Three-Axis Motion Simulator Model AC3355-RS

The model AC3355-RS has been designed to test missiles and missile seekers that operate in the Infra-Red (IR) spectrum. A high speed Roll Barrel supports the missile with the seeker gimbal coincident with the simulator's axis intersection. The Roll Barrel can be moved in azimuth with high acceleration and rate. Electrical and gas sliprings at the rear of the Roll Barrel provide access for the necessary facilities of the missile seeker.

The surface plate or Look Angle Fixture (LAF) supports the target which, for simulation purposes, is typically a point source IR and associated collimator. The collimated beam is directed onto the missile seeker. The LAF can be moved in front of the missile in azimuth to simulate motion of the target and off bore-sight testing.

Saddle mounting surfaces on the side of the missile azimuth axis support the customer electronics for the IR source and missile control.

The ACUTROL®3000 controls the table. The digital controller has a touch sensitive operator interface and scalable analog input/output interface. Programmable Event Pulses can be used for calibration and synchronization with external computers or test equipment. Optionally, the standard digital interfaces, Ethernet (TCP/IP) and IEEE-488 can be supplemented with real time reflective memory interfaces SCRAMNet or VMIC. For more details, please refer to the ACUTROL®3000 datasheet.

Dimensions	Height, max		mm	1930
	Length		mm	3520
	Turn radius of Look Angle Fixture		mm	1650
	Look Angle Fixture Hole pattern		mm	M6 x 50mm grid
	Base, diameter		mm	900
Unit Under Test (UUT)	Payload, nominal LAF		kg	25
	Payload, peak Roll Barrel		kg	40
	Payload, RT		kg	4x100
	Gas line(s) through slipring		2	up to 480 bar
	Slipring(Roll)	twisted pair	2	160V DC, 10A
		twisted pair	11	48V DC, 10A
		space/mil/single	9/2/52	48V DC, 2A
			100 ways	**Total**

Specification Summary

	Missile		Target
	Roll	**Azimuth**	**LAF Azimuth**
Mech. Specifications			
Orthogonality	< 5 arcsec	< 5 arcsec	
Wobble	+/- 5 arcsec		+/- 5 arcsec
Dynamic performances			
Angular freedom	Continuous	Continuous	+/- 60°
Positioning accuracy	36 arcsec RSS	36 arcsec RSS	36 arcsec RSS
Positioning resolution	0.00001°	0.00001°	0.00001°
Rate range	+/-7200°/s	+/-65°/s	+/-20°/s
Rate resolution	0.00001°	0.00001°	0.00001°
Rate accuracy	0.01%	0.01%	0.01%
Acceleration, no load	900°/s^2	25°/s^2	20°/s^2

Options

- Various Slipring configurations upon request
- Different Torquers upon request
- Roll Barrel Offsets according to customer's needs
- Base Extension

Installation requirements

- 3 x400VAC +/-8% with ground (PE; no neutral required), 50/60Hz, 25Amps fused.

Packing details (approximate)

- Box 1 (simulator): 355x301x280, cm brutto 3630 kg / netto 3000 kg
- Box 2 (console): 85x100x235 cm, brutto 480 kg / netto 320 kg

Delivery time

- 12 months average

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