









**NORTHSTAR  
CONTROLS, LLC**  
Vehicle Detection, Systems & Accessories



## NP2 PLUS

Single Channel Dual Relay Vehicle Detector

-  **Digital Display & EZ Tune Technology**
-  **Digital Bar Graph for Loop Diagnosis**
-  **10 Sensitivity & 4 Frequency Settings**
-  **Output Timing - Extend & Delay**
-  **Selectable Presence Times**
-  **Selectable Pulse Lengths**



Our Facility  
Sarasota, Florida



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**Built in America, by an American**

**Front Panel Controls:**

The NP2+ has three Front Panel pushbutton switches.

- UP / sensitivity programming mode.
- Press and hold for 3 seconds to enter sensitivity mode.
- UP and DOWN buttons may be used to step through sensitivity levels.
- DOWN / frequency programming mode.
- Press and hold for 3 seconds to enter frequency mode.
- UP and DOWN buttons may be used to step through the frequency selections.
- Reset – front panel reset performs a hard reset of the detector and resumes operation using the last programmed settings.

**Indications:**

Single digit 7 Segment Multifunction Display.

- In normal operation this display shows the current sensitivity level.
- In sensitivity programming mode the sensitivity is displayed and may be changed by manipulating the UP/DOWN pushbuttons.
- In frequency programming mode, the frequency of the loop oscillator in kHz is displayed. This frequency may be changed by manipulating the UP/DOWN pushbuttons. The display alternates digits to show the ‘tens’ digit, then the ‘ones’ digit and then a pause.
- When the detector is in fault, the display shows ‘OC’ for open circuit loop or ‘SC’ for short-circuited loop.
- When delaying a signal, the display will show ‘dL’ and when extending a signal ‘En’ will be displayed.

6 segment bargraph.

- 2 red, 2 yellow and 2 green segments.
- Shows depth of detection as vehicle pass over detection zone.
- Shows level of interference from adjacent loops.

Detect & Relay 2 Leds.

- Leds show status of both Relay outputs.

Additional Indications.

- When the detector is in fault, two yellow leds will be illuminated.
- When the detector is tuning to the loop, a green led will be illuminated.

**Outputs:**

The NP2+ has two relay outputs, a primary Relay 1 for normal detection operation and a secondary Relay 2 for additional functionality. Relay 1 is Fail Safe (provides a constant closure on power fail) Relay 2 is Fail Secure (no closure on power fail). Optional Fail Secure Relay 1 operation is available.

**Output Rating:**

Relay Contact Closure, 125VAC, 60VDC 1A.

**Rear Panel DIP Switch**

A six position DIP switch on the back of the unit allows the selection of additional operational modes.

Switch No.	OFF	ON
1	No Extend	5 Second Extend
2	No Delay	2 Second Delay
3	60 Minute Presence	Permanent Presence
4	20ms Pulse	500 Pulse
Switch 5	Switch 6	Relay 2 Function
OFF	OFF	Pulse on Entry
ON	OFF	Pulse on Leaving
OFF	ON	Presence
ON	ON	Fault

**Supply Voltage:**

12 to 24 volts AC or DC 1VA max, 60mA max.

Note: 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.

**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:**

3.25” H x 3.75” D x 1.375” W. incl.connector

**Connector:**

11P Amphenol Style

Pin #	Function	Harness Color
1	Power (+)	Black
2	Power (-)	White
3	Relay 2 N.O.	Orange
4	Ground	Green
5	Relay 1 Common	Yellow
6	Relay 1 N.O.	Blue
7	Loop	Gray
8	Loop	Brown
9	Relay 2 Common	Red
10	Relay 1 N.C.	White/Black
11	Relay 2 N.C.	White/Red

