



NPC-A-1110DS

Standalone Analogue Single-Axis Closed Loop Driver with *Dual Sensor Technology™*

Features

◆ **Dual Sensor Technology™ enables Industry-leading performance**

- Higher Speeds
- Higher Stability
- Superior Bandwidth

◆ **Market Leading Noise Floor**

◆ **Soft Start/Stop technology**

- Load and stage protection

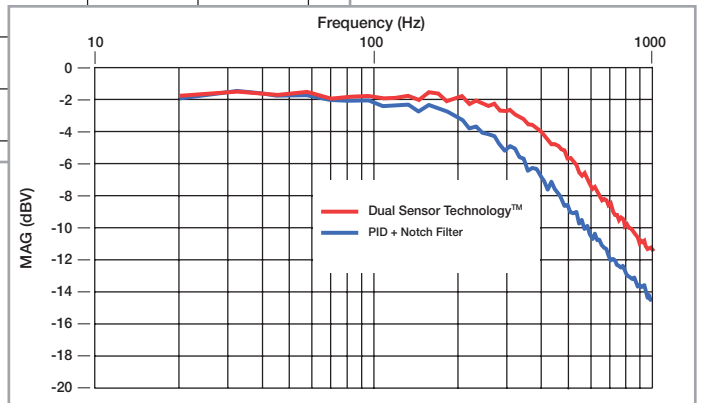
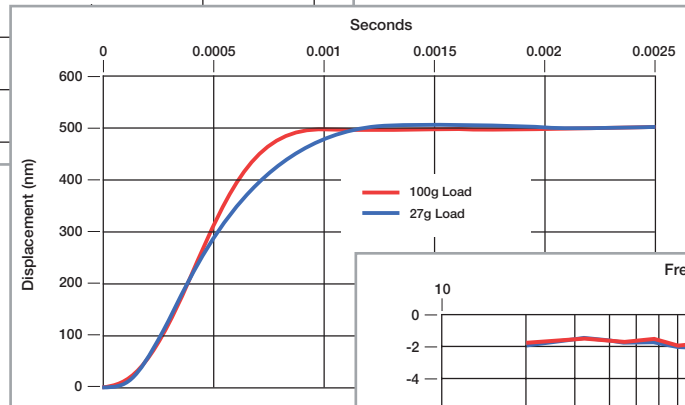
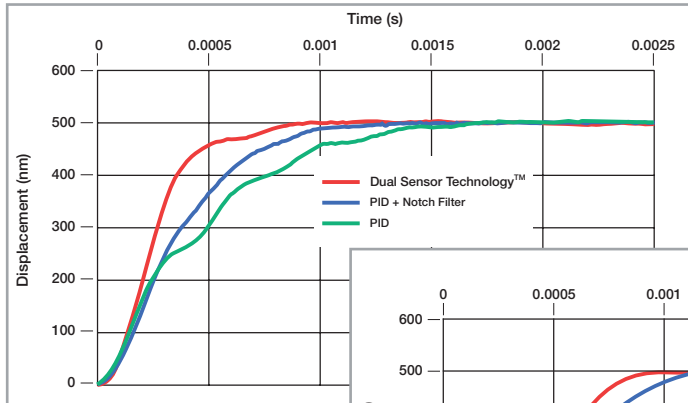
◆ **Switchable front-panel illumination**

- For light-sensitive applications

Dual Sensor Technology™ is a new control technique that overcomes the limitations of conventional PID controllers with fixed notch filters, allowing faster step responses, higher stability against payload changes and a dramatic improvement of the system mechanical bandwidth.



NPC-A-1110DS



Dual Sensor Technology™ Dynamic Performance of an NPS-X-15A with and without DST Control™



NPC-A-1110DS Standalone Analogue Single-Axis Closed Loop Driver

The NPC-A-1110DS combines traditional PID (Proportional, Integral, Differential) control with the new *Dual Sensor Technology*™ offering unrivalled performance for nanopositioning stages. Previously unachievable throughputs

are now possible thanks to industry leading response and settling times. The NPC-A-1110DS features +/-10V analogue and TTL input, manual offset, and position display, switchable lights (for dark rooms) and Soft Start/Stop switch.

Specification

Parameter	Value	Units	Comments
Static physical			
Size	210 x 120 x 70	mm	
Line voltage	100-240	VAC	
Line frequency	47-63	Hz	
Analogue Input	-10 to +10 (BNC and SMB)	V	
Analogue Output	-10 to +10 (BNC and SMB)	V	
Other Interfaces	TTL in Position and Acc Mon BNC		
Max NanoSensor bandwidth	1/10/100	KHz	Note 1
Intrinsic sensor noise	60 x 10 ⁻⁹	Hz ^{-1/2}	Note 2
HV amplifier output swing	-20 to +120 or -30 to +150	V	Note 1
HV amplifier bandwidth	50	KHz	Note 3
Intrinsic HV noise(rms)	0.1	mV	
HV amplifier peak current (<5ms)	600	mA	
HV amplifier average max current (>5ms)	80	mA	
Warm up time	25	min	
Operating temperature	0-40	°C	

Notes

1. Factory Selectable
2. Measured with 10pF sensor and 10KHz BW
3. The small signal bandwidth for 1.5μF

