

# PILine® Motion Controller

FOR ULTRASONIC PIEZOMOTORS, 1 AND 2 AXES



## C-867

- For PILINE® ultrasonic piezo linear motors
- 50-MHz encoder inputs for high velocity and position resolution
- USB, RS-232 and analog interfaces (e.g. for a joystick)

### Servocontroller and power amplifier

One and two channels, bench top, proprietary PID control for ultrasonic motors, network-compatible with up to 16 units per interface

### For PILINE® ultrasonic linear motors

Power amplifier for PILINE® drives and stages with up to two piezomotors per channel. Automated frequency tracking for improved servo performance

### Incremental encoders

Differential signal transmission (A/B). Evaluation of TTL signals for limit and reference point switches

### Digital communication

USB, RS-232 and analog interfaces (e. g. for a joystick). Data recorder. Powerful macro programming language, e. g. for standalone operation. Extensive software support, e. g. LabVIEW, shared libraries for Windows and Linux



The two-channel C-867.260 controller serves to control XY scanning stages, as in this case a customized M-686 stage for microscopy

	C-867.160	C-867.260
Function	Controller for single-axis positioning or scanning stages	Controller for XY positioning or scanning stages
Drive type	PILine® motors, single and dual drives with P-661, P-664, U-161 and U-164	
Channels	1	2
Motion and control		
Servo characteristics	Programmable PID filter, parameter changes on the fly	
Trajectory profile modes	Trapezoid	
Encoder input	A/B (quadrature) differential, 50 MHz	
Stall detection	Servo off, triggered by programmable position error	
Limit switches	2 TTL (programmable) per channel	
Reference point switch	1 TTL per channel (active high/low, programmable)	
Electrical properties		
Max. output power per channel	15 W	
Max. output voltage per channel	200 V <sub>pp</sub>	
Interface and operation		
Communication interfaces	USB, RS-232	
Motor connector	MDR14	2 × MDR14
Controller network	Up to 16 units on single interface	
I/O ports	4 analog/digital in 4 digital out (Mini-DIN, 9-pin) Digital: TTL Analog: 0 to 5 V	
Command set	PI General Command Set (GCS)	
User software	PIMikroMove	
Software drivers	GCS-DLL, LabVIEW driver	
Supported functionality	Start-up macro, macro, data recorder for recording parameters as motor input voltage, velocity, position or position error	
Manual control	Pushbutton box, joystick (for two axes), Y cable for 2-D motion	Pushbutton box, joystick (for two axes)
Miscellaneous		
Operating voltage	24 VDC from external power supply (included)	
Max. operating current	300 mA plus motor current (max. 2 A)	600 mA plus motor current (max. 4 A)
Operating temperature range	5 to 40°C	
Mass	1 kg	2.4 kg
Dimensions	206 × 130 × 66 mm (incl. mounting rails)	320 × 150 × 80.5 mm (incl. mounting rails)

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Appendix