

1. Antennas for RadioRanger SEL-8310

The SEL-8310 unit works with two types of antennas – internal antenna and remote antenna. The internal antenna is made by SEL. The remote antenna is purchased.

1.1 Internal Antenna

1.1.1 Antenna Type

The internal antenna is of a coaxial dipole type.

A 1/4 wave stub is counter-balanced with a brass pipe. This design is widely used by the radio industry.

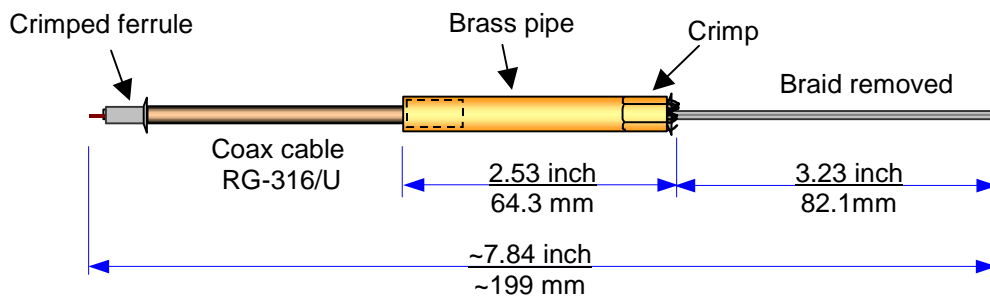
1.1.2 Antenna Structure

SEL part number: SEL-8310 Internal Antenna

Manufacturer: EOS

The antenna is built by EOS, using RG-316/U coaxial cable, plastic insert, brass pipes and a crimping ferrule.

Antenna drawing is shown in figure below.



1.2 Remote Antenna

1.2.1 Antenna Type

The remote antenna is detachable, through a coaxial connector, and it is of a 1/4 wave stub type, with a magnetic base. Antenna is connected with a 10 feet RG-58U coax cable.

This antenna is widely used by the radio industry.

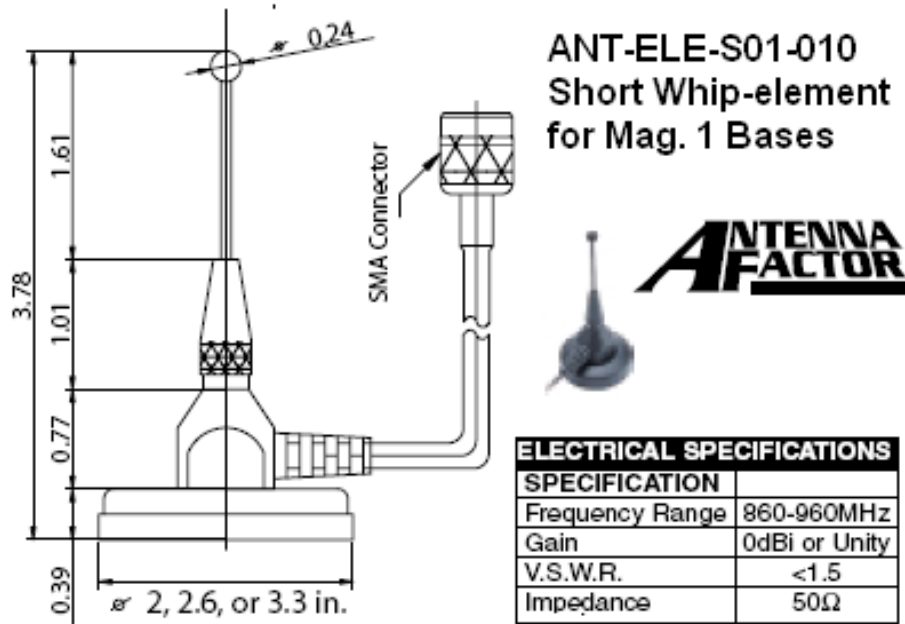
1.2.2 Antenna Structure

Manufacturer part number: ANT-ELE-S01-010

Manufacturer: ANTENNA FACTOR, 159 Ort Lane, Merlin, OR 97532

The external antenna is purchased from an US distributor.

The antenna drawing is shown in figure below.



The coaxial cable length is set to 10 feet.

1.2.3 Coaxial Connector

The RG-58/U coaxial cable is connectorized with an SMA right-angle connector. The SMA connector mates with a coaxial adaptor-plug, mating with the RF switchable connector on the SEL-8310 board.