Barrier Logic

Model - BL110B

The BL110B is a barrier logic unit which has been developed to control barriers using magnetic motors with ease of installation. The BL110B accepts inputs from card readers and cash registers as well as an input from a loop detector for safety and closing.

Applications

Typical applications are the control of barriers/booms in the parking and access control environments.

Features - Logic

Selectable Memory/Non Memory input. The Memory input feature will allow opening inputs to be memorized. This will then enable a number of vehicles to pass over the closing loop before the barrier lower output is enabled. The purpose of this feature is to enable vehicles to pass the barrier without opening and closing for each vehicle and hence allowing rapid entry or exit of vehicles.

Automatic/Manual mode. This mode allows the barrier to be manually operated for maintenance purposes using the toggle switch mounted on front of the unit.

Barrier raise/lower relay output. This output is used to control the motor which raises or lowers the barrier. The motor can be connected directly to this relay without the need for an external relay.

Ticket vend interlock output. This output is used to prevent tickets from being issued when the barrier is in the raised position.

Time out if vehicle reverses out. (Auto Close) On some occasions a vehicle may raise the barrier and then reverse out. In this situation the logic will time-out (switch selectable) and automatically lower the barrier.

Roll-back protection. After a vehicle has passed the closing loop and the barrier is closing, it is possible for the vehicle to roll backwards under the closing barrier. In this situation the logic will raise the barrier again until the vehicle moves forward off the closing loop.

Toggle input. The barrier can be raised and lowered from a remote pushbutton or radio receiver contact by using the toggle input. Dip switch used to enable or disable auto close.

Facility for extra loop detector for opening input interlock. An arming loop detector may be used to prevent the barrier from being raised when there is no vehicle present at the ticket issuing machine. This is done by placing a loop in front of the barrier and a vehicle must be present on this loop to allow opening of the barrier.

Facility for Free Exit loop detector. Another loop detector may be placed after the barrier and used to raise the barrier as a free exit option. This feature is normally used in a bi-directional lane.

Detector/Beam Off Delay. This feature enables a beam delay of 0, 5, 10 or 15seconds. When enabled, the beam is extended to prevent false closing of the barrier.

Indicators

Power Indicator. This LED Indicator illuminates when power is present.

Barrier Raise Indicator. This LED Indicator is illuminated when the barrier output relay is switched on to raise the barrier.

Barrier Lower Indicator. This LED Indicator is illuminated when the barrier output relay is switched off to lower the barrier.

Technical Specifications

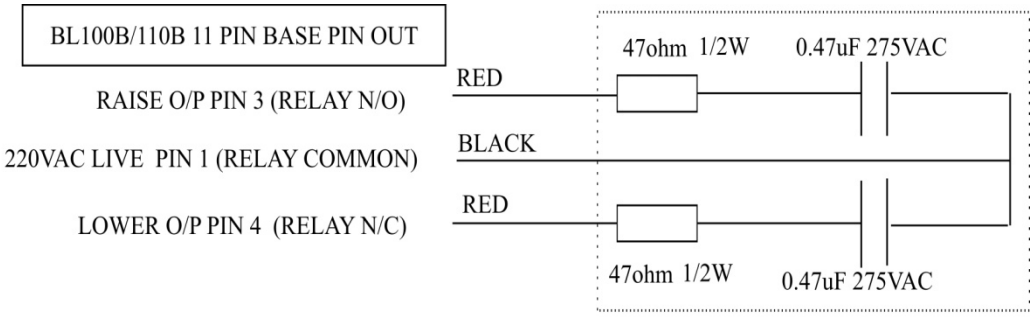
Power supply	200 - 260VAC 50Hz 1.5VA
NMI/MI Input	This input may be activated by a potential free relay contact or open collector NPN transistor output. This input is isolated from the logic. When held on, the barrier will stay in the open position.
Toggle Input	This input may be activated by a potential free relay contact or open collector NPN transistor output. This input is isolated from the logic.
Detector / Beam Input	This input may be activated by a potential free relay contact or open collector NPN transistor output. This input is isolated from the logic and is used to close the barrier when a vehicle has passed through the barrier. When Dip SW 2 and 3 are used, this input has a selectable off delay of 0 to 15sec in 5 second increments.
Raise/Lower Output Relay	These outputs are a relay contact rated at 5A/220VAC.
TVI Output Relay	This output is a normally closed relay output rated at 0.5A/35VDC.
Indicators	LED indicators show: Power, Barrier Raised and Barrier Lower.
Protection	Loop isolation transformer with zener diodes and gas discharge tube.
Connector	11 Pin Connector on rear of unit.
Dimensions	80mm (height) X 40mm (width) X 79mm (Depth excl. connector).
Operating Temperature	-40°C to +80°C
Storage Temperature	-40°C to +85°C

Switch Settings

BL110B Switch Settings			
Switch No.	Function	ON	OFF
10	Reset (normally in Off position)	On	Off
9	Not Used	-	Off
8	Not Used	-	Off
7	MI/NMI input select	MI	NMI
6	Roll back time	5 Sec	2 Sec
5	Auto Close time	None	20 Sec
4	Toggle input select	On	Off
2,3	Beam Off Delay 0 Seconds	-	S2/S3
2,3	Beam Off Delay 5 Seconds	S3	S2
2,3	Beam Off Delay 10 Seconds	S2	S3
2,3	Beam Off Delay 15 Seconds	S2/S3	-
1	Not Used	-	Off

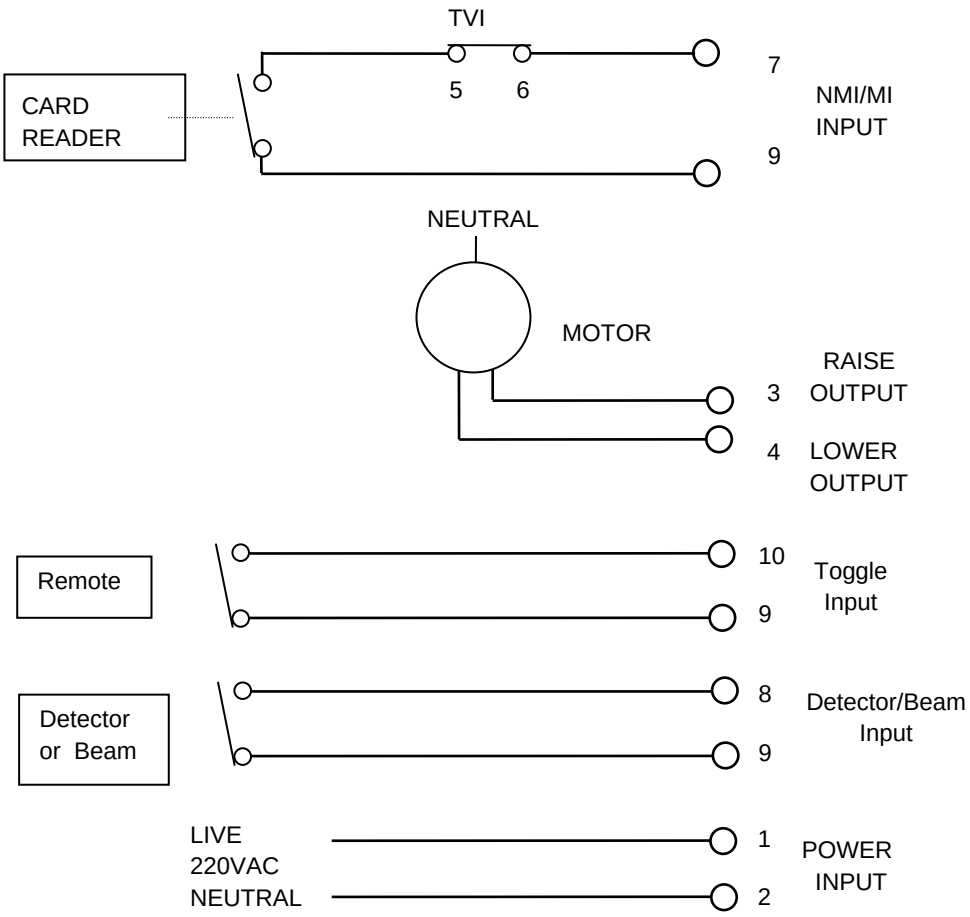
Installing Snubber Network

Due to the high inductance of the barrier motor, it is highly recommended to install an external snubber network to reduce electrical noise and interference generated when switching the motor. Recommended snubber network and connection details are shown below.

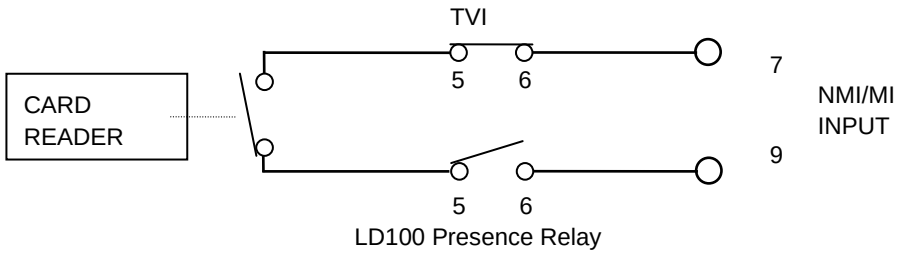


Wiring Diagram

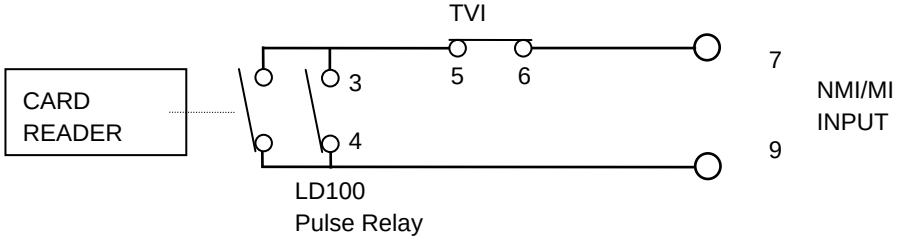
Standard Configuration



Configuration with Arming Loop Detector



Configuration with Free Exit Detector



Contact Details

PROCON ELECTRONICS

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