

B1 Barrier Gate Controller (DC motor)

Operating instructions

This B1 panel has all the functions needed to control barrier gate using DC actuator. The DC actuator's speed and power are derived from the external power transformer. Many inputs are incorporated for interface to push-buttons, vehicle loop detectors, photobeam and card access system.

It has dual speed control function set by the N.C. limit switches during the end of rotation. When the limit switch contact starts to open, the low speed begins to set in and stops after a time of 1.5 seconds (the limit switch contact must remain open by means of oval shape cam). This gives a smooth control of the barrier arm and hence the wear and tear problem is much reduced. Battery back-up system type (12V or 24V) is optional and is available upon request.

Function descriptions

Loop detector or Proximity card (to trigger opening and stop closing if sensed)

- 13,14** Input control by loop detector (N.O. mode) to detect present of vehicle.
- 1) When the arm has stopped at close limit or half-way position, it can be opened.
 - 2) During closing, the arm will open if activated by card or vehicle.
 - 3) During opening, the arm will continue to open.
 - 4) If the arm has stopped at open limit position and the terminal is triggered, the arm stays still. It cannot be triggered to close by other push buttons or autoclose function.

Loop detector 2 or photobeam input (N.O. mode)

- CON3** The lower 2 terminal points of **CON3** is used for outer loop detector or photobeam (N.O. mode). During closing, the arm will open if triggered. It is not response if the gate is fully closed. If it is triggered during opening, the gate will autoclose if DS1 dipswitch no.8 is YES.

Limit switches

- 10,11,12** It must be N.C. type. These limit switches are programmed for N.C. mode. It sets the low speed using the lower secondary winding output of the external power transformer.

Warning lighting

- 18** This is for barrier gate movement warning. 230VAC is output whenever the arm moves.

Open/Close push button

- 8, 9** Connected to push button or wireless receiver's output control. This triggers the arm to open, stop and close in sequence.

Open push button

- CON5** The upper and middle terminal point are connected to a push button (N.O.) for open only control. If held in contact by a key-switch, the arm cannot be triggered by other buttons or loop detectors.

Close push button

- CON5** The lower and middle terminal point are connected to a push button (N.O.) for close only control. If held in contact by a key-switch, the arm cannot be triggered by other buttons or loop detectors.

24Vac power supply

- CON7** Auxiliary AC power supply for vehicle loop detector (model: MID1E).

DIP SWITCH SETTINGS (DS1)

- 1 Additional fix 2nd speed (low speed) time (set left =1S, set right = 3S)
- 2 Autoclose delay (set left = 5S, set right = 0S)
- 3 Not use. Limit Switch Selection is NC type only.
- 4 2nd speed (low speed) time, set left =0S, set right = 0.8S
- 5 2nd speed (low speed) time, set left =0S, set right = 0.4S
- 6 2nd speed (low speed) time, set left =0S, set right = 0.2S
- 7 2nd speed (low speed) time, set left =0S, set right = 0.1S
- 8 Autoclose function selection (set left = NO, set right = YES)

“Dip switch setting will be read after power switch off for 5 seconds and then switch on”

B1 ELECTRICAL CONNECTIONS

