



DSP-15 Vehicle Detector

The Only Loop Detector You Will Ever Need!

Overview

The DSP-15 vehicle detector has been specifically designed to handle all parking, drive-through and access control applications. Working on virtually any size loop, the DSP-15 automatically tunes itself to the best operating frequency. Environmental conditions are constantly compensated with the DSP-15's *HYPERTRACK* software. The DSP-15's inherent noise filtering algorithms allow it to work reliably in any electrical situation.

With its compact size, front panel switch features, and built-in fail safe/secure feature, the DSP-15 is the only vehicle detector you will ever need.

Features

- Works on any in-ground inductive loop from 20 to 2000 microhenries.
- Can be easily changed to fail safe or fail secure mode in the field.
- Power interruptions of short duration are ignored. If power fails for approximately three seconds or less the DSP-15 "remembers" a vehicle.
- The DSP-15-LV is protected from damage if plugged into a higher voltage. No need to change a fuse or reset a circuit breaker, simply plug the detector into the proper voltage and it works.
- Separate Power/Fail and Detect LEDs.

LED Indicators

The green POWER LED shows the following status:

Normal	On
Loop open	Slow flash
Loop shorted	Fast flash

The red DETECT LED shows the following status:

Delay	Slow flash
Detect	On
Extension	Fast flash
No Detect	Off

Fail Safe Operation (J2 shunt installed - factory default) - In fail safe mode the output A relay is energized and will de-energize for any one of the following conditions: vehicle detection, loop failure, or power failure. In this mode, continuity will occur between connector/terminal block pins 1 and 3 during detection.

Fail Secure Operation (J2 shunt removed) - In fail secure mode the output A relay is de-energized and will energize for either vehicle detection or loop failure. In this mode, continuity will occur between connector/terminal block pins 1 and 2 during detection.

Switch Settings

NOTE: Changing any DIP or rotary switch setting automatically resets the detector.

Sensitivity

Experience has shown that almost all parking and access control applications can be handled with sensitivity set at NORMAL (level 5). The rotary sensitivity switch is rarely moved from NORMAL. However, the DSP-15 has ten sensitivity settings varying from LOW (level 0) to HIGH (level 9).

Frequency

Automatically tunes within one of four operating ranges.

Delay

With DIP switch 1 turned off there is no delay. With DIPSWITCH 1 turned on there is a 2 second delay before output A occurs. This 2 second delay is flashed on the detect LED. If the vehicle leaves before the two seconds has timed out, the output will not occur. *Delay only affects Output A.*



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Extension

DIP switches 2 and 3 are used to select extension timing. See chart below for extension times. Extension allows the main output to be held for a period of time after the vehicle has left the loop detection area. Selected extension time is flashed on the call LED. *Extension timing only affects Output A.*

	DIP Switch 2	DIP Switch 3
0 seconds	Off	Off
2 seconds	On	Off
5 seconds	Off	On
10 seconds	On	On

Sensitivity Boost

DIP switch 4 selects this feature. With switch 4 turned on, sensitivity is automatically boosted during a call to improve detection of high-bed vehicles and truck/trailer combinations. Sensitivity boost is not applicable to most situations.

Output B Function Select

DIP switches 5 and 6 determine the function of the second output relay, Output B. See chart below to select a specific function. This output can be used in any one of the following ways:

	DIP Switch 5	DIP Switch 6
True Presence	Off	Off
Entry Pulse	On	Off
Exit Pulse	Off	On
Loop Fail	On	On

True Presence

The relay is energized whenever a vehicle is present. The relay is *not* affected by any delay or extension timing.

Entry Pulse

The relay is energized for 250 ms when a vehicle enters the loop, or after the delay interval, if programmed.

Exit Pulse

The relay is energized for 250 ms when a vehicle exits the loop or after the extension time, if programmed.

Loop Fail

If the inductive loop fails (opens or shorts), the output B relay energizes.

Extended Presence

DIP switch 7 is normally left in the off position. If extended presence is required, this switch is turned on. This feature is only used in those rare cases when a vehicle will be over the loop for a long time (loading dock, etc.).

Loop Failure Memory

With DIP switch 8 turned on, the DSP-15 will indicate a prior intermittent loop failure regardless if the failure recovers. Any reset will clear the memory failure.

Output Relay Ratings

3A, 150 VDC or 300 VAC.

Power

10 to 30 volts, AC or DC. Power consumption is less than 3 watts.

Size

Height: 2.90" (73.7 mm) Width: 4.125" (104.8 mm)

Operating Temperature

-35°F to 165°F (-37°C to 74°C)

Ordering Information:

DSP-15-LVx

x = T = 10-position terminal block.

x = F = 10-pin right angle female Molex

x = M = 10-pin header (model pictured)



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