

DSP-100 Vehicle Detector

The Only Vehicle Detector You Will Ever Need!

OVERVIEW

The DSP-100 vehicle detector has been specifically designed to handle all traffic applications and is the industries smallest shelf mounted detector.

Working on virtually any size loop, the DSP-100 tunes itself automatically to the best operating frequency within the selected range. The DSP-100's inherent noise filtering algorithms allow it to work reliably in any electrical situation.

The "RT" and "ST" models have front panel switches to select both extension and delay timing.

With its rugged enclosure, front panel switch features, and built-in flexibility the DSP-100 is the most "user friendly" detector on the market today.



FEATURES

Loop Size - Works on in-ground inductive loops from 20 to 1500 mH.

Fail Safe Operation - The output contact is configured to output a call whenever the loop circuit has failed or power is interrupted.

Indicators - Separate Power/Fail and Detect LEDs.

Sensitivity - Eight sensitivity settings.

Frequency – Automatically tunes within one of four operating ranges.

Output - Main detection output. Models with timing can be modified by delay and extension. All models are factory set to be fail-safe and can be programmed to output either presence or pulse.

Loop failure - If the loop fails, the power indicator flashes. (See table next page)

Delay - Models with timing can be selected to ignore fast moving or "right turn" vehicles over the loop. Delay can be set from 0 to 63 seconds in one second increments.

Extension - Models with timing can extend a call for slow moving vehicles. Extension can be set from 0 to 15.75 seconds in quarter second increments.

Fail Secure – The output can be configured to not place a call whenever the loop has failed or power is interrupted by removing **internal** jumper J2.

Solid State Outputs – The DSP-100 can be ordered in a solid state output version.

Green Extend – Normal operation always honors any extension time programmed. The DSP-100 can be set to extend only during the green interval by removing jumper J1 and connecting the 117 AC green input for that phase to connector pin J.

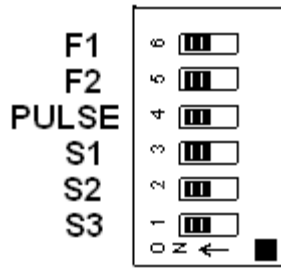


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The above switches can be changed as follows:

Frequency - One of four operating frequencies can be selected by using front panel DIPSWITCHES F1 and F2

Pulse / Presence - DIPSWITCH 4 selects this feature. With switch 4 turned on, Output will output a 125 ms pulse each time a vehicle enters the loop detection area. If the vehicle remains within the loop for two seconds, the detector will automatically re-tune making itself ready for the next vehicle to arrive. If switch 4 is turned off, the detector will output presence. **NOTE - Changing any of the function DIPSWITCH settings automatically resets the detector, which cancels the call output.**

Sensitivity – Switches S1, S2, and S3 can be set for a total of 8 different levels. NOTE Almost all traffic applications can be handled with sensitivity set at NORMAL (level 4). The sensitivity switches are rarely moved from NORMAL. Refer to the table below

Sensitivity	Level	S 1	S 2	S 3
Lowest	1	OFF	OFF	OFF
	2	ON	OFF	OFF
	3	OFF	ON	OFF
	4	ON	ON	OFF
Normal	5	OFF	OFF	ON
	6	ON	OFF	ON
	7	OFF	ON	ON
Highest	8	ON	ON	ON

Delay (Available only on -RT and -ST models) - This interval is between vehicle arrival and output activation. Delay time can be programmed from 0 to 63 seconds in one-second increments. During the delay interval, the CALL LED is flashed slowly. If the vehicle leaves before the delay interval times out, the output will not occur.

Extension (Available only on -RT and -ST models) - Extension time can be programmed from 0 to 15.75 seconds in quarter second increments. During this interval, the CALL LED is flashed rapidly. If another vehicle arrives before the interval times out, the output will not be dropped.

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Fail Safe or Fail Secure Operation - The DSP-100 will be shipped in the fail safe mode from the factory. In the standard fail safe mode, the main output is normally energized and will de-energize for any one of the following conditions: vehicle detection, loop failure, or power failure. A fail secure model may be ordered as an option.

Output Relay Ratings - 3A, 150 VDC or 300 VAC.

Enclosure – Aluminum extrusion.

Indicators

The GREEN LED shows the following status:

- ON Steady Normal (Shows power to unit)
- Blinks Slowly Loop Circuit Open
- Blinks Fast Loop Circuit Shorted

The RED LED shows the following status:

- ON Steady Detection of Vehicle
- Blinks slowly* Delay
- Blinks fast* Extension

*Extended features (On -RT and – ST Models only)

Connector – Standard 10-pin MS. Pin assignments and cable harness wire colors are shown below:

- A - AC neutral – White
- B - Output Common -Brown
- C - AC hot - Black
- D - Loop - Red
- E - Loop - Orange
- F - Output A (N.O.) -Yellow
- G - Output A (N.C.) (relay only) - Blue
- H - Chassis ground - Green
- I - Not Used - Violet
- J - Delay Inhibit 117 VAC - Gray



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