

# PIMag<sup>®</sup> Motion Controller for Magnetic Direct Drives

1 Axis, for 3-Phase Linear Motors



## C-891.130300

- Output current 5 A
- 20-kHz control bandwidth
- Protection against overload, overcurrent, overtemperature
- Digital inputs and outputs for trigger and stop function
- USB interface for commanding and configuration

### Digital motion controller for PIMag<sup>®</sup> linear motors

1 motor channel, 1 sensor channel. For three-phase linear motors with currents of 5 A per phase. Sine-commutated operation, field-oriented current control. Automatic commutation angles adjustment. PID controller for position and velocity.

### Encoder inputs

Differential signal transmission for digital (A/B) or analog (sin/cos) encoder signals. Supports BiSS interface for absolute encoders. TTL inputs for limit and reference point switches.

### Extensive functionality

Protection for motor and motor driver due to protective shutdown and current limitation. Motor stop via external switch. Data recorder, wave generator, macros. Extensive software support, e.g., for NI LabVIEW, C, C++, MATLAB, Python. PIMikroMove user software.

### Interfaces

USB and RS-232 for commanding. Digital inputs and outputs for automation. Analog input for recording an external sensor signal.

## Specifications

	C-891.130300
Function	PIMag® motion controller for 3-phase linear motors
Motor channels	1
Sensor channels	1
Supported functions	Point-to-point motion. Data recorder. Wave generator. Macros. Automatic commutation angles adjustment for 3-phase linear motors.
Safety features	Motor stop via external switch. Overload protection of the motor driver. Overheat protection of the motor. Overcurrent protection of the system.

Motion and servo controller	C-891.130300
Controller type	PID controller for position and velocity, parameter changing during operation
Servo frequency	20 kHz
Profile generator	Trapezoidal velocity profile, setting of maximum velocity and acceleration
Encoder input	Sin/cos, A/B (TTL, differential), BiSS interface for absolute encoder
Reference and limit switches	TTL

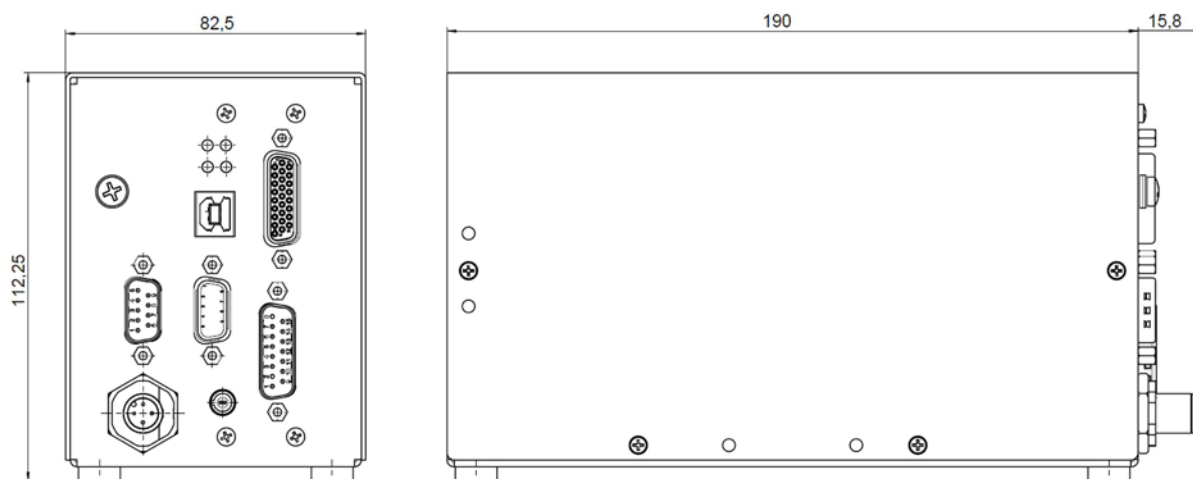
Electrical properties	C-891.130300
Max. output voltage	48 / 24 V depending on operating voltage
Max. average output current, amplitude of sine	5 A
Peak output current, amplitude of sine	10 A
Max. average output current, RMS	3.6 A
Peak output current, RMS	7.2 A

Interfaces and operation	C-891.130300
Communication interfaces	USB, RS-232
Motor connector	HD D-sub 26 (f)
Sensor connector	D-sub 15 (m)
I/O lines	HD D-sub 15 (f): 4 x digital input, 4 x digital output (TTL) LEMO EPG.00.302.NLN: Analog input -10 to 10 V
Command set	PI General Command Set (GCS)
User software	PIMikroMove
Application programming interfaces	API for C / C++ / C# / VB.NET / MATLAB / Python, drivers for NI LabVIEW

Miscellaneous	C-891.130300
Operating voltage	48 / 24 V DC (Power adapter not in the scope of delivery. Available as an accessory.)
Max. current consumption	10 A (load-dependent)
Operating temperature range	5 to 40 °C
Mass	1.0 kg
Dimensions	190 mm × 83 mm × 110 mm (with rubber feet and connection for supply voltage: 206 mm x 83 mm x 112 mm)

Ask about customized versions.

## Drawings / Images



*C-891.130300: dimensions in mm*

## Ordering Information

### **C-891.130300**

PIMag® motion controller for magnetic direct drives, 1 axis, 24/48 V, 5 A, USB and RS-232 interface

### **Accessories**

#### **C-501.24120M12**

Wide input range power supply 24 V 120 W, M12 4-pin