

FUSES

Features

- > Reliable replacements for fuses used in Opto 22 products
- > Convenient multi-packs

DESCRIPTION

For your convenience, you can purchase replacement fuses for classic, G4, and SNAP racks, modules, power supplies, and other Opto 22 products.

Fuses can also be purchased from other manufacturers, such as Littelfuse or Wickmann.

Part numbers for fuses, clips, and holders are listed in the table at right.

NOTE: Fuses are sold in convenient packs of 10 or 25. If you have ordered a part number such as FUSE.125 in the past, you should now order FUSE.125B. The fuse is the same; the "B" at the end of the part number indicates a pack of 10.

The tables on the following pages list Opto 22 products in alphabetical order and show the fuse to use with each one. If your part number is not listed, contact Opto 22 Inside Sales (951-695-3000).

For modules—see [page 2](#).

For racks—see [page 3](#).

For other Opto 22 products—see [page 5](#).



Replacement Fuses

Part Numbers

Part	Description
FUSE.125B	Pack of 10 1/8-amp fuses for standard analog I/O channel loop source
FUSE01B	Pack of 10 1-amp fuses for standard digital logic power
FUSE02B	Pack of 10 2-amp fuses for standard analog logic power and some 32-channel digital logic power
FUSE05B	Pack of 10 5-amp fuses for standard digital output modules
FUSEG4B	Pack of 10 4-amp fuses for G4 digital modules
FUSE01G4B	Pack of 10 1-amp fuses for G4 digital rack logic power and brick regulator
G4 FUSE CLIP	Pack of 10 fuse clips for G4 products
SNAP-FUSE1AB	Pack of 25 1-amp fuses for SNAP racks and power supplies
SNAP-FUSE1AC	Pack of 25 1-amp fuses for breakout racks
SNAP-FUSE2AB	Pack of 25 2-amp fast-acting fuses for SNAP-PS5-24DC power supplies
SNAP-FUSE4AB	Pack of 25 4-amp fuses for SNAP racks and modules
SNAP-FUSE7.5AB	Pack of 25 7.5-amp fuses for SNAP M-series and SNAP PAC racks
SNAP-FUSE10AB	Pack of 25 10-amp fuses for SNAP-IT TMS modem
SNAP-MODFUSE-HLDRB	Pack of 10 fuse holders for the 4-amp fuses used with SNAP products

FUSES FOR OPTO 22 MODULES

Opto 22 PN	Description	Fuse
AD3	4 to 20 mA Input	FUSE.125B
DA3	4 to 20 mA Output	FUSE.125B
DA8	0 to 20 mA Output	FUSE.125B
G4HDAR,BSC	G4HDAR for Bethlehem Steel	FUSE01G4B
G4IAC5M	G4 AC Input with Fuse Millar	FUSEG4B
G4IDC5GFAST	G4 DC Input with Fuse Millar	FUSEG4B
G4IDC5M	G4 DC Input with Fuse Millar	FUSEG4B
G4IDC5WF	G4 DC Input Module with Fuse	FUSEG4B
G4OAC15	G4 AC Output 12–140 VAC, 15 VDC Logic	FUSEG4B
G4OAC15A	G4 AC Output 24–280 VAC, 15 VDC Logic	FUSEG4B
G4OAC24	G4 AC Output 12–140 VAC, 24 VDC Logic	FUSEG4B
G4OAC24A	G4 AC Output 24–280 VAC, 24 VDC Logic	FUSEG4B
G4OAC24A, WEIDMULLER	G4 AC Output Module Weidmuller	FUSEG4B
G4OAC24ADC	G4 AC Output	FUSEG4B
G4OAC24AFC	G4OAC24A with Fuse Clip	FUSEG4B
G4OAC24FC	G4OAC24 with Fuse Clip	FUSEG4B
G4OAC5	G4 AC Output 12–140 VAC, 5 VDC Logic	FUSEG4B
G4OAC5A	G4 AC Output 24–280 VAC, 5 VDC Logic	FUSEG4B
G4OAC5A5	G4 AC Output, 24–280 VAC, 5 VDC Logic, NC	FUSEG4B
G4OAC5A5FM	G4 AC Output 24–280 VAC, 5 VDC Logic, NC, FM	FUSEG4B
G4OAC5ADC	G4 AC Output	FUSEG4B
G4OAC5AFC-ABB	G4 AC Output ABB-no.2005ap2	FUSEG4B
G4OAC5AFM	G4 AC Output 24–280 VAC, 5 VDC Logic, Factory Mutual Approved	FUSEG4B
G4OAC5AMA	G4 AC Output 24–280 VAC, 5 VDC Logic with HOA/SW	FUSEG4B
G4OAC5FM	G4 AC Output 12–140 VAC, 5 VDC Logic, FM Approved	FUSEG4B
G4OAC5MA	G4 AC Output 12–140 VAC, 5 VDC Logic with HOA/SW	FUSEG4B
G4ODC15	G4 DC Output 5–60 VDC, 15 VDC Logic	FUSEG4B
G4ODC24	G4 DC Output 5–60 VDC, 24 VDC Logic	FUSEG4B

Opto 22 PN	Description	Fuse
G4ODC24, WEIDMULLER	G4ODC24 Private Label for Weidmuller	FUSEG4B
G4ODC24A	G4 DC Output 5–200 VDC, 24 VDC Logic	FUSEG4B
G4ODC24AFC	G4ODC24A with Fuse Clip	FUSEG4B
G4ODC24FC	G4ODC24 with Fuse Clip	FUSEG4B
G4ODC5, WEIDMULLER	G4ODC5 Private Label for Weidmuller	FUSEG4B
G4ODC5	G4 DC Output 5–60 VDC, 5 VDC Logic	FUSEG4B
G4ODC5, ELECTROC	EC-ODC060-3	FUSEG4B
G4ODC5,KENT	ABB Instrumentation 2005ap10100a	FUSEG4B
G4ODC5A	G4 DC Output 5–200 VDC, 5 VDC Logic	FUSEG4B
G4ODC5A, ELECTRO	EC-ODC200-1	FUSEG4B
G4ODC5A, KENT	ABB Instrumentation 2005ap10110a	FUSEG4B
G4ODC5AFM	G4 DC Output 5–200 VDC, 5 VDC Logic, FM Approved	FUSEG4B
G4ODC5FM	G4 DC Output 5–60 VDC, 5 VDC Logic, FM Approved	FUSEG4B
G4ODC5MA	G4 DC Output 5–60 VDC, 5 VDC Logic with HOA/SW	FUSEG4B
G4ODC5R	G4 Reed Relay Output, 5 VDC Logic	FUSE01G4B
G4ODC5R5	G4 Reed Relay Output, 5 VDC Logic, NC	FUSE01G4B
G4ODC5R5FM	G4 Reed Relay Output, 5 VDC Logic, NC, FM Approved	FUSE01G4B
G4ODC5RFM	G4 Reed Relay Output, 5 VDC Logic, FM Approved	FUSE01G4B
G4ODC5RFR	G4 Reed Relay Fr-epoxy	FUSE01G4B
SNAP-OAC5	4-channel AC Output 12–280 VAC, 5 VDC Logic	SNAP-FUSE 4AB
SNAP-ODC5ASNK	SNAP DC Output Reed Relay	SNAP-FUSE 4AB
SNAP-ODC5SNKFM	4 Channel DC Output 5–60 VDC Logic Sinking	SNAP-FUSE 4AB
SNAP-ODC5SNK	4-channel DC Output 5–60 VDC, 5 VDC Logic Sink	SNAP-FUSE 4AB
SNAP-ODC5SRC	4-channel DC Output 5–60 VDC, 5 VDC Logic Source	SNAP-FUSE 4AB
SNAP-ODC5SRCFM	4-channel DC Output 5–60 VDC, 5 VDC FM Logic Source	SNAP-FUSE 4AB
SNAP-ODC5SRC-T	4-channel DC Output Transient Protect	SNAP-FUSE 4AB

FUSES FOR OPTO 22 RACKS

Opto 22 PN	Description	Fuse
G4PB16	G4 16-channel I/O Module Rack	FUSEG4B
G4PB16H	G4 16-channel Rack with Header Connector	FUSE01B (logic) FUSEG4B (I/O)
G4PB16HC	G4 16-channel Rack with Header Connector and Extra Terminal Strip	FUSE01B (logic) FUSEG4B (I/O)
G4PB16I	G4 16-channel I/O Module Rack Isolated Control	FUSEG4B
G4PB16J	G4 DC Input 4–16 VDC 16-channel Integral	FUSE01G4B
G4PB16K	G4 DC Input 16–28 VDC 16-channel Integral	FUSE01G4B
G4PB16L	G4 DC Output 5–60 VDC 16-channel Integral	FUSE01G4B
G4PB16T	G4 16-channel I/O Module Rack Extra Terminal Strip	FUSEG4B
G4PB24	G4 24-channel I/O Module Rack	FUSEG4B
G4PB32DEC	G4 32-channel I/O Module Rack	FUSEG4B
G4PB32H	G4 32-channel Rack with Header Connector for B4 Brain	FUSE02B (logic) FUSEG4B (I/O)
G4PB32JY-IN	G4 32 Point Rack Inputs JYC-systems	FUSE01G4B (logic) FUSEG4B (I/O)
G4PB32JY-OUT	G4 32 Point Rack JYC-systems	FUSE01G4B (logic) FUSEG4B (I/O)
G4PB4	G4 4-channel I/O Module Rack	FUSEG4B
G4PB4R	G4 4-channel Output Module Rack	FUSEG4B
G4PB8	G4 8-channel I/O Module Rack	FUSEG4B
G4PB8H	G4 8-channel Rack with Header Connector	FUSE01B (logic) FUSEG4B (I/O)
G4PB16FB1	Foxboro G4PB16 Single Wetting	FUSE01B (logic) FUSEG4B (I/O)
G4PB16FB2	Foxboro G4PB16 Dual Wetting	FUSE01B (logic) FUSEG4B (I/O)
PB16A	16-channel I/O Module Rack	FUSE05B
PB16AH	16-channel Analog Mounting Rack	FUSE02B
PB16C	16-channel I/O Module Rack Extra Terminal Strip	FUSE05B

Opto 22 PN	Description	Fuse
PB16H	16-channel Rack with Header Connector	FUSE01B (logic) FUSE05B (I/O)
PB16HC	16-channel Rack with Header Connector and Extra Terminal Strip	FUSE01B (logic) FUSE05B (I/O)
PB16HQ	Quad 4-module Position Rack	FUSE01B (logic) FUSE05B (I/O)
PB16J	DC Input 4–16 VDC 16-channel Integral	FUSE01B
PB16K	DC Input 16–28 VDC 16-channel Integral	FUSE01B
PB16L	DC Output 5–60 VDC 16-channel Integral	FUSE01B
PB16P1	Pamux 1	FUSE01B (logic) FUSE05B (I/O)
PB16T	16-channel I/O Module Rack	FUSE05B
PB24	24-channel I/O Module Rack	FUSE01B (logic) FUSE05B (I/O)
PB24HQ	Quad 6-module Position Rack with Header Connector	FUSE01B (logic) FUSE05B (I/O)
PB24Q	Quad 6-module Position Rack	FUSE01B (logic) FUSE05B (I/O)
PB32DEC	Quad 8-module Position Rack	FUSE01B (logic) FUSE05B (I/O)
PB32HQ	Quad 8-module Rack with Header Connector for B4 Brain	FUSE02B (logic) FUSE05B (I/O)
PB32P2	Pamux 2	FUSE02B (logic) FUSE05B (I/O)
PB4	4-channel I/O Module Rack	FUSE05B
PB4H	4-channel Rack with header Connector	FUSE01B (logic) FUSE05B (I/O)
PB4R	4-channel Output Module Rack	FUSE05B
PB8	8-channel I/O Module Rack	FUSE05B
PB8H	8-channel Rack with Header Connector	FUSE05B
SNAP-AIMA-HDB	Breakout Board for SNAP-AIMA-32 Analog Input Module	SNAP-FUSE1AC
SNAP-AIMA-HDB-FM	Breakout Board for SNAP-AIMA-32 Analog Input Module, FM-apprv.	SNAP-FUSE1AC
SNAP-B12M	12-module Rack	SNAP-FUSE4AB
SNAP-B12MC	12-module Rack with Extra Terminal Block for Field Wiring	SNAP-FUSE4AB

Opto 22 PN	Description	Fuse
SNAP-B12MC-P	12-module Rack with Extra Terminal Block for Field Wiring, Pluggable	SNAP-FUSE4AB
SNAP-B16M	16-module Rack	SNAP-FUSE4AB
SNAP-B16MC	16-module Rack with Extra Terminal Block for Field Wiring	SNAP-FUSE4AB
SNAP-B16MC-P	16-module Rack with Extra Terminal Block for Field Wiring, Pluggable	SNAP-FUSE4AB
SNAP-B16MC-SF1	16-module Smart Rack for Sputter Film	SNAP-FUSE4AB
SNAP-B4M	4-module Brain Rack	SNAP-FUSE4AB
SNAP-B8M	8-module Rack	SNAP-FUSE4AB
SNAP-B8MC	8-module Rack with Extra Terminal Block for Field Wiring	SNAP-FUSE4AB
SNAP-B8MC-P	8-module Rack with Extra Terminal Block for Field Wiring, Pluggable	SNAP-FUSE4AB
SNAP-D12M	12-module Rack	SNAP-FUSE1AB
SNAP-D12MC	12-module Rack with Extra Terminal Block for Field Wiring	SNAP-FUSE1AB
SNAP-D12MC-P	12-module Rack with Extra Terminal Block for Field Wiring, Pluggable	SNAP-FUSE1AB
SNAP-D4M	4-module Rack	SNAP-FUSE1AB
SNAP-D4MC	4-module Rack with Extra Terminal Block for Field Wiring	SNAP-FUSE1AB
SNAP-D4MC-P	4-module Rack with Extra Terminal Block for Field Wiring, Pluggable	SNAP-FUSE1AB
SNAP-D6M	6-module Rack	SNAP-FUSE1AB
SNAP-D6MC	6-module Rack with Extra Terminal Block for Field Wiring	SNAP-FUSE1AB
SNAP-D6MC-P	6-module Rack with Extra Terminal Block for Field Wiring, Pluggable	SNAP-FUSE1AB
SNAP-D64RS	SNAP 64-point Digital Rack	SNAP-FUSE4AB
SNAP-D8M	8-module Rack	SNAP-FUSE1AB
SNAP-D8MC	8-module Rack with Extra Terminal Block for Field Wiring	SNAP-FUSE1AB
SNAP-D8MC-P	8-module Rack with Extra Terminal Block for Field Wiring, Pluggable	SNAP-FUSE1AB

Opto 22 PN	Description	Fuse
SNAP-IDC-HDB	Breakout Rack for SNAP 32-channel Digital Input Module	SNAP-FUSE1AC
SNAP-IDC-HDB-FM	Breakout Rack for SNAP 32-channel Digital Input Module, FM-apprv.	SNAP-FUSE1AC
SNAP-ODC-HDB	Breakout Rack for SNAP 32-channel Digital Output Modules	SNAP-FUSE1AC
SNAP-ODC-HDB-FM	Breakout Rack for SNAP 32-channel Digital Output Modules, FM-apprv.	SNAP-FUSE1AC
SNAP-M16	4-module Rack	SNAP-FUSE7.5AB
SNAP-M32	8-module Rack	SNAP-FUSE7.5AB
SNAP-M48	12-module Rack	SNAP-FUSE7.5AB
SNAP-M64	16-module Rack	SNAP-FUSE7.5AB
SNAP-PAC-RCK4	4-module Rack	SNAP-FUSE7.5AB
SNAP-PAC-RCK4-FM	4-module Rack, FM-app.	SNAP-FUSE7.5AB
SNAP-PAC-RCK8	8-module Rack	SNAP-FUSE7.5AB
SNAP-PAC-RCK8-FM	8-module Rack, FM-app.	SNAP-FUSE7.5AB
SNAP-PAC-RCK12	12-module Rack	SNAP-FUSE7.5AB
SNAP-PAC-RCK12-FM	12-module Rack, FM-app.	SNAP-FUSE7.5AB
SNAP-PAC-RCK16	16-module Rack	SNAP-FUSE7.5AB
SNAP-PAC-RCK16-FM	16-module Rack, FM-app.	SNAP-FUSE7.5AB
SNAP-TEX-FB16-H	16-channel Breakout Board, Fuses and Bussed Power (120-240 V)	FUSE01G4B
SNAP-TEX-FB16-L	16-channel Breakout Board, Fuses and Bussed Power (12-24 V)	FUSE01G4B

FUSES FOR OTHER OPTO 22 PRODUCTS

Opto 22 PN	Description	Fuse
BUNNMASTER	Bunn Master System	FUSE01G4B
CATTRONFUSE	Two 5 A Fuses	FUSE05B
CUBIC-9375-0125	8-point Digital Rack Loaded for Cubic	SNAP-FUSE1AB
CUBIC-9375-0144	8 -point Digital Rack Loaded for Cubic	SNAP-FUSE1AB
G4A8L	Local Analog 8-channel Multifunction I/O Unit Mystic Protocol	FUSE01G4B
G4A8P	Mistic 100 8-pt Analog Brick	FUSE01G4B
G4A8R	Remote Analog 8-channel Multifunction I/O Unit Mystic Protocol	FUSE01G4B
G4D16L	Local Digital 16 Channel Multifunction I/O Unit Mystic Protocol	FUSE01G4B
G4D16LS	Local Digital 16 Channel I/O Unit Mystic Protocol	FUSE01G4B
G4D16P	Mistic 100 Digital Brick	FUSE01G4B
G4D16R	Remote Digital 16-channel Multifunction I/O Unit Mystic Protocol	FUSE01G4B
G4D32RS	Remote Digital 32-channel I/O Unit Mystic Protocol	FUSE01G4B
G4HDAL	Local Analog 32-channel High Resolution Multifunction I/O Unit Mystic Protocol	FUSE01G4B
G4HDALB	High Density Analog Local Brain	FUSE01G4B
G4HDAR	Remote Analog 32-channel High Resolution Multifunction I/O Unit Mystic Protocol	FUSE01G4B
G4HDARB	High Density Analog Remote Brain	FUSE01G4B
G4HDML	G4 High Density Motion Local	FUSEG4B
G4HDMR	G4 High Density Motion Remote	FUSEG4B
G4IOL	Local Panel Interface Mystic Protocol	FUSE01G4B (logic) FUSEG4B (I/O)
G4IOP	Mistic 100 I/O Cable Adapter	FUSE01G4B (logic) FUSEG4B (I/O)
G4IOR	Remote Panel Interface Mystic Protocol	FUSE01G4B (logic) FUSEG4B (I/O)

Opto 22 PN	Description	Fuse
G4IOR-NS	G4IOR with No Switches	FUSE01G4B (logic) FUSEG4B (I/O)
G4IOR-S	Remote Panel Interface Sealed Switches	FUSE01G4B (logic) FUSEG4B (I/O)
G4LC32	Opto 22 Classic Controller	FUSE01G4B
G4LC32ISA-LT	Opto 22 ISA Lite Controller	FUSE01G4B
G4LC32ISASER	ISA Serial Adapter for G4LC32ISA	FUSEG4B
G4OAC5,KENT	ABB Instrumentation 2005ap10120a	FUSEG4B
G4OAC5A, KENT	ABB Instrumentation 2005ap10130a	FUSEG4B
G4OAC5A-11, ELEC	EC-OAC240-3	FUSEG4B
G4OAC5A5, KENT	ABB Instrumentation 2005ap10140a	FUSEG4B
G4OAX	Optomux Analog Extender	FUSE01G4B
G4RAX	Remote Analog 8-channel I/O Unit Extender	FUSE01G4B
G4RCOMMKIT	Remote Brick Communication Kit	FUSE01G4B (logic) FUSEG4B (I/O)
G4REG	Brick Power Regulation Module	FUSE01G4B
LCM4EXTPWR	LCM4 External Power Board	FUSE01
M4SHART	M4 Slave Interface	FUSE01G4B
SNAP-IT-PM	Panel-mounted SNAP-IT Monitoring Unit (All Models Including Tower Management Systems)	SNAP-FUSE04A B (rack, modules, modem) SNAP-FUSE10A B (modem)
SNAP-PS24	SNAP Power Supply - Loop Power - 110 VAC To 24 VDC	SNAP-FUSE1AB
SNAP-PS5-24DC	SNAP DC-to-DC Power Supply	SNAP-FUSE2AB
SNAP-PS5	SNAP Power Supply - Single Rack - 110 VAC to 5 VDC	SNAP-FUSE1AB
SNAP-PS5-AT	SNAP Power Supply - (Argonaut)	SNAP-FUSE1AB
TMSDC-DC CONVERTER	DC-DC Converter for TMS Units	SNAP-FUSE4AB

PRODUCTS

Opto 22 develops and manufactures reliable, easy-to-use, open standards-based hardware and software products.

Industrial automation, process control, building automation, industrial refrigeration, remote monitoring, data acquisition, and industrial internet of things (IIoT) applications worldwide all rely on Opto 22.

groov EPIC® System

Opto 22's *groov* Edge Programmable Industrial Controller (EPIC) system is the culmination of over 40 years of experience in designing products for the automation industry.

groov EPIC gives you an industrially hardened system with guaranteed-for-life I/O, a flexible Linux®-based controller with gateway functions, and software for your IIoT application or any application.

groov EPIC I/O

I/O provides the local connection to sensors and equipment. *groov* I/O offers up to 24 channels on each I/O module, with a spring-clamp terminal strip, integrated wireway, and swing-away cover.

Opto 22 I/O is so reliable, we can afford to guarantee it for life. *groov* I/O is hot swappable, UL Hazardous Locations approved, and ATEX compliant.

groov EPIC Controller

The heart of the system is the *groov* EPIC controller. 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, online services, and more, both on premises and in the cloud.

Configuring and troubleshooting I/O and networking is easier with the EPIC's integrated high-resolution touchscreen. Authorized users can see your *groov* View HMI locally on the touchscreen or on a monitor connected via the HDMI or USB ports.

groov EPIC Software

Software includes:

- Flowchart-based PAC Control for control programming, or build your own custom application with optional secure shell access
- *groov* View for building and viewing your own device-independent HMI
- Node-RED for creating simple logic flows from pre-built nodes

- Ignition Edge® from Inductive Automation®, with OPC-UA drivers to Allen-Bradley®, Siemens®, and other control systems, and MQTT/Sparkplug communications for efficient IIoT data transfer

groov Edge Appliance

Visualization, data handling, and connectivity in a compact, industrial box: that's the *groov* Edge Appliance. Included are:

- *groov* View for building and viewing operator interfaces on PCs and mobile
- Node-RED for building simple logic flows
- Ignition Edge® from Inductive Automation®, for OPC-UA drivers and MQTT/Sparkplug IIoT communications



Older products

From solid state relays (our first products) to world-famous G4 and SNAP I/O, to SNAP PAC controllers, Opto 22 products last a long time. You can count on us to give you the reliability and service you expect.



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 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, comprehensive 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 how-to videos, user's guides, the Opto 22 KnowledgeBase, troubleshooting tips, and OptoForums. In addition, free hands-on training is available at our Temecula, California headquarters, and you can [register online](#).

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.