

## Wiring Instructions

### J-9 - Power Connector

This is the power - motor - limit switch connector and must be correctly wired.

Note: The pins, numbered from left to right are:

- 1-Battery Input Pos
- 2-Motor Output Neg
- 3-Motor Output Pos
- 4-Battery Input Neg
- 5-Motor Phase C (optional)
- 6-Open Limit N/O
- 7-Limit Switch Com
- 8-Limit Switch N/O

1. Connect the white wire from the battery's positive terminal to pin 1, far left on J-9.
2. Connect the black/white wire from the motor to pin 2 of J-9.
3. Connect the red/white wire from the motor to pin 3 of J-9
4. Connect the blue wire from the battery's negative terminal to pin 4 of J-9.
5. Pin 5 used for special applications - normally left open.
6. Connect the black wire from the limit switch 3-conductor wire from the actuator to pin 6 of J-9.
7. Connect the green wire from the limit switch 3-conductor from the actuator to pin 7 of J-9.
8. Connect the white wire from the limit switch 3-conductor wire from the actuator to pin 8 of J-9

#### **J-4 - Gate Control Connector**

△ Caution: All inputs are dry contact. NO power inputs are to be used. Power inputs will damage the board if connected. Damage to the board caused by connecting powered inputs will void the warranty.

1. These are the *Go Open*, *Go Close* and *Stop* controls that are triggered from the System Controller, Keypads, Emergency Entry Switches or Guard Shack.
2. The Open input is the entry control and uses pins 1 and 2 of J-4.
3. If an EVA gate is installed, connect the two leads from the Fire Emergency Box switch to pins 1 and 2 of J-4. Polarity is not important as this is a dry contact to return power to the gate operator board.

#### **J-6 - Receiver and IR Beam Connector**

1. The Radio Receiver input is pre-wired at VertiGate in pins 1 - 3 of J-6.
2. Any dry contact receiver rated at 12 VDC can be interfaced.
3. The IR Detector input connects on pins 4 - 6 on J-6.
4. Connect the brown wire (+12 VDC) to pin 4, the white wire (N/O) to pin 5 and the blue & yellow wire (COM) to pin 6 of J-6.

TIP: Two beam sets may be connected in parallel.

Separate Emitter/receiver systems are wired as follows:

- Brown wire in +12 VDC
- Blue wire in COM
- White wire in N/O

#### **J-8 - Entrapment Detector Connection**

1. The entrapment detector connections are not normally used for most gate applications. They have been provided for special situations and future use.
2. Pins 1 -4 are used for proximity detection devices or other detectors and provide connections for Normally Open or Normally Closed device types.

3. Pins 5 and 6 are used to connect a Normally Closed primary entrapment device, i.e. beams, kickout switch, edge detector.
  4. The J-8 plug comes pre-wired for a default setting with two jumper wires from pin 3 to pin 4 for the Secondary Entrapment/Proximity Detector input and from pin 5 to pin 6 for the Primary Entrapment Detector input.
- △ Caution: The gate will short cycle and go into alarm fail mode if this connector is left off. You must then push the Reset button to get the gate to function with these jumper connections or other device connections.

### **J-3 Mag Lock**

The exit loop trigger wires to open input J-4

The safety trigger wires to J6 (IR Det)

△ Caution: The loops **MUST** be wired in series, where one end of each of the loops is connected together. The other end of each loop is connected to J-3. If more than two loops are involved, the additional loops are connected in line. This effectively makes one loop containing all the smaller loops.

1. Safety loops are connected to pins 1 and 2 of J-3.
2. If there is a free exit loop, it is connected in pins 3 and 4 of J-3.
  1. Pins 5 and 6 of J-3 are for controlling a solenoid latch or mag lock. They can also operate an external relay to control warning lights, etc. Max output is 6amps @ 12 VDC.

### **Installing the External Loop Detector**

1. Exit wired to Open Input J-4
2. Safety wired to J6 with IR

### **J-11 Connector**

This connector contains 2 spare positions which are not used unless indicated in special instructions. It also contains, in positions 5 and 6, an output for an external annunciator per UL325 requirements. This would normally be a 100DB piezo electric annunciator mounted, either through the control box or the operator front channel.

### **J-10 Connector**

This connector contains both the tachometer connections and the external reset for restarting the gate when it goes into fault per UL325 requirements.

Connect the tachometer cable from the actuator as follows

- 1 - 12V to Red Wire
- 2 - Tach signal to Black Wire
- 3 - COM to shield
- 4 - Not Used

Connect the external reset - a dry contact N/O pushbutton to 5 and 6

### **J-5 Connector**

This connector is used only for brushless DC motor applications and is otherwise left blank.

### **J-7 Connector**

This connector is for the ribbon connector that attaches the secondary board for primary/secondary applications.

J-12, J13, J14 Connectors

These connectors are not for field use.

