



Size:

3.70m

PXY-370

Earth Observation & LEO/MEO Tracking

PALS designed new 3.7m antenna for Earth Observation and TT&C application with simultaneous S and X-Band reception-transmission and Ka-Band reception. Serves as high-performance data reception and processing terminal for LEO and MEO satellites constellations. X/Y positioner enables full hemispherical coverage with no zenith keyhole, ensuring uninterrupted tracking during overhead passes. Excellent G/T and sidelobe performance optimizes link budget for fast connectivity.

RF & Mechanical Design

Tri-band operation with carbon-fiber composite construction preventing thermal distortion. Remote-control interface with NMS Vision provides seamless integration into ground networks. Integrated hub design houses all electronics and RF components within a single compact unit.

Reliability & Integration

Optimized reliability using most modern industrial components available. Remote-control interface ensures seamless ground network integration. All electronics and RF components fully integrated within the unit. Modular design supports future upgrades and frequency expansions.

Key Features

- S, X and Ka Band available
- Embedded controller and beacon receiver
- Eliminated overhead keyhole by X/Y design
- Zero signal loss on overhead passes
- Program, Monopulse, TLE Tracking
- Dual polarization feed
- Controlled remotely by HTML, Web GUI, SNMP
- Optional dual or tri-band feed
- Optional de-ice system





GENERAL SPECIFICATIONS

Reflector Diameter	3.7 m, Carbon-Fiber
Reflector Type	Cassegrain
Antenna Mount	X/Y
Power Supply	220VAC $\pm 10\%$, 50Hz ± 2 Hz

RF CHARACTERISTIC

	S-Band	X-Band	Ka-Band
Frequency (GHz) Tx	2.025 - 2.120	7.145 - 7.250	
Frequency (GHz) Rx	2.200 - 2.300	7.750 - 8.500	25.500 - 27.500
Gain (dBi) Tx	≥ 33.20 @ 2.025 GHz	≥ 45.80 @ 7.2 GHz	
Gain (dBi) Rx	≥ 34.00 @ 2.20 GHz	≥ 46.25 @ 8.0 GHz	≥ 56.2 @ 26.5 GHz
Polarization Tx	LHCP & RHCP	LHCP & RHCP	
Polarization Rx	LHCP & RHCP	LHCP & RHCP	LHCP & RHCP
G/T (Typical & Midband) (dB/K)	≥ 12	≥ 24.50	≥ 31
Pointing Accuracy	0.01° RMS	0.01° RMS	0.01° RMS
Antenna Pattern Compliance	Compliant with MIL-STD-188-164C, ITU-R S.580-6 & ITU-R S.465-6		

MECHANICAL SPECIFICATIONS

	X	Y
Axes Travel Range	$\pm 90^\circ$	$\pm 90^\circ$
Velocity	$6^\circ/s$	$6^\circ/s$
Acceleration	$6^\circ/s^2$	$6^\circ/s^2$

ENVIRONMENTAL SPECIFICATIONS

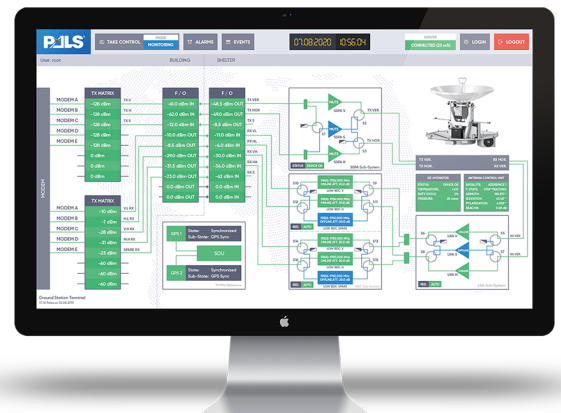
Wind Speed Operational	100 km/h
Wind Speed Survival	201 km/h
Temperature Range Operational	$-40^\circ\text{C} - +60^\circ\text{C}$
Temperature Range Survival	$-50^\circ\text{C} - +65^\circ\text{C}$
Humidity (Relative)	95%

M&C Interface

Ethernet interface for M&C and user interface.

Full remote operation and monitoring with multiple tracking options.

The antenna can be controlled via the provided computer software application or via a customer interface.



Specifications are subject to change.

