

Indicating Circuit Module D192C

Installation Instructions

1.0 Introduction

Before you install the D192C, you should be familiar with the *Operation and Installation Guide* for the Control Panel you are using.

The D192C Indicating Circuit Module is used with the Bosch Security Systems 2000 Series, D9412G, D7412G, D7212G, D9412, D9112, D7412, D7212, D8112, D9112B1, and D7212B1 Control Panels. The D192C is used for wiring connections to remote alarm indicating devices. The wiring is supervised for open, short, or grounded circuit faults.

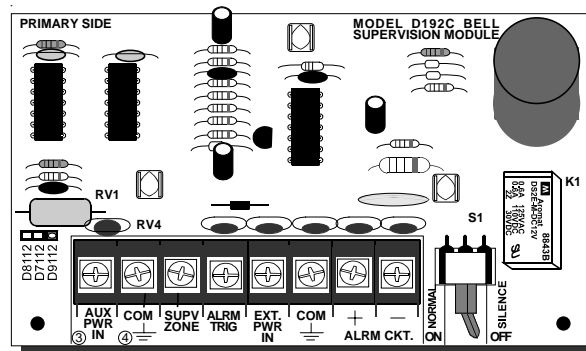


Figure 1: D192C Indicating Circuit Module

Several D192C Modules can be connected to the same zone/point on the above listed panels. However, if you want individual annunciation of indicating bell circuit, connect the D192C Modules to separate zones or points.

The D192C powers the alarm indicating devices from either the panel's alarm output or from a UL Listed auxiliary power supply. This feature allows the system to support more indicating devices on longer wire runs. It also allows the use of 12 V or 24 V alarm indicating devices (requires the appropriate power supply). The D192C Indicating Circuit Module is designed to use only polarized (DC) indicating devices.

Signaling Devices Specifications: Not all signaling devices are polarized and those used with the D192C Module must comply with the following parameters:

- Must be polarized (DC) equipment.
- Must match the voltage rating of the alarm power supply.
- Must not exceed the current rating of the alarm power supply.
- Must not exceed 1.80 A per D192C Module.

2.0 Specifications

D192C Operating Voltage	AUX PWR IN: 12 VDC supplied by Aux Power from the control panel.
Alarm Output Voltage	EXT PWR IN: 12 or 24 VDC supplied by UL Listed external power supply, or 12 VDC supplied by the alarm output terminal on the control panel. Module is rated at 1.80 A output at 12 or 24 VDC.
D192C Module Current	Idle: 25 mA Alarm: 50 mA Maximum rating of module alarm circuit is 1.80 A. Alarm power comes from an external power supply, or the panel's alarm output terminal, if one is used (refer to <i>Figure 2</i> on page 4)
Dimensions (H x W x D)	5.0 in. x 3.0 in. x 3/4 in. (12.7 cm x 7.6 cm x 1.9 cm)
Indicating Circuit End-of-Line Resistor	Bosch Security Systems (P/N: 15-03130-005): 560 Ω , 2 W
P105F End-Of-Line Resistor (sold separately)	Locate on the last D192C Module in the circuit. Refer to <i>Figure 2</i> and <i>Figure 3</i> (page 5). Bosch Security Systems (P/N: 15-03130-004): 1 k Ω , 1/2 W Bosch Security Systems (P/N: 4998140608): 1 k Ω , 1/2 W (package of 8)
Power Supplies	Use a UL Listed auxiliary 12 VDC or 24 VDC regulated/power limited power supply for Fire Protective Signal Units and Commercial/Residential Burglar Units. Install auxiliary supply according to manufacturer's instructions.

D192C

Operation

3.0 Operation

During normal operation, the indicating circuit is supervised for opens, shorts, and grounds. If any of these conditions are detected, the panel indicates a trouble condition at the command center. You can program the panel to report the condition to the central station.

When the panel detects an alarm, the alarm output circuit triggers the D192C to supply circuit power to the indicating devices.

3.1 Panel Selector Jumper

The panel selector jumper allows you to configure the D192C for either D8112 mode of operation or 2000 and 9000 Series mode of operation. The jumper in the D8112 position adds the filtering capacitor to the indicating output circuit. The jumper should be set in the D7112/D9112 position when used with the 2000 Series and 9000 Series (D9412G, D7412G, D7212G, D9412, D9112, D7412, D7212) Control Panels. In this position, the filtering capacitor is removed from the circuit and allows the panels to detect a missing battery condition. All new Bosch Security Systems control panels have the filter capacitor built into their power supplies.

3.2 Silence Switch

The D192C Module has a toggle switch that is used to silence the fire alarm indicating devices while testing the alarm panel. When the toggle switch is put in the SILENCE (OFF) mode, the D192C presents a short circuit to the supervisory circuit of the panel.

4.0 Programming

2000 Series	Program the point supervising the D192C with 4030A .		
D8112	Program the zone supervising the D192C with 4161 .		
D9112B1, D7212B1	Point Index*	Fire Systems	Burg Systems
	Point Type	0	0
	Point Response	3	3
	Buzz on Fault	YES	YES
	Fire Point	YES	NO
D9412G, D7412G, D7212G, D9412, D9112, D7412, D7212	Point Index*	Fire Systems	Burg Systems
	Point Type	0	0
	Point Response	3	3
	Buzz on Fault	1	1
	Fire Point	YES	NO
*All other selections for the Point Index should be programmed NO.			

4.1 Alarm Output

2000 Series	The Bosch Security Systems defaults set the alarm output to activate in Burglar and Fire alarm. Consult the <i>2000 Series Program Entry Guide</i> (P/N: 35114) for further information.		
D8112	Program the D8112 alarm output response, <i>75 Pulse</i> . This item determines the response of zones with pulsed bell output zone codes (fire zone codes). Use Terminal 7 for the D192C.		
	When <i>Pulse</i> is Yes:	Terminal 6 Pulse +12 VDC	Terminal 7 Steady +12 VDC
	When <i>Pulse</i> is No:	Terminal 6 No Output	Terminal 7 Steady +12 VDC
	Terminal 7 operation: Plug a D136 relay in the K6 socket on the D8112 to operate Terminal 7.		
D9412G, D7412G, D7212G, D9412, D9112, D7412, D7212, D9112B1, D7212B1	The Bosch Security Systems defaults set Relay A (Terminal 6) as an Alarm Bell and Fire Bell output. For programming information, refer to the <i>Relay Parameters</i> section in the panel's <i>Program Entry Guide</i> :		
	D9112B1 and D7212B1	<i>D9112 Program Entry Guide</i>	P/N: 74-06145-000
	D9412G, D7412G, D9412, D9112, D7412, and D7212	<i>D9412G/D7412G Program Entry Guide</i>	P/N: 47775
	D7212G	<i>D7212G Program Entry Guide</i>	P/N: 4998138538

D192C

Installation

5.0 Installation

5.1 Installation for Compatible Control Panels (Excludes 2000 Series)

These installation instructions apply to the following control panels: D9412G, D7412G, D7212G, D9412, D9112, D7412, D7212, D8112, D9112B1, and D7212B1.

1. Mount the D192C Module(s) inside the panel enclosure using the mounting screws provided. You can use any of the mounting positions. If additional locations are needed, use the D137 Mounting Bracket.
2. Depending on the power supply used, wire the D192C according to *Figure 2*, *Figure 3* (page 5) or *Figure 4* (page 6).
Multiple D192C Modules: You can connect multiple D192C Modules to the same supervision zone/point. The zone/point must use a 1 kΩ EOL (P/N: 15-03130-004).
3. Install the 560 Ω, 2 W EOL resistor (P/N:15-03130-005), included with the D192C Module, beyond the last indicating device. Install the P105F EOL resistor (P/N:15-03130-004) on the last D192C for a supervised zone or point, as shown in *Figure 2* and *Figure 3*.

Notes

When using a 24 V system, the power cable from the 24 VDC power supply to the D192C EXT PWR IN/COM must be at least 1.8 m (6 ft.) or more of AWG 22 wire. This is required to limit the bell loop short circuit current to the D192C.

No external auxiliary power supply.

Maximum 1.8 A draw for each indicating device circuit.

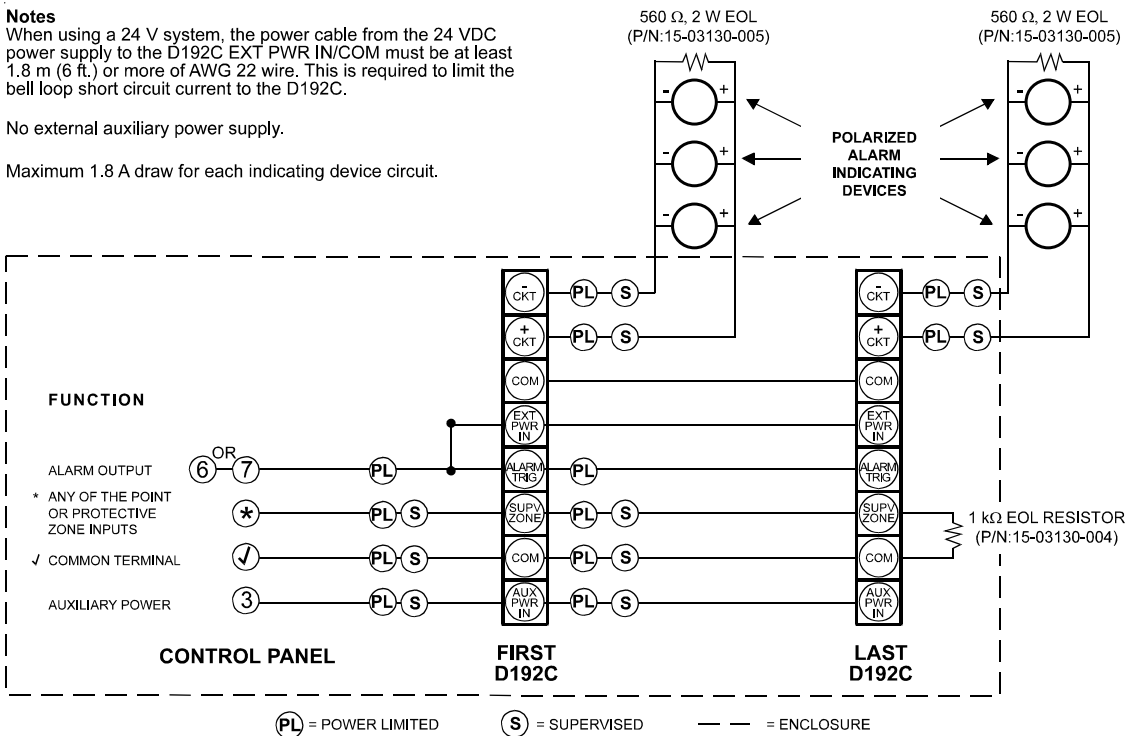


Figure 2: Connection without External Power Supply

5.2 Using an External Auxiliary Power Supply

The control panel and an external power supply must be installed in the same room, not more than 20 ft (6 m) apart.

The interconnecting wiring between the Control Panel and the power supply must be in conduit.

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

The power supply fault conditions must be supervised by a UL Listed relay, as shown in *Figure 3*.

1. 12/24 volt external auxiliary power supply
2. Maximum alarm output = the rating of the power supply
3. 1.8 maximum amp draw for each indicating device circuit

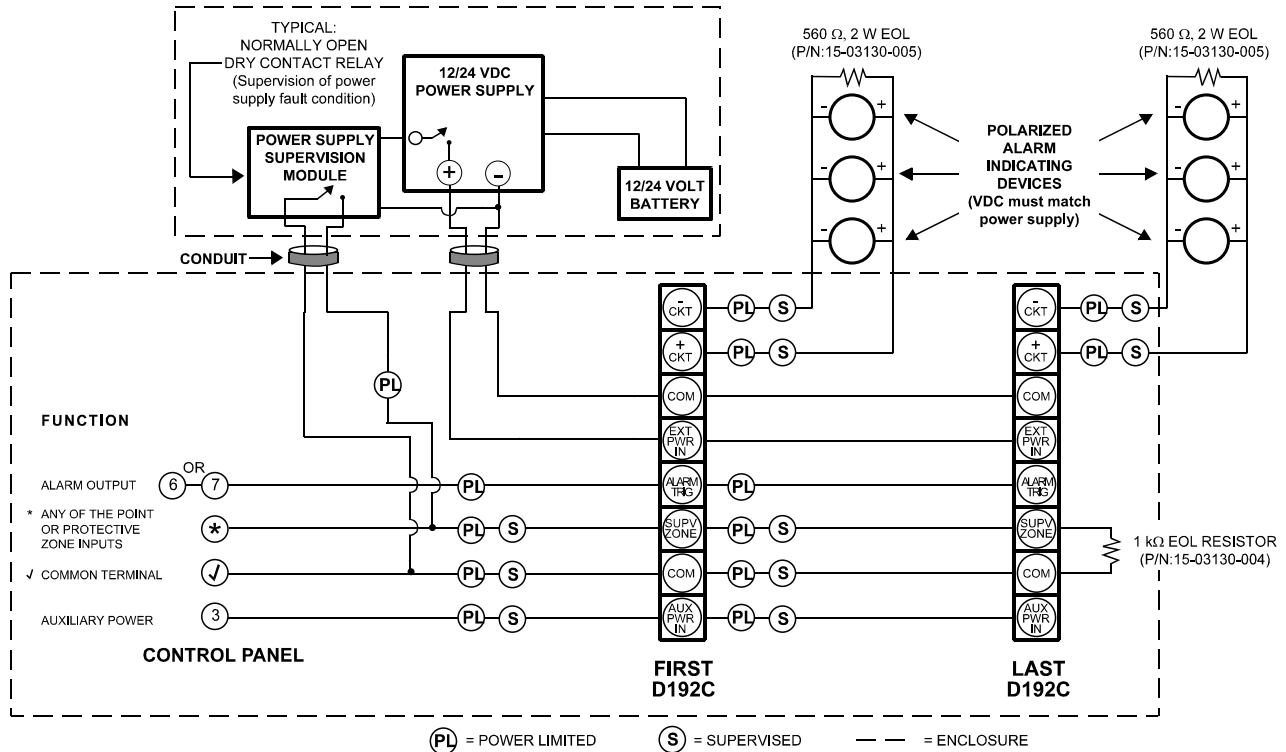


Figure 3: Connection with 12 V or 24 V External Power Supply

Installation

5.3 Installation for 2000 Series Panels

1. Install the D2102 Mounting Skirt with the D133 Relay Module (or D134 Dual Relay Module) in the D8103 Enclosure. If installing the D2212, install the panel and D133 (or D134) in the D8103.
2. Depending on the panel and power supply used, wire the D192C according to *Figure 4*. If using multiple D192C modules, you can connect them to the same supervision zone/point. The zone/point must use a 1 k Ω EOL.
3. Install the 560 Ω , 2 W EOL resistor (P/N: 15-03130-005), included with the D192C Module, beyond the last indicating device. Install the P105F EOL resistor (P/N: 15-03130-004) on the last D192C for a supervised zone or point, as shown in *Figure 2* (page 4), *Figure 3* (page 5), and *Figure 4*.

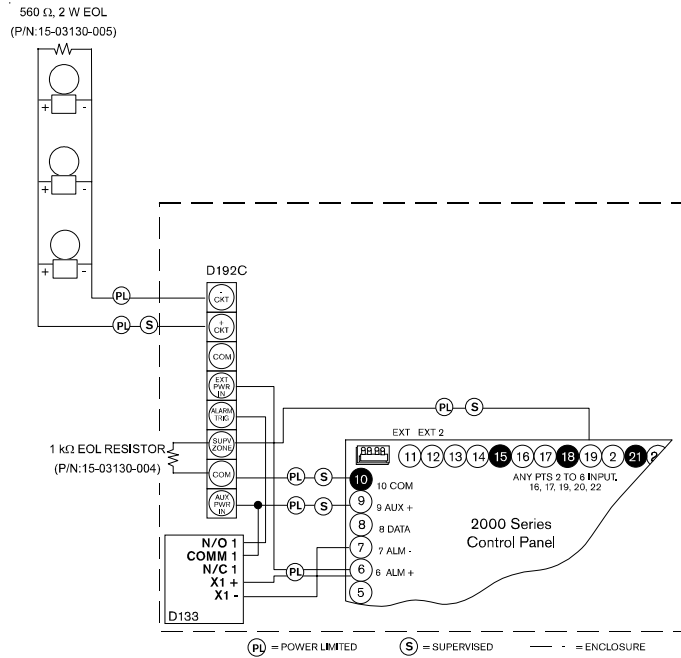


Figure 4: Connection with D133

6.0 Troubleshooting

Symptom	Probable Cause	Possible Solution
No bell output	Nothing is connected to EXT PWR IN.	<ul style="list-style-type: none">• 12 V output (no power supply) – connect a jump between Alarm Trigger and EXT PWR IN of the D192C.• Using an external power supply – connect wire from positive terminal of 12 or 24 VDC power supply to EXT PWR IN of the D192C.
Panel Supervision Zone in constant trouble	Wiring issue	<ul style="list-style-type: none">• The panel zone/point is not seeing the 1 kΩ EOL between COM and SUPV ZONE.• Alarm circuit supervision is less than 560 Ω between (+) ALRM CKT and (-) ALRM CKT.• Normal/Silence switch is in the Silence position.

