

## 712-8 Zone Expansion Module

### Description

The Model 712-8 Zone Expansion Module allows you to increase the number of protection zones available on a DMP panel. The 712-8 provides eight grounded zones for connecting burglary devices to the panel.

The zone expansion module provides a terminal strip for zone inputs, two 4-pin headers for keypad bus/LX-Bus connections, a jumper for LX-Bus™ or Keypad bus operation, and a transmit data LED to indicate panel communication. Separate zone 1K End-of-Line resistors are included.

**Note:** The 712-8 is listed for use in burglary applications only: No fire circuits shall be used on this device.

### Mounting the Module

The 712-8 easily installs inside the panel enclosure using the 3-hole mounting configuration.

1. Mount the plastic standoffs to the enclosure using the three included Phillips head screws.
2. Insert the screws from the outside of the enclosure through the holes and into the plastic standoff which mounts on the inside of the enclosure and tighten.
3. After the securing the standoffs onto the enclosure, snap the 712-8 onto the standoffs.

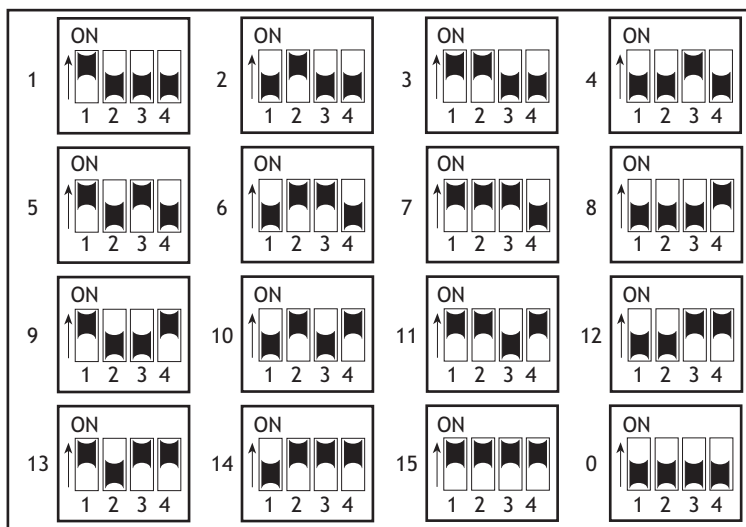
### Setting the Keypad Bus/LX-Bus Jumper

The 712-8 Module provides a 3-pin jumper (J4) and header used to select the type of bus connection to the panel. If the module is connected to the LX-Bus, place the jumper header on the top two pins, labeled LX-Bus. Place the jumper header on the bottom two pins, labeled Keypad, when connected to the keypad bus. See Figure 2.

### Setting the Starting Address

To communicate the status of the eight zones, the 712-8 responds to two addresses on the keypad bus and eight addresses on the LX-Bus. You can set the 712-8 starting address to any bus address from 0 to 15. The module automatically responds to this address and the next address on the keypad bus and the next seven addresses on the LX-Bus.

To change the current address, move the slide switches to the appropriate address positions according to Figure 1.



**Figure 1: 712-8 Addressing**

### Keypad Bus Addressing

The 712-8 can be set to the following keypad addresses according to panel model: 1 through 4 for all DMP panels; 1 through 8 for XT30, XT50, XR100 and XR150 Series panels; and 1 through 15 for XR500 and XR550 Series panels.

The eight zones on the 712-8 occupy two keypad addresses.

For example, if the 712-8 is set to address 2, the first four expansion zones occupy address 2 and respond as zones 21-24. The last four expansion zones, zones 5 through 8, occupy address 3 and respond to the panel as zones 31-34. Refer to Table 1.

**Note:** Because the 712-8 is supervised, both addresses must be selected in Device Setup of the XR100/XR500 Series and the XR150/XR550 Series programming when used on the keypad bus.

DMP Panel Keypad Bus	712-8 Address	Expander Zones	
		1-4	5-8
Panel Zones			
XT30, XT50, XR100/XR500, and XR150/XR550 Series	1	11-14	21-24
	2	21-24	31-34
	3	31-34	41-44
	4	41-44	51-54
XT30, XT50, XR100/XR500, and XR150/XR550 Series	5	51-54	61-64
	6	61-64	71-74
	7	71-74	81-84
	8	81-84	91-94*
XR500 and XR550 Series	9	91-94	101-104
	10	101-104	111-114
	11	111-114	121-124
	12	121-124	131-134
	13	131-134	141-144
	14	141-144	151-154
	15	151-154	161-164

**Table 1: Keypad Bus Addresses**

\*Zones 91-94 are only available on XR500 and XR550 control panels.

### LX-Bus Addressing

When connecting to the LX-Bus, the 712-8 must be addressed to match the last two digits of the first zone being used. The next 7 zone addresses are automatically used to communicate expander zones 2 through 8 status.

For example, on an XR100 panel using LX-Bus 1 if you address the 712-8 to 8, the eight zones on the expander respond as zones 508 to 515. When connected to an XR500 panel using LX-Bus 2, the zones respond as 608 to 615. Refer to Table 2.

**Note:** Only two 712-8 Modules can be connected to each LX-Bus.

712-8 Address	XR100/XR500 (1-5) and XR150/XR550 (LX500-LX900)				
	Panel Zone Range				
	LX-Bus 1 (LX500)	LX-Bus 2 (LX600)	LX-Bus 3 (LX700)	LX-Bus 4 (LX800)	LX-Bus 5 (LX900)
0	500-507	600-607	700-707	800-807	900-907
1	501-508	601-608	701-708	801-808	901-908
2	502-509	602-609	702-709	802-809	902-909
...	...	...	...	...	...
7	507-514	607-614	707-714	807-814	907-914
8	508-515	608-615	708-715	808-815	908-915
9	509-516	609-616	709-716	809-816	909-916
...	...	...	...	...	...
12	512-519	612-619	712-719	812-819	912-919
13	513-520	613-620	713-720	813-820	913-920
14	514-521	614-621	714-721	814-821	914-921
15	515-522	615-622	715-722	815-822	915-922

**Table 2: LX-Bus Addresses**

## Connecting to the Keypad Bus/LX-Bus

Using J1 on the 712-8, connect the 712-8 to the keypad bus or LX-Bus. When connecting the 712-8 to an XT30 or XT50, you may use the supplied dual-ended 4-wire harness. Connect the harness between the 712-8 J1 and the panel J8.

Another keypad bus wiring option is to cut off one end of the dual-ended harness. Then, as shown in Figure 2, connect the wires to the panel terminals 7 (red), 8 (yellow), 9 (green), and 10 (black), observing wire colors.

The zone expansion module can also connect to the on board LX-Bus of an XR100/XR500 or XR150/XR550 Series panel. XR100/XR500 Series: connect the 712-8 directly to the on-board LX-Bus or an LX-Bus Expansion Interface Card, such as a 481 or 463G. Observe wire colors when making connections.

On an XR150/XR550 Series: connect the zone expander directly to the LX500 - LX900 connectors on the panel.

**Note:** 481, 463C, 463G, 462P, 462N, and 472 LX-Bus Interface Cards are not for use with XR150/XR550 Series panels.

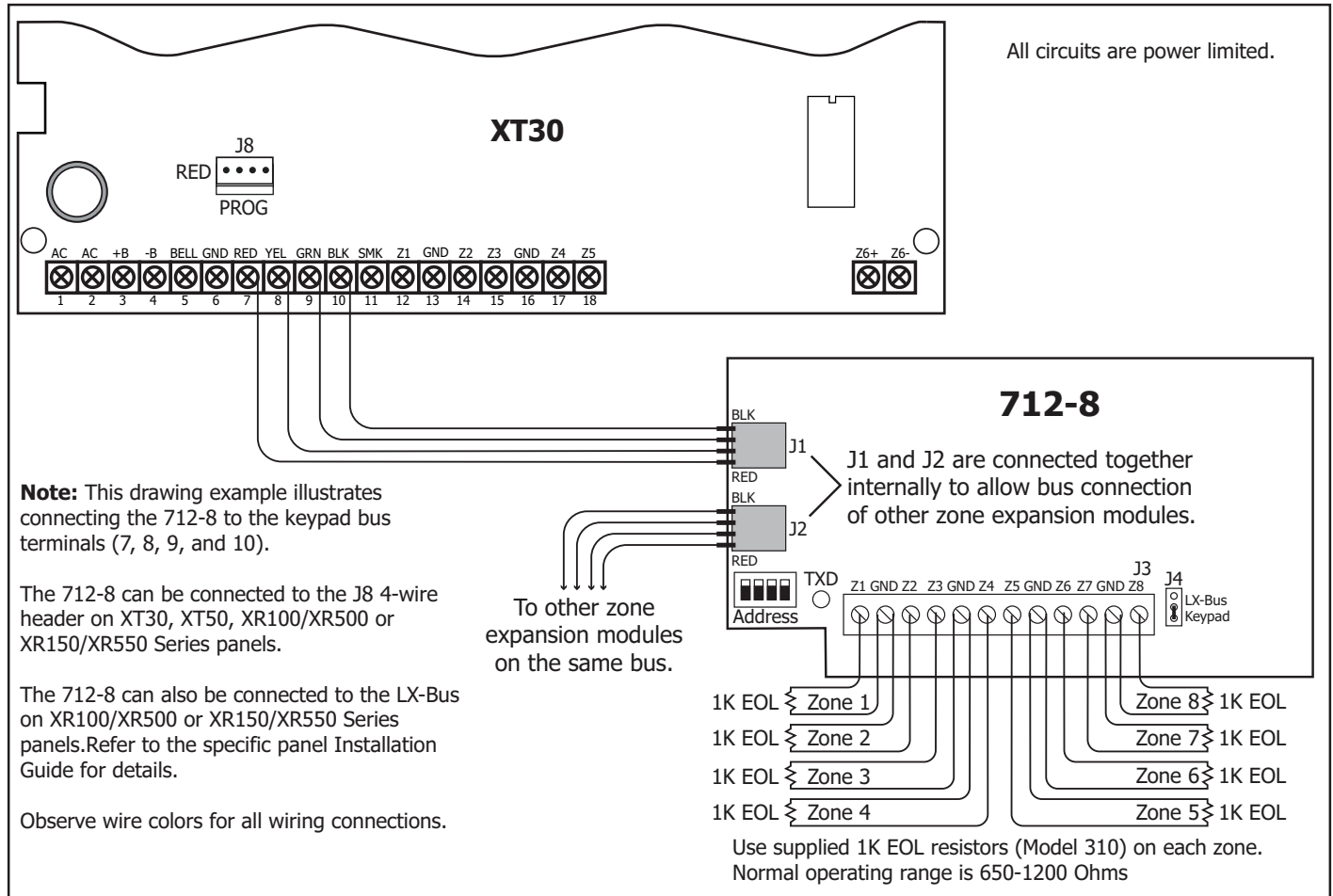


Figure 2: 712-8 Zone Expansion Module Wiring Diagram

## Wiring Specifications

1. DMP recommends using 18 or 22-gauge **unshielded** wire for all keypad and LX-Bus circuits. **Do Not** use twisted pair or shielded wire for LX-Bus and keypad bus data circuits. To maintain auxiliary power integrity when using 22-gauge wire do not exceed 500 feet. When using 18-gauge wire do not exceed 1,000 feet. Install an additional power supply to increase the wire length or add devices.
2. Maximum distance for any one circuit (length of wire) is 2,500 feet regardless of the wire gauge. This distance can be in the form of one long wire run or multiple branches with all wiring totaling no more than 2,500 feet. As wire distance from the panel increases, DC voltage on the wire decreases.
3. Maximum number of devices per 2,500 foot circuit is 40.  
**Note:** Each panel allows a specific number of supervised keypads. Add additional keypads in the unsupervised mode. Refer to the panel installation guide for the specific number of supervised keypads allowed.
4. Maximum voltage drop between the panel (or auxiliary power supply) and any device is 2.0VDC. If the voltage at any device is less than the required level, add an auxiliary power supply at the end of the circuit. When voltage is too low, the devices cannot operate properly.



Refer to the LX-Bus/Keypad Bus Wiring Application Note (LT-2031) for more information. Also see the 710 Module Installation Sheet (LT-0310).

## Connecting to Other Modules (J2)

Using the J2 4-wire connector as a continuation of the keypad bus or LX-Bus, you can easily connect the 712-8 to multiple modules on the same bus. Observe wire colors when making connections.

## Data LED

The LED on the 712-8 flashes each time the module responds to a poll from the panel. If there is a problem with the panel, panel programming, or the Green data wire between the panel and the zone expansion module, the LED stops flashing and "System Trouble" appears in the display of the keypad.

## Compliance Listing Specifications


### UL Commercial Burglary

The 712-8 Zone Expansion Module must be mounted inside the control unit enclosure or other Listed enclosure.

### ULC Commercial Burglary (XR100/XR500 or XR150/XR550 Series Panels)

If the 712-8 is installed in another enclosure, a DMP Model 307 Clip-on Tamper Switch programmed as a 24-Hour zone is required.

The 712-8 zones can only be used in Low Risk applications. Medium or High Risk applications must use panel zone inputs.

<p><b>Specifications</b></p> <p>Operating Voltage 8 to 14.5VDC</p> <p>Current Draw</p> <p>Normal 17mA + 1.6mA per active zone</p> <p>Alarm 17mA + 2mA per active zone</p> <p>Dimensions 4.5" H x 2.5" W</p> <p><b>Compatibility</b></p> <p>XT30/XT50 Series panels</p> <p>XR100/XR500 Series panels</p> <p>XR150/XR550 Series panels</p>	<p><b>Certifications</b></p> <p>FCC Part 15</p> <p>UL 365 Police Connected Burglar</p> <p>UL 609 Local Burglar</p> <p>UL 1023 Household Burglar</p> <p>UL 1076 Proprietary Burglar</p> <p>UL 1610 Central Station Burglar</p> <p>UL 1635 Digital Burglary</p> <p>ULC Subject-C1023 Household Burglar</p> <p>ULC/ORD-C1076 Proprietary Burglar</p> <p>ULC S304 Central Station Burglar</p>
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