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# Model AVI-1 Receiver

For Automatic Vehicle Identification (AVI)



The **Model AVI- Receiver** identifies vehicles with a unique coded transmitter (Model AVI-X Transponder) and provides an opening signal for vehicle identification and/or control purposes. Because the transmitter is mounted to the underside of the vehicle, the code is tied to the vehicle, eliminating lost, stolen, or forgotten hand held devices or codes. The transmitter must pass directly over the AVI receiver loop coil (within 3 feet) that is installed in the road surface, requiring the vehicle to be in an exact area to activate the gate controller. Because the loop coil is installed in the pavement, it is not exposed to the elements or vulnerable to vandalism.

**Setup:** The receiver does not require any adjustment or setup. The receiver is operational within 2 seconds after application of power.

**Receiving Range:** The transmitter must be directly over and within 3 feet of the road surface.

**Vehicle Speed:** The receiver will reliably recognize signals from vehicles passing directly over the area enclosed by the roadway loop coil for all vehicles speeds up to 85 MPH.

**Presence Time:** The receiver will hold a valid code detect for as long as the transmitter is within the loop coil area and for 2 seconds after the transmitter leaves the loop coil area.

**Grounded Loop Operation:** The loop coil is transformer-isolated allowing operation with poor quality loops (which may include one short to ground at one single point).

**Inductance Range:** There is no inductance requirement.

**Loop Coil Area:** The maximum area a loop coil can cover is 120 square feet.

**Antenna Loop Feeder Length:** Up to 300 feet (91m) maximum with proper feeder cable and appropriate loops.

**Lightning Protection:** The receiver can tolerate, without damage, a 10 microfarad capacity charged to 2,000 volts being discharged directly into the loop input terminals, or a 10 microfarad capacitor charged to 2,000 volts being discharged between either loop terminal and earth ground.

**Detector Indicator:** Super-high intensity red light-emitting diode (LED) indicates the presence of a valid-coded transmitter within the loop area.

**Relay Ratings:** The relay contacts are rated for: 6-Amps max, 150 VDC max, 300 VAC max, and 180 Watts max switched power.

**Size:** 1.60 in (4.06 cm) wide x 2.90 in (7.37 cm) high x 3.50 in (8.89 cm) deep excluding connector.

**Enclosure:** The enclosure is aluminum with a durable polyester coating. Printed circuit boards are made with 0.062- in FR4 material with 2oz copper on each side and plated- through holes.

**Power:** 89 to 135 VAC, 50/60 HZ, 6 Watts max.

**Operating Temperatures:** -40°F to +180°F

**Connector:** (1) MS3102A-18-1P

**Pin Assignments:**

<u>Pin</u>	<u>Function</u>
A	Power, Neutral, 120 VAC
B	Output Relay (COM.)
C	Power, Line, 120 VAC
D	Loop
E	Loop
F	Output Relay (N.O.)
G	Output Relay (N.C.)
H	Chassis Ground
I	No connection
J	No connection