

PIMag[®] Controller Module

For the C-885 PIMotionMaster Modular Controller System



C-891.11C885

- For 3-phase linear motors
- Output current 5 A
- 20-kHz control bandwidth
- BiSS interface for absolute encoders
- Protection against overload, overcurrent, overtemperature

Motor control, servo control, and protective functions

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 adjustment of the commutation angle. PID controller for position and velocity. Protection for motor and motor driver due to protective shutdown and current limitation.

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 switches.

Plug-and-play installation in the C-885 PIMotionMaster

Can be inserted in any free slot. Automatic detection and external communication (USB, Ethernet) by the processor and interface module of the C-885. Can be expanded with optional digital inputs and outputs. Power via the power supply of the C-885.

Accessories required for digital inputs and outputs

C-885.AA01 adapter board and C-885.iD digital interface module.

Specifications

C-891.11C885	
Function	PIMag® motion controller module for 3-phase linear motors, for C-885 PIMotionMaster modular multi-axis controller system
Motor channels	1
Sensor channels	1
Motion and servo controller	
Controller type	PID controller for position and velocity, parameter changing during operation
Servo frequency	20 kHz
Dynamics profile	Trapezoidal velocity profile, setting of maximum velocity and acceleration
Encoder input	Sin/cos, A/B (TTL, differential), BiSS interface for absolute encoder
Limit switches	2 × TTL
Reference switch	1 × TTL
Electrical properties	
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	
Communication interfaces	USB or Ethernet, via C-885.M1 / C-885.M2 Digital processor and interface module
Motor connector	HD D-sub 26 (f)
Sensor connector	D-sub 15 (m)
I/O connector	Optional; requires a C-885.iD digital interface module and a C-885.AA01 adapter board: 4 digital inputs (TTL), 4 digital outputs (TTL)
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
Supported functions	Point-to-point motion. Data recorder. Wave generator. Macros. Automatic adjustment of the commutation angle for 3-phase linear motors.
Safety features	Overload protection of the motor driver. Overheat protection of the motor. Overcurrent protection of the system.
Miscellaneous	
Operating voltage	24 V DC or 48 V DC, supply via C-885
Max. current consumption	10 A (load dependent)
Operating temperature range	5 to 40 °C
Mass	130 g
Dimensions	186.42 mm × 128.4 mm (3 RU) × 19.98 mm (4 HP); width without C-885.AA01 adapter board Width with adapter board: 31 mm

Ask about customized versions.

Ordering Information

C-891.11C885

PIMag® controller module for magnetic direct drives, 1 channel, for PIMotionMaster, HD D-sub 26, PID controller

Accessories

C-885.ID

Digital interface module for PIMotionMaster

C-885.AA01

Adapter board from C-891.11C885 to C-885.iD in PIMotionMaster