# CONTROLLER

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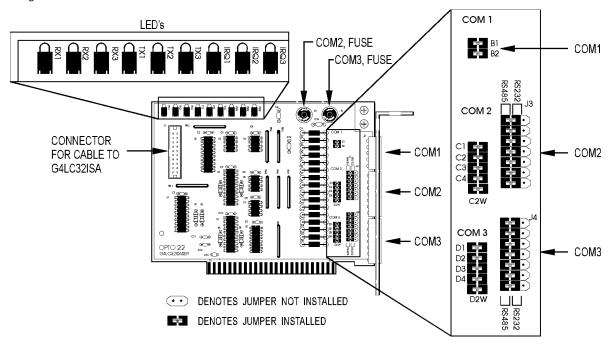
Form 644-230124

## Description G4LC32ISASER

Part Number	Description
G4LC32ISASER	ISA Serial Adapter for G4LC32ISA

## \*\*\*\* This product is OBSOLETE and not longer available.

The following diagram shows the communication jumper groups, LED's, RS-232 fuses, and physical layout of the G4LC32ISASER daughter card.



#### **G4LC32ISASER Physical Layout**

## **G4LC32ISA Descriptions**

LED	Description
RX1	Receive LED for COM1
RX2	Receive LED for COM2
RX3	Receive LED for COM3
TX1	Transmit LED for COM1
TX2	Transmit LED for COM2
TX3	Transmit LED for COM3
IRQ1	IRQ LED for COM1
IRQ2	IRQ LED for COM2
IRQ3	IRQ LED for COM3

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## INTERFACE CONTROLLER ISA

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## G4LC32ISASER Jumpers [OBSOLETE]

#### **COM1 Jumper Settings**

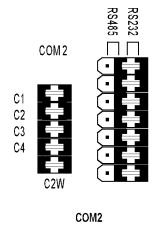
Install jumpers on B1 and B2 to provide termination and biasing for COM1, the RS-485 2-wire, half-duplex serial port.

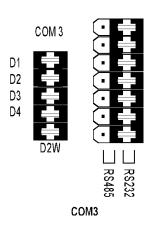


## **COM2 and COM3 Jumper Settings**

COM2 and COM3 offer RS-485 2- or 4-wire communications as well as RS-232. Each port is jumper selectable for the type of mode required. Only one serial mode can be used at a time. Each communication port has two groups of jumpers. They need to be set according to the serial mode used.

## **RS-232 Jumper Settings**





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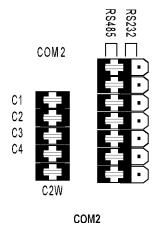
## **G4LC32ISASER Jumpers (Continued)**

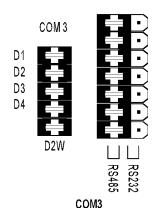
#### **RS-485 Jumper Settings**

The "C" and "D" jumper groups are used for biasing and terminating the RS-485 ports. The physical location of the controller on the RS-485 communication network effects which jumpers are installed.

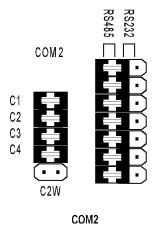
If the controller is at the physical beginning or end of the RS-485, install these jumpers:

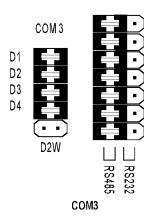
## 2-Wire Half-Duplex





#### 4-Wire Full-Duplex





# INTERFACE CONTROLLER ISA

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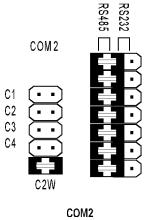
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## **G4LC32ISASER Jumpers (Continued)**

If the controller is **not** at the physical beginning or end of the RS-485 network, install these jumpers:

## 2-Wire Full-Duplex



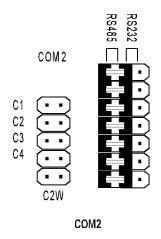
D4 RS 232 RS 485 COM3

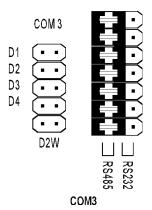
COM<sub>3</sub>

D1 D2

D3

#### 4-Wire Full-Duplex







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## Wiring [OBSOLETE]

**Important:** Connectors wired for other Mistic 200 controllers may not be compatible with the G4LC32ISA. Use the connectors provided and refer to the configuration label for wiring information.

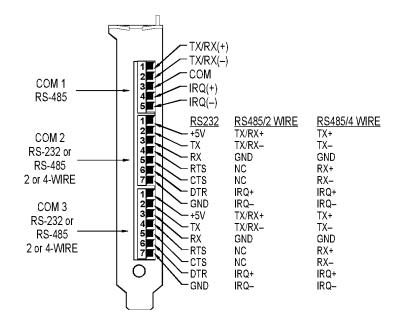
#### COMO and COM1

COMO on the G4LC32ISA and COM1 on the G4LC32ISASER uses a pluggable 5-terminal block. The pinouts are:

Pin	RS-485 2-Wire Mode Only
1	TX/RX (+)
2	TX/RX (-)
3	Common Ground
4	Interrupt (+)
5	Interrupt (-)

#### COM2 and COM3

COM2 and COM3 on the G4LC32ISASER use a pluggable 7-terminal block. The pinouts are:



## INTERFACE CONTROLLER ISA

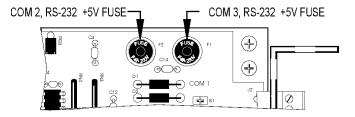
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## Fusing for RS-232 +5V

A +5VDC fused source is available from the COM2 or COM3 ports on Pin 1. Fuse F2 is for COM2 and fuse F1 is for COM3. The replacement part number for this fuse is Opto 22 P/N FUSE01G4 (Wickman p/n 19373A).



## Installation [OBSOLETE]

This section describes how to install a G4LC32ISASER card into your computer. Please refer to the owner's manual for your computer for information on opening and removing the computer's cover.

To install the daughter cards into the computer:

- 1. Find an unoccupied 8- or 16-bit ISA expansion slot adjacent to the G4LC32ISA card.
- 2. Remove the expansion slot cover if one is installed.
- 3. Discharge any static electricity you may have by touching the computer's metal chassis.
- 4. Attach one end of the cable included with the daughter board card to the daughter board, and the other to the G4LC32ISA.
- 5. Install the card by orienting the computer connector facing the expansion slot and the mounting bracket facing the access port.

## Specifications [OBSOLETE]

Power Requirements:	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-wire or 4-wire
RS-232:	TX, RX, Gnd, RTS, CTS
Weight:	0.1 Kg

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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.

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#### 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.

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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.

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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.

