PILine® Motion Controller

For Ultrasonic Piezo Motors, 1 Axis, Inexpensive and Compact

C-877.1U11

- Integrated power amplifier
- PID servo control with dynamic parameter switching
- Macro programmable for stand-alone functionality
- Data recorder
- Extensive software support, e.g., for NI LabVIEW, C, C++, MATLAB, Python

Servo controller and power amplifier

Single-axis benchtop device with special PID controller for ultrasonic piezo motors. Integrated power amplifier for PILine® drives and class 1 positioners.

Interfaces and communication, encoder input

USB interface for commanding. Differential signal transmission (A/B). TTL inputs for 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

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Specifications

	C-877.1U11
Function	Controller for positioners or scanning stages with PILine® class 1 ultrasonic piezo motors
Axes	1

Motion and control	C-877.1U11
Controller type	PID controller, parameter changing during operation
Servo cycle time	100 µs
Profile generator	Point-to-point motion. Trapezoidal velocity profile.
Encoder input	A/B quadrature TTL level, differential according to RS-422
Stall detection	Automatic motor stop when a programmable position error is exceeded
Limit switches	2 × TTL (programmable polarity)
Reference point switch	1 × TTL

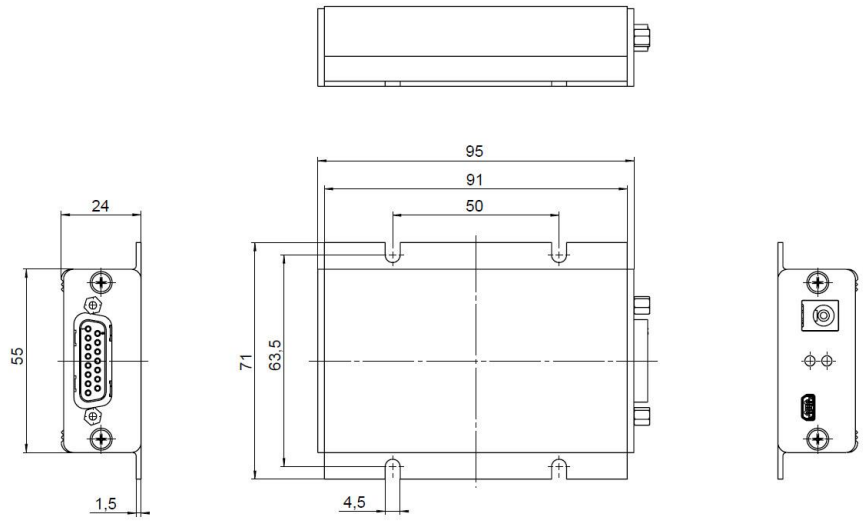
Electrical properties	C-877.1U11
Max. output power per axis	15 W
Max. output voltage per axis	200 V_{pp}, 71 V_{eff}

Interfaces and operation	C-877.1U11
Communication interfaces	USB
Motor / sensor connection	Sub-D 15 (f)
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. Internal safety circuitry: Watchdog timer. ID chip detection

Miscellaneous	C-877.1U11
Operating voltage	24 V DC from external power adapter (in the scope of delivery)
Max. current consumption	300 mA plus motor current (max. 0.8 A)
Operating temperature range	5 to 40 °C
Mass	0.13 kg
Dimensions	95 mm × 71 mm × 24 mm (incl. mounting rails)

Ask about custom designs!

Drawings / Images



C-877.1U11, dimensions in mm

Ordering Information

C-877.1U11
Compact, inexpensive PILine® Controller, 1 axis, with USB interface, for PILine® systems with low power consumption