

Dual Class A Initiating Circuit Module

D129



BOSCH

1 Notices

These instructions cover the installation of the D129 Dual Class A Initiating Circuit module as an interface to specified combined Burglary/Fire control panels for fire alarm and waterflow alarm applications.

Install, test and maintain the module according to these instructions, NFPA 72, local codes, and the authority having jurisdiction (AHJ). Failure to follow these instructions can result in failure of a detector to initiate an alarm event. Bosch Security Systems, Inc. is not responsible for improperly installed, tested or maintained devices.

Before installing the module, become familiar with the *Installation and Operation Guide* for the control panel you are using.



Warning!

Follow these instructions to avoid personal injury and damage to equipment.

NFPA 72 requires that you perform a complete system wide functional test following any modifications, repair, upgrades or adjustments made to the system's components, hardware, wiring, programming and software/firmware.

2 Description

The D129 Dual Class A Initiating Circuit module is a fire system interface to the control panels listed in the table below for fire alarm and waterflow alarm applications. The module has two Class A (Style D) circuits, each with a screwdriver adjustable Alarm Retard and Alarm Reset Delay. Use the Alarm Reset Delay in waterflow applications. You can mount up to four modules inside the control panel enclosure.

The Class A (Style D) circuit is four-wire data expansion loop with a feed and return for both the positive and negative sides of the loops. Unlike the two-wire loops supervised by an end-of-line (EOL) resistor, the Class A circuits can detect an alarm condition with a single open or ground fault in the circuit.

The following table lists control panels compatible with the D129:

Control Panels	See section:
Active products:	
GV4 ¹ , GV3 ² , and GV2 ³ panels	<i>Wiring, page 7</i>
Legacy*	
D9412G, D7412G, D7212G**, D9412, D7412, D7212** and D7212B1** panels	See control panel's documentation on the Bosch website (http://www.boschsecurity.com)
D9112B1 and D9112 panels	
D8112 panel	
D7112 panel	
¹ GV4 = D9412GV4, D7412GV4, and D7212GV4** panels	
² GV3 = D9412GV3, D7412GV3, and D7212GV3** panels	
³ GV2 = D9412GV2, D7412GV2, and D7212GV2** panels	
* Legacy products were investigated to comply only to UL864 8 th edition	
** indicates products which are not UL listed for commercial fire applications	

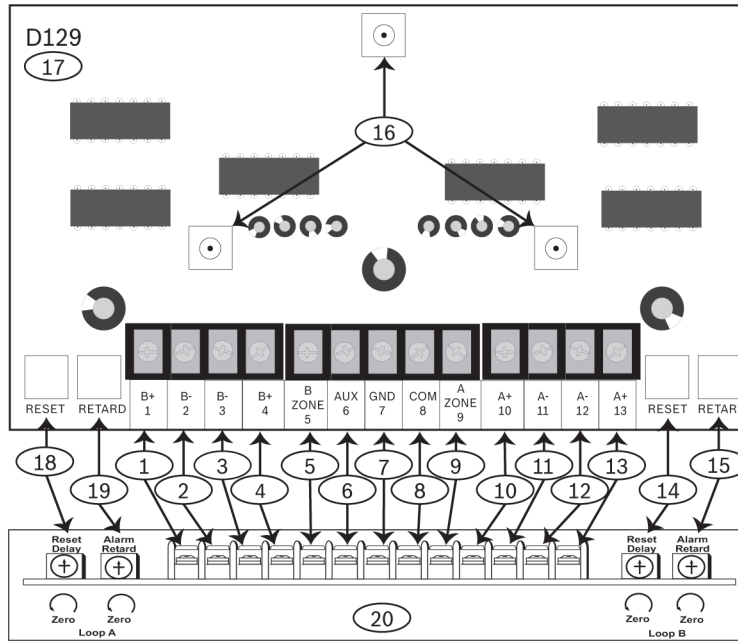


Figure 2.1: D129 Dual Class A Initiating Circuit Module

1, 2, 3, 4	Connectors for Loop B wiring	14	Loop A Reset Delay adjuster
5	Zone B connection	15	Loop A Alarm Retard adjuster
6	+12 VDC connection	16	Mounting holes
7	Earth Ground	17	D129 module (top view)
8	Common (-) connection	18	Loop B Reset Delay adjuster
9	Zone A connection	19	Loop B Alarm Retard adjuster
10, 11, 12, 13	Connectors for Loop A wiring	20	D129 module (side view)

3 Operation

3.1 Waterflow Alarm

When using waterflow switches without retard on a wet pipe sprinkler system, you can set each module loop input with an Alarm Retard period to compensate for water pressure surges.

**Notice!**

For all other types of fire alarm applications, set the Alarm Retard to zero.

3.2 Alarm Retard and Reset Delay

When using Alarm Retard, set the Reset Delay time at a time interval approximately 50% longer than the Alarm Retard period to ensure an alarm is generated in case of alarm valve fanning. The Reset Delay progressively shortens the Alarm Retard cycle when the sprinkler loop continuously alternates between alarm and restoral.

Setting the Alarm Retard**Notice!**

Only use the Alarm Retard for wet pipe sprinkler systems using waterflow switches without retard. For all other applications, adjust the Alarm Retard to zero (fully counterclockwise).

1. For each input loop requiring Alarm Retard, use a screwdriver to set an appropriate retard time for that loop. Fully clockwise represents a maximum retard time of approximately 90 seconds.
2. When using the Alarm Retard, set the Reset Delay to compensate for alarm valve fanning conditions.
3. Test the Alarm Retard period and the Reset Delay.

4 Installation

Mount the module inside the control panel enclosure using the supplied screws. You can also use the D137 Mounting Bracket to mount the module inside the enclosure. For mounting instructions using the D137, see the *D137 Installation Instructions*.

**Notice!**

The module must be mounted in a fire-rated enclosure such as the D8109.

An external power supply listed for fire signaling units and commercial or residential burglary units can be used.

The external power supply must be UL1481 or UL864 Listed, regulated, and power-limited. Install the control panel and external power supply in the same room no more than 20 ft (6 m) apart. The interconnecting wires between the control panel and external power supply must be in conduit.

The power source for both the auxiliary power supply and the control panel must be from the same dedicated AC branch circuit.

5 Wiring

Use the table below to ensure you are using the proper wire size for the length of the circuit:

Maximum circuit length	Wire size (AWG and ISO metric)
60 ft 18 m)	22 AWG (0.34 mm ²)
160 ft (48.75 m)	18 AWG (0.75 mm ²)

5.1 Wiring a G Series (GV2 or higher) panel to supply 12 VDC power to the D129

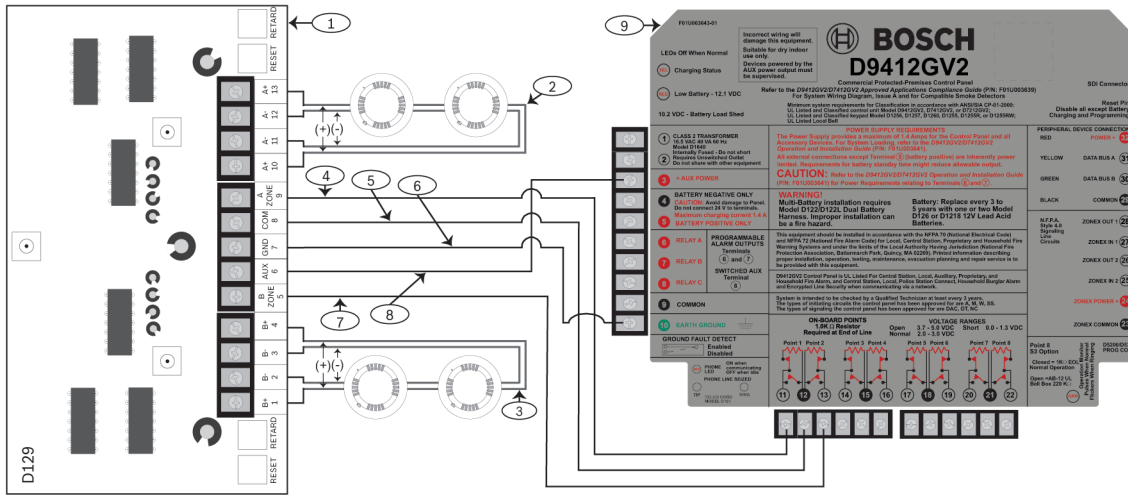


Figure 5.1: Wiring a D129 module with power supplied by the G Series control panel

1	D129 module	6	Earth Ground
2	Loop A (4-wire Class A, Style D)	7	Zone B connection
3	Loop B (4-wire Class A, Style D)	8	+12 VDC aux power connection
4	Zone A connection	9	G Series panel
5	Common connection		

5.2 Wiring a G Series (GV2 or higher) panel to a D129 with 12 VDC supplied by an external power supply

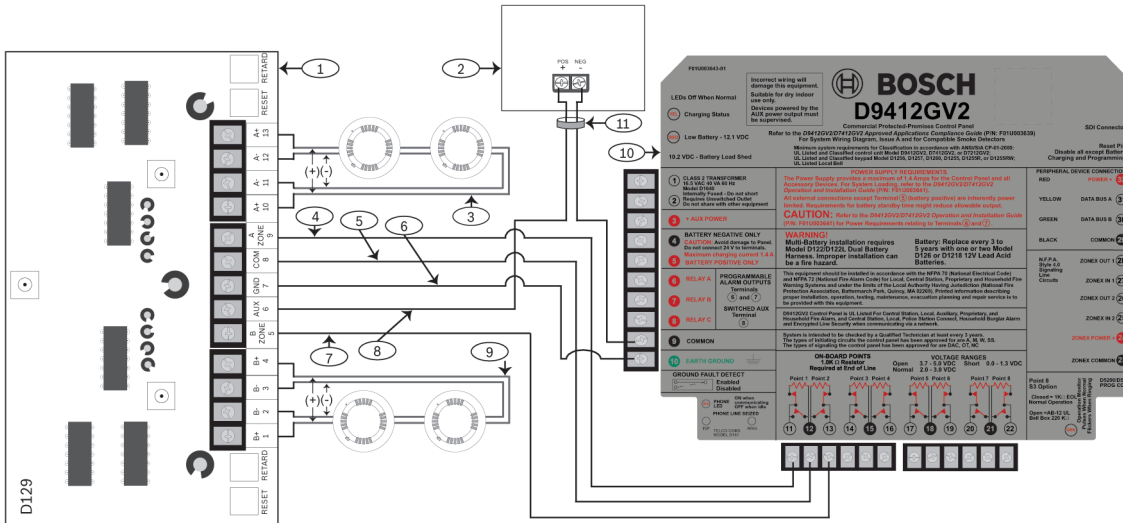


Figure 5.2: Wiring a G Series panel to a D129 module with 12 VDC supplied by an external power supply

1	D129 module	7	Zone B connection
2	External power supply	8	+12 VDC from external power supply
3	Loop A (4-wire Class A, Style D)	9	Loop B (4-wire Class A, Style D)
4	Zone A connection	10	G Series panel
5	Common connection	11	Wiring from external power supply to control panel enclosure must be in conduit.
6	Earth Ground		

6 Programming

On the GV4, GV3, and GV2 panels for waterflow alarm installations where the control panel provides the only means for operating a local sprinkler warning bell, use Point Index 2 from the default program. This point index is programmed to:

- Ring the bell until restored,
- Buzz on Fault, Fire Point,
- have a trouble condition on an open, and
- have an alarm on a short.

To silence the bell while there is still a waterflow condition use Point Index 2 from the default program, except turn Ring Until Restored to NO.

7 Specifications

Electrical

Voltage	12 VDC nominal
Current	
– Maximum	25 mA
– Standby	23 mA
Class A (Style D) Loop	
Resistance	
– Alarm device	75 Ω maximum
– Wiring	1 Ω maximum

Bosch Security Systems, Inc.

130 Perinton Parkway

Fairport, NY 14450

USA

www.boschsecurity.com

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