

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.

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.



d-Drive^{pro}

characteristics:

- highest resolution: 24 bit
- simultaneous control of up to 3 axes with 120 mA / expandable up to 6 axes
- parallel processing of the converter data
- synchronous 3-channel-modulator
- single channel expandable to 300 mA
- data transfer with 50 kHz
- supply for external sensor signals
- 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 outputs
- storage of user specific functions

options:

- digital input/output
- trigger input
- current controlled operation of the piezo actuators
- detection of the specific resonant frequency in your application
- expandable interfaces (CAN, RS485, RS422)

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technical data

	unit	19" rack / desktop casing
part no.		E-760-000
power supply	V	long range power supply 90 ... 240 V
power consumption	W	max. 175 (full load)
standby-current	mA	0.25
electric fuse	-	2 x T6.3 A / 250 V 5 x 20 mm, slow
channels	-	3 simultaneous (6 power amplifiers)
output voltage	V	-20 ... 130 per channel
output current (constant)	mA	3 x 120 or 6 x 60 for nanoX-actuators, (optionally: 1 channel expandable to 300 mA)
voltage noise (RMS @ 500 Hz)	mV	<0.15
DA-converter resolution	bit	18 (optionally 20)
connector	-	3 x 15-pol. Sub-D
sensors	-	SG, capacitive, adaptable to customer-specific sensors
modulation input	V	0 ... 10
AD-converter resolution	bit	24 (oversampling)
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	bit	24
baud rate	baud	115200
operating temperature	-	max. 35°C / 98F (<308K)
humidity	-	max. 90% RH, non-condensing
casing		
I-brackets available	-	Yes
active cooling	-	Yes
dimensions (w x h x d)	mm	449 (84HP) x 96 (2RU) x 375
weight	kg/lbs	5/11