POS MV™ 320

POS MV 320 - Providing robust, reliable, and repeatable position and orientation marine solutions

POS MV maintains positioning and orientation accuracy under the most demanding conditions regardless of vessel dynamics. POS MV provides high update rate (up to 200 Hz) georeferencing and motion compensation for vessel mounted remote sensing systems.

THE POS MV ADVANTAGE

- **High quality, state of the art Inertial Measurement Units (IMUs) developed by the world's leading supplier of inertial technology**
- **IMUs with high quality accelerometers and gyros integrated into a strap down navigation solution proven to produce the best results for resolving individual multi-beam pointing angles**
- **Robust heading aiding from GPS Azimuth Measurement Subsystem (GAMS)**
- **Proprietary tightly coupled Inertially Aided GPS technology providing robust positioning with industry leading immunity to GPS outages and almost instantaneous reacquisition of RTK following a GPS outage**
- **Industry leading real time Heave estimation**
- **TrueHeave™ implemented for maximum immunity to filter transients and phase lag error**
- **The only positioning and orientation system with full raw data logging capabilities suitable for use in the Applanix POSPac post processing package.**
- **The only Inertially Aided Post Processed Kinematic (IAPPK) Solution in the Marine Hydrographic industry providing the most accurate positioning and orientation results possible**
- **Proven reliability with over 400 systems in service, the Applanix POS MV is the proven industry standard for Marine Hydrographic Surveying**

* For detailed upgrade information please call your Applanix Marine office.

* POS MV 320 comes with a 2 year warranty.

To find out more about the POS MV™ System go to

www.applanix.com

POS MV™ 320
SPECIFICATIONS

Accuracy

POS MV 320 Main Specifications (with Differential Corrections)

Roll, Pitch accuracy:	0.02° (1 sigma with GPS or DGPS)
	0.01° (1 sigma with RTK)
Heave Accuracy:	5 cm or 5% (whichever is greater) for periods of 20 seconds or less
Heading Accuracy:	0.02° (1 sigma) with 2 m antenna baseline, 0.01 (1 sigma) with 4 m baseline
Position Accuracy:	0.5 - 2 m (1 sigma) depending on quality of differential corrections
	0.02 - 0.10 m (RTK) with input from auxiliary RTK or optional internal RTK receiver
Velocity Accuracy:	0.03 m/s horizontal

POS MV 320 during GPS Outages

Roll, Pitch accuracy:	0.02° (1 sigma)
Heave accuracy:	5 cm or 5% (whichever is greater) for wave periods of 20s or less
Heading accuracy:	Drift less than 1° per hour (negligible for outages < 60s)
Position accuracy degradation:	2.5 m (1 sigma) for 30 s outages <6 m (1 sigma) for 60 s outages

Interfaces

Ethernet (100 base-T)	Parameters: Time tag, status, position, attitude, heave, velocity, track and speed, dynamics, performance metrics, raw IMU data, raw GPS data
Serial RS232 I/O	User assignable to: NMEA output (0-5), up to 200Hz , Attitude output (0-5), Auxiliary GPS input (0-2), Base GPS correction input (0-2)
High Rate Attitude Output	User selectable binary messages
Auxiliary GPS Inputs	NMEA Standard ASCII messages:
Base GPS Correction Inputs	RTCM 1, 9, 18, 19, CMR and CMR+ input formats accepted.

Environmental

Temperature Range (Operating)

IMU:	-40 °C to +60 °C
Processor:	0 °C to +55 °C
GPS Antenna:	-40 °C to +70 °C

Temperature Range (storage)

IMU:	-40 °C to +60 °C
Processor:	-25 °C to +85 °C
GPS Antenna:	-50 °C to +70 °C

Humidity

IMU:	10 - 80% RH, Ingress Protection of 65
Processor:	10 - 80% RH, non-condensing
GPS Antenna:	0 - 100% RH
IMU:	10 - 80% RH, Ingress Protection of 65
Processor:	10 - 80% RH, non-condensing
GPS Antenna:	0 - 100% RH
GPS Antenna:	0 - 100% RH

Shock & Vibration (IMU)

Operating:	90 g, 6 ms terminal saw tooth
Non-Operating:	220 g, 5 ms half-sine

Physical Characteristics

Size

IMU:	204 mm X 204 mm X 168 mm
PCS:	432 mm X 89 mm X 356 mm
	2.0U 19 in rack mount
GPS Antenna (x2):	187 mm X 53 mm

Weight

IMU:	3.5 kg
Processor:	5 kg
GPS Antenna:	<0.5 kg

Power

Processor:	110/230 Vac, 50/60 Hz, auto-switching 80 Watt
IMU:	Power provided by PCS
GPS Antennas:	Power provided by PCS

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