

# AVL TECHNOLOGIES

## MODEL 750K iMoVSAT

### 75cm EQUIV. MOTORIZED VEHICULAR 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	Two Cases 6 x 6 x 3.5 in (15 x 15 x 9 cm)
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

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NOTE: Technical specifications may change. Please contact AVL before using this information for system design.

RevA 1-07

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### 75cm EQUIV. METER MOTORIZED VEHICULAR ANTENNA

#### 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 ±75°, 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	15 ft. (5 m) Cable with Connector for Controller
Weight	90 lbs. (36 kg) with Standard RF Electronics
Stowed Dimensions	49 L x 36¼ W x 10¾ H inches (125 L x 92 W x 27 H cm)

#### Environmental

Wind	
Survival	
Deployed	80 mph (129 kmph)
Stowed	140 mph (225 kmph)
Operational	45 mph (72 kmph), Gusts to 60 mph (97 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	+5° to 125°F (-15° to 52°C)
Survival	-40° to 140°F (-40° to 60°C)