

PIMag® Controller Module

For the C-885 PIMotionMaster Modular Controller System



C-891.10C885

- Maximum average current consumption 3 A
- 20-kHz control bandwidth
- BiSS interface for absolute encoders
- Data recorder
- Wave generator

Digital motion controller for PIMag® linear motors

1 motor channel, 1 sensor channel. For three-phase linear motors, maximum current consumption 3A (rms) per phase. Sine-commutated operation, field-oriented current control. Automatic detection of the motor phase. PID controller for position and velocity. Servo cycle frequency 20 kHz.

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

Data recorder: Recording of operating data such as motor current, velocity, position or position error. Wave generator: Storage and output of periodic motion profiles. Supports direction sensing reference point switches. Extensive software support, e.g., for LabVIEW, dynamic libraries for Windows and Linux.

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.

Specifications

C-891.10C885	
Function	PIMag® motion controller module for 3-phase linear motors, sine-commutated operation, field-oriented current control, for C-885 PIMotionMaster modular multi-axis controller system
Motor channels	1
Sensor channels	1
Motion and control	
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	Analog (sin/cos) or digital signals (A/B differential, TTL, or BISS interface)
Limit switches	2 × TTL
Reference point switch	1 × TTL
Electrical properties	
Max. output voltage	24 V
Max. output current	3 A _{rms}
Interfaces and operation	
Communication interfaces	USB or Ethernet, via C-885.M1 / C-885.M2 Digital Processor and Interface Module
Motor connection	HD Sub-D 26 (f)
Sensor connection	Sub-D 15 (m)
I/O lines	Optional with C-885.iD Digital Interface Module for PIMotionMaster: 4 analog/digital inputs (0 to 5V/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 LabVIEW
Supported functions	Point-to-point motion, data recorder, wave generator, automatic detection of the motor phase
Safety features	Switch-off via external switch, motor driver overload protection, motor overheat protection, system overcurrent protection
Miscellaneous	
Operating voltage	24 V DC, supply via C-885
Max. current consumption	4.5 A
Operating temperature range	5 to 40 °C
Mass	130 g
Dimensions	186.42 mm × 128.4 mm (3 RU) × 19.98 mm (4 HP)

Ordering Information

C-891.10C885

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