

Positioning Stages - Motion Controllers

for stages L1160 & L1161



L1162



POSITIONING STAGES

Order No.	No. of axis control	Encoder
NSC-1S	Single	No
NSC-1S-E	Single	Yes
NSC-1H	Single	No
NSC-1H-E	Single	Yes
NSC-M2	Two	No
NSC-M2-E	Two	Yes
NSC-M3	Three	No
NSC-M4	Four	No

Specification - NSC-1 Series

Output current NSC-1S	2A Typ., 4A peak (programmable to lower current settings)
Output Current NSC-1H	3A Typ., 6A peak (programmable to lower current settings)
Motor type	2/4 phase bipolar stepper
MicrostepResolution	Programmable up to 51200 steps per rev (1,8° motor)
Communications	RS-232, 4800 to 38,8kbps
User programme space	8175 bytes
Program and data storage	Flash
Number of I/O	6 (software selectable as dedicated or general purpose)
Encoder feedback	High speed differential inputs
Encoder functions	Stall detection and position maintenance

Technical Notes

NSC-1:

A powerful single axis machine control system combining a bipolar microstepping driver with a programmable controller in a compact envelope.

The motion controller can operate as a stand alone system through the RS-232 port. It utilizes a 32-bit microprocessor to control the trajectory, profile, acceleration, velocity and deceleration.

If closed loop the NSC-1 can be expanded to handle different inputs from an encoder.

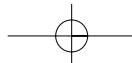
NSC-M Series:

The controller can communicate with the host computer through an RS232 interface. It can manage up to four axis and perform co-ordinated or independent motion of each or all of the axis simultaneously.

With built-in high level functionality, such as circular and linear interpolation, multi-tasking and custom profiling the controller is greatly simplified.

The multi-axis controller is commanded using virtually any programming language to pass simple ASCII command strings to the controller through the RS-232 port.





L1160-62 Positioning Stages

Motorised

POSITIONING STAGES

L1160 - Type NB-4

Specification - NB4

	Type	Accuracy
Resolution	1,5748mm/ rev lead	0,03µm @50,000 steps/ rev motor resolution
Resolution	6,35mm/ rev lead	0,13µm @50,000 steps/ rev motor resolution
Resolution	1,5748mm/ rev lead with encoder	0,8µm @2,000 counts/ rev encoder resolution (-E option) 0,4µm @4,000 counts/ rev encoder resolution (-E1 option)
Resolution	1,35mm/ rev lead with encoder	3,2µm @2,000 counts/ rev encoder resolution (-E option) 1,6µm @4,000 counts/ rev encoder resolution (-E1 option)
Max. Travel Speed	1,5748mm/ rev lead	12,7mm/ second
Max. Travel Speed	6,35mm/ rev lead	50,8mm/ second
Repeatability Bidirectional		±5µm

Specification - NB4

Motor Connection		Signal Connection		Signal Connection (encoder option)	
DB9 male	Description	DB9 female	Description	HD-15 female	Description
1	Phase A	1	Positive limit	1	Positive limit switch
2	Phase A'	2	Negative limit	2	Negative limit switch
3	Phase B	3	Gnd	3	Gnd (limits)
4	Phase B'	4	NC	4	Gnd (encoder)
5	A centre tap	5	NC	5	+5V
6	A centre tap	6	NC	6	Ch. A
7	NC	7	NC	7	Ch. A-
8	NC	8	NC	8	Ch. B
9	NC	9	NC	9	Ch. B-
				10	Index
				11	Index-

L1161 - Type NLS-4

Specification - NLS4

	Type	Accuracy
Resolution	1,5748mm/ rev lead	0,03µm @50,000 steps/ rev motor resolution
Resolution	6,35mm/ rev lead	0,13µm @50,000 steps/ rev motor resolution
Resolution	1,5748mm/ rev lead with encoder	0,8µm @2,000 counts/ rev encoder resolution (-E option) 0,4µm @4,000 counts/ rev encoder resolution (-E1 option)
Resolution	6,35mm/ rev lead with encoder	3,2µm @2,000 counts/ rev encoder resolution (-E option) 1,6µm @4,000 counts/ rev encoder resolution (-E1 option)
Max. Travel Speed	1,5748mm/ rev lead	12,7mm/ second
Max. Travel Speed	6,35mm/ rev lead	50,8mm/ second
Repeatability Bidirectional		±0,5µm

Specification - NLS-4

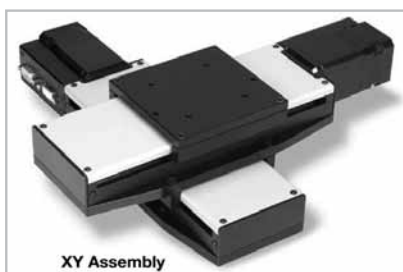
Motor Connection		Signal Connection		Signal Connection (encoder option)	
DB9 male	Description	DB9 female	Description	HD-15 female	Description
1	Phase A	1	Positive limit	1	Positive limit switch
2	Phase A'	2	Negative limit	2	Negative limit switch
3	Phase B	3	Gnd	3	Gnd (limits)
4	Phase B'	4	NC	4	Gnd (encoder)
5	A centre tap	5	NC	5	+5V
6	A centre tap	6	NC	6	Ch. A
7	NC	7	NC	7	Ch. A-
8	NC	8	NC	8	Ch. B
9	NC	9	NC	9	Ch. B-
				10	Index
				11	Index-



L1160-62 Positioning Stages

motorised

Additional Configurations



Motion Controllers



NSC - IS

Single axis stepper motor controller.

A powerful single axis machine control system which combines a micro stepping driver with a programmable controller in a compact envelope.

It uses a 32 bit microprocessor to control the trajectory profile, acceleration, speed and deceleration.

NSC - IS; Single axis stepper motor controller.

NSC - IS E; Single axis stepper motor controller with encoder.



NSC - M

Multi - axis stepper motor controller.

Designed for use with our stepper motor systems. The controller communicates via an RS-232 interface. It can manage up to four axis either independently or simultaneously. It uses a 32 bit microprocessor to control the trajectory profile, acceleration, speed, deceleration and direction of selected axis.

NSC - M2 Two axis stepper motor controller.

NSC - M2 - E Two axis stepper motor controller with encoder.

NSC - M3 Three axis stepper motor controller.

NSC - M4 Four axis stepper motor controller.