OPTO 22

INSTALLATION NOTE

Form 662-230124

**** This product is OBSOLETE and no longer available. ****
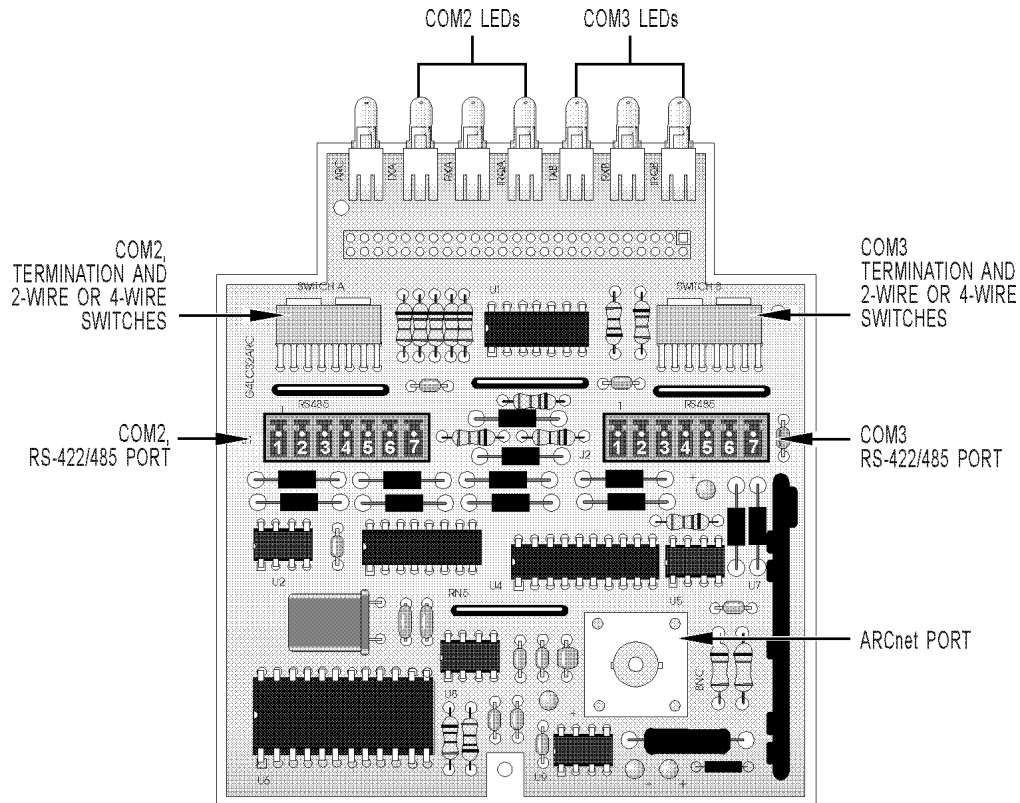
Unpacking [OBSOLETE]

The packing box for the G4LC32ARC contains:

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

Diagram [OBSOLETE]

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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CONTROLLER
DAUGHTER CARD
G4LC32ARC

INSTALLATION NOTE

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Switches [OBSOLETE]

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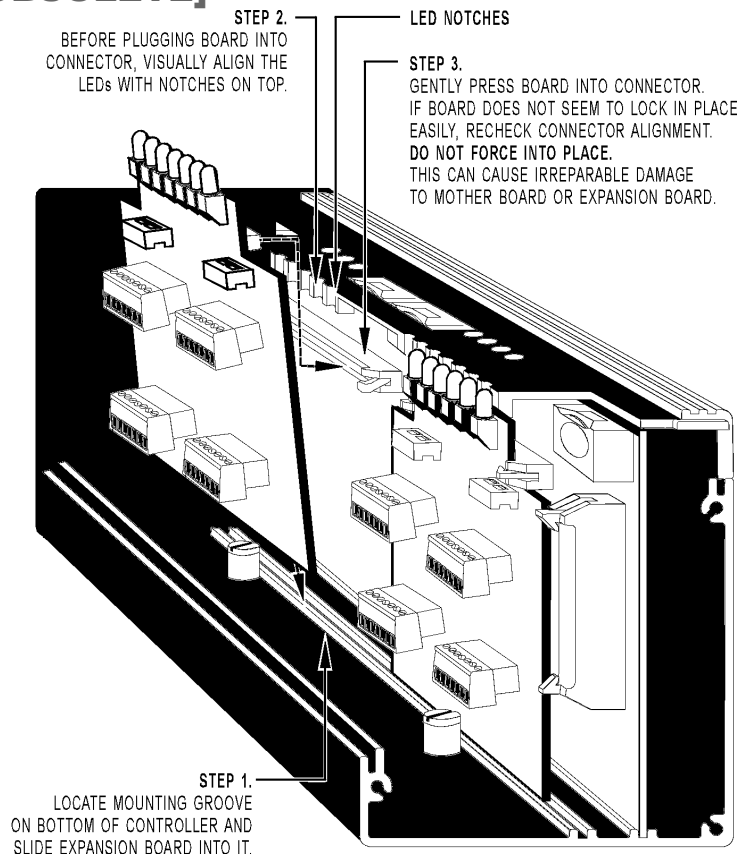
In the NO position, the RS-422/485 lines will be floating. This setting should be used when the port is part of a multidrop application and is not physically the first or last unit in the network.

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**.
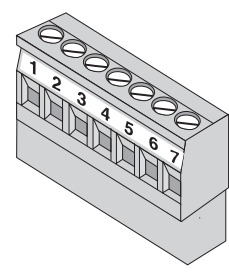
Installation [OBSOLETE]

STEP 2.
BEFORE PLUGGING BOARD INTO
CONNECTOR, VISUALLY ALIGN THE
LEDs WITH NOTCHES ON TOP.

LED NOTCHES

STEP 3.
GENTLY PRESS BOARD INTO CONNECTOR.
IF BOARD DOES NOT SEEM TO LOCK IN PLACE
EASILY, RECHECK CONNECTOR ALIGNMENT.
DO NOT FORCE INTO PLACE.
THIS CAN CAUSE IRREPARABLE DAMAGE
TO MOTHER BOARD OR EXPANSION BOARD.

STEP 1.
LOCATE MOUNTING GROOVE
ON BOTTOM OF CONTROLLER AND
SLIDE EXPANSION BOARD INTO IT.

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Wiring [OBSOLETE]

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

OPTO 22

Form 662-010406

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 [OBSOLETE]

Power Specifications	5 VDC ± 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

More about Opto 22

OPTO 22

PRODUCTS

Opto 22 develops and manufactures reliable, easy-to-use, open standards-based hardware and software products. Industrial automation, process control, remote monitoring, data acquisition, and industrial internet of things (IIoT) applications worldwide all rely on Opto 22.

groov RIO®

groov RIO edge I/O offers a single, compact, PoE-powered industrial package with web-based configuration and IIoT software built in, support for multiple OT and IT protocols, and security features like a device firewall, data encryption, and user account control.

Standing alone, *groov* RIO connects to sensors, equipment, and legacy systems, collecting and securely publishing data from field to cloud. Choose a universal I/O model with thousands of possible field I/O configurations, with or without Ignition from Inductive Automation®, or a RIO EMU energy monitoring unit that reports 64 energy data values from 3-phase loads up to 600 VAC, Delta or Wye.

You can also use *groov* RIO with a Modbus/TCP master or as remote I/O for a *groov* EPIC system.

groov EPIC® System

Opto 22's *groov* Edge Programmable Industrial Controller (EPIC) system gives you industrially hardened control with a flexible Linux®-based processor with gateway functions, guaranteed-for-life I/O, and software for your automation and IIoT applications.

groov EPIC Processor

The heart of the system is the *groov* EPIC processor. It handles a wide range of digital, analog, and serial functions for data collection, remote monitoring, process control, and discrete and hybrid manufacturing.

In addition, the EPIC provides secure data communications among physical assets, control systems, software applications, and online services, both on premises and in the cloud. No industrial PC needed.

Configuring and troubleshooting I/O and networking is easier with the EPIC's integrated high-resolution color touchscreen. Authorized users can manage the system locally on the touchscreen, on a monitor connected via the HDMI or USB ports, or on a PC or mobile device with a web browser.

groov EPIC I/O

groov I/O connects locally to sensors and equipment. Modules have a spring-clamp terminal strip, integrated wireway, swing-away cover, and LEDs indicating module health and discrete channel status. *groov* I/O is hot swappable, UL Hazardous Locations approved, and ATEX compliant.

groov EPIC Software

The *groov* EPIC processor comes ready to run the software you need:

- Programming: Choose flowchart-based PAC Control, CODESYS Development System for IEC61131-3 compliant programs, or secure shell access (SSH) to the Linux OS for custom applications
- Node-RED for creating simple IIoT logic flows from pre-built nodes
- Efficient MQTT data communications with string or Sparkplug data formats
- Multiple OPC UA server options
- HMI: *groov* View to build your own HMI viewable on touchscreen, PCs, and mobile devices; PAC Display for a Windows HMI; Node-RED dashboard UI
- Ignition or Ignition Edge® from Inductive Automation (requires license purchase) with OPC-UA drivers to Allen-Bradley®, Siemens®, and other control systems, and MQTT communications

Older products

From solid state relays, to world-famous G4 and SNAP I/O, to SNAP PAC controllers, older Opto 22 products are still supported and working hard at thousands of installations worldwide. You can count on us for the reliability and service you expect, now and in the future.

QUALITY

Founded in 1974, Opto 22 has established a worldwide reputation for high-quality products. All are made in the U.S.A. at our manufacturing facility in Temecula, California.

Because we test each product twice before it leaves our factory rather than testing a sample of each batch, we can afford to guarantee most solid-state relays and optically isolated I/O modules for life.

FREE PRODUCT SUPPORT

Opto 22's California-based Product Support Group offers free technical support for Opto 22 products from engineers with decades of training and experience. Support is available in English and Spanish by phone or email, Monday–Friday, 7 a.m. to 5 p.m. PST.

Support is always available on our website, including free online training at OptoU, how-to videos, user's guides, the Opto 22 KnowledgeBase, and OptoForums.

PURCHASING OPTO 22 PRODUCTS

Opto 22 products are sold directly and through a worldwide network of distributors, partners, and system integrators. For more information, contact Opto 22 headquarters at **800-321-6786** (toll-free in the U.S. and Canada) or **+1-951-695-3000**, or visit our website at www.opto22.com.

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43044 Business Park Dr. Temecula, CA 92590-3614

SALES • sales@opto22.com
800-321-6786 • 1-951-695-3000

SUPPORT • support@opto22.com
800-835-6786 • 1-951-695-3080

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