

Piezoelectric Drivers

NDR6210DC Single Channel Dynamic Driver

NDR6220DC Single Channel Dynamic Driver

Features

- Fast linear low noise driver
- Galvanic separation of the output
- Adjustable input range and phase inversion
- 4 predefined cut off frequencies
- G class design with higher efficiency so less warming
- Soft startup
- Adjustable output voltage limiters
- Actuator discharge circuit
- 2 DC sources up to $\pm 100V$ DC
- Switch off timer



Description

NDR6210DC and NDR6220DC are DC versions of the piezoelectric drivers NDR6210 and NDR6220 with similar features. They work with 2 DC sources going up to $\pm 100V$ DC. Both drivers can supply actuators with capacity up to 100 μF . The output voltage range is from 0 to +200V or $\pm 100V$ depending on the piezoelectric component type.

There are also AC versions of these drivers – see ctscorp.com for more information.

Standard Product or Custom Solution

This document contains information about the piezoelectric driver NDR6210DC and NDR6220DC. All the CTS multilayer products can be custom designed to match specific requirements – find more information on www.ctscorp.com.

Specifications

Parameters	Typical Value	Unit	Remark
NDR6210DC			
Maximal Power	25	W	
Output Voltage Maximal Ranges ¹	0 to ±200 ±100	V	For stacks For benders
Maximum Current Amplitude	0.4	A	
Peak Current	0.75	A	<0.5 ms impulse, 10 ms period
NDR6220DC			
Maximal Power	60	W	
Output Voltage Maximal Ranges ¹	0 to ±200 ±100	V	For stacks For benders
Maximum Current Amplitude ²	1	A	Ambient temperature less than 22 °C
Peak Current	1.5	A	<0.5 ms impulse, 10 ms period

¹ Other output ranges available on demand

² Two front long purple rubber feet must be used!

NDR62DC series parameters

Parameter	Typical Value	Unit	Remark
Power Supply	230 V / 50 Hz or 115 V / 60 Hz	V	Two versions of the device
Voltage Limiters	±100	V	Both – high limit and low limit
Output voltage distortion	5	%	
Maximal capacitance load ³	100	uF	
Frequency range			
Low frequency limit	0	Hz	DC coupled, galvanically isolated
High frequency limit	10	kHz	Limited by maximal power

	- 2 dB		
Slew rate	10	V/ μ s	
High frequency filter	50 Hz, 500 Hz, 2500 Hz and 10 kHz	-	Settable from the panel
Offset setting	\pm 100	%	
Output noise ⁴	5	mV	Typical RMS value, 1 μ F load
Input voltage range ⁵	0 \div 10.0, 0 \div 5.0, 0 \div 2.5, 0 \div 1.0	V	Settable from the panel
Input impedance	10	k Ω	
Input connection	BNC	-	
Output connection	4 pin LEMO	-	The output plug is FGG.0B.304.CLAD52Z
Measured values ⁶	LCD display with 2 rows	-	Voltage, temperature

³ Sum of both piezo capacitances for benders.

⁴ Input is shorted and output is set with the aid of offset into 0 V DC. Noise voltage RMS was measured in bandwidth 0 \div 300 kHz.

⁵ Other input ranges on request.

⁶ Temperature is the only informative value.

Environmental Parameters

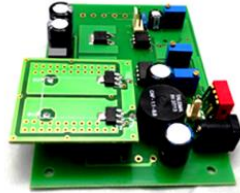
Temperature range	+5 \div +45	$^{\circ}$ C	
Relative humidity	max 80 % to 31 $^{\circ}$ C, max 50 % above 40 $^{\circ}$ C	%	
Ingress protection	IP20		When connectors are opened

Mechanical Parameters

Dimensions ¹	Width 105mm, height 65mm, depth 200mm		
Mass	1.9	Kg	

¹ Dimensions are without purple rubber feet (foot overlap is about 5.5mm) and without connector(s) overlap.

Piezoelectric Drivers Product Families



NDR6110 Single Channel Dynamic Driver
 NDR6110 OEM Single Channel Dynamic Board



NDR6210 Single Channel Dynamic Driver
 NDR6220 Single Channel Dynamic Driver

NDR6210DC Single Channel Dynamic Driver
 NDR6220DC Single Channel Dynamic Driver



NDR6880 Single Channel Dynamic Driver
 NDR6880-20A Single Channel Dynamic Driver



NDR6881 Dual Channel Dynamic Driver
 NDR6881-20A Dual Channel Dynamic Driver

Learn more about the different piezoelectric drivers on www.ctscorp.com.