

Model 8226 GNSS Surge Suppressor

Installation Guide

Orolia recommends the use of an inline coaxial protector for all products connected to an outside GNSS antenna.

Orolia offers the Model 8226 GNSS Antenna Surge Suppressor to protect a connected GNSS receiver from damaging voltages occurring on the antenna coax cable. Voltages exceeding the impulse suppressor trip point are shunted to the system ground. The Model 8226 is designed to withstand multiple surges.



Figure 1-1: 8226 Surge supressor with bracket

1. Mounting Bracket Installation

Install the suppressor indoors, preferably where the coax enters the building. Connect the largest-gauge grounding wire available to the mounting bracket, using the M8 attachment screw; see Fig. 1-2:

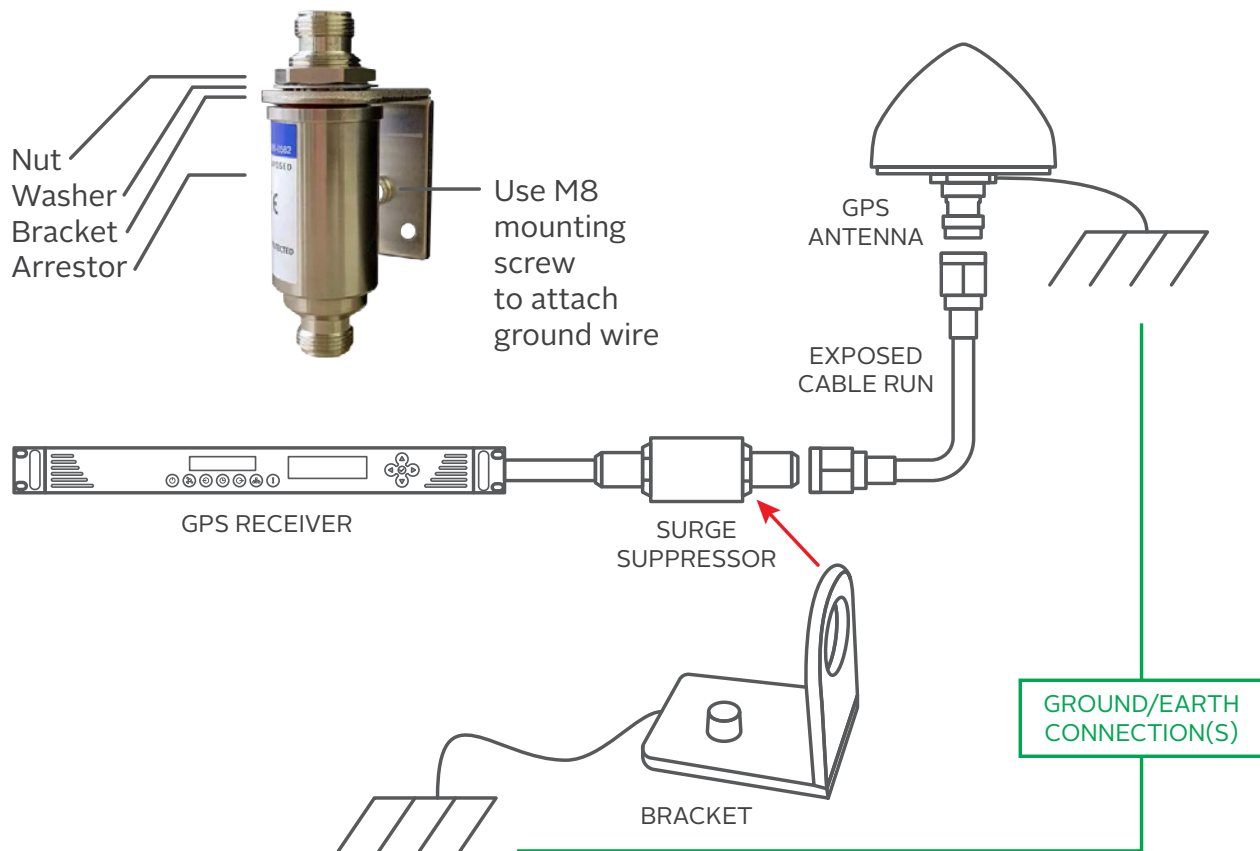


Figure 1-2: Model 8226 with optional mounting bracket

2. Grounding Plate Installation

Optionally, the suppressor can be mounted to a grounding panel or bulkhead, as shown in Fig. 1-3: Orolia offers a Surge Protector Grounding Kit, part number 8226-0002-0600, that serves as a single point ground connection for the Model 8226 Surge Suppressor.

The kit includes a copper grounding plate on melamine-covered particle board, mounting hardware, copper strapping, strap clamps, ground wire, a ground clamp, copper paste, an appropriate mounting bracket, and ancillary hardware. A single point ground system is recommended to provide optimum protection from lightning strikes.

- Mount the grounding panel indoors, preferably close to where the antenna coax enters the building and direct access to the system ground is available.
- The grounding panel must be connected to a low impedance (both low resistance and low inductance) ground system to assure proper operation of the surge protection equipment. To minimize the inductance between the ground plate and system ground interconnection, keep the copper grounding strap as straight as possible.
- Limit bends to a radius of 8 inches or larger. Thoroughly clean the copper panel to remove any oxidation or contaminants prior to installation. Apply the supplied copper paste to all junctions on the copper panel to maintain a low-impedance connection.

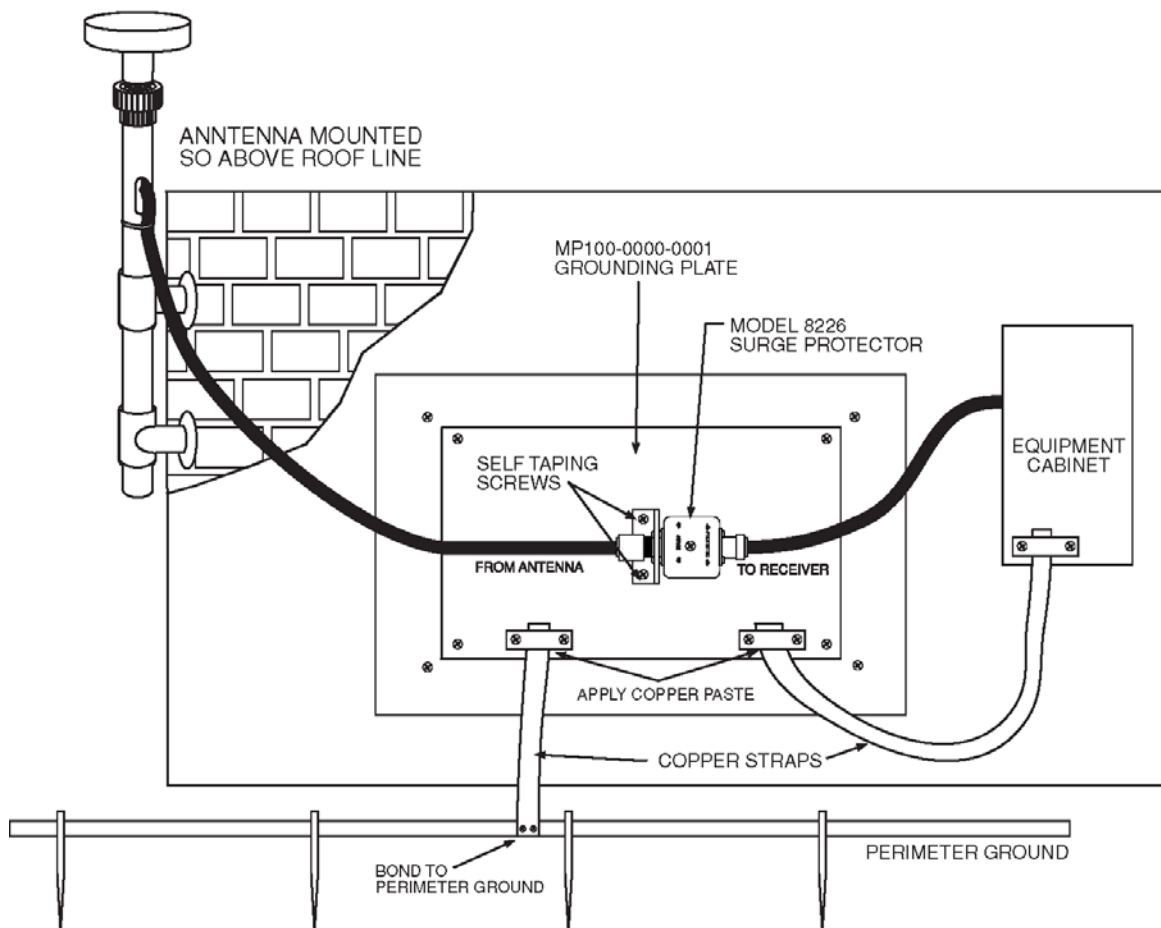


Figure 1-3: Grounding kit panel installation

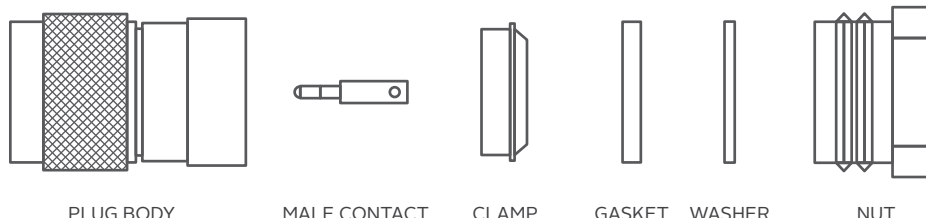
Each Model 8226 includes two clamp type male N connectors. These connectors can be used to splice the Model 8226 into the antenna coax. The connectors are compatible with Orolia CAL7xxx cable assemblies and Times Microwave LMR- 400 equivalent coax. Connector assembly instructions are shown below:

3. Assembly Instructions, Type N Connectors, and Clamps

The instructions below apply to Type N Connectors, part number PO51-0001-0100.

Using the manufacturer’s part list, verify that all the connector parts are included. (See also connector diagram below.)

Figure 1-4: Connector component; and below Table 1-1: Connector Assembly



Cable Assembly Instructions - Clamp

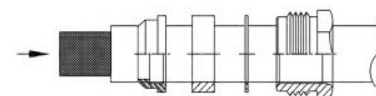
Step 1 Stripping Braid Wire

Strip the braid wire where the connectors will be installed. Strip the cable as shown in illustration on the right; follow the cable stripping dimensions as recommended by the connector manufacturer.



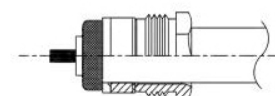
Step 2 Nut, Washer, Gasket, and Clamp

Place all the parts in order and make sure the assembly direction is correct.



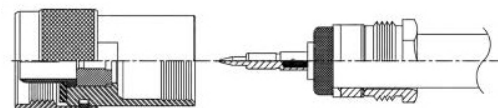
Step 3 Spreading Braid Wire and Stripping Inner conductor:

Fold the braid wire backward onto the braid clamp and make it spread evenly:



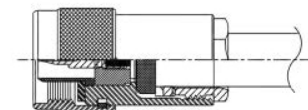
Step 4 Contact Pin Soldering

While soldering the contact pin, it must be soldered carefully, and the pin must remain free of tin-solder.



Step 5 Fastening the Nut

Install metal screw onto nut, and spin into the connector body until hand-tight.
Use Wrench and tighten the nut.



4. Document Revision History

Revision	ECO	Description	Date
A	–	Legacy documentation	
B	2017	Reformatted instructions for latest style standards. Made minor text edits throughout. Added reference to Grounding Kit, 8226-0002-0600	Feb. 2007
C	2333	Updated Figure 1 to accurately represent new hardware.	June 2009
D	2621	Minor maintenance & adjustments made to reflect hardware changes (cable jacket dimensions).	April 2011
E	2715	Update Figure 1, additional minor document maintenance.	August 2011
6	O445	Connector assembly instructions revised.	Sept 2015
7	O121	Changed arrester model and instructions for grounding. Plus: Layout and minor content modifications.	Nov. 2017