and control of three axis active magnetic bearing system
- PAM and PWM control
- Sensorless speed control from 0 rpm up to 500,000 rpm
- Integrated break chopper
- Controlled motor stop in case of power failure
- User-friendly PC control software (CelerotonPilot)
- Ideal in combination with Celeroton AMB-motors

Specifications converter

Input voltage U_{in} (DC)	27 – 75 V
Maximum output power	1,500 VA
Output voltage (peak value phase-phase)	0 – 0.95 U_{in}
Maximum phase current motor drive (PAM-operation)	10.9 Arms / 15.4 A _{peak} ¹
Rated reactive power (active magnetic bearing)	2 x 180 VA (radial) / 340 VA (axial)
Maximum phase current radial bearing	3.5 Arms
Maximum phase current axial bearing	10 Arms
Maximum frequency / speed (PAM-operation)	8.3 kHz / 500,000 rpm
Operating range motor	4-Quadrant
Communication interface	USB, RS232/485, CAN
Weight	2.25 kg
Dimensions (L x W x H)	270 (320) x 182 x 83 mm
Operating temperature	0 – 40 °C

¹ Fundamental of the PAM-block current

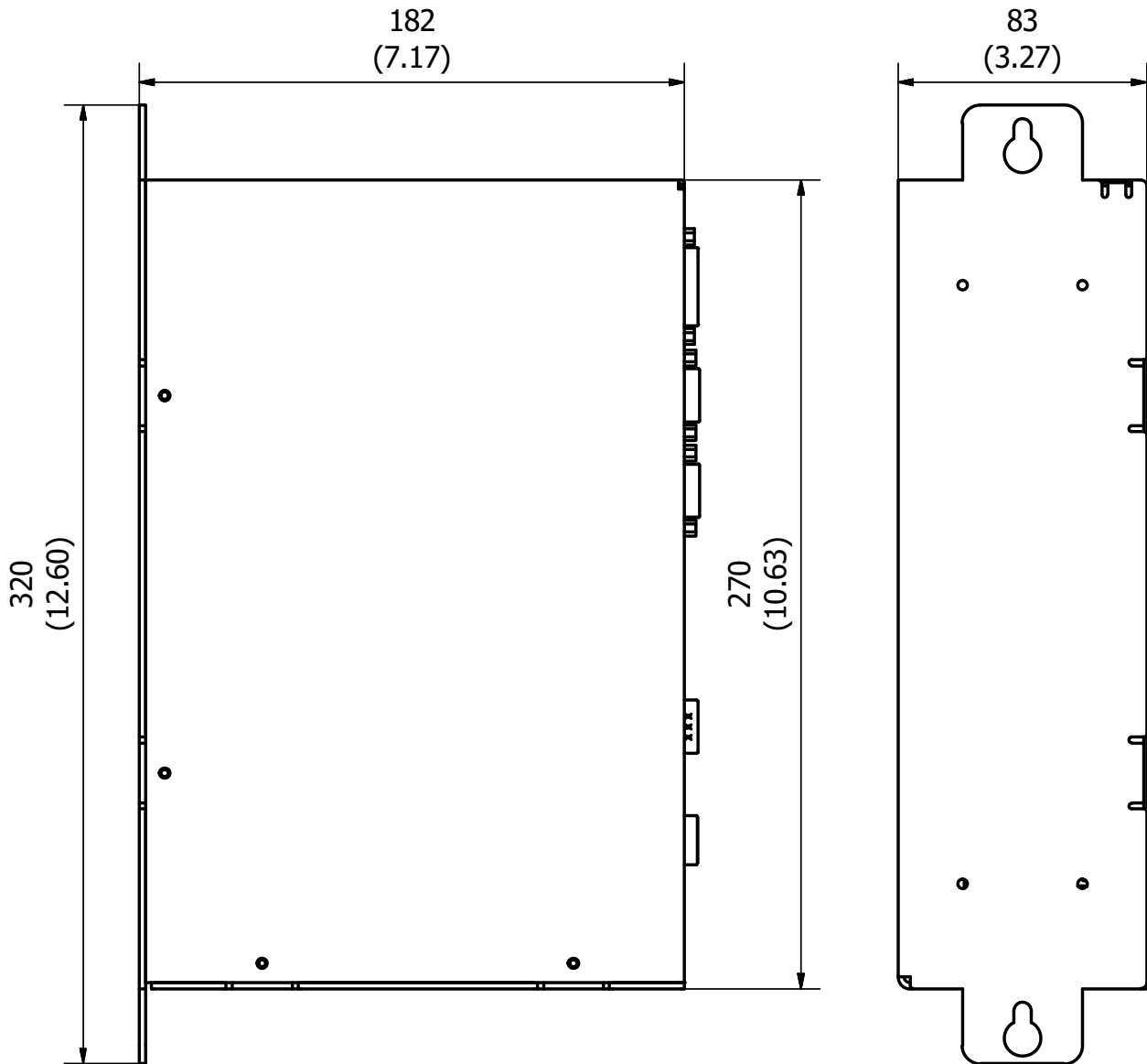
User interfaces (X10, X11)

Connector X10 – Digital Interface (2 x 6 pins)

1 x digital GND	Digital GND for digital inputs
3 x digital inputs	0 – 24 V, galvanically isolated (software adjustable thresholds 0.8 – 23 V)
3 x COM	Separate references for digital outputs
3 x digital outputs	0 – 24 V (relay, normally open contacts)
1 x auxiliary power supply	5 V, 200 mA (max.) e.g. for digital inputs/outputs
1 x GND	Reference for auxiliary power supply

Connector X11 – Analog Interface (2 x 6 pins)

1 x analogue GND	
3 x analogue inputs	0 – 10 V
3 x analogue outputs	0 – 10 V
2 x temperature measurement input	PT100
1 x auxiliary power supply	10 V, 100 mA



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