

NPC-D-5200

Digital Controller



- **High speed positioning accuracy**
- **Fast step settle times**
- **Precision, accuracy and repeatability**

The NPC-D-5200 digital controller; Precision, Accuracy and Speed for the best in Nano-positioning

A standalone single axis closed loop piezo actuator controller designed to cover a wide range of challenging applications needing the best dynamic performance. There is no compromise; the NPC-D-5200 delivers precision, accuracy and speed.

Key Features	Key Benefits
Precision capacitive sensor measurement circuit for closed loop operation.	Stage designs incorporate capacitive sensors which give precise positional feedback in closed loop mode delivering high resolution/ low noise and high linearity of movement. Precision and Accuracy
Update rate of 8.3 Micro Seconds (120KHz)	The controller is updated with the position of the stage 120000 times per second. This contributes to high speed positioning accuracy for applications that need high speed movement of the stage
Low Electronic Noise. The low noise design allows stage position noise as low as a few tens of picometres.	A stable system which delivers repeatability of movement with improved precision and accuracy for precise imaging & focusing
High Power rating, -30 to +150V drive with 160mA continuous current as standard.	The high power rating allows stages to be driven at higher maximum speeds with faster step settle times. This can be particularly important for longer range stages or stages designed for high load bearing



queensgate

a brand of Elektron Technology

NPC-D-5200 SPECIFICATION

Parameter	Value	Units	Comments
Mechanical			
Size (Width x Depth x Height)	268 x 194 x 70	mm	Additional space required for rear connectors and cables.
Height includes feet Not including protruding components at front and rear of controller			
Weight	1.7	Kg	
Cooling	Fan forced air	-----	Vents on rear and base
Electrical			
Power input	96 to 265 47 to 63	V Hz	Using external supply. Only use approved power supply -provides protective earth connection
DC Power input	Input 1	+5V \pm 0.25V @3A	V 4 way mini DIN
	Input 2	+24V \pm 0.75V @2A	V Provides protective earth connection
Connectivity			
Serial	RS232		9 way D Type connector. Requires a NULL model cable.
USB	2.0 compliant		USB type B connector Note: power not taken from USB port.
Ethernet	IEEE 802.3		RJ45 connector Requires a Shielded Cat 5 male to male cable.
Environmental – Operational			
Temperature	10 to 40	°C	
Relative Humidity	0 to 80	%RH	Non-condensing
Environmental - Storage and Shipping			
Temperature	-20 to 70	°C	
Relative Humidity	0 to 95	%RH	Non-condensing



queensgate

a brand of Elektron Technology

NPC-D-5200 SPECIFICATION

Parameter	Value	Units	Comments
Connector	17W2 D type	-----	Mixed signal connector
HV output swing	-30 to +150	V	Factory set (default)
	-20 to +120		Factory set (optional)
HV drive current	160mA	mA	Factory set (Default)
HV amplifier bandwidth	TBD	kHz	
HV amplifier intrinsic noise	0.3	mV	
“ANA I/P” analogue input position command	-5 to +5	V	Connector BNC Differential input – core +ve
“POS MON” analogue output position monitor	-5 to +5	V	Connector BNC Single ended
“READY” output signal	Logic “0”	<0.8	Connector BNC
	Logic “1”	2.4 to 5	
“TRIG I/P” input signal	Logic “0”	<0.8	

