The LB100 contains two separate occupancy detectors designed specifically for use with any NMRA DCC system.

Technical specifications:

- Maximum current: 3 A
- Minimum detected current: 1 mA

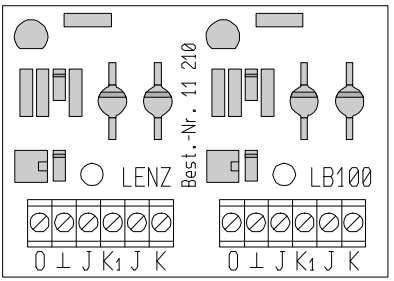
Information

LB100 Dual Occupancy Detector

Art. No. 11210

DIGITAL plus

November, 1996



General information about the LB100 Dual Occupancy Detector

The LB100 contains two independent occupancy detectors, each of which can be used to detect that a train or piece of rolling stock occupies a section of track. It operates on the so called “current sensing principle”. The LB100 only detect occupancy when there is a "current consumer" within the monitored track section (detection section). The LB100 has been designed to detect a decoder equipped locomotive or a single car with lighting or resister wheelsets.

When the LB100 detects that there is something it its detection section, the LB100 closes a switch. This switch can be used to trigger other devices such as signals or layout feedback devices such as the DIGITAL plus LR100 encoder. The LB100 is compatible with all NMRA DCC systems.

Installing The LB100

The LB100 is installed between the track power feeds and the track. The power supplying the track goes from the Power Station (LV100) via the LB100 to the track. This allows the LB100 to be able to detect current changes on the section of track it is connected to. The LB100 will not be able to detect current load if there are any connections to the detection section that bypass the LB100.

The first step in installing LB100s is to divide the area that is supplied by one LV100 into the needed number of detection sections. To do this, you cut the rail that you have wired to connector “**K**” on LV100, as shown in Figure 1. The other rail, wired to connector “**J**” on LV100 remains the common rail for the section. Connectors **K** and **J** on LB100 are wired to the corresponding connectors on LV100.

Wire connector **K1** on LB100 to the insulated rail in the detection section.

The circuit from connector **J** on LV100 to the common rail remains, or is set up using one of the free connectors **J** on LB100. For ease in wiring, there are two connectors labeled **J** on each occupancy decoder.

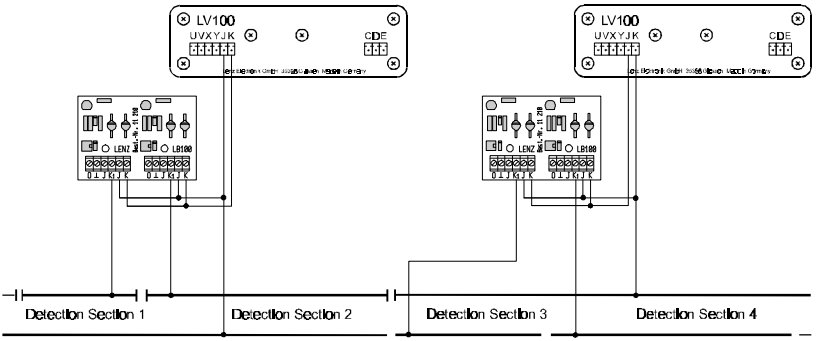


Figure 1: Normal Wiring to the K Rail Figure 2: Alternative wiring to the J Rail

Should you have a layout where necessity dictates that the rail connected to connector **J** is gapped then you can install the LB100 using the alternative configuration shown in Figure 2. Note that the important think is that no other connections be made between the Power Station and the rail connected to the K1 output of the LB100.

Connecting the LB100 to a Feedback Unit

When the LB100 detects a current draw on the track it closes an internal switch (connections **O** and ⊥). This can be used to control signals or be fed into a feedback device such as the DIGITAL plus LR100. Wire connector ⊥ to the corresponding connector on LR100, and connector **O** with one of the occupancy decoder inputs on LR100. You can connect a total of 8 LB100s to one LR100. That equals 16 detection sections. If you want more detection sections on your train layout, simply add another set of LR100/LB100s.

Figure 3 illustrates a typical connection from a LB100 to an LV100 and an LR100.

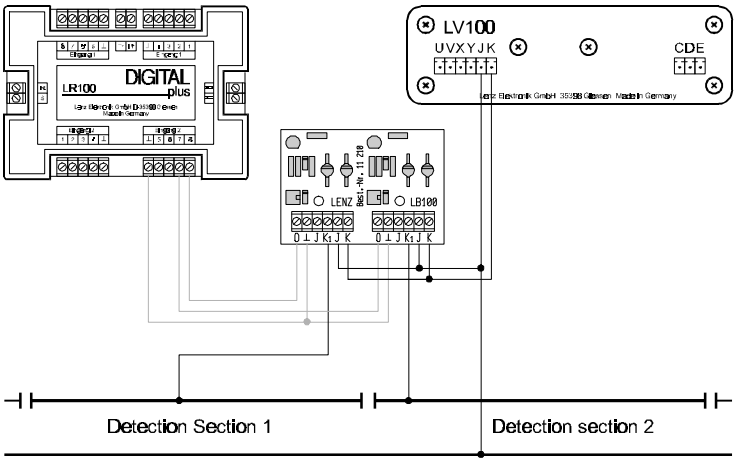


Figure 3: Connecting the LB100 to the LV100 and LR100.

Important note:

Never connect the ⊥ inputs of different LR100s to each other.

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