

Mercury Step Stepper Motor Controller Module

For the C-885 PIMotionMaster Modular Controller System



C-663.12C885

- High microstep resolution
- Fast-running motor (output voltage 48 V, even at lower operating voltage)
- Closed-loop operation of 2-phase stepper motors
- Support for external sensors
- ID chip detection for fast startup

Mercury Step controller module for 2-phase stepper motors

1 axis. Microstep resolution: 1/2048 full step. Closed-loop operation. Point-to-point motion, trapezoidal velocity profile. Fast-running motor, even at lower operating voltage.

Extensive functionality

Powerful macro command language. Nonvolatile macro storage, e.g., for stand-alone operation with autostart macro. Data recorder. ID chip for fast startup. Parameter changing during operation. Extensive software support, e.g., for LabVIEW, dynamic libraries for Windows and Linux.

Interfaces

Differential signal transmission for digital (A/B) encoder signals. TTL inputs for limit and reference point switches. Input for RS-422 signals for index switch. I/O lines (analog/digital) for automation.

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-663.12C885
Function	Mercury Step stepper motor controller module, for C-885 PIMotionMaster modular multi-axis controller system
Drive types	2-phase stepper motor
Axes	1
Supported functions	Startup macro; data recorder for recording operating data such as velocity, position or position error; internal safety circuitry: Watchdog timer; ID chip detection (for future use)
Motion and control	C-663.12C885
Controller type	PID, parameter changing during operation
Dynamics profile	Trapezoidal velocity profile, point-to-point motion
Microstep resolution	1/2048 full step
Encoder input	A/B quadrature, TTL, RS-422; 60 MHz
Limit switches	2 × TTL, programmable
Reference point switch	1 × TTL, programmable
Index switch	1 × RS-422 for index pulse
Stall detection	Automatic motor stop when a programmable position error is exceeded (only in conjunction with sensor)
Electrical properties	C-663.12C885
Max. output voltage	0 to 48 V (via voltage transformer at lower operating voltage) for direct control of stepper motors
Max. output power	60 W
Average output power	48 W
Power consumption, full load	48 W (max.)
Power consumption without load	3 W
Current limitation per motor phase	2.5 A
Interfaces and operation	C-663.12C885
Communication interfaces	USB or Ethernet, via C-885.M1 / C-885.M2 Digital Processor and Interface Module
Motor / sensor connection	HD Sub-D 26 (f)
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
Miscellaneous	C-663.12C885
Operating voltage	24 V DC or 48 V DC, supply via C-885
Operating temperature range	5 to 50 °C (temperature protection switches off at excessively high temperatures)
Mass	132 g
Dimensions	186.42 mm × 128.4 mm (3 RU) × 19.98 mm (4 HP)

Ordering Information

C-663.12C885

Mercury Step stepper motor controller module, 1 axis, HD Sub-D 26, for PIMotionMaster, 1 axis, closed-loop and open-loop operation, support of external sensors