

AvL TECHNOLOGIES

MODEL 750KCB

.75M AUTO-ACQUISITION MINI-FLYAWAY ANTENNA



Reflector	75cm Equiv. 89 x 62 cm Elliptical GRP
Optics	Offset, Prime Focus
Drive System	Patented Roto-Lok® 3-axis Positioner
Mount Geometry	Elevation over Azimuth
Polarization Adjustment	Rotation of Reflector/Feed about Boresight
Controller	TracStar One-button Auto-acquisition

Electrical RF

Receive

Transmit

Frequency	11.70-12.75 Ghz	13.75-14.5 Ghz
Gain (Midband)	37.8 dBi	39.3 dBi
VSWR	1.30:1	1.30:1
Beamwidth on Orbital Arc (degrees)		
-3 dB	1.8	1.6
-10 Db	3.3	2.8
First Sidelobe Level (Typical)	-18 dB	-21 dB
Tx Radiation Pattern Compliance > 1.8°	FCC §25.209, ITU-R S.528.5	
Antenna Noise Temperature	50° K at 30° Elevation	
Polarization	Linear Cross or Co-Polarized	
Cross-Pol Isolation		
On-Axis (minimum)	30 dB	30 dB
Off-Axis (within 0.3°)	28 dB	28 Db
BUC Mounting Capacity	1W, 2W and 4W	
Allowable Power	-14dBw/4kHz per FCC, -0dBw/4kHz per ITU	
Feed Port Isolation - TX to RX	70 dB	
Satellite System Compliance	Intelsat, PanAmSat	

Controller

Type	Fully Automatic Satellite Acquisition, Peaking and Cross-Pol Adjustment using GPS, Compass, and Level Sensor Inputs with Entry of Desired Satellite, Certified for Auto-Commissioning on select services
Auto Positioning Accuracy	≤ ±0.1 degree
Size	
Standard	Power Supply - 9 W x 10.25 D x 2.5 H - 4.5 lbs. Display Unit - 5.5 W x 3.5 D x 1 3/8 H - 0.5 lbs.
Optional Rack Mounted Config.	1 RU Chassis 8 in (20 cm) deep, Weight 3.75 lbs. (1.7 kg)
Input Power	110/240 VAC, 1 ph, 50/60 Hz, 5 amps peak, 1 amp continuous

Mechanical

Az/EI/Pol Drive System	Patented Roto-Lok® Cable Drive System
Travel	
Azimuth	400°
Elevation	True elevation readout from calibrated inclinometer
Mechanical	0° to 90° of Reflector Boresight
Electrical	Standard limits at 5° to 65° (CE Approval) or 5° to 90°
Polarization	Motorized $\pm 75^\circ$, Manual H/V
Speed	
Slewing/Deploying	10°/sec. Azimuth, 5°/sec. Elevation, 5°/sec. Polarization
Peaking	0.2°/second
Motors	24V DC Variable Speed with Optical Encoders
RF Interface	
BUC Mounting	Feed Boom Up to 4-watts
Coax	Tx and Rx L-band with Type-F at Base of Antenna
Electrical Interface	25 ft. (5 m) Cable with Connector for Controller
Weight	206 lbs. (94 kg)
Stowed Dimensions	54 L x 43 W x 20 H inches (138 L x 109 W x 51 H cm)

Environmental

Wind	
Survival with Anchoring	60 mph (96 kmph)
Operational w/out Anchoring	45 mph (72 kmph)
Pointing Loss in Wind	
20 mph (32 kmph)	0.1 dB Typical, 0.1° Maximum
30 Gusting to 45 mph (48 to 72 kmph)	0.3 dB Typical, 0.3° Maximum

Temperature

Operational	$\pm 5^\circ$ to 125°F (-15° to 52°C)
Survival	-40° to 140°F (-40° to 60°C)
