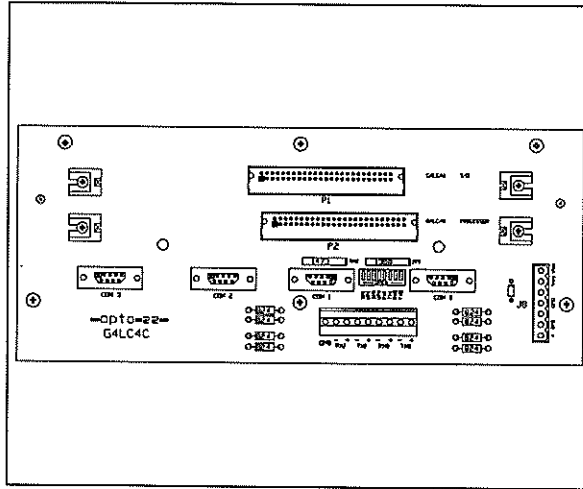


# **mistic** model 100 CONTROLLER



## DESCRIPTION

The G4LC4C Base Board and Metal Housing is a sub-assembly for the G4LC4 Local Controller. The base board contains connectors and card guides for the G4LC4A I/O card and the G4LC4B Processor card. It has four DB9 connectors for the serial ports. The two DB9 female connectors are used for the RS-485 ports COM 0 and COM 1 and the two DB9 male connectors are used for the RS-232 ports COM 2 and COM 3. In addition, a barrier strip is provided for COM 0 and COM 1. The connector and the barrier strip are connected in parallel so that either one can be used for connecting to COM 0 and COM 1. A DIP switch provides connections for pull-up resistors, pull-down resistors and line termination resistors for the RS-485 communications lines COM 0 and COM 1. The base board is mounted by means of two mounting holes in the base board. 5 VDC power is supplied to the base board through a pluggable barrier block.

## FEATURES

- ◆ Compatible With *mistic*<sup>®</sup> 100
- ◆ Microcomputer Based Controller
- ◆ High Speed Parallel G4 PAMUX Bus
- ◆ Connectors for Com 0 and Com 1 RS-485 Serial Ports
- ◆ Connectors for Com 2 and Com 3 RS-232 Serial Ports
- ◆ DIP Switch for Resistor Selection for RS-485 Communications Lines
- ◆ Pluggable Barrier Block for 5 VDC

# OPTO 22

## GENERATION 4<sup>®</sup> PAMUX BASEBOARD AND METAL HOUSING FOR G4LC4 LOCAL CONTROLLER

### G4LC4C

## INSTALLATION DETAILS

### Step-By-Step Installation Procedure

1. Set the DIP switch for the desired resistor configuration for communications lines COM 0 and COM1.
2. Install the base board to the panel by means of two #10-32 mounting screws (or equivalent) in the holes provided. Mounting screws are supplied with the panel.
3. Plug the G4LC4A I/O Card into the G4LC4 Base Board. (G4LC4A not supplied).
4. Plug the G4LC4B Processor Card into the G4LC4 Base Board. (G4LC4B not supplied).
5. Connect the communications lines using the DB9 connectors and/or the 9 terminal barrier strip.
6. Connect 5 VDC to the appropriate terminals on the pluggable barrier block.
7. Install the cover provided with this assembly.

### LOCATION DRAWING

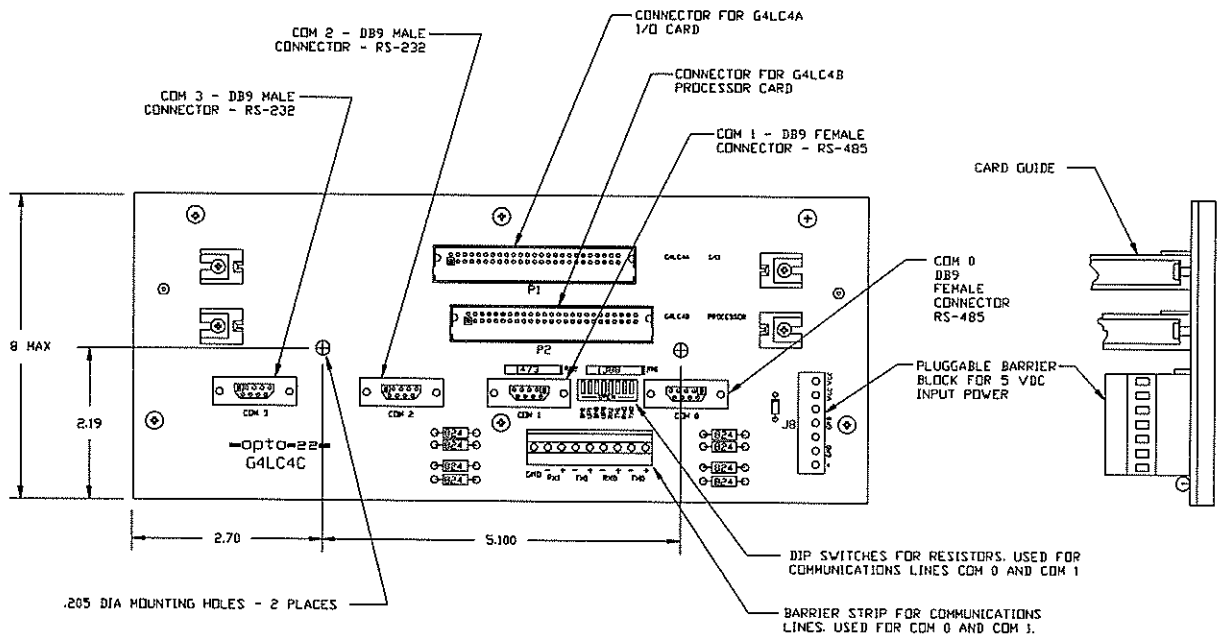


Figure 1 - G4LC4C BASE BOARD

### POWER SUPPLY

Power for the G4LC4C G4 PAMUX Base Board and Metal Housing for Local Controller is supplied from the G4PS245 Power Supply for G4 Panels With Local Controller brick. This power supply also supplies power to the Digital and Analog bricks. The wires from the power supply connect to the top half of a pluggable barrier block by means of screw terminals. See Figure 1. Once the wires are connected, the top half of the barrier block can be unplugged from the lower half, which is a permanent part of the base. The connector is keyed so that it cannot be installed incorrectly. This makes it easy to replace the G4LC4.

## METAL HOUSING

The cover completely shields and protects the processor board and the I/O board. It has a slot for the G4 PAMUX Bus 40 conductor flat ribbon cable. A label on the top of the cover identifies the unit, the lights and the jumpers. It has a transparent window for viewing the LEDs and the jumpers. See Form 289 and Form 290 for the setting of the jumpers and the meaning of the status lights.

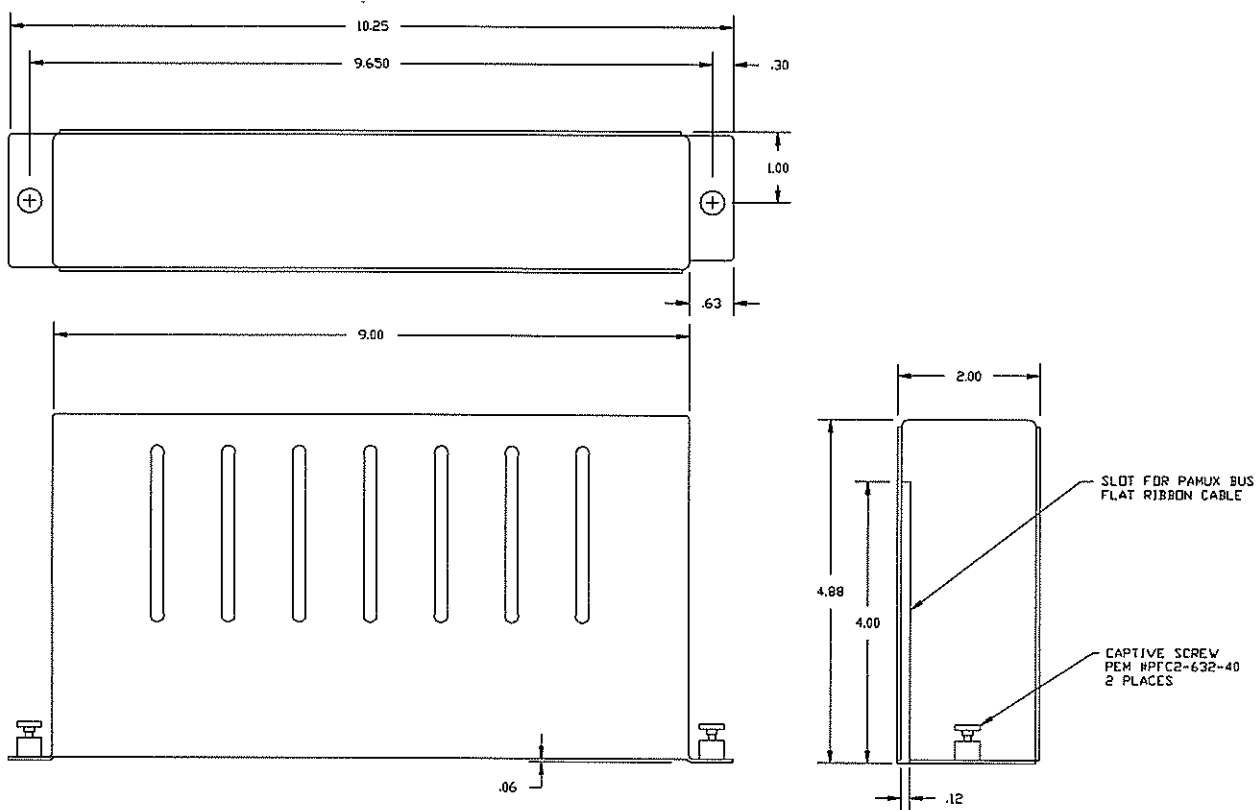


Figure 2 - G4LC4C Metal Housing

## RS-232 CONNECTORS - COM 2 AND COM 3

The G4LC4 Local Controller has four serial ports, COM 0, COM 1, COM 2 and COM 3. They are located on the G4LC4C G4 PAMUX Base Board and Metal Housing for Local Controller. There are two RS-485 ports, COM 0 and COM 1 and two RS-232 ports, COM 2 and COM 3. The connectors for the two RS-232 ports are DB9 male connectors. The pinouts for the RS-232 connectors COM 2 and COM 3 are as follows:

| PIN NUMBER | DESCRIPTION                    |
|------------|--------------------------------|
| 1          | +5 VDC                         |
| 2          | Transmit Data (from the G4LC4) |
| 3          | Receive Data (to the G4LC4)    |
| 4          | Request to Send                |
| 5          | Clear to Send                  |
| 6          | Not Connected                  |
| 7          | Signal Ground                  |
| 8          | Not Connected                  |
| 9          | Data Terminal Ready            |

## RS-485 CONNECTORS - COM 0 AND COM 1

Connections to/from the two RS-485 ports, COM 0 and COM 1 can be made by means of a 9 terminal barrier strip or by means of a 9 pin DB9 female connector. They are connected in parallel as shown in Figure 3. The nomenclature TX0, TX1, RX0, RX1 and GND refers to the markings on the barrier strip. The nomenclature J4-1 thru J4-9 refers to the pinouts for the DB9 connector for COM 0. The nomenclature J5-1 thru J5-9 refers to the pinouts for the DB9 connector for COM 1.

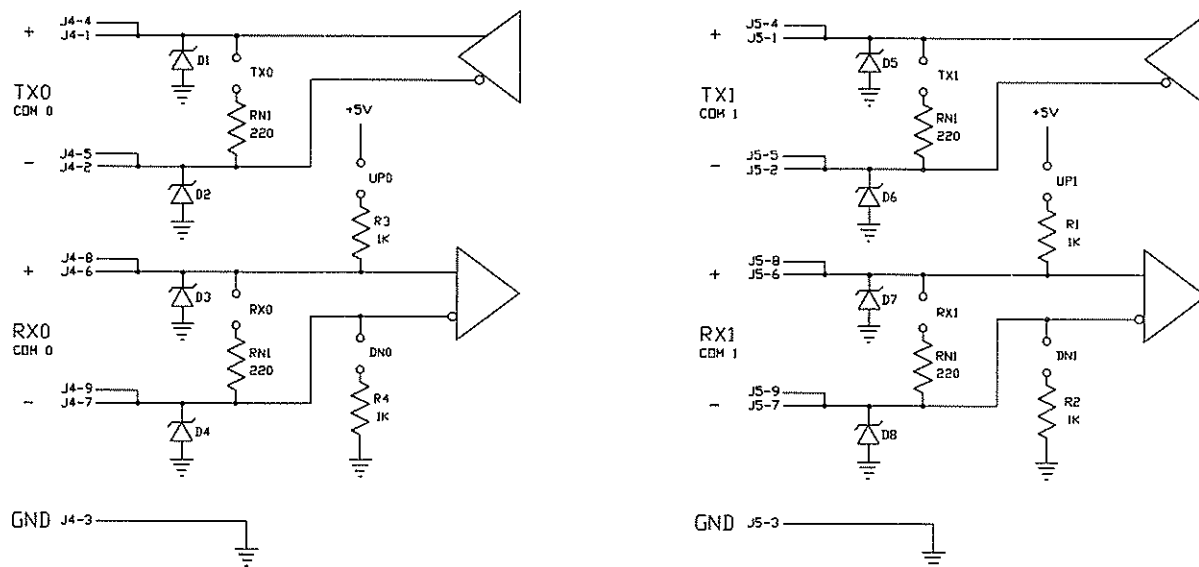


Figure 3 - Resistors for RS-485 Communications Lines

## DIP SWITCH SETTINGS FOR COMMUNICATIONS LINE RESISTOR

When more than one G4LC4 is connected in a multidrop configuration on one RS-485 communication line, you must terminate the line at each end. If you are installing the G4LC4C Base Board for a G4LC4 unit at one end of the communications line which uses COM 0, then close switches RX0 and TX0. If you are installing the G4LC4C Base Board for a G4LC4 unit at one end of the communications line which uses COM 1, then close switches RX1 and TX1.

Pull up and pull down resistors are used to place the communications lines in a known state when all the transmitters (connected to the line) are in a high impedance state. In contrast to the termination resistors, which are connected at each end of the line, pull up resistors and pull down resistors are installed only at one place on a communication line. They are usually installed at the receiver which is the furthest away from the transmitter. If you are using COM 0, and want to install pull up and pull down resistors, then close switches UP0 and DN0. If you are using COM 1, and want to install pull up and pull down resistors, then close switches UP1 and DN1.

## MOUNTING

The baseplate can easily be installed on a panel (or other flat mounting surface) by means of just two #10-32 mounting screws (or equivalent) in the holes provided or by means of an optional DIN rail mounting plate. Mounting screws are provided with the panel.