NV100/D NET Digital Piezo Controller

Concept

The NV100/D is a digital piezo controller with an ethernet interface for remote control and servicing of piezo drives. The user can drive quasi static or dynamic step positioning applications through the network access, allowing more flexibility and the use in critical environmenments.

For the operation of the actuator a control voltage of -20 V to +130 V and a peak output current of 100 mA (2 x 40 mA NanoX®) are supplied.

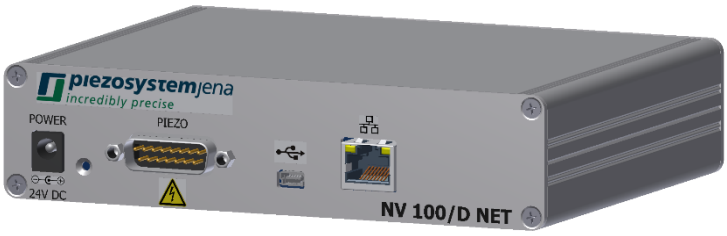
With a 16-bit resolution, the NV100/D NET guarantees high positioning accuracy and low noise.

Due to the stored information in the EEPROM, the actuator is being automatically recognized. The NV100/D can be used with actuators equipped with either strain gauge or capacitive sensors, as well as with actuators without measurement system. The NV100/D also supports actuators based on piezosystem jena's own NanoX® bi-directional actuating technology.

Features:

The NV100/D NET has an automatic sensor identification (ASI) function. All values of the actuating system, like serial number of the actuator, actuator name, control parameters and filter settings, are stored in the actuator plug. This allows an easy exchange of actuators or controllers.

A digital PID controller is integrated in the controller. The user can change the values according to his current setup himself.



perspective view of the NV100/D NET

Product highlights:

- Ethernet connection for remote control
- 100mA peak current
- Automatic Sensor Identification (ASI-function)
- 16 bit resolution
- Voltage supply of several elements can be daisy-chained
- Loop control with adjustable PID controller
- Low-pass filter and slew rate limiter
- USB interface
- Aluminum casing

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Technical Data

part no.		E-730-810
power supply ±10%	V	24VDC
Input current	A	max. 0.3
power connector	-	2.1 mm DC plug
electric fuse	-	1.1 A Polyswitch (resetable)
channels	-	1
output voltage	V	-20 … +130
output current (constant)	mA	80 (2 x 40 in NanoX®-mode)
voltage noise (@500 Hz Band-width)	mV_{RMS}	0.7
actuator connector	-	D-Sub 15 pol.
DA-converter resolution	bit	16
sensor	-	external sensor, strain gauge, capacitive
AD-converter resolution	bit	16
controller architecture		full PID control
features		short circuit proof
interface module		
USB		2.0
Ethernet		RJ45
casing		
dimensions (l * w * h)	mm	165 x 38 x 120
environment		
operating temperature	-	5 … 35°C / 41 … 95°F
humidity	$\%_{rel}$	max. 80, non-condensing
altitude	m	up to 2000

front view of the NV100/D NET

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