

## 30V300 series – OEM piezo controller

### Compact analog piezo controller

#### Concept:

The 30V300 OEM piezo controller board series is especially made for controlling high precision, flexure guided piezo actuator stages used in highly dynamic nanopositioning tasks. One of the key features is the 300 mA permanent output current which enables the 30V300 piezo controller unit series to drive piezo actuator elements with the highest frequency. The driven piezo stages can reach the shortest settling times and allow high precision positioning tasks to be realized in the millisecond range.

The 30V300 series is available in 3 different casing styles for highest flexibility in use. The robust metal casing is available in a table top version (please see 30V300 CLE image), as an industrial rack mount 19"-version, and in a screw slot mounting version. These various options support flexibility in use and industrial compatibility!

#### Specials:

The 30V300 piezo controller series displays a superior voltage noise of the output signal of only 0.3 mV. This guarantees the achievement of nearly unlimited positioning resolution of piezoelectric actuators, down to a single step resolution in the sub-nanometer range.

The 30V300 CLE is equipped with an integrated sensor controller module which allows the highly dynamic control of piezoelectric elements equipped with an integrated feedback measurement system.

#### Interface:

A potentiometer on the front panel of the 30V300 controller series allows the user to manually change the DC level. An analog modulation input is also available for an external control signal from 0 to 10 V. All 30V300 piezo amplifiers come with a power supply module for 10 to 30 VDC.



Image: 30V300 CLE

#### Product Highlights:

- 1 channel low noise piezo controller
- main supply voltage of 10...30 VDC
- 300 mA permanent output current
- robust casing
- small dimensions
- CLE version for all closed loop systems
- casing design changeable between 19" screw slot and stand-alone version

#### Application:

- high speed and precision control of piezo actuating systems in industrial and laboratory environments
- automatic control for high resolution
- nanopositioning applications

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### Technical data:

OEM piezo controller		30V300 and 30V300nanoX series			
description		30V300	30V300 CLE	30V300 nanoX	30V300 nanoX CLE
part number		<b>E-460-013</b>	<b>E-460-113</b>	<b>E-468-013</b>	<b>E-468-113</b>
casing style		table top	table top	table top	table top
number of channels		1	1	1	1
display		without	without	without	without
output voltage signal		-20...130V		-20V...130V (only nanoX actuators)	
output current (permanent)		300mA			
voltage noise		< 0.3mVRMS@500Hz			
DC Offset		incremental potentiometer			
piezo connector	voltage	LEMO 0S.302		ODU series L 3pin	
	sensor	-	ODU 4pin	-	ODU 4pin
sensor controller		none	SG, CAP	none	SG, CAP
PC interface					
modulation input		0...+10V			
modulation input impedance		1kOhm			
monitor output impedance (typ.)		25kOhm			
monitor output		-2...+13V	0...+10V	-2...+13V	0...+10V
connector modulation/monitor		BNC			
working temperature range		5°C up to 35°C (41F to 95F)			
main supply voltage		10V DC ... 30V DC			
connector main supply voltage		2.1mm Barrel type			
specials		power on delay, overdrive protection, short circuit proofed			
dimensions (lxwxh)		235.5x85.7x105mm		235.5x85.7x105mm	
part.No.: series casing with screw slots		<b>E-460-011</b>	<b>E-460-111</b>	<b>E-468-011</b>	<b>E-468-111</b>
dimensions (lxwxh)		235.5x87.5x130mm		235.5x87.5x130mm	
part.No.: series casing 19" rack mount		<b>E-460-012</b>	<b>E-460-112</b>	<b>E-468-012</b>	<b>E-468-112</b>
dimensions (lxwxh)		16TE x 3HE		16TE x 3HE	

\* for piezoelectric actuators with part number suffix "E" - with integrated strain gage or capacitive feedback sensor

Specifications subject to change without notice!

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