

PILine® Motion Controller

For Two-Axis Positioning Stages with PLine® Ultrasonic Piezo Motors



C-867.2U2

- Integrated power amplifier with dynamic frequency control
- Multifunctional encoder input: A/B, sin/cos, BiSS
- Macro programmable for stand-alone functionality
- Integrated interfaces: USB, RS-232, TCP/IP, SPI, I/O, joystick
- Daisy chain networking
- Trajectory support for 1- or 2-D motion patterns

Servo controller and power amplifier

Two-axis benchtop device with special PID controller for PLine® ultrasonic piezo motors. Network capable with up to 16 units on a single interface. Power amplifier for PLine® ultrasonic piezo motors and stages with performance class 1 and 2 piezo motors. Dynamic frequency control for optimum control.

Motion profiles

Point-to-point, trapezoidal velocity profile. User-definable trajectories (e.g., circles, sine curves) from externally fed points.

Interfaces and communication, encoder input

USB, RS-232, TCP/IP, SPI interface for commanding. I/O lines for automation. Connectors for analog and digital joystick. Differentially transmitted A/B signals (TTL) or sin/cos signals. BiSS interface for absolute encoders. Inputs for TTL signals from limit and reference point switches.

Extensive functions, software support

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

Fields of application

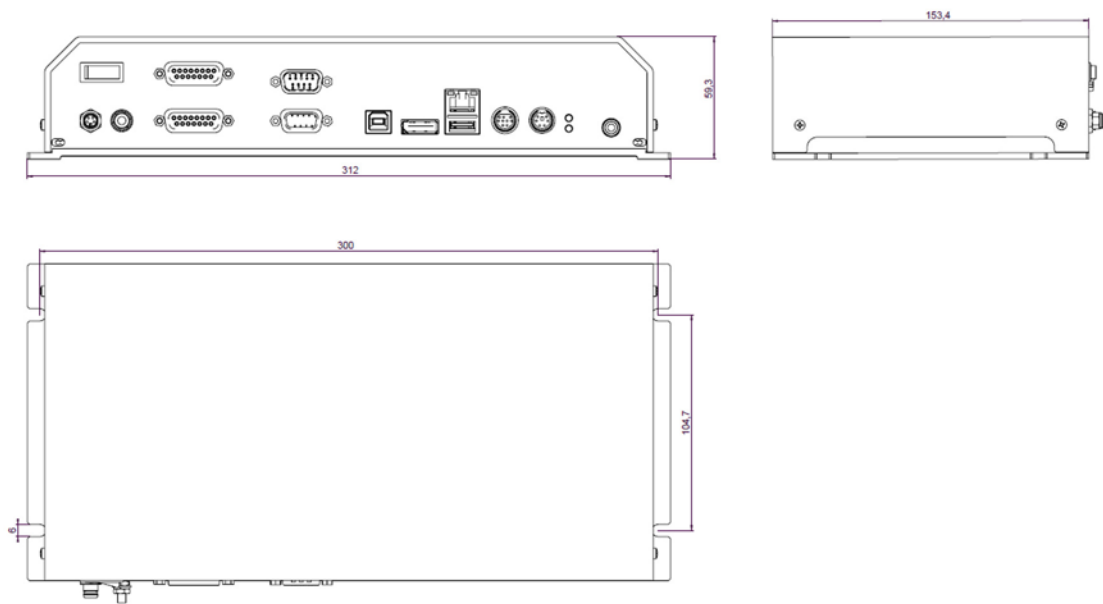
- Micromanipulation
- Automation
- Biotechnology
- Sample manipulation
- Sample positioning
- Optical measuring technology

Specifications

C-867.2U2	
Function	Controller for XY positioning, scanning or microscope stages
Drive types	Performance class 1 and 2 PLine® motors
Axes	2
Motion and control	
Controller type	Programmable PID control, parameter changing during operation
Motion profiles	Point-to-point trapeze, user-definable trajectories
Encoder input	Sin/cos (differential), A/B (TTL, differential), BiSS interface
Stall detection	Servo off, triggered by programmable position error or power level
Limit switches	2 programmable TTL lines per axis
Reference point switch	1 programmable TTL line per axis
Electrical properties	
Max. output power per axis	15 W
Max. output voltage per axis	200 V _{pp}
Interfaces and operation	
Communication interfaces	USB, RS-232, TCP/IP, SPI
Motor connection	Sub-D 15 (f)
Controller network	Up to 16 units on a single interface
I/O lines	4 analog / digital inputs 4 digital outputs to mini DIN, 9-pin Digital: TTL Analog: 0 to 5 V
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	Startup macro. Data recorder for recording operating data such as motor voltage, velocity, position or position error. ID chip detection.
Manual control	Pushbutton box, analog or digital joystick (for 2 axes)
Miscellaneous	
Operating voltage	24 V DC (external power adapter in the scope of delivery)
Max. current consumption	600 mA plus motor current (max. 4 A)
Operating temperature range	5 to 40 °C
Mass	1.62 kg
Dimensions	312 mm × 153.4 mm × 59.3 mm (incl. mounting rails)

Ask about customized versions.

Drawings / Images



C-867.2U2, dimensions in mm



U-780 PI Line[®] XY stage system with C-867.2U2 controller and joystick

Ordering Information

C-867.2U2

Piezo motor controller for PLine® systems, 2 axes, USB, RS-232, TCP/IP, SPI, I/O, analog or digital joystick, networkable via daisy chain

Accessories

C-862.CN

Network cable for daisy chain network, 30 cm

C-862.CN1

Network cable for daisy chain network, 1 m

C-862.CN2

Network cable for daisy chain network, 3 m

C-815.553

Patch cable 1:1, for connecting controller and PC via a TCP/IP network

C-815.563

Patch cable twisted, for connecting controller and PC directly via TCP/IP

C-815.34

RS-232 null modem cable, 3 m, 9/9-pin

C-170.PB

Pushbutton box with 4 buttons and 4 LEDs

C-170.IO

I/O cable, 2 m, open end

C-819.20

Analog joystick for 2 axes

C-819.30

Analog joystick for 3 axes

C-819.JA

Analog joystick for 2 axes, 3 programmable buttons

C-819.JD

Digital joystick for 2 axes, 3 programmable buttons