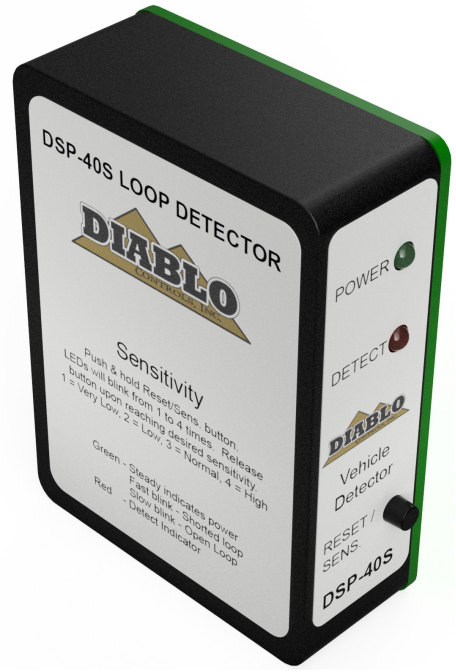
DSP-40S

Plug-N-Play Vehicle Detector



Features

- Plug-N-Play for most installations.
- Wide DC voltage operation (8 to 35).
- Fail safe operation.
- Designed to be cross talk free between other loops.
- Separate Power/Fail and Detect LEDs.
- Works on any in-ground inductive loop from 20 to 1500 microhenries.
- Small profile is perfect for many installations.
- This series of Diablo Controls detectors are covered by United States Patent number 7,132,959 “Non-Interfering Vehicle Detection.”

At last a plug-in detector with very little configuration needed. The DSP-40S has no configuration settings other than being able to change the sensitivity. The detector comes from the factory already set to the correct sensitivity for most loop installations.

The detector will operate on any voltage from 8 to 35 volts DC. The DSP-40S detector is covered by United States patent number US 7,132,959 “Non-Interfering Vehicle Detection.” This detector is virtually cross-talk free in most applications. It has been specifically designed to handle parking, drive-through and access control applications where solid-state outputs are required for both the detect and fail outputs.

Power interruptions of short duration (approximately 1.5 seconds) will not cause the detector to reset and forget a vehicle currently over the loop.

The detector is provided with a loop/lead-in failure output. If the detector senses that loop/lead-in circuit is open or shorted, the green LED will flash to identify the type of failure and the fail output will be activated.

Fail-Safe vs Fail-Secure: A fail-safe detector will activate the detect output when the loop circuit is failed. This is always the desired operation for a safety (obstruction) loop. On a free exit loop, this will keep the gate open until the fault is corrected. This is useful in applications where it is important to allow traffic flow to continue in the event of a loop/lead-in failure. A fail-secure detector will not activate the detect output when the loop circuit is failed. This will keep the gate closed. This is useful in high security areas or installations where containment is needed. The DSP-40S is a fail-safe detector.

CAUTION: Use of a fail-secure detector on a safety (obstruction) loop may result in a gate prematurely closing when a loop/lead-in fault occurs.

DIABLO CONTROLS, INC.
Pros Who Know Trust Diablo

DSP-40S

Plug-N-Play Vehicle Detector

SELECTABLE FEATURES

Reset / Sens Button: This button is used for two functions. A short press and release of the button will reset the detector and both LED's will flash from 1 to 4 times, indicating the detector's sensitivity level. The detector is shipped from the factory with the sensitivity set at level 3.

If a different sensitivity level is required, push and continue to hold the button until the LEDs start flashing. Release the button immediately after the desired number of flashes. For example, if the sensitivity is to be changed to level 2, push and hold the button until the LEDs flash twice then immediately release the button. The sensitivity level can always be verified by a quick tap on the push button. This will reset the detector and flash both LEDs indicating the current sensitivity level.

Level 1 - Very Low
Level 2 - Low
Level 3 - Normal (Factory setting)
Level 4 - High

SPECIFICATIONS

Loop Inductance: 20 µH to 1500 µH (including lead-in)

Operating Temperature: -35°F to 165°F (-37°C to 74°C)

Operating Voltage: 8 volts to 35 volts DC

Operating Current: Without a call is 31 ma maximum
With a call is 40 ma maximum

Output Rating: Both Outputs are Solid State Open Drain
Can Sink 250 milliamps @ 35 volts

Enclosure: Impact resistant plastic
2.375" (H) x 0.86" (W) x 2.25" (D)
60.4 mm (H) x 22 mm (W) x 58 mm(D)

INDICATORS

Green Power LED: The LED will be on steady to indicate the detector is powered and operating normally. If there is a short in the loop/lead-in circuit, the LED will flash quickly (5 times per second). If there is an open in the loop/lead-in circuit, the LED will flash slowly (1 time per second).

Red Detect LED: The LED will turn on when a vehicle is over the loop detection area.

CONNECTOR PINS

10-position Molex Type 09-48-1104
Mates with many female PCB 0.156" pitch headers in use by some access control devices and gate operators.

Pin	Function
1	Loop Input
2	Loop Input
3	Power + [1]
4	No Connection
5	No Connection
6	Fail Output - Connects to common for fail [1]
7	Fail Output - Connects to common for fail [1]
8	Detect Output - Connects to common for fail
9	Power + [1]
10	Power - and Output common

[1] Either or both of these pins can be used.

ORDERING INFORMATION

DSP-40S Only one model available