

INSTALLATION NOTE

Form 662-010406

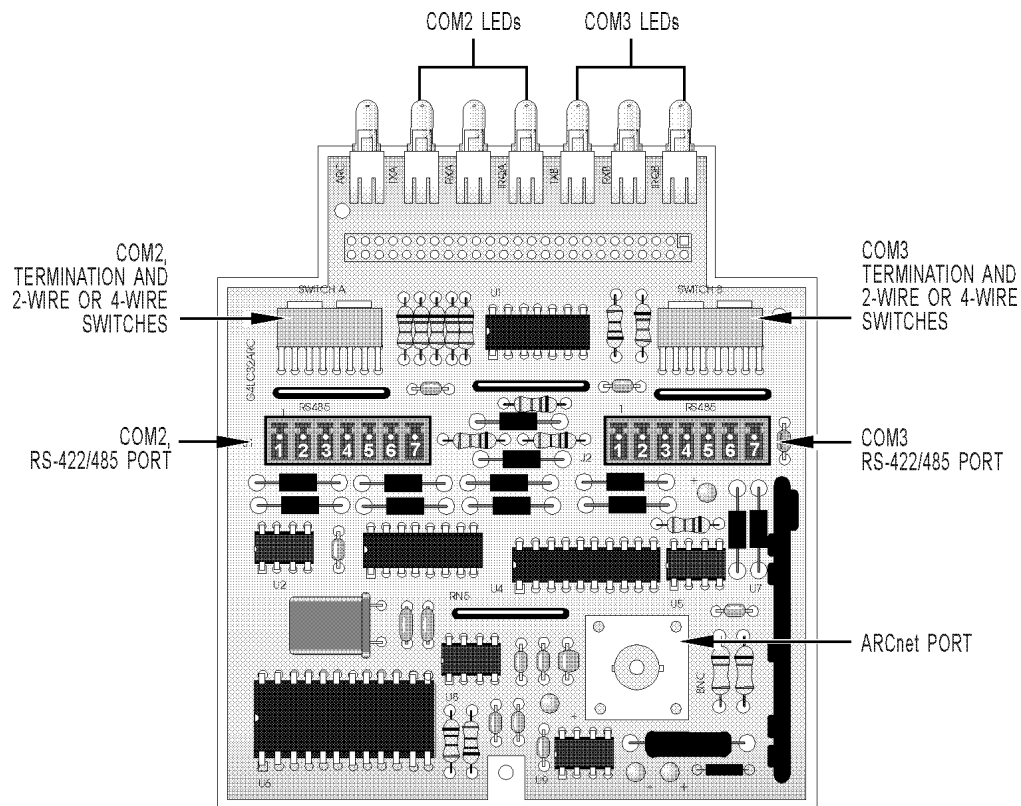
Unpacking

The packing box for the G4LC32ARC contains:

- G4LC32ARC daughter card
- Two RS-485 7-position plugs
- Connector Key
- Right angle BNC connector

Diagram

The following diagram shows the LEDs and physical layout of the G4LC32ARC daughter card. The G4LC32ARC only operates in the top daughter board slot of the controller with its RS-442/485 serial ports as COM2 and COM3.



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Switches

TERM YES/TERM NO

This switch selects termination for the RS-422/485 port. In the YES position, the RS-422/485 lines are terminated. Terminate the port when it is physically the first or last unit in a serial network.

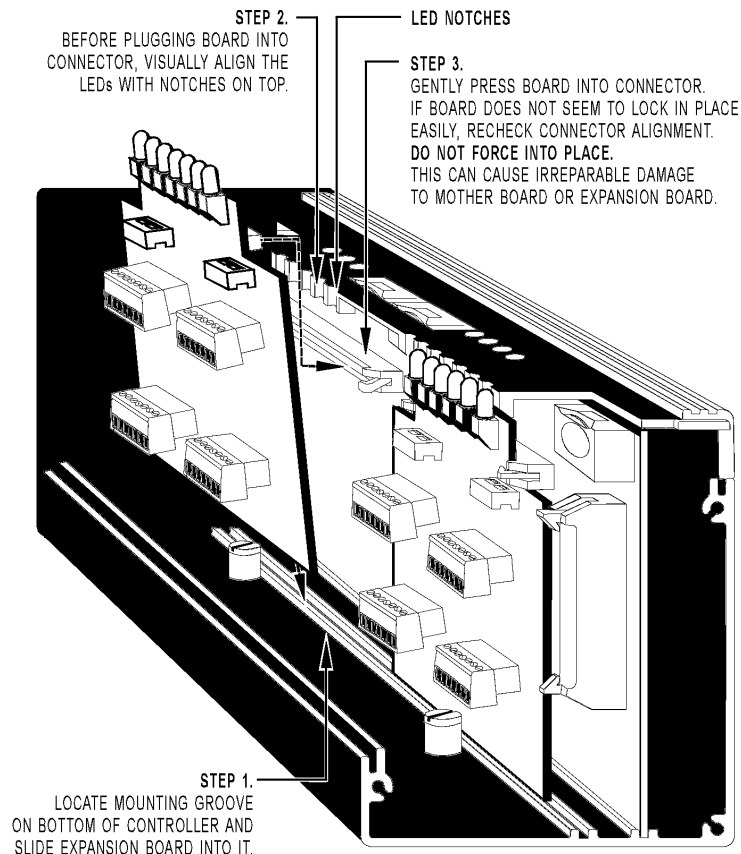
In the NO position, the RS-422/485 lines will be floating. This setting should be used when the port is part of a multidrop application and is not physically the first or last unit in the network.

The factory default is **TERM YES**.

2-Wire/4-Wire

This switch selects the wiring method used to connect the RS-422/485 serial port. The choices are 2-wire or 4-wire. The factory default is **4-WIRE**.

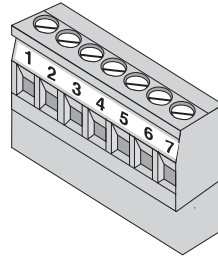
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Wiring

RS-422/485 Pin Connections



Pin	2-Wire Mode	4-Wire Mode
1	Transmit/Receive Plus (TX/RX+)	Transmit Plus (TX+)
2	Transmit/Receive Minus (TX/RX -)	Transmit Minus (TX-)
3	Common Ground (GND)	Common Ground (GND)
4	No Connection (NC)	Receive Plus (RX+)
5	No Connection (NC)	Receive Minus (RX-)
6	Interrupt Plus (IRQ+)	Interrupt Plus (IRQ+)
7	Interrupt Minus (IRQ-)	Interrupt Minus (IRQ-)

ARCNET Cables and Connectors

The following is suggested cable wire and connectors to make your custom ARCNET cable.

Cable Wire: RG62A/U Coaxial Cable

Manufacturer: Belden

Connectors: BNC

Terminators: 93 ohms

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LEDs

The G4LC32ARC card has three diagnostic LEDs for each serial communications port and one diagnostic LED for the ARCNET port. The following table describes the LEDs.

LED	Description
ARCN	ARCNET connection is active
TX2	Transmit LED for COM2
RX2	Receive LED for COM2
IRQ2	Interrupt (IRQ) LED for COM2
TX3	Transmit LED for COM3
RX3	Receive LED for COM3
IRQ3	IRQ LED for COM3

Specifications

Power Specifications	5 VDC \pm 0.25 V @ 0.5 A
Operating Temperature	0°C to 70°C
Storage Temperature	-25°C to 85°C
Humidity	5% to 95% relative humidity
Baud Rate	300-115.2 KBd (all ports)
RS-485	2- or 4-wire
ARCNET Transfer Rate	2.5 Mb/s
Weight	0.1 kg

Products

Opto 22 produces a broad array of reliable, flexible hardware and software products for industrial automation, remote monitoring, enterprise data acquisition, and machine-to-machine (M2M) applications.

SNAP Ethernet Systems

Based on the Internet Protocol (IP), SNAP Ethernet systems offer flexibility in their network connectivity and in the software applications they work with. The physical network may be a wired Ethernet network, a cellular wireless network, or a modem. A wide variety of software applications can exchange data with SNAP Ethernet systems, including:

- Opto 22's own ioProject™ suite of control and HMI software
- Manufacturing resource planning (MRP), enterprise management, and other enterprise systems
- Human-machine interfaces (HMIs)
- Databases
- Email systems
- OPC client software
- Custom applications
- Modbus/TCP software and hardware.



SNAP Ethernet system hardware consists of controllers and I/O units. Controllers provide central control and data distribution. I/O units provide local connection to sensors and equipment.

SNAP OEM Systems

Opto 22 SNAP OEM I/O systems are highly configurable, programmable processors intended for OEMs, IT professionals, and others who need to use custom software with Opto 22 SNAP I/O modules.

Linux® applications running on these systems can read and write to analog, simple digital, and serial I/O points on SNAP I/O modules using easily implemented file-based operations. Applications can be developed using several common development tools and environments, including C or C++, Java, and shell scripts.



M2M Systems

Machine-to-machine (M2M) systems connect your business computer systems to the machines, devices, and environments you want to monitor, control, or collect data from. M2M systems often use wireless cellular communications to link remote facilities to central systems over the Internet, or to provide monitoring and control capability via a cellular phone.

Opto 22's Nvio™ systems include everything you need for M2M—interface and communications hardware, data service plan, and Web portal—in one easy-to-use package. Visit nvio.opto22.com for more information.

Opto 22 Software

Opto 22's ioProject and FactoryFloor® software suites provide full-featured and cost-effective control, HMI, and OPC software to power your Opto 22 hardware. These software applications help you develop control automation solutions, build easy-to-use operator interfaces, and expand your manufacturing systems' connectivity.



Quality

In delivering hardware and software solutions for worldwide device management and control, Opto 22 retains the highest commitment to quality. We do no statistical testing; each product is made in the U.S.A. and is tested twice before leaving our 160,000 square-foot manufacturing facility in Temecula, California. That's why we can guarantee solid-state relays and optically-isolated I/O modules *for life*.

Product Support

Opto 22's Product Support Group offers comprehensive technical support for Opto 22 products. The staff of support engineers represents years of training and experience, and can assist with a variety of project implementation questions. Product support is available in English and Spanish from Monday through Friday, 7 a.m. to 5 p.m. PST.

Opto 22 Web Sites

- www.opto22.com
- nvio.opto22.com
- www.internetio.com (live Internet I/O demo)

Other Resources

- OptoInfo CDs
- Custom integration and development
- Hands-on customer training classes.



About Opto 22

Opto 22 manufactures and develops hardware and software products for industrial automation, remote monitoring, enterprise data acquisition, and machine-to-machine (M2M) applications. Using standard, commercially available Internet, networking, and computer technologies, Opto 22's input/output and control systems allow customers to monitor, control, and acquire data from all of the mechanical, electrical, and electronic assets that are key to their business operations. Opto 22's products and services support automation end users, OEMs, and information technology and operations personnel.

Founded in 1974 and with over 85 million Opto 22-connected devices deployed worldwide, the company has an established reputation for quality and reliability.