iIPSC-ANTRAD-101D

Dynamic Azimuth Axis Antenna Stabilizer and Positioner

The iIPSC-ANTRAD-101D is part of a family of single axis and two-axes stabilizers for antennas being used on naval and surface vessels.

- Open frame design for easy implementation of customer's antennas (e.g. phased-array)
- gyro stabilized
- high angular resolution
- high dynamic capability
- standard vehicle power supply
- standard or customized RF and NF slip rings
- size and sliprings scaleable to operator's needs
- control via CAN or Ethernet or RS232/422

The antenna is protected against the environment by a radom, which can be adapted by its transmission behavior to the antenna operating frequencies. The system is delivered with full integrated servo motor and electronics, stabilization gyro or IMU (inertial measurement unit), integrated GPS, integrated iSCU stabilization & control unit and algorithms for stabilization and pointing to moving or static targets (satellites, vehicles), capability for conical scan and RF signal feedback for improved pointing performance. As an option the unit also can be delivered with external vibration absorbers.

All signals are fed via robust connectors of type MIL-C-38999-III and TNC to the user.

The system is also available as two-axes antenna stabilizer for surface and naval vessels.

Standard designs as well as customized designs are provided.

Technical Data iIPSC-ANTRAD-101D:

Angular Positioning Rate:	± 300 °/s
Angular Acceleration:	> 300 °/s²
Positioning Resolution:	< 1 arcsec
Linearity / Scale factor error:	< 0.003 %
Accuracy in Position:	< 5 arcsec; resolution < 1 arcsec
Size:	700 mm diameter, height customer specific (depends on radom design) height of base: 100 mm
Antenna Payload Weight:	15 kg or TBD (customer's antenna and amplifier electronics)
Angular freedom:	rotation angle unlimited
Slip Rings:	RF sliprings, coax, 6 ways (DC to 2.2 GHz, 50 Ohm, insertion loss 2.5 dB max (TBD) NF / DC sliprings, 20 ways, 2 A / line
Interfaces:	Ethernet / CAN / RS232/422 for command and read-out of stabilization and control
Inertial sensors / IMS:	standard: iVRU-FC; option iOLFOG-S-D or iMGYR-SN or TBD option: georeferencing system of type iTraceRT-F200 or iNAV-FMS or iNAV-FJI
Odometer input:	as option to aid the IMS on surface vehicles
Connector:	MIL-C-38999-III, TNC
Temperature:	-20...+56 °C (operating) or TBD
Environment / MTBF/ MTTR:	IP66 at radom site / 30.000 hrs (estimated) / 10 minutes
Size, Weight:	approx. 30 kg (without payload)
Power:	24 V DC ; 360 W (max at full dynamics; at standard tracking < 120 W))

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