POS MV

MAXIMIZE YOUR ROI WITH POS MV ELITE

POS MV ELITE is a user-friendly, turnkey system designed and built to provide accurate attitude, heading, heave, position, and velocity data of your marine vessel and onboard sensors.

POS MV is proven in all conditions, and is the georeferencing and motion compensation solution of choice for the hydrographic professional.

POS MV blends GNSS data with angular rate and acceleration data from an IMU and heading from the GPS Azimuth Measurement System (GAMS) to produce a robust and accurate full six degrees-of-freedom position and orientation solution.

Key Features

- For the highest level of performance available to the industry
- IN-Fusion 2.0 ensures optimal GNSS aiding for any given conditions
- TrueHeave - no requirement to tune filter for specific conditions, no settling time so no run in time
- High accuracy inertial measurement units featuring SmartCal
- Data time tagged to microsecond accuracy
**DATASHEET**

**PERFORMANCE SUMMARY**

**POS MV ELITE ACCURACY**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>DGPS</th>
<th>Fugro</th>
<th>IARTK</th>
<th>POSPac MMS PPP</th>
<th>POSPac MMS IAPPK</th>
<th>Accuracy During 60 s GNSS Outage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Position</td>
<td>0.5</td>
<td>2 m²</td>
<td></td>
<td></td>
<td></td>
<td>~ 0.5 m (DGPS)</td>
</tr>
<tr>
<td>Roll &amp; Pitch</td>
<td>0.005°</td>
<td></td>
<td>0.003°</td>
<td>&lt; 0.003°</td>
<td>0.002°</td>
<td>0.004°</td>
</tr>
<tr>
<td>Heading</td>
<td>0.008°</td>
<td></td>
<td>0.003°</td>
<td></td>
<td></td>
<td>0.03°</td>
</tr>
<tr>
<td>Heave</td>
<td>5 cm or 5%</td>
<td></td>
<td>5 cm or 5%</td>
<td></td>
<td></td>
<td>5 cm or 5%</td>
</tr>
<tr>
<td>trueHeave</td>
<td>5 cm or 5%</td>
<td></td>
<td>5 cm or 5%</td>
<td></td>
<td></td>
<td>5 cm or 5%</td>
</tr>
<tr>
<td>Weight</td>
<td>3.9 kg</td>
<td></td>
<td>4.5 kg</td>
<td></td>
<td></td>
<td>0.82 kg</td>
</tr>
<tr>
<td>Weight</td>
<td>3.9 kg</td>
<td></td>
<td>4.5 kg</td>
<td></td>
<td></td>
<td>0.82 kg</td>
</tr>
<tr>
<td>Weight</td>
<td>3.9 kg</td>
<td></td>
<td>4.5 kg</td>
<td></td>
<td></td>
<td>0.82 kg</td>
</tr>
</tbody>
</table>

**GLOBAL NAVIGATION SATELLITE SYSTEM (GNSS)**

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>DIMENSIONS</th>
<th>WEIGHT</th>
<th>TEMPERATURE</th>
<th>HUMIDITY</th>
<th>POWER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rack Mount PCS</td>
<td>L = 442 mm, W = 356 mm, H = 46 mm</td>
<td>3.9 kg</td>
<td>-20 °C to +70 °C</td>
<td>10 to 80% RH</td>
<td>AC 120/230 V, 50/60 Hz, auto-switching 40 W</td>
</tr>
<tr>
<td>GNSS antenna (540AP)</td>
<td>Ø78 mm, W = 73 mm</td>
<td>0.45 kg</td>
<td>-50 °C to +70 °C</td>
<td>0-100% RH</td>
<td></td>
</tr>
<tr>
<td>GNSS Antenna (GAB30)</td>
<td>Ø149 mm, W = 99 mm</td>
<td>0.82 kg</td>
<td>-40 °C to +70 °C</td>
<td>0-100% RH</td>
<td></td>
</tr>
</tbody>
</table>

**ETHERNET INPUT/OUTPUT**

- **Parameters**
  - Time tag, status, position, attitude, velocity, track and speed, dynamics, performance metrics, raw IMU data, raw GNSS data.
  - Up to 50 Hz (user selectable).

**SERIAL RS232 INPUT OUTPUT**

- **Parameters**
  - Up to 50 Hz (user selectable).
  - Configurable on each assigned port.

**NMEA ASCII OUTPUT**

- **Parameters**
  - NMEA Standard ASCII messages: Position ($GNGGA), Heading ($HDMG), Attitude ($PASHR), and Time and Date ($HDMT).
  - Configuration:
    - Output selections and rate individually configurable on each assigned command.

**HIGH RATE ATTITUDE OUTPUT**

- **Parameters**
  - Up to 200 Hz (user selectable).

**AUXILIARY GNSS INPUTS**

- **Parameter**
  - NMEA Standard ASCII messages: $GPGGA, $GPGST, $GPGSA, $GPGSV.

**BASE GNSS CORRECTION INPUTS**

- **Parameter**
  - RTCM V3.x, CMR, CMR+, and CMR inputs formatted accepted. Combined with raw GNSS observables in navigation solution.

**DIGITAL I/O**

- **IPPS**
  - 1 pulse-per-second Time Sync output, normally high, active low pulse.

**USER SUPPLIED EQUIPMENT**

- **PC for POSView Software (Required for configuration):**
  - Pentium 90 processor (minimum), 256 MB RAM, 2 GB free disk space, Ethernet adapter (10/100 Base-T Ethernet; IEEE 802.3 standard), Windows 7 SP1, Windows 7 Embedded, Windows 8, and Windows 10.

- **PC for POSPac MMS Post-processing Software:**
  - Intel Pentium series 1Ghz or faster 64-bit processor (minimum), 2GB RAM, 2.6 GB free disk space, USB Port (For Security Key), Windows 7 SP1, Windows 8.1, Windows 10.

Specifications subject to change without notice.

© 2019, Applanix. All rights reserved. Applanix and the Applanix logo are trademarks of Applanix Corporation registered with the Canadian Patent and Trademark Office and other countries. POS MV and POSPac are registered trademarks of Applanix Corporation.