

NEXACT® Controller Module

For the C-885 PIMotionMaster Modular Controller System



E-861.11C885

- High-speed encoder input
- Data recorder
- Nonvolatile EEPROM for macros and parameters
- Control signal for motor brake
- Suitable for vacuum use because the sensor can be switched off

Digital servo controller for NEXACT® piezo motors

1 axis. Supports motion types of the NEXACT® drives: Nanostepping mode for longer distances. Highly dynamic positioning within one step with resolutions below one nanometer. Sensor can be switched off via parameter, e.g., for use in a vacuum.

Extensive functions, software support

Powerful macro command language. Nonvolatile macro storage, e.g., for stand-alone operation with autostart macro. Data recorder. PID controller, parameter changing during operation. Extensive software support, e.g., for NI LabVIEW, C, C++, MATLAB, Python. PIMikroMove user software.

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

E-861.11C885	
Function	Controller module for NEXACT® drives, for C-885 PIMotionMaster modular multi-axis controller system
Drive type	NEXACT® piezo motor
Axes	1
Supported functions	Startup macro. Data recorder for recording operating data such as motor voltage, velocity, position or position error. Internal safety circuitry: Watchdog timer.
Motion and control	
Controller type	PID controller, parameter changing during operation
Dynamics profile	Trapezoidal velocity profile
Encoder input	Analog encoder input sine-cosine, interpolation factor to 16384x; interpolation electronics preset for differential transmission, 1 V _{pp} and 2.5 V encoder offset signal
Stall detection	Automatic motor stop when a programmable position error is exceeded
Limit switches	2 × TTL
Reference point switch	1 × TTL
Electrical properties	
Max. output power	40 W
Output voltage	-10 V to +45 V
Max. current consumption	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 Sub-D 15 (f)
Sensor connection	HD 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 / Python, drivers for NI LabVIEW
Miscellaneous	
Operating voltage	24 V DC, supply via C-885 PIMotionMaster
Operating temperature range	10 to 40 °C
Mass	220 g
Dimensions	186.42 mm × 128.4 mm (3 RU) × 19.98 mm (4 HP)

Ordering Information

E-861.11C885

NEXACT® controller module for PIMotionMaster, 1 axis, for systems with NEXACT® piezo motor