

electronic • analog • table top

NV 40/1 CLE

- analog 1-channel piezo amplifier
- permanent 40mA output current
- low noise output signal
- table top casing
- analog input and output signals
- RS232 interface
- positioning control for strain gage and capacitive sensors (ASI Function)



fig.: NV 40 /1 CLE

applications:

- lasers and photonics
- microscopy
- research & development

Concept

The voltage amplifier NV 40/1 CLE is well suited for single axis, high resolution piezo elements and is made for use in research applications. The device will be manufactured as a “stand alone” unit and includes the voltage amplifier and the sensor positioning control. This amplifier is well suited for sub-nm positioning tasks due to a very low voltage noise of only 0.3mVRMS.

Specials

The integrated electrical positioning control prevents creep and hysteresis, a typical characteristic of piezo electrical actuators. The controller obtains the linear data of the actuator and strain gage, so it is possible to switch actuators without recalibration. The memory-function can save and retrieve position data.

Interface

The NV 40/1 CLE makes it possible to control the piezo elements through an analog modulation input, by computer interface (RS232 line), or by manual operation – through a potentiometer. The 5-digit display shows the parameters in volts or micrometers. The monitor output receives a signal (0 to +10V) from the measurement system and therefore, the position information.

Technical data		NV 40/1 CLE		
		E-101-73	E-101-74	E-101-75
part. no.	unit			
power supply	-	230V AC	115V AC	95V AC
number of channels	-	1		
display	-	LED - 5 digits		
sensor controller	-	SG, capacitive		
output voltage (adjustable by via manual encoder)	V	-10...+150		
output current (continuous)	mA	40		
voltage noise	-	<0.3mV _{RMS} @500Hz		
connector output voltage	-	LEMO 0S.302		
connector sensor system	-	ODU4pin		
modulation input	V	0...+10		
input impedance	kΩ	10		
monitor output	V	0...+10		
monitor output impedance	Ω	100		
connector modulation/monitor	-	BNC		
interface	-	RS 232		
command parameter resolution	-	16 bit		
software	-	LabView (demo files and dll's)		
dimensions (l x w x h)	mm	200x170x70		
weight	kg	1.6		
operating temperature range	°C (°F)	5°C to 35°C (41°F – 95°F)		
special features		signal values are shown either in volts or microns; memory function		