NPM Nippon Pulse
Your Partner in Motion Control

SX080-X0
Linear Shaft Motor

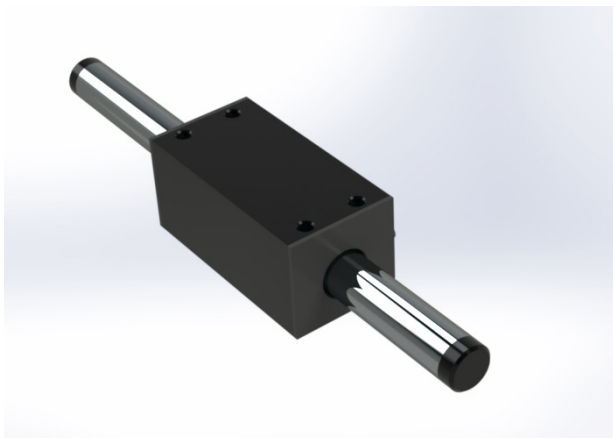| Electrical Specs	SX080D-X0	SX080T-X0		SX080Q-X0	
	SX080D-X0	SX080T-X0	SX080T-DC-X0	SX080Q-X0	SX080Q-DC-X0
Continuous Force[1]	2.5N (0.56lbs)	3.8N (0.85lbs)		4.9N (1.10lbs)	
Continuous Current[1]	0.84Arms		2.5Arms	0.84Arms	1.7Arms
Acceleration Force[2]	10N (2.25lbs)	15N (3.38lbs)		20N (4.41lbs)	
Acceleration Current[2]	3.4Arms		10Arms	3.4Arms	6.7Arms
Force Constant (K_f)	3.0N/Arms	4.5N/Arms	1.5N/Arms	5.8N/Arms	2.9N/Arms
Back EMF (K_e)	1.0V/m/s (39.1V/in/s)	1.5V/m/s (58.8V/in/s)	0.5V/m/s (19.6V/in/s)	1.9V/m/s (76.6V/in/s)	1.0V/m/s (38.3V/in/s)
Resistance 25°C[3]	4.7Ω	6.8Ω	0.8Ω	9Ω	2.3Ω
Inductance[3]	0.7mH	1.0mH	0.1mH	1.3mH	0.3mH
Magnetic Pitch (North-North)	30mm				

Is this the proper Linear Shaft Motor for your application? Use our SMART sizing program to assist in your decision.

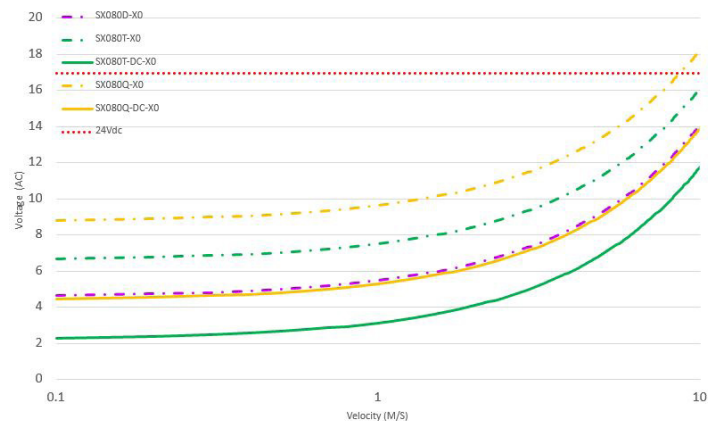This motor can be customized to fit your application demands; contact your application engineer for more information.

[1] Based on a temp rise of coil surface of 110°K over 25°C ambient temperature stalled forcer, and no external cooling or heat sinking.

[2] Can be maintained for a maximum of 40 seconds. Higher forces and current possible for short periods of time, contact Nippon Pulse for more information.

[3] All winding parameters listed are measured line-to-line (phase-to-phase).

Bus Voltage

Part Numbering System

SX	Shaft Size	Forcer Size (A)	Winding	Shaft Type	Usable Stroke (S)	Options
SX	080	X	XX	XX	XXst	XX
		D: Double (2) windings	Blank: Standard	Blank: Standard	50-300mm	Blank: Standard
		T: Triple (3) windings	DC: Low voltage	X0: Strong		FO: Forcer Only
		Q: Quadruple (4) windings		magnets		SO: Shaft Only

Forcer Specs	SX080D-X0	SX080T-X0	SX080T-DC-X0	SX080Q-X0	SX080Q-DC-X0
Forcer Length (A)	40mm (1.57in)	55mm (2.17in)		70mm (2.76in)	
Forcer Width	20mm (0.79in)				
Forcer Screw Pitch (P)	34mm (1.34in)	49mm (1.93in)		64mm (2.25in)	
Forcer Weight	0.050kg (0.110lbs)	0.054kg (0.119lbs)		0.072kg (0.159lbs)	
Gap	0.50mm (0.02in)				
Screw	M3				

Tolerances are as follows:

Dimension (mm)	Tolerance (mm)
0 - 6	±0.1
7 - 30	±0.2
31 - 120	±0.3
121 - 315	±0.5
316 - 1000	±0.8
1001 - 2000	±1.2
2000 -	±1.5

L = See Shaft Length
L1 = Usable Stroke + A
L2 = See Support Length
A = See Forcer Length
P = See Forcer Screw Pitch

Unless otherwise specified, dimensions are in mm
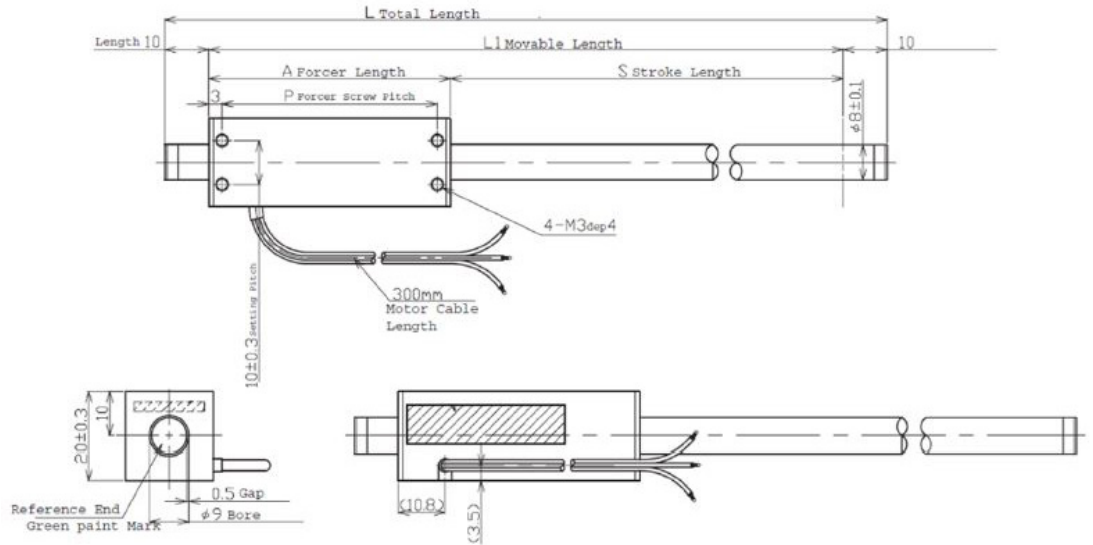
Note: Metric units guaranteed. Imperial (United States customary) units are calculated.

For assistance in selecting the best motor for your application, contact Nippon Pulse
to speak with an applications engineer. 1-540-633-1677