

**Model SSA-5**

Rough Service "Isolated" GPS Antenna

**RoHS Compliant****Summary:**

The SSA-5 is a Ruggedized, direct replacement for the Panasonic VIC-5 "Fleet Management Antenna" which was designed for through-hole mounting. The SSA-5, like the obsolete VIC-5, totally isolates the LNA ground and coax shield from the antenna base and mounting surface which eliminates the possibility of ground loops in the antenna system.

**Applications:**

New and existing applications requiring a ruggedized GPS antenna for navigation, synchronization and/or fixed location precise timing operation in hostile environments including:

- Railroad Locomotives and Rail Cars
- Wayside Equipment
- Heavy Construction Vehicles and Equipment
- Rural Cell Sites Subject to Vandalism

**Configurations:**

Three versions are available to simplify installation and optimize SSA-5 performance in different applications:

P/N 12112111G-1 specifies the SSA-5 with a 22 inch long RG-174 pendent cable terminated in an isolated TNC bulkhead connector and includes an O-Ring seal, S/S mounting washer and nut. This product is made for through-hole or bracket mounting. The pendent TNC connector is mounted on a customer supplied bracket as a strain relief. The dash number denotes cable length.

The P/N 12111110G is the same antenna as above but with an isolated bulkhead mounted TNC Jack connector (rather than the pendent coax cable/connector). This antenna is also designed for through-hole or bracket mounting but does not need a separate bracket to accommodate a pendent coax/connector. This version allows connecting the coax cable from the GPS receiver directly to the base of the antenna using either a straight or Right Angle TNC plug connector (without stopping at an interim connection as on the first version above).

The third SSA-5 version, P/N 12111120G, excludes the O-Ring seal and Stainless Steel washer and mounting nut which are replaced with a base mounted, threaded adaptor that allows installation on a 3/4 NPT pipe (or 1-14 Marine Mount) which also acts as a conduit protecting the cable. This pipe-mount version can be mounted at the height desired at wayside structure locations to attain a good view of the GPS satellites.

**Antenna Characteristics:**

Parameter	Value
Center Frequency:	1575.42 MHz
Dual Pole Filter	-25 dB at +/- 50 MHz
Polarization:	R.H.C.P. (Right Hand)
Gain Overall	+28dB typical
RF input w/o damage	10 Watt max momentary
Output VSWR:	1.5 max
Output Impedance:	50 Ohms
Power input	+3.0 VDC to +6.0 VDC
Current draw	11 mA typ., 13 mA max.
Elevation Angle Coverage	5 to 90 degrees
Azimuth Bearing Coverage	360 degrees

**Environmental Specifications:**

Parameter	Value
Operating Temperature	-40° C to +85° C
Storage Temperature	-40° C to +90°C
Humidity	95% Non-Condensing
Shock & Vibration	IEC 61373 (1999)

**Physical Specifications:**

Parameter	Value
Dimensions:	
Diameter	3.40 Inches
Height - Radome to Base	1.2 inches
Material: Base & Radome	Ultra-High Density PE
Material: Washer & Nut	316 Stainless Steel

The SSA-5 features full electrical isolation of the antenna, LNA Coax cable and TNC connector from the Aluminum mounting stem. The internal GPS antenna module cavity is double O-Ring sealed to prevent water and dust intrusion. Mounting methods are outlined on page two and optional mounting brackets or pipe adaptors are quoted on request.

SSR-5 antennas feature rugged, machined Radomes and housings of Black, Ultra-High Density Polyethylene (UHDP) material that is U/V stabilized for long-term exposure to the sun and to harsh wash-down fluids. The Radome is nearly three times as thick as consumer and commercial grade antennas to better resist damage after installation.

**For configuration assistance, order placement and technical support call:**



**SYNERGY SYSTEMS, LLC**  
Time proven products and support

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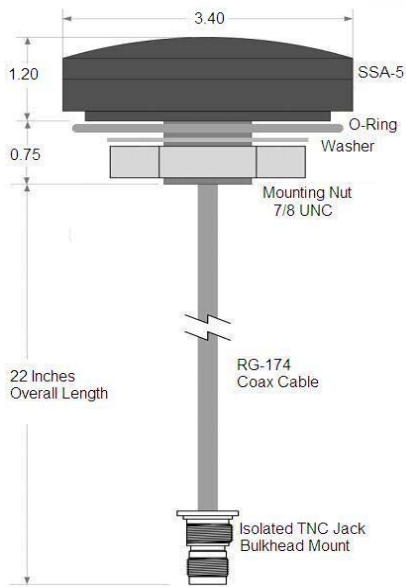
Prices and/or specifications subject to change without notice.

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Rough Service "Isolated" GPS Antenna

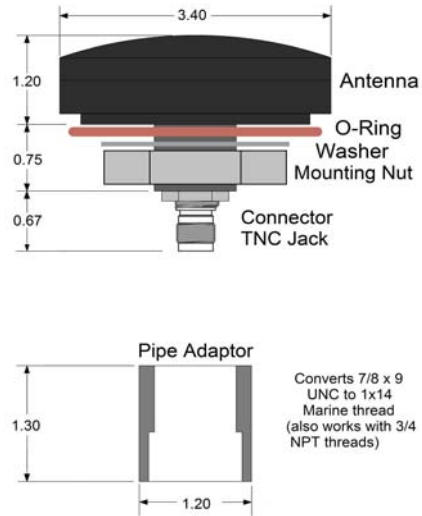
**RoHS Compliant**



Installation Detail for P/N 12112111G-1



Installation Detail for P/N 12111110G \*



\* Note: SSA-5 with Marine Mount Adaptor is P/N 1211120G

**Ordering Information:**

Part Number	Low-Profile Radome Configuration
12112111G-1	SSA - 5 w/22" RG-174 & pendent bulkhead TNC
12111110G	SSA - 5 with bulkhead TNC
12111120G	SSA - 5 with bulkhead TNC & Marine Mount Adaptor

Other RF Connectors, coax cable lengths and mounting brackets quoted on request.

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