B SERIES

SINGLE CHANNEL DETECTOR

Overview:
The Model B is a full featured, single channel, dual output vehicle detector that incorporates the reliable vehicle detection technology found in all of Reno A & E’s vehicle detectors. All detector functions and settings are configured by using a set of eight internal DIP switches and a front panel mounted pushbutton switch.

Models available that operate on 12 VDC / 24 VDC / 24 VAC, 120 VAC or 240 VAC input power.

Fail-Safe or Fail-Secure versions available.

Dual Relay outputs:
- Output A:
  - Limited Presence.
  - True Presence™.
- Output B:
  - Presence (Duplicates Output A).
  - Pulse-on-Entry.
  - Pulse-on-Exit.

Delay Outputs A and B for two seconds.

Eight levels of sensitivity.

Sensitivity Boost for applications where high-bed vehicles might be encountered.

Detect Memory feature maintains detection during momentary power interruptions of up to two seconds.

Fail LED indicates current loop failures or loop failures that have occurred.

Four loop frequencies.

Loop Fail Memory stores a record of the last loop failure.

Ordering Information:
Model B-XX-XX-X
- Blank = Fail-Safe, S = Fail-Secure
- Blank = Internal DIP Switches set to Relay B Pulse-on-Entry
- DP = Internal DIP Switches set to Relay B Presence Mode

1, 3, 4, 5, 8, or 35:
- 1 or 3 = 120 VAC Input Power (B-1 = 10-Pin, B-3 = 11-Pin)
- 4 or 5 = 12 VDC, 24 VDC, or 24 VAC Input Power (B-4 = 11-Pin, B-5 = 10-Pin)
- 8 or 35 = 240 VAC Input Power (B-8 = 11-Pin, B-35 = 10-Pin)

3.00” High x 1.75” Wide x 4.30” Deep (11-Pin)
2.90” High x 1.60” Wide x 4.96” Deep (10-Pin)

11-Pin Amphenol Style Connector
10-Pin MS Style Connector

Manufactured under Patent # 5,936,551. - Other Patents Pending.

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**B Series Specification**

This is a Performance Specification. It is not intended to be used as Operating Instructions.

**Loop Frequency:** Four (4) operating frequencies (normally in the range of 20 to 100 kilohertz) are selectable by means of three internal DIP switches. Vehicle detection results from a sufficient negative change in loop inductance (\(\Delta L/L\)). (See SENSITIVITY, \(\Delta L/L\) table.)

**SENSITIVITY, \(\Delta L/L\) table:**

<table>
<thead>
<tr>
<th>Setting</th>
<th>Sensitivity Boost</th>
<th>Total Sensitivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1.28%</td>
<td>1.6%</td>
</tr>
<tr>
<td>2</td>
<td>0.64%</td>
<td>1.2%</td>
</tr>
<tr>
<td>3</td>
<td>0.32%</td>
<td>0.96%</td>
</tr>
<tr>
<td>4</td>
<td>0.16%</td>
<td>0.16%</td>
</tr>
<tr>
<td>5</td>
<td>0.09%</td>
<td>0.09%</td>
</tr>
<tr>
<td>6</td>
<td>0.04%</td>
<td>0.04%</td>
</tr>
<tr>
<td>7</td>
<td>0.02%</td>
<td>0.02%</td>
</tr>
<tr>
<td>8</td>
<td>0.01%</td>
<td>0.01%</td>
</tr>
</tbody>
</table>

* Denotes factory default.

**Note:** Changing a sensitivity switch will reset the detector.

### TABLES

#### SENSITIVITY, \(\Delta L/L\):

<table>
<thead>
<tr>
<th>Sensitivity Setting</th>
<th>(\Delta L/L)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1.28%</td>
</tr>
<tr>
<td>2</td>
<td>0.64%</td>
</tr>
<tr>
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<td>4</td>
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</tr>
<tr>
<td>8</td>
<td>0.01%</td>
</tr>
</tbody>
</table>

**Function (1-Pin Models)**

1. AC Line / DC +
2. AC Neutral / DC Common
3. Relay B, Normally Open (N.O.)
4. No Connection
5. Relay A, Common
6. Relay A, Normally Open (N.O.)
7. Loop
8. Relay B, Common
9. Relay A, Normally Closed (N.C.)
10. Relay B, Normally Closed (N.C.)

**Function (2-Pin Models)**

A. AC Neutral / DC Common
B. Relay A, Normally Open (N.O.)
C. AC Line / DC +
D. Loop
E. No Connection
F. Relay A, Common
G. Relay A, Normally Closed (N.C.)
H. Chassis Ground
I. Relay B, Common
J. Relay B, Normally Closed (N.C.)

**Note:** Relay contacts shown are with power applied, loop(s) connected, and no vehicle present.

### FACTORY DEFAULT SETTINGS:

<table>
<thead>
<tr>
<th>Switch</th>
<th>ON</th>
<th>OFF</th>
<th>Factory Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Eight (8) Sensitivity Selections (See Sensitivity, (\Delta L/L) Table)</td>
<td>OFF</td>
<td>OFF</td>
</tr>
<tr>
<td>2</td>
<td>ON</td>
<td>ON</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>No Delay</td>
<td>OFF</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>No Boost</td>
<td>OFF</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Output B Pulse-on-Exit</td>
<td>Output B Pulse-on-Entry</td>
<td>OFF</td>
</tr>
<tr>
<td>6</td>
<td>Limited Presence</td>
<td>True Presence™</td>
<td>OFF</td>
</tr>
<tr>
<td>7</td>
<td>Output B Pulse</td>
<td>Output B Presence</td>
<td>ON *</td>
</tr>
</tbody>
</table>

* Dual Presence (DP) models have DIP switch B set to the OFF position.