

Dual Channel Vehicle Detector



Model NP2 Squared Features:

- Two Channels in a compact package
- 10 Sensitivity Settings per channel
- 4 selectable Frequencies per channel
- Wrong voltage protection
- Directional Logic capability
- Selectable Presence or Pulse output mode
- Separate Detect and Power/Fault Indicators
- Automatic Sensitivity Boost
- Available in: 240VAC, 120VAC, or 12-24VDC/AC

NP2 Squared Specifications

Front Panel Controls:

Each channel has individual Controls for Sensitivity and Frequency

Sensitivity – controlled by front panel Rotary Switch. One of 10 sensitivities may be selected using the front panel rotary switches.

Medium sensitivity (5) should be used for most applications. Always use the lowest sensitivity setting that reliably detects vehicles.

Frequency – four separate settings controlled by front panel DIP switches.

- F2 + F1 = High
- F2 + F0 = Medium High
- F1 + F0 = Medium Low
- F0 + F0 = Low

Reset – front panel reset performs a hard reset of the detector.

Rear Panel Options:

Switch	Function	
	OFF	ON
1	Normal Dual Channel	Directional Logic
2	Fail Secure (N.O.)	Fail Safe (N.C.)
3	Presence Mode	Pulse Mode
4	Normal Presence	Permanent Presence
5		Option A
6		Option B

Directional Logic Operation:

In directional logic mode, both loops will be in a single lane and close enough to each other such that vehicles will bridge both loops simultaneously. If a vehicle enters loop 1, the detect 1 led will start a slow flash, as the vehicle enters loop 2, the detect 2 led and output 2 relay will show a vehicle call which will continue until the vehicle has left loop 2. If the vehicle does not enter loop 2 and exits loop 1 no call is initiated and the system resets. In the above example, if pulse mode is selected, the call on detect 2 will be a pulse after which the detect 2 led will resume a slow flash. If a vehicle enters loop 2 and proceeds to loop 1 then the above example will reverse with the call being output on detect 1 relay.

Fail Secure/Fail Safe Output:

Detect Output Relay may be selected as fail secure Normally Open (loss of power does not cause relay to change state) or Fail Safe Normally Closed (relay is energized with no vehicle over loop, relay will deactivate on power fail.)

Presence Mode/Pulse Mode:

In Presence mode the channel will maintain a presence indication while a vehicle remains in the detection area. Presence time may be selected as normal (detect call is reset after 60 minutes) or permanent. In pulse mode, each vehicle entering the detection area will initiate a 250 millisecond pulse. No further pulses are initiated until the vehicle leaves the detection area.

Specifications:

Output Rating: Relay Output is rated 120VAC, 28VDC, 1A

Power: 12-24V DC/AC, 120 VAC or 240 VAC

Inductance Range: 20uH to 1500uH.

Temperature Range: -30 F to +180 F.

Lead-In Length: up to 2500 ft. with proper lead-in and loop.

Mechanical: 3.66" D x 3.1" H x 1.4" W.

Supply Voltage – incorrect voltage supplied to the unit will not result in damage, the unit will simply not operate until correct voltage is supplied. No fuses need to be reset.

Indicators – Front Panel LED Indicators:

Power/Fault – Green, solid with correct power supplied. Flashes during a fault condition.

Fault flash sequence:

Single flash and pause = Open Circuit Loop,

Double flash and pause = Shorted Loop.

Detect – Red, solid during detect or Fault

Factory Settings:

- Set to High frequency
- Set to Medium sensitivity (5)

Sensitivity Boost – automatic during detect except in the highest sensitivity setting (3).

Connector: – 11 pin Amphenol

Pin #	Function
1	Power +
2	Power -
3	Relay 2 N.O (N.C)
4	Earth
5	Relay 1 Common
6	Relay 1 N.O. (N.C.)
7	Loop Channel 1
8	Loop Channel 1
9	Relay 2 Common
10	Loop Channel 2
11	Loop Channel 2

Note: The above connections are shown with correct power supplied and no vehicle present.

Specifications are subject to change without notice. Northstar Controls L.L.C. warrants this product against defects in Manufacturing and workmanship for one year from date of shipment from the Northstar Controls L.L.C. factory.

L NP2 SQ-Rev A

