piezosystem jena
incredibly precise

d-Drive pro

digital piezo controller

piezosystem jena presents the d-Drive pro, the latest generation of digital control electronics for piezo actuators. The new piezo controller provides 24 bit resolution and simultaneous regulation of 3 axes with an internal data transfer rate of 50 kHz.

The d-Drive pro has a compatible instruction set to that of the existing d-Drive® series. As with the standard d-Drive® all digital piezo actuators can be controlled via PC. The d-Drive pro also shares the same great features including: freely programmable frequency generator, adjustable slew-rate, as well as notch and low pass filters. The d-Drive pro also allows for the exchanging of actuators in the field through Automatic Sensor Identification (ASI) and Automatic Sensor Calibration (ASC). The new integrated Field Programmable Gate Array (FPGA) offers the users of the d-Drive pro entirely new possibilities with the highest flexibility.
Special highlights include the high 24 bit resolution and simultaneous control of up to 3 axes. The interfaces available to the user are RS232, USB and Ethernet as well as an analog modulation input and monitor output.

New functions like curve tracking or temperature monitoring complete the d-Drive pro and enable new applications for daily use. The output current of a single axis is adjustable up to 300 mA.

We will be happy to help you to find a solution for your application.

image: d-Drive pro

characteristics:

- highest resolution 24 bit
- simultaneous control up to 3 axis
- parallel processing of the converter data
- synchronous 3-channel-modulator with 120 mA continuous current
- single channel can be expand to 300 mA
- high-speed data transfer with 50 kHz
- supply for external sensors
- adjustable PID modulator
- automatic sensor identification (ASI)
- automatic sensor calibration (ASC)
- freely programmable frequency generator
- storable functions
- adjustable slew-rate
- adjustable notch and low pass filter
- compatible instruction set to d-Drive®
- trigger output

options:

- real time curve tracking
- temperature monitoring
- digital input/output
- trigger input
- current controlled operation of the piezo actuators
- detection of the specific resonant frequency in your application
- storage of user specific functions
- expandable interfaces (CAN, RS485, RS422)

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d-Drive pro

technical data

	unit	19'' rack / desktop casing
technical data		
power supply	V	long range power supply 90 ... 240 V
power consumption	W	max. 175 (full load)
standby-current	mA	0.25
electric fuse	-	2x T6.3A / 250V 5x20mm, slow
channels	-	3 simultaneous (6 power amplifiers)
output voltage	V	-20 ... 130
output current	mA	3x 120 (continuous)[1], (6 x 60 for nanoX-actuators)
connection	-	3 x 15-pol. Sub-D
sensors	-	SG, capacitive, adaptable to customer-specific sensors
modulation input	V	0....10
monitor output	V	0... 10
modulator	-	PID freely programmable
characteristics		adjustable slew-rate, notch filter, low pass filter, overheat control, automatic sensor identification (ASI), automatic sensor calibration (ASC), short circuit withstand, trigger in and output, integrated function generator (sine wave, triangle, rectangular, arbitrary, vector)
interfaces module		
interfaces	-	RS 232; USB, Ethernet, optional: CAN, RS485, RS422
resolution[2]	bit	24
baud rate	baud	115200
operating temperature	-	max. 35°C / 98F (<308K)
humidity	-	max. 90% RH, non-condensing
casing		
l-brackets available	-	Yes
active cooling	-	Yes
dimensions (w x h x d)	mm^3	449 (84TE) x 96 (2HE) x 375
weight	kg/lbs	5/11

[1] one channel can be expand to 300 mA

[2] oversampling

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