NDR8310

The PAD driver NDR8310 is tailored specifically for PAD7344 and is therefore the perfect companion for this PAD. It offers speed and position control through a simple analog interface.

PAD DRIVER NDR8310

A perfect companion for PAD7344 is the dedicated piezo driver NDR8310. The driver system is tailored for the specific PAD.

The NDR8310 is easily controlled through an analog interface and offers essential functions: Standby, Position and Speed mode, with step/direction control signals and resolution setting in order to achieve both the high responsivity and the high resolution offered by the system.

All cabling is shipped with each individual PAD as a plug-and-play unit.

The NDR8310 has an easy to use interface with only a power switch and an analog (TTL) interface. It has a universal power input and can be fitted with a power cord corresponding to the country of use.

Accessories
The NDR8310 is shipped with the following accessory:

- Power cord adapted to the country of use (please specify when ordering)

FUNCTIONAL DESCRIPTION

The NDR8310 can be controlled through an analog interface situated at the front of the driver. The interface pin-out is defined as follows:

Pin number	Function
1	0V reference
2	Reserved
3	+5Vdc out
4-5	Mode selection
6-7	Resolution selection
8	”Step” signal
9	”Direction” signal

The interface provides a low-power 5V output (pin 3), which can be used for powering small devices (encoders, LEDs...).

"Mode" setting	Function
00	Standby
01	Position
10	Speed
11	(Reserved)

The operation modes can be described:

- Standby

In this mode, the motor is supplied with constant voltage, with negligible power consumption and no movement of the output.

If this mode is activated after Position or Speed mode, the motor will stop and hold the last position at the time of the change.

- Position

In this mode, the system responds to pulses on the “Step” signal to increment / decrement (depending on “Direction”) the target position. The motor moves to the target position at a preset speed.

This mode is comparable to stepper-motor controller logic, although speed and resolution (“microstepping”) are controlled independently.

If this mode is activated after “Standby” or “Speed” mode, the motor will stop and hold its last position. Target position is lost.

- Speed

In this mode, the motor is commanded at constant speed. the system responds to pulses on the “Step” signal to increment / decrement (depending on “Direction”) the speed.

If this mode is activated from “Position” or “Standby”, speed is set to 0.

The effect of the resolution setting is described in the following table for PAD7344:

Resolution setting	**Position increment (position mode), degrees**	**Speed (position mode), rpm**	**Speed increment (speed mode), rpm**
00	0.002	0.08	0.08
01	0.016	0.16	0.32
10	0.126	1.29	1.29
11	1.011	10.29	5.14

Note: rounded values.

SPECIFICATIONS

Power input characteristics	
Parameter	Value
Supply voltage	90 – 264 Vac
Input frequency range	47 – 63 Hz
Input current	1.5 A Max
Inrush current	60 A Max
Input power	70 W Max
PAD output characteristics	
Connector reference (Amphenol)	T 3475 001
Output voltage range	0 – 100 V
Frequency range	0 – 200 Hz
Points per PAD cycle	1024
Control interface	
Connector type	D-Sub 9
Signal type	TTL (5V)
Operation modes	Standby, Position, Speed
Environmental parameters	
Operating temperature range	+5 - +45°C
Storage temperature range	-20 - 70°C
Ingress protection	IP31

CONSTRUCTION