
AvL TECHNOLOGIES

.75M iMoVSAT MODEL 750



Mechanical

Reflector/Feed System	75cm Prodellin Model or Channel Master
Mount Geometry	Elevation over Azimuth
Polarization Axis	Rotation of Reflector/Feed System about boresight
Travel	
Azimuth	400E or $\pm 200E$ from stow position
Elevation - Operational	0-65 or 0-90E of reflector boresight
Total	0-150E
Polarization	$\pm 55E$ or $\pm 95E$
Speed	
Slewing/Deploying	10E/second in azimuth, 5E/sec. in elevation, 5E/in polarization
Peaking	0.2E/second
Motors	24V DC Variable Speed with optical
Electrical Interface	
RF	Tx and Rx Type F connectors at base of antenna
Controller	15 ft. Cable from antenna to remote box
Weight	80 lbs. with standard RF electronics

Environmental

Wind	
Survival	
Deployed	80 mph
Stowed	140 mph
Operational - Tracking	60 mph at 60E F
Boresight Backlash	
Az degrees	.01 dB
El degrees	.05 dB
Pol degrees	.05 dB
Beam Deflection-Transmit	
20 mph	.1 dB
30 gusting to 45 mph	.3 dB
Temperature	
Operational	-20EF to 125EF
Survival	-30EF to 125EF

<u>Electrical RF</u>	<u>Receive</u>	<u>Transmit</u>
Frequency	10.95-12.75 GHz	13.75 -14.5 GHz
Gain (Midband)	37.8 dBi	39.3 dBi
VSWR	1.30:1	1.30:1
Beamwidth in Orbital Arc (degrees)		
-3 dB	2.0	1.6
First Sidelobe Level (± 2 dB)	-23 dB	-23 dB
Radiation Pattern (1.8E \langle T \rangle 20E)		29-25 Log T dBi
Antenna Noise Temperature		
30E Elevation Angle	50EK	
Polarization	Linear	Linear
Allowable Transmit Power		2 Watts
Cross-Pol Isolation		
On-Axis	30 dB	30 dB
Off-Axis (within 1 dB BW)	28 dB	28 dB
Maximum Off-Axis	21 dB	25 dB
Feed Port Isolation		
TX/RX		100 dB

Controller

Type	Automatic satellite acquisition with GPS, compass, level sensors, pre-loaded library of satellite positions
Manual Mode Input	Menu-driven by front panel buttons
Automatic Mode Input	Automatically locates, peaks-up, and minimizes cross-pol
Display	Two lines 3/8" high, 16 characters per line
Size	Two rack units high or two units 6" x 6" x 3.5"
Input Power	110V AC, 1ph, 60Hz, 5 amps peak