

24DV40 Digital Piezo Controller

Concept

The 24DV40 digital piezo controller of piezosystem jena is designed to be used as a single unit for quasi static or dynamic step positioning applications in laboratory settings.

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

Connected actuators are controlled via PC using the integrated USB 2.0 interface. Having a 16-bit resolution, the 24DV40 guarantees high positioning accuracy and low noise.

As usual for digital piezo controllers of piezosystem jena, actuators with D-Sub plugs can be connected. Due to the stored information in the EEPROM, the actuator is being automatically recognized. This includes actuators without measurement system, as well as actuators with either strain gauge or capacitive sensors. Finally, the 24DV40 also supports actuators based on piezosystem jena's own NanoX® technology.

Features:

The 24DV40 comes with the 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. An operator can change the values according to his current setup himself. A low-pass filter and a slew rate limiter is also a very useful feature for numerous applications. Several devices can also be daisy-chained via the power connector.



image: 24DV40

Product highlights:

- Automatic Sensor Identification (ASI-function)
- High resolution: 16 bit
- 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-730-800
power supply $\pm 10\%$	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	40 (2 x 40 in NanoX®-mode)
voltage noise (@500 Hz Bandwidth)	mV _{RMS}	0.8
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
casing		
dimensions (l * w * h)	mm	124 x 105 x 35
environment		
operating temperature	-	5 ... 35°C / 41 ... 95°F
humidity	% _{rel}	max. 80, non-condensing
altitude	m	up to 2000

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Drawing

