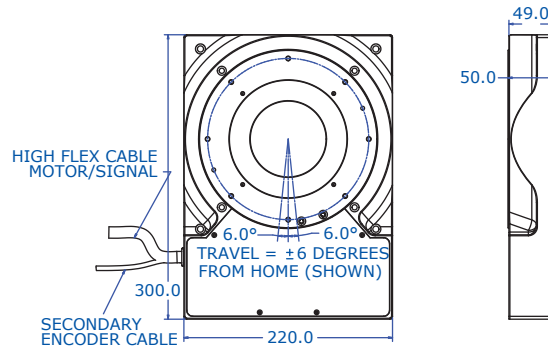
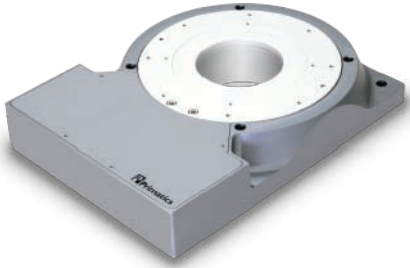




Feature Summary:

- +/- 6 degrees of rotation
- Class 3 preloaded precision ball-screw with a brushless servo or stepper motor drivetrain for high precision.
- Resolution to 0.2 arc-seconds
- Precision cross-roller bearings deliver high capacity, excellent rigidity and long life.
- Very stiff rotational correction stage for moderate payloads

Overview

Primatics PLR190 Series rotary positioning tables offer a compact solution for systems in need of small, stiff angular corrections. An innovative drive system creates arc-second accuracy and fast settling times, making the PLR190 ideal for fine position correction in assembly and optical applications where worm drives don't provide the necessary accuracy, throughput or life.

Versatile Application

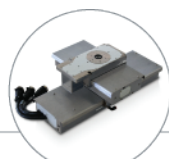
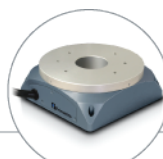
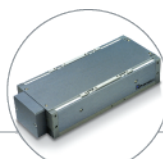
The low profile of the PLR190 supports its use in tight spaces. The open throat design allows cables to be routed through its center up to tooling mounted above the stage. Multiple mounting hole patterns ease integration of the PLR190 into many applications.

Performance Verification

All PLR190 performance specifications are verified and a full set of accuracy & repeatability plots are included with each stage. Calibration data is also provided. In addition to test data, a 12 hour burn-in test is performed, insuring that the stage will perform as specified.

For more information and a complete datasheet, go to www.primatics.com

Performance Specifications w/ 2mm Ballscrew & 0.1 Micron Tape Encoder, Aluminum	PLR190
Travel (degrees)	+/- 6
Table Diameter (mm)	188
Mechanical Drive System	Class 3, 2mm lead ballscrew
Max Speed (degrees / sec)	15
Axial Runout (microns)	+/- 0.5
Radial Runout (microns)	+/- 1
Accuracy (arc-sec)	+/- 2
Bi-directional Repeatability (arc-sec)	+/- 1
Minimum Resolution (arc-sec)	0.2
Acceleration (deg-sec ²)	360
Axial Load Capacity (kg)	70
Radial Load Capacity (kg)	35
Weight (kg)	8.1



CONNECTOR PINOUTS

Stepper Axis connector

Mate: FCI (Bumdy) Female, Circular Connector, 28 Contacts, Size 20 Shell Pin-out

Pin	Function
A	Motor A+
B	Motor B+
C	Motor B-
D	<Key>
E	Encoder 5V - power for encoder
F	Encoder A+ output
G	Encoder A- output
H	Encoder B+ output
J	Encoder B- output
K	Encoder Shield
L	12VDC - for limit, home, and temp sensor
M	DCCOM
N	No Connection
P	No Connection

Stepper Axis connector (continued)

Pin	Function
R	No Connection
S	Signal Shield
T	Motor A-
U	Motor B Common
V	Encoder Common
W	Encoder Index +
X	Encoder Index -
Y	Forward Limit
Z	Reverse Limit
a	Motor Shield
b	Motor A Common
c	DCCOM
d	Temperature Sensor
e	No Connection

MODEL NUMBER CONFIGURATION

OPTIONS :

SAMPLE MODEL NUMBER :

Model Series

Limited Rotation PLR190

Base Material

Aluminum AL

Grade

Precision P

Encoder^{1,2}

0.22 arc-sec Output, 0.55 arc-sec Drive Encoder E1

0.22 arc-sec Output, No Drive Encoder E2

Limit Sensor

Normally Closed L1

Normally Open L2

Drive Type

Brushless Servo Motor M1

Step Motor M2

Protection Level

Level 1 - Hard Covers P1

PLR190 AL P E1 L1 M1 P1

¹The output encoder directly reads the rotary position. The drive encoder is on the motor drive and is used for motor velocity feedback for dual-loop positioning control. We recommend encoder option E1 for Servo motor drive type and E2 for Stepper motor drive type.

²At the center of travel, one revolution of the motor produces 0.76367 degrees of stage rotation. The M1, E1 option includes a 1250 line encoder on the motor which yields 6547.3 counts / deg (0.54984 arc-sec / count). The M2, E2 option includes a stepper motor with 200 full steps per ballscrew revolution. This yields a stage displacement of 261.89323 full-steps / deg (13.74606 arc-sec / full step).



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