



Single Channel - Dual Relay Vehicle Detector



Model NP2 Features:

- 10 selectable Sensitivities
- 4 selectable Frequencies
- Wrong voltage protection
- Output Timing – Extend & Delay
- Selectable Presence times
- Selectable Pulse lengths
- Separate Power, Detect and Fault Indicators
- Automatic Sensitivity Boost
- Available in: 240VAC, 120VAC, or 12-24VDC/AC

NP2 Specifications

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 and switch 6 OFF provides pulse-on-entry.
Switch 5 ON & switch 6 OFF provides pulse-on-leaving.
Switch 5 OFF & switch 6 ON provides for presence.
Switch 5 and switch 6 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.

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.

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: 7A 277VAC/30VDC.

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.

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.

Relay 2 – Red, solid during detect.

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.

Relay 2 fail-safe or **fail-secure**.

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

Connector – 11P Amphenol

Pin #	Function	Color
1	Power (+) Power	Black
2	(-)	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.	White/Red
	Relay 2 N.C.	White/Red

