NORTHSTAR CONTROLS, LLC

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Single Channel – Single Output, Very Low Power Miniature Vehicle Detector

Model NP2-ESL Features:

- Extremely Small Form Factor.
- 4 selectable Sensitivities.
- 4 selectable Frequencies.
- Wrong voltage protection.
- Separate Power/Fault and Detect Indicators.
- Automatic Sensitivity Boost.
- Power Supply requirement: 10 to 30V dc or ac, 1mA nominal.
- Screw Terminal Connections for power, loop and output.

The NP2-ESL has been specifically designed and engineered for use in the Parking/Access Control industries and is designed for use where extremely low current consumption is required, for example in solar powered installations. Current consumption is less than 1mA in most installations. With standard operations including compatibility with all radio controls and more, the NP2-ESL covers your low power detection needs.

The NP2-ESL's wide inductance range allows for use with small loops sometimes found in the Parking/Access Control industries (for recommended loop sizes please consult the Northstar Loop Information Guide).

Separate indicators for power/fault and detect output provide for quick visual verification of proper operation. Loop diagnostics are easily viewed with the front panel power/fault indicator.

Reliable operation and long field life are key engineering goals in every Northstar product.

NP2-ESL Specifications

Front Panel Selections:

Sensitivity – controlled by front panel DIP switch.

- 0 = Low sensitivity
- 1 = Med Low
- 2 = Med High
- 3 = High sensitivity

Medium Low sensitivity is used for most applications; this is a setting of 1. Always use the lowest sensitivity setting that detects the desired vehicles. Lower sensitivity allows operation with the lowest possible current consumption.

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.

Internal Switch Settings:

Call Delay – select from delay off and 2 second delay
Call Extend – select from extend off and 5 second extend
Permanent Presence – select from 60 minute and permanent presence.

Outputs:

Detect Output is fail secure, loss of power does not cause a detect output to be placed.

Factory Settings:

- Set to High frequency
- Set to Medium Low sensitivity (1)

Specifications:

Output Rating: Relay Output is rated 120VAC, 28VDC, 0.5A

Supply Power: 10 – 30 V DC or AC, 1mA nominal

Inductance Range: 20uH to 1000uH.

Temperature Range: -30 F to +180 F.

Lead-In Length: up to 1000 ft. with proper lead-in and loop.

Mechanical: 2.4" H x 2.25" D x 0.8" 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 indicators:

Power/Fault – Green, solid with correct power supplied.
Flashes during a fault condition.
Fault flash sequence:
Single flash & pause = Open Circuit Loop.
Double flash & pause = Shorted Loop.

Detect – Red, solid during detect.

Power Saving Mode: While in normal operation with no fault indication, the Green LED will extinguish after a period of 2 minutes. A power interruption or reset will re-illuminate the Green LED.

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

Connector: – 7 position Screw Terminal Block

Pin #	Function
1	Loop
2	Loop
3	Relay N.C.
4	Relay N.O.
5	Relay Common
6	Power 10 – 30 VDC or AC
7	Power –Logic Ground

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

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.

Specifications are subject to change without notice.

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