

C-663 Mercury Step Controller 1-Axis Networkable Stepper-Motor Controller



C-663 Mercury Step stepper motor controller for cost-sensitive micropositioning tasks

- High Performance at Low Cost
- Stand-Alone Functionality
- Network Capability for Multi-Axis Applications
- Compatible and Networkable with Mercury DC-Motor Controllers
- Joystick Port for Manual Control
- Non-Volatile Macro Memory
- Data Recorder
- Parameters Changeable On-the-Fly

The Mercury Step stepper motor controller is the perfect solution for cost-effective and flexible motion control applications where a precision positioner is to be controlled by a

Application Examples

- Flexible automation
- Handling
- Quality control
- Testing equipment
- Photonics applications
- Fiber positioning

PC or PLC (programmable logic controller). The C-663 supplements the successful C-863 Mercury servo motor controller.

Microstepping of 1/16 full step (up to 6400 steps/rev. with PI stepper motors) provides for ultra-smooth, high-resolution motion.

Multi-Axis Control

Up to 16 Mercury class controllers can be networked and controlled over a single PC interface.

Such daisy chain networks are flexible, can be extended at any

time and are compatible with over PI controllers for DC servomotors or stepper motors, PLine® ultrasonic piezomotor drives or piezostepping drives.

Flexible Automation

The C-663 offers a number of features to achieve automation and handling tasks in research and industry in a very cost-effective way. Programming is facilitated by the high-level mnemonic command language with macro and compound-command functionality. Macros can be stored in the non-volatile memory for later recall.

For easy synchronization of motion with internal or external trigger signals four input and four output lines are provided. A joystick can also be connected for manual control.

Stand-alone capability is provided by a user-programmable autostart macro to run automation tasks at power up (no runtime computer communication required!).

User-Friendly: Comprehensive Software Package and Two Interface Options

Easy data interchange with laptop or PC is possible via the USB interface. To facilitate industrial applications, an RS-232 interface is also standard.

The included software supports networking of multiple controller devices. LabVIEW drivers and Windows DLLs allow for easy programming and integration into your system. Mercury Step controllers can be operated using the PI General Command Set (GCS). PI-GCS allows networking of different PI-controllers such as piezo drivers and multi-axis servo controllers with minimal programming effort.

Ordering Information

C-663.11
Mercury Step Stepper Motor Controller with Wide-Range Power Supply, 24 V

C-819.20
2-Axis Analog Joystick for Mercury Controller

C-819.20Y
Y-Cable for Connecting 2 Controllers to C-819.20

C-170.IO
I/O cable, 2 m, open end

C-170.PB
Push Button Box, 4 Buttons and 4 LEDs

Contents of Delivery

Each Mercury Step comes with a wide-range power supply, RS-232 communications cables, a USB cable and a comprehensive software package.



Technical Data

Model	C-663.11
Function	Stepper motor controller, stand-alone capability
Drive type	2-phase stepper motor
Channels	1
Motion and control	
Trajectory profile modes	Trapezoidal, point-to-point
Microstep resolution	1/16 full step
Limit switches	2 x TTL, programmable
Reference switches	1 x TTL, programmable
Motor brake	1 x TTL, programmable
Electrical properties	
Operating voltage	15 to 30 V
Current limitation per motor phase	1000 mA
Interface and operation	
Interface/Communication	USB, RS-232 (bus architecture)
Motor connector	Sub-D 15 (f)
Controller network	Up to 16 units* on single interface
I/O ports	4 analog/digital in, 4 digital out
Command set	PI General Command Set (GCS)
User software	PIMikroMove®
Software drivers	LabVIEW drivers
Supported functionality	Start-up macro, data recorder for recording parameters as motor input voltage, velocity, position or position error
Manual control	Joystick, Y-cable for 2D motion, pushbutton box
Miscellaneous	
Operating temperature range	0 to 50 °C
Mass	0.3 kg
Dimensions	130 x 76 x 40 mm ³

*16 with USB; 6 with RS-232 (depending on RS-232 output driver of PC)

Linear Actuators & Motors

Nanopositioning/Piezoelectrics

Nanometrology

Micropositioning

Hexapod 6-Axis Systems /
Parallel Kinematics

Linear Stages

Translation (X)

Vertical (Y)

Multi-Axis

Rotary & Tilt Stages

Accessories

**Servo & Stepper
Motor Controllers**

Single-Channel

Hybrid

Multi-Channel

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