



# NORTHSTAR CONTROLS, LLC

Vehicle Detection, Systems & Accessories



## NP2 | ACCESS CONTROL

Single Channel Dual Relay Vehicle Detector

 **10 Selectable Sensitivities**

 **4 Selectable Frequencies**

 **Wrong Voltage Protection**

 **Output Timing - Extend & Delay**

 **Selectable Presence Times**

 **Selectable Pulse Lengths**



Our Facility  
Sarasota, Florida



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**Rear Panel DIP Switch Selections**

**Relay 1**

**Extend** – switch 1 is for extending the detector output after the vehicle has left the loop. Switch 1 in the OFF position provides no extension. Switch 1 in the ON position provides a 5 second extension once the vehicle leaves the loop. This extension applies to relay 1 only.

**Delay** – switch 2 is for providing a 2 second delay, detector will ignore the vehicle until the vehicle has been present over the loop for 2 seconds. Switch 2 in the OFF position provides no delay. Switch 2 in the ON position provides for the 2-second delay. This delay applies to relay 1 only.

**Presence Time** – switch 3 provides for either a 1 hour presence or permanent presence. Switch 3 in the OFF position provides for 1 hour of presence. Switch 3 in the ON position provides for permanent presence. The above presence settings apply to relay 1 only. (Other options are available).

**Relay 2**

**Pulse Length** - switch 4 provides for either a 250mS pulse length or a 500mS pulse length. Switch 4 in the OFF position provides a 250mS (standard) pulse length. Switch 4 in the ON position provides a 500mS pulse length.

**Operating Mode** – switch 5 and switch 6 determine the operating mode for Relay 2. The four modes are as follows:

- Switch 5 ON Switch 6 OFF** = Pulse on Leaving
- Switch 5 Off Switch 6 ON** = Provides for Presence
- Switch 5 & Switch ON** = Provides a Fault Output

**Front Panel Selections**

**Sensitivity** – controlled by front panel rotary switch.

- 0 = Low sensitivity
  - 9 = High sensitivity
- Medium sensitivity is used for most applications; this is a setting of 4 or 5. Always use the lowest sensitivity setting that detects the desired vehicles.

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

- 2+1 = High
- 2+0 = Medium High
- 1+0 = Medium Low
- 0+0 = Low

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

**Factory Settings:**

- Set to HI frequency
- Set to Medium sensitivity (5)
- Extend/Delay in the OFF position
- Presence time set to 1 hour Pulse length set to 250msec
- Relay 1 = fail-safe
- Relay 2 = fail-secure

**Relay Output Rating:** 120 VAC 28VDC

**Power:** 240 VAC, 120 VAC or 12-24 VAC/DC. (70mA DC or 1W AC)

**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:** 1 3/8”w X 3 3/32”h X 3 1/2”l including connector. Weight: 8 oz.

**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 indicators include:

- Power – Green, solid with correct power supplied.
- Relay 1 – Red, solid during detect. Slow flash=delay, Fast=extend
- Relay 2 – Red, on while relay 2 is energized.
- Fault – Yellow, solid during current fault, flashing for historical fault.

**Sensitivity Boost** – automatic during detect except in the highest sensitivity setting (9).

**Factory Options:**

- Presence lengths of 15, 30, 60 minutes or permanent.
- Pulse lengths of 250mS, 500mS, 1, 2 or 4 seconds.
- Extend times of 0, 2, 5 or 10 seconds.
- Delay times of 0, 1, 2 or 4 seconds.
- Relay 1 **fail-safe** or fail-secure.

**Note:** **Bold** indicates standard configuration from the factory.

**Connector - 11P Amphenol**

**Below connection is shown with correct power supplied and no vehicle present.**

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

