

DSP-10

Full-Featured Vehicle Detector with Two Outputs



The DSP-10 detector has been specifically designed to handle most parking, drive-through, and access control applications. This detector uses sophisticated filtering and processing algorithms to allow the detector to function in noisy electrical conditions and with less than ideal loops. The DSP-10 also supports Diablo Controls Free Exit Probe to provide more detection options.

The DSP-10 is full-featured offering outputs for presence, pulse on entry, pulse on exit, or loop failure. Output A can have delay and/or extension applied to modify the behavior of a presence output. Sensitivity boost is available to help eliminate detection drop outs when high bed vehicles or tractor / trailer combinations need to be detected. Extended presence is available to deal with situations where vehicles may be parked over a loop for extended periods of time (several hours). Several diagnostic indications are also available: Low voltage indication, open loop circuit, shorted loop circuit, large inductance change, and prior faults that cleared by themselves. This detector can also be field configured for fail-safe or fail-secure operation (the factory default is fail-safe).

The DSP-10 is a cost-effective detector that provides leading edge noise immunity and is fully featured. The DSP-10 provides many advanced features to provide a great value for your money.

Features

- ❖ Wide low voltage operation
- ❖ Works with standard inductive loops as well as Diablo's Free Exit Probe.
- ❖ Advanced filtering technology for superior noise tolerance.
- ❖ Works on any in-ground inductive loop from 20 to 1500 microhenries.
- ❖ Can be changed between fail-safe or fail-secure mode in the field.
- ❖ Pulse on Entry or Pulse on Exit for those operators or situations that require this type of signal.
- ❖ Delay and Extension timing functions are available to provide additional flexibility.
- ❖ Four frequency settings to help avoid loop cross-talk situations.
- ❖ Sensitivity Boost for those installations that require reliable detection of semi-truck trailers and high-bed vehicles.
- ❖ Provides two relays outputs, each with a Normally Open and a Normally Closed contact.

| Switch | Function | | | | | | | |
|--------|----------|--------------------|-----|---------|-----|-------------------|----|---------|
| 1 | OFF | Normal Presence | | | ON | 2 Second Delay | | |
| 2 | OFF | Norm | ON | 2 Sec. | OFF | 5 Sec. | ON | 10 Sec. |
| 3 | OFF | | OFF | Extend | ON | Extend | ON | Extend |
| 4 | OFF | Normal Sensitivity | | | ON | Sensitivity Boost | | |
| 5 | OFF | B Pres | ON | B Entry | OFF | B Exit | ON | B Fail |
| 6 | OFF | | OFF | Pulse | ON | Pulse | ON | Output |
| 7 | OFF | Normal Presence | | | ON | Extended Presence | | |
| 8 | OFF | Inductive Loop | | | ON | Mini-Loop | | |
| 9 | OFF | High | ON | Med | OFF | Med | ON | Low |
| 10 | OFF | | OFF | High | ON | Low | ON | |

SPECIFICATIONS

- Loop Circuit Inductance:** 20 µH to 1500 µH
- Operating Temperature:** -35°F to 165°F (-37°C to 74°C)
- Operating Voltages:** There are two versions:
LV = 10 volts to 40 volts DC or 10 volts to 30 AC
117 = 100 volts to 135 volts AC
- Operating Current:** LV Version - 75 milliamps max. 50 milliamps typical.
117 Version - 35 milliamps max. 25 milliamps typical.
- Output Relay Rating:** 3 amps at 300 VAC or 150 VDC.
- Pulse Output:** 250 ms ±15 ms
- Size:** 2.36" (H) x 1.75" (W) x 4.09" (D)
59.94 mm x 4.45 mm x 10.39 mm



