

Test Fixture Series TES-2S

Modes of Operation

- Positioning: absolute with a Resolution of <math><0.00001\text{deg}</math>.
- Rate: no drift, good instantaneous rate stability with a Resolution of <math><0.0001\text{deg/sec}</math>
- Indexing: for tracking applications



Description

The Series TES-2S Test-Fixtures offer accurate angular positioning, precise uniform rotation and angular motion profiling. All operations are commanded via the handheld paddle or by an optional host computer. The control software delivered with the instrument is based on LabView™. The fixture is designed for the testing and calibration of integrated packages and subassemblies.

Payloads are mounted on table top platen. A pattern of threaded holes accept a variety of test loads. Electrical access to the payload is dimensioned for different power ratings and signals. The lines terminate on the platen and the base casting by D-Sub connectors.

The Series TES-2S Test-Fixture consists of modular cube assemblies with precision bearings and the required servo components. The drive module houses the direct drive brushless torquer, the high resolution encoder, the amplifier/controller assembly and power supply. All components are interchangeable facilitating repair and spare part supply management.

Specification Summary

General Configuration		
Payload nominal		124 x 150 x 150mm, 10kg; (30kg max.)
Mounting platen		242mm dia., aluminum hard anodized with grid of threaded mounting holes, M5 with Heli-coil insert on 25mm spacing, (optional different patterns)
Platen flatness		+/- 0.05mm
Axis alignment		support point perpendicular or orthogonal to the drive axis within $\pm<2\text{arc sec}</math>$
Axis wobble		$\pm<4\text{ arcsec}</math>$

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Dynamic

Rate	±2000deg/s	@ voltage supply 230VAC
Rate	±400deg/s	@ voltage supply 48VDC
Rate	±80deg/s	@ voltage supply 28VDC
Torque	10Nm	
Axis inertia, (no load)	0.5kgm ²	
Bandwidth (-3dB)	>15Hz	

Position command

Position transducer	SIN/COS high-resolution, absolute
Position range	0 to 359.9999deg unlimited rotation
Position slew	Profiling within rate and acceleration limits
Position resolution	<0.01arcsec
Position accuracy	<5arcsec _{RSS}
Position repeatability	better ±2arcsec

Rate command

Rate slew	Profiling within acceleration and jerk limits
Rate resolution	<0.2 arcsec/s
Rate stability	0.002% of commanded rate over one revolution
Event pulse	1/revolution

Acceleration Control

Rate changes can be performed with controlled acceleration.	
Acceleration Limit	can be set within the dynamic range
Command Resolution	<4 arcsec/sec ²

Command

Through RS-232 interface, at a baud rate of 115200, via a host computer or optional handheld.

Supply

24VDC to 36VDC optional 48VDC

Dimension

Dia 242mm x H 110mm (control and power electronics is part of the unit)

Weight

11kg
