MX45S SERIES QUICK START GUIDE

***This document contains minimum information to install and operate the MX45S positioners. Download the complete MX45S series product manual no. 102-3619-01 from www.parkermotion.com.**

Step 1 Installation:

The MX45S can be mounted by two methods.

- Threaded holes in base: The MX45S can be mounted by the four M3 x 0.5 threaded holes in the base. The thread engagement into the base should not be greater that 7mm.
- Counterbored holes in base: The MX45S can also be mounted using the four counterbored holes in the base. These holes are sized to use M2.5 screws. It will be necessary to travel the positioner towards the motor end to gain access to the two rear holes.
- The MX45S positioner is also supplied with dowel pin holes, in the base, for repeatable mounting.
- **WARNING:** The surface that the MX45S positioner is mounted to, must be flat within 0.005mm (0.0002in) over the entire surface that contacts the base of the MX45S.

Step 2 Payload mounting:

- A payload can be mounted to the top plate of the MX45S by M3 x 0.5 screws. When fastening the payload, take precaution in using screws with no more than 7mm of thread engagement, as to not damage the positioner.
- The MX45S positioners are also supplied with dowel pin holes, in the top plate, for repeatable mounting.

WARNING: The surface of the payload that mates to the top plate of the MX45S positioner to must be flat within .005mm (0.0002in) over the entire surface.

WARNING : To avoid damage to drive nut assembly:
DO NOT BACK DRIVE (push by hand) the top plate.
The top plate should be only moved by input to the drive shaft via motor or hand crank.

Loading precautions :

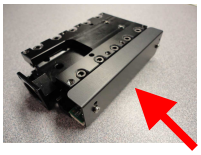
The MX45S positioners have normal load ratings.

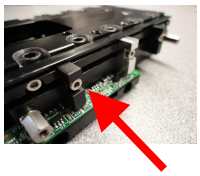
Do not load table more than chart below shows.

Normal Load	5 mm travel	15 mm travel	25 mm travel
Kg (lb)	5.0 (11.0)	5.0 (11.0)	7.0 (15.4)

See Manual for complete load ratings.

Step 3 Optional Limit/Home Sensors:





If the optional Limit/Home sensors were ordered with the MX45S, the magnetic trippers are set at the factory for maximum travel and a center home position. These tripper locations can be changed by:

1. Removing the Limit/Home cover.
2. Loosening the tripper bracket screws and repositioning the tripper brackets at the desired locations.

Step 4 Optional Linear Encoder Limit Sensors:

If the optional linear encoder was ordered with the MX45S, the magnetic limit trippers are packaged loose, not attached to the positioner. See manual for complete instructions.

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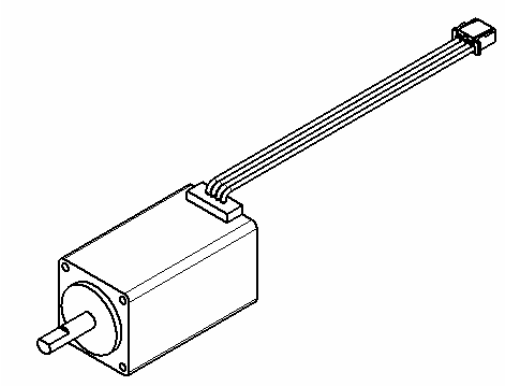
Step 5 Motor installation

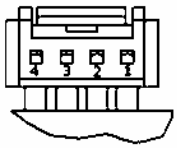
Motor Information:

MX45S Motor Specifications		Motor Part #006-2360-04
Rated Torque	N-M	0.03
Rated Current (rms)	Amps/ Phase	0.80
Max. Current (peak)	Amps/ Phase	1.13
Rated Resistance	Ohms/Phase	5.4
Rated Inductance	mH	1.5
Rotor Inertia	g-cm²	1.8
Number of Phases	-	2
Step Angle	Degrees	1.8



CCW	Switching Sequence			
Color	Red	Blue	Green	Black
Step	A+	A-	B+	B-
1	+	-	+	-
2	+	-	-	+
3	-	+	-	+
4	-	+	+	-
Note: Viewed from Front Motor Shaft End				

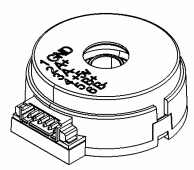
Motor Connector	
Pin	Function
Pin 1	A+
Pin 2	A-
Pin 3	B+
Pin 4	B-

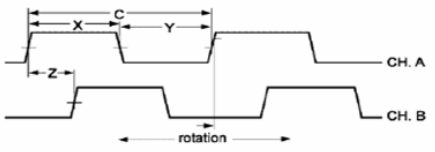


Motor Encoder Information: E1– 400 Counts/Rev E2– 500 Counts/Rev

Encoder Cable Pin Out		
Pin	Color	Function
1	White	Ground
2	Green	A
3	Yellow	A-
4	Brown	+5 VDC
5	Blue	B
6	Red	B-

Specifications	Min.	Typ.	Max.	Units	Notes
Supply Current	-	22	30	mA	
Supply Voltage	4.5	-	5.5	V	
High Level Output	2.4	3.4	-	V	I_{oh}= -20mA
Low Level Output	-	0.2	0.4	V	I_{ol}= 20 mA
Rise Time	-	50	-	ns	
Fall Time	-	100	-	ns	
Frequency Response	-	-	44	kHz	





Step 6 Limit and Home Sensor Specifications

Description	Specification
Input Power	NPN: +5 to 24 VDC +/- 5%, 25 mA PNP: +5 to 24 VDC +/- 5%, 25 mA plus up to 50mA per output
Output	NPN - Normally Closed Current Sinking Limits, Normally Open Current Sinking Home PNP - Normally Closed Current Sourcing Limits, Normally Open Current Sourcing Home NPN - +5 to +24 VDC All outputs Sink a max. of 50mA each PNP - +5 to +24 VDC All outputs Source a max. of 50mA each
Repeatability	Home Sensor: +/- 5 µm (unidirectional) plus repeatability of the positioner