NLI080X series

TUBULAR LINEAR MOTORS

NiLAB
Imported Agency Products

Modbus

Specification

	Model		NLI080X
Mechanical Parameters	Rated force	N	9.25
	Peak force (S3-5%)	N	41.35
	Repeatability	mm	±0.015
Electrical Parameters	Operating voltage	V	24/48
	Rated current	A	2.44
	Peak current (S3-5%)	A	10.9
	Pole pair pitch	mm	30
	Force constant	N/A	3.79
	Back EMF constant	Vrms/(m/s)	2.19
	Phase resistance	Ohm	4.86
	Phase inductance	mH	0.6
	Control method		Modbus RTU (RS-485), I/O (2 in 3 out)
Weight	Rod	kg/m	0.35
	Body	kg	0.4

*1. There is a ±10% tolerance for the parameters, except for dimensional parameters.
*2. Due to the minimum length of internal magnets in the rod, the actual effective stroke of the rod will be longer than the ordered stroke.

Feature

- Compact design, Integrated driver and encoder
- Programmable multi-segment position motion control (Position table)
- Programmable motion curve types (trapezoidal, triangular, sinusoidal, etc.)
- Support for force control and force origin return
- Support for Modbus RTU communication protocol

Order example

NLI080X – 100 – HR

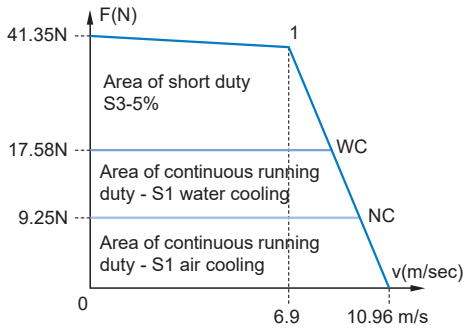
- NLI080X: MODEL
- 100: STROKE
- HR: CONNECTOR TYPE (Hirose HR10A)

* Please contact us for other stroke requirements.

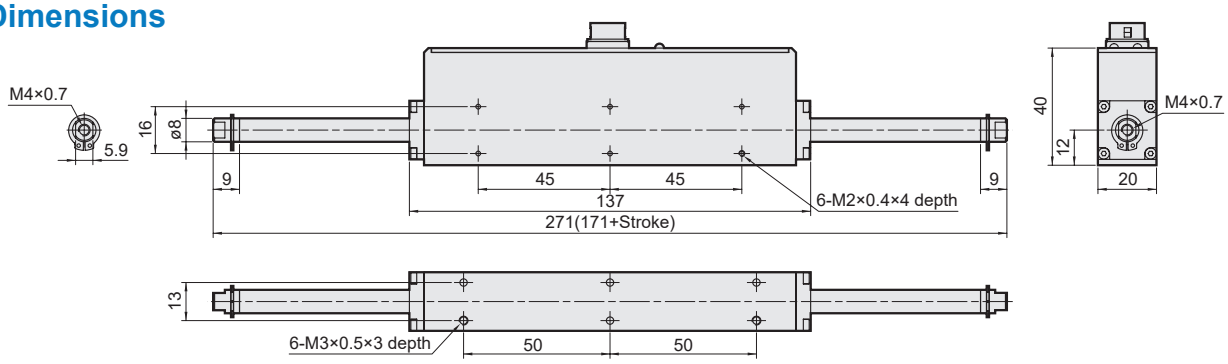
Accessories of order example

Cable order number	Description
NLI080X-DA002060	Communication cable
NLI080X-DA002011-5M	Power and I/O cable - 5M (Hirose HR10A to D-SUB 15 male)

Force and speed curve @24VDC



Dimensions



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NLI080X Connector Pinout

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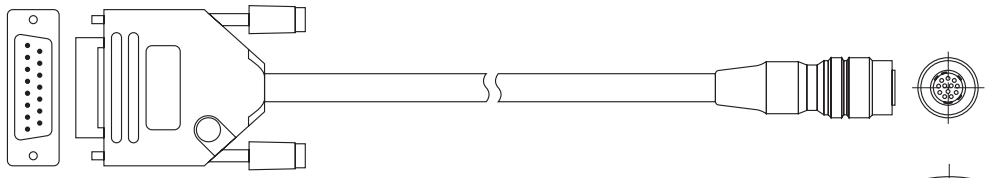
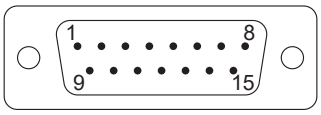
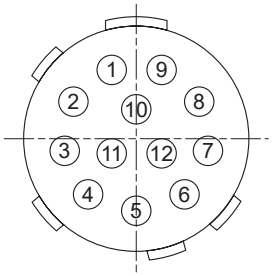
Power and I/O cable (NLI080X-DA002011-5M)





D-SUB side
(Male D-SUB 15P)



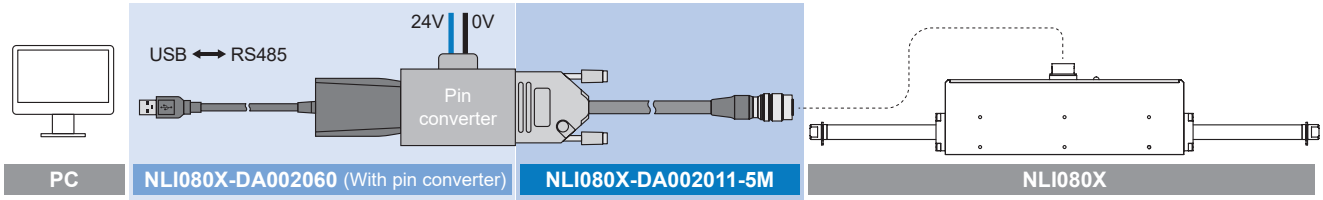
Moter side
(HR10A-10P-12P)

Pinout

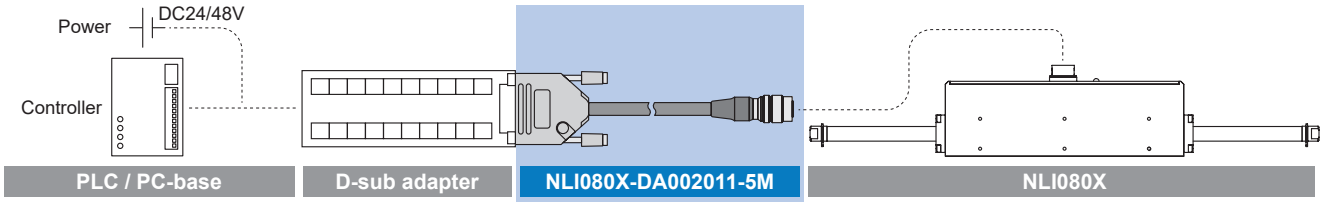
D-Sub side Pin No.	Signal	Description	Function	Motor side Pin No.
1	RS485_B	Modbus B		12
2	RS485_A	Modbus A		10
3	GND	Ground		2
4	+24VDC	Power		3
5	+24VDC	Power		4
6	GND	Ground		5
7	GND	Ground		11
8	DIG_IN_0	Digital Input 0 (24V logic)	Enable / Homing	6
9	DIG_IN_1	Digital Input 1 (24V logic)	Motion trigger	7
10	DIG_OUT_0	Digital output 0 (24V logic, internal pull-up, NPN)	Motor running	8
11	DIG_OUT_1	Digital output 1 (24V logic, internal pull-up, NPN)	Motor fault	9
12	DIG_OUT_2	Digital output 2 (24V logic, internal pull-up, NPN)	Programmable	1
13~15	None			

Cable accessories connection diagram

PC communication cable



PLC / PC-base control



Such as DB15-M2 or MOD-15-F
(Prepared by the customer)

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