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

NORTHSTAR CONTROLS, LLC — PROUDLY MADE IN THE USA — SARASOTA, FLORIDA

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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 ½”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	Brown
9	Relay 2 Com	Red
10	Relay 1 NC	White/Blk
11	Relay 2 N.C.	White/Red