

**Module Description**

The D8128C OctoPOPIT Module combines the functions of the D8125 POPEX module and the D8127/D9127 POPIT modules to provide eight off-board points in a single module. You can wire both D8128C OctoPOPIT and D8125 POPEX modules in parallel to the zone bus terminals on the same panel.

Review the *Power Outputs* section of your panel's *Operation and Installation Manual* to be sure you provide enough power for the OctoPOPITs and other powered devices you wish to connect to your system.

The D8128C OctoPOPIT is designed for use with the Radionics' panels shown in Table 1.

OctoPOPIT	Radionics Control/Communicator							
	D7212B1	D7212	D7412	D8112	D9112B1	D9112	D9124	D9412
D8128A	✓				✓		*	
D8128B				✓				
<b>D8128C</b>	✓	✓	✓		✓	✓	*	✓

\* D9124 w/ D9112LTB uses D8128A, **D9124 w/ D9112LTB-EX uses D8128C.**

**Table 1: OctoPOPIT Compatibility With Radionics' Panels**

As shown in the table above, D8128A OctoPOPITs cannot be used on the new D7212, D7412, D9112, or D9412 Control Communicators. However, D8128C OctoPOPITs may be used and intermixed with D8128A OctoPOPITs on the D7212B1 and D9112B1 Control Communicators.

**Listings**

The D8128C OctoPOPIT Module is UL listed for Local or Police Connected Burglary Alarm, Central Station Burglary Alarm, and Household Burglary Alarm applications. The D8128C is also suitable for fire supervisory applications, such as indicating circuit supervision (using the D192C Bell Circuit Supervision Module), sprinkler supervision, and valve tamper protection. Do not connect fire alarm initiating devices to the D8128C.

You must use the D125B Powered Loop Interface Module or D129 Dual Class A initiation Circuit Module for fire initiation applications. Connect the initiating devices, smoke detectors for example, to the D125B powered loops or D129 Class A loops.

Connect the zone outputs on the D125B or D129 to the OctoPOPIT sensor loop inputs. The D125B or D129 and the OctoPOPIT must be mounted in the enclosure with the panel or in a separate enclosure connected to the panel's enclosure by conduit not more than 20 feet in length.

## Installing the OctoPOPIT

**Before You Begin.** Before installing the D8128C OctoPOPIT, you should be familiar with the *Operation and Installation Manual* and the *Program Entry Guide* that correspond to your system.

### Step 1. Setting OctoPOPIT Switches.

The switches on the D8128C OctoPOPIT set point assignments and line termination (see Figure 2). These switches are easier to set before you mount the D8128C in the enclosure.

**Address Assignment Switches.** Switches 0, 1, 2, and 3 assign the OctoPOPIT sensor loops to point numbers on the panel. Table 2 (page 4) show the OctoPOPIT switch settings for point assignments.

**Data Bus Line Termination.** Switch 4 sets line termination.

If there is no D8125 POPEX module connected to ZONEX 1, set switch 4 of **only one** D8128C (switch 12 on the D8128A) connected to those terminals to the ON position.

If there is a D8125 POPEX module connected to ZONEX 1, set switch 4 of **all** D8128Cs (switch 12 on the D8128A) connected to those terminals to the OFF position.

If there is no D8125 POPEX module connected to ZONEX 2, set switch 4 of **only one** D8128C (switch 12 on the D8128A) connected to those terminals to the ON position.

If there is a D8125 POPEX module connected to ZONEX 2, set switch 4 of **all** D8128Cs (switch 12 on the D8128A) connected to those terminals to the OFF position.

### Step 2. Mounting the OctoPOPIT

You can install the D8128C OctoPOPIT Module in the enclosure with the panel, or in a separate enclosure (model D8103, D8108A, or D8109) up to 200 feet from the panel using standard 4-conductor 22 awg wire. Refer to the previous page for use with D125B and D129.

If you mount the OctoPOPIT in a separate enclosure, use shielded cable to avoid electro-magnetic interference.

**Tampered enclosures for UL certificated systems.** Mount the D8128C in a tampered enclosure for UL certificated systems.

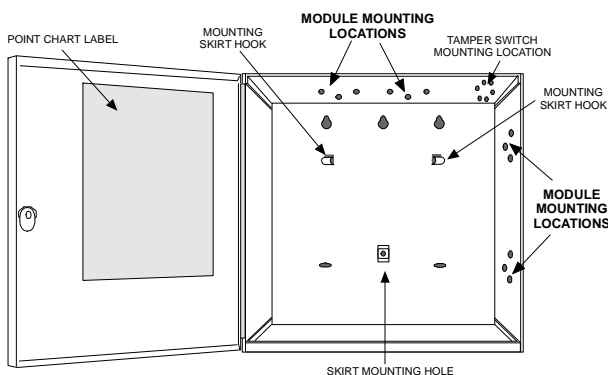


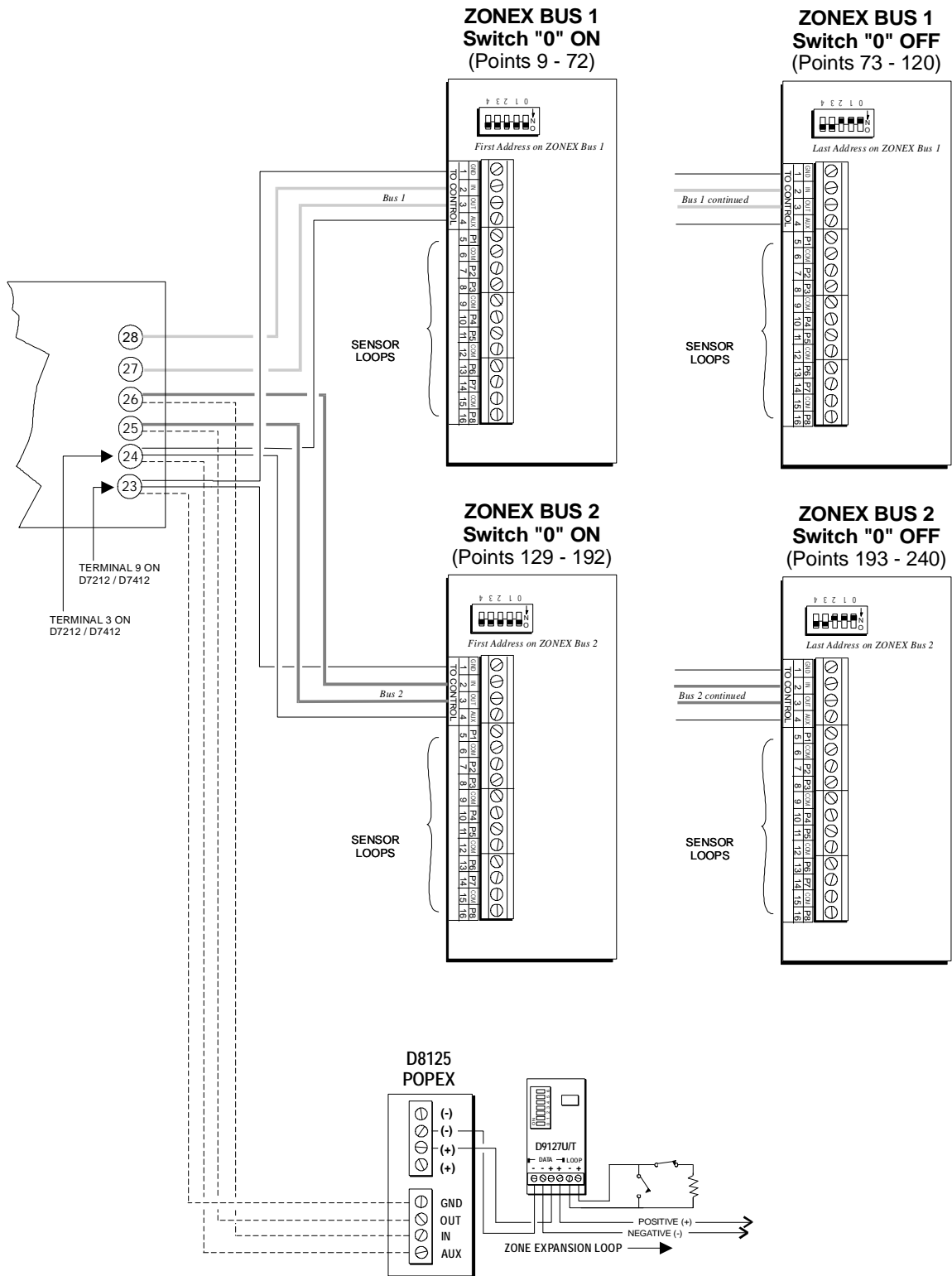
Figure 1: Mounting Enclosure

Follow the procedure below to install OctoPOPITs in the panel's enclosure. Use the D137 Mounting Bracket to install OctoPOPITs in enclosures with no module mounting locations available.

1. Align the OctoPOPIT module with any of the four mounting locations in the enclosure. See Figure 1.
2. Use the screws provided with the module to secure it in the enclosure.

### Step 3. Wiring the OctoPOPIT.

**Power down first.** Power down the panel by disconnecting the positive (red) battery lead at the battery and unplugging the transformer.



**AC INDUCTION:** Avoid installing ZONEX data wires and ZONEX input (sensor loop) wires around any AC conduit/wiring or electrical devices that emit large fields of electromagnetic interference (EMI).

**Figure 2: Wiring the D8128C to the Panel**

#### Step 4. Wiring OctoPOPIT Sensor Loops

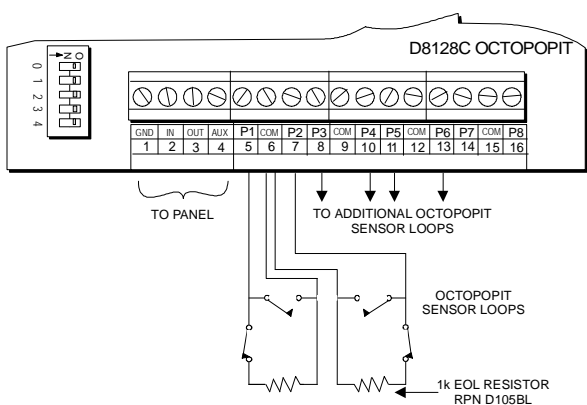
The number of normally-open and/or normally-closed detection devices each sensor loop can supervise is limited only by the resistance on the loop. Resistance on each sensor loop must be less than 100Ω with the detection devices connected.

Certain UL and NFPA applications may limit the number of detection devices. Consult the appropriate UL or NFPA standards.

The OctoPOPIT detects open, short, closed, normal, and grounded circuit conditions on its sensor loops and transmits the conditions to the panel. A ground on the positive leg of the sensor loop transmits a shorted condition for the point. Each sensor loop is assigned a point number and transmits to the panel separately.

Radionics recommends you use twisted-pair wire for the OctoPOPIT sensor loops to avoid EMI problems. Run wires away from the premises telephone and AC wiring. If you suspect a noisy environment, use shielded cable.

There are two rows of terminal numbers on the OctoPOPIT. In the row closest to the terminal blocks, the positive outputs for the sensor loops are labeled P1 to P8. Sensor loop outputs P1 and P2, P3 and P4, P5 and P6, and P7 and P8 share common terminals. The common terminals for each pair are labeled COM.



Terminate each OctoPOPIT sensor loop with a 1kΩ end-of-line resistor. Attach a resistor even if you don't enable the loop. The OctoPOPIT comes with a D105BL resistor for each sensor loop.

**Duplicated points do not function correctly.** Take care not to duplicate point assignments. Points assigned to both an OctoPOPIT sensor loop and a POPIT, two OctoPOPIT sensor loops, or two POPITs do not function properly.

Figure 3: D8128C OctoPOPIT Sensor Loops

Table 2: D8128C OctoPOPIT Switch Settings for D9412, D9112, D7412, and D7212

ZONEX 1 Points 9-120	D8128C Address Switches					ZONEX 2 Points 129-240
	0	1	2	3	4	
9-16	On	On	On	On	--	129-136
17-24	On	On	On	Off	--	137-144
25-32	On	On	Off	On	--	145-152
33-40	On	On	Off	Off	--	153-160
41-48	On	Off	On	On	--	161-168
49-56	On	Off	On	Off	--	169-176
57-64	On	Off	Off	On	--	177-184
65-72	On	Off	Off	Off	--	185-182
73-80	Off	On	On	On	--	193-200
81-88	Off	On	On	Off	--	201-208
89-96	Off	On	Off	On	--	209-216
97-104	Off	On	Off	Off	--	217-224
105-112	Off	Off	On	On	--	225-232
113-120	Off	Off	On	Off	--	233-240
<b>121-127</b>	<b>Do not use D8128C</b>					<b>241-247</b>

**NOTE:**

- D9112, D9124 and D9412 use points 9-120 on ZONEX 1 and points 129-240 on ZONEX 2.
- A D8128C OctoPOPIT module cannot be configured for points 121-127 and points 241-247. Use a D8125 POPEX module and D9127 POPIT modules for these points.
- D7212 and D7412 uses points 9-75 on ZONEX 1 only; however, Points 73-75 must use POPITS.

**Table 3: D8128C OctoPOPIT Switch Settings for D9112B1 and D7212B1**

ZONEX 1 Points 9-120	D8128C Address Switches					ZONEX 2 Points 129-240
	0	1	2	3	4	
9-16	On	On	On	On	--	73-80
17-24	On	On	On	Off	--	81-88
25-32	On	On	Off	On	--	89-96
33-40	On	On	Off	Off	--	97-104
41-48	On	Off	On	On	--	105-112
49-56	On	Off	On	Off	--	113-120
57-64	On	Off	Off	On	--	121-128

**NOTE:**

- A D8128C OctoPOPIT module cannot be installed at the end of either ZONEX (for points 65-72 and points 129-135) when used on a B1 Series panel. Use a D8125 POPEX module and D8127/D9127 POPIT modules for these points.
- D7212B1 uses ZONEX 1 and supports up to 48 points only.

## Specifications

**Operating Voltage**

10.2 to 13.8 VDC supplied by the panel

**Current**

51 mA per OctoPOPIT module (all points shorted @ 13.8 VDC)

**Sensor Loop Response Time**

Approximately 1 second. OctoPOPIT sensor loops are supervised with a 1k $\Omega$  end-of-line resistor: Radionics model #D105BL or #D105FL (for fire supervisory applications)

**Cabling**

D8128C OctoPOPITs may be installed up to 200 feet from the control panel using standard 4-conductor 22 awg wire. Each OctoPOPIT uses 51 mA (worst case). This affects the number of units which can be connected on a single wire run.

**Resistance**

Maximum loop resistance: 1k $\Omega$   $\pm$  200 $\Omega$  (with 1k $\Omega$  end-of-line resistor installed)

**Environmental**

Temperature: 32 $^{\circ}$  - 122 $^{\circ}$ F (0 $^{\circ}$  - 50 $^{\circ}$ C); Non-condensing Relative Humidity: 5 to 85% @ 86 $^{\circ}$ F (30 $^{\circ}$ C)