E-545 PI nano™ Piezo Controller

3 Channels with USB Interface

E-545 PI nano™ series nanopositioning stage controller

- **Low-noise 24-bit D/A Converter**
- **Sample Rate 25 kHz**
- **Linearization for Piezoresistive Sensors**
- **Notch Filter for Higher Bandwidth**
- **TCP/IP, USB und RS-232 Interfaces**
- **3 x 14 W Peak Power**
- **Wave Generator with Programmable Trigger-I/O**

The E-545 controller is ideally suited for the PI nano™ stage series P-545 for super-resolution microscopy. The controller meets all demands for this applications and provides useful additional functionality.

USB Interface

The microprocessor controlled interface is equipped with low-noise, 24-bit D/A converters and can be controlled through three digital interfaces: TCP/IP, USB oder RS-232.

Alternatively, stand-alone operation is possible by uploading macro command sequences to the internal non-volatile memory.

Wave Generator

The integrated wave generator can output periodic motion profiles. In addition to sine and triangle waves, arbitrary, user-defined motion profiles can be created and stored.

Extensive Software Support

The controllers are delivered with Windows operating software. Comprehensive DLLs, LINUX and LabVIEW drivers are available for automated control.

Ordering Information

E-545.3RD
PI nano™ Multi-Channel Piezo Controller with High-Speed Digital Interface, 3 Channels, Piezoresistive Sensors, Sub-D Connectors

Technical Data

Model	E-545.3RD
Function	Piezo Servo-Controller for PI nano™ stages
Axes	3
Sensor	
Servo characteristics	P-I (analog), notch filter
Sensor type	Piezoresistive sensors
Amplifier	
Min. output voltage min.	-20 to 120 V
Peak output power, < 5 ms	14 W
Average current	6 W
Peak current, < 5 ms	140 mA
Average current	60 mA
Current limitation	Short-circuit-proof
Voltage gain	10 ±0.1
Interfaces and operation	
Interface / communication	Ethernet (TCP/IP), USB, RS-232
Piezo system connector	Sub-D 25
Command set	PI General Command Set (GCS)
User software	PIMikroMove™
Supported functionality	Wave generator, data recorder, macro programming
Miscellaneous	
Operating temperature range	+5 to +50 °C
Overheat protection	Deactivation at 85°C
Operating Voltage	12 to 30 VDC, stabilized
Current consumption	2 A