714 and 715 Zone Expander Modules

Description

Zone expander modules allow you to increase the number of reporting zones available on DMP panels. Refer to the panel installation guide for more information about zone expansion modules and the maximum number of 2-wire smoke detectors and type allowed per panel. The modules connect to the panel's 4-wire keypad bus or LX-Bus™ and are set to an address that determines the reporting zone number. The 714 provides four Class B, Style A zones for use with burglary and non-powered fire devices. The 715 provides four 12 VDC Class B zones for use with burglary, non-powered or powered fire devices.

Zone Programming

Program the zones on the zone expander modules with any of the panel burglary or fire zone types or as an Arming type zone when used with key switches.

Zone Expander Data LED

The LED on the zone expanders 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 expander module, the LED stops flashing and "System Trouble" appears in the keypad display.

Installing the 714/715 Modules

Mount the modules outside the panel enclosure in the housing on a flat surface such as a wall or single-gang box.

714/715 Zone Wiring

These modules use a wire harness for wiring connections. Figure 1 shows the zone colors and polarity. You may use an optional 718T Plug-in Screw Terminal that plugs into the 714 and 715 to provide a screw type terminal connector for 14 to 22 gauge device wiring.

Wiring the 714 Module

Connect the **Red**, **Green**, **Yellow**, and **Black** wires from the panel keypad bus or LX-Bus™ to the matching harness wires on the 714 Zone Expander.

Wiring the 715 Module

For the **715** module, connect the **Red** wire to the panel **Smoke** power terminal. This allows **Sensor Reset** to drop power to the module and devices connected to its zones.

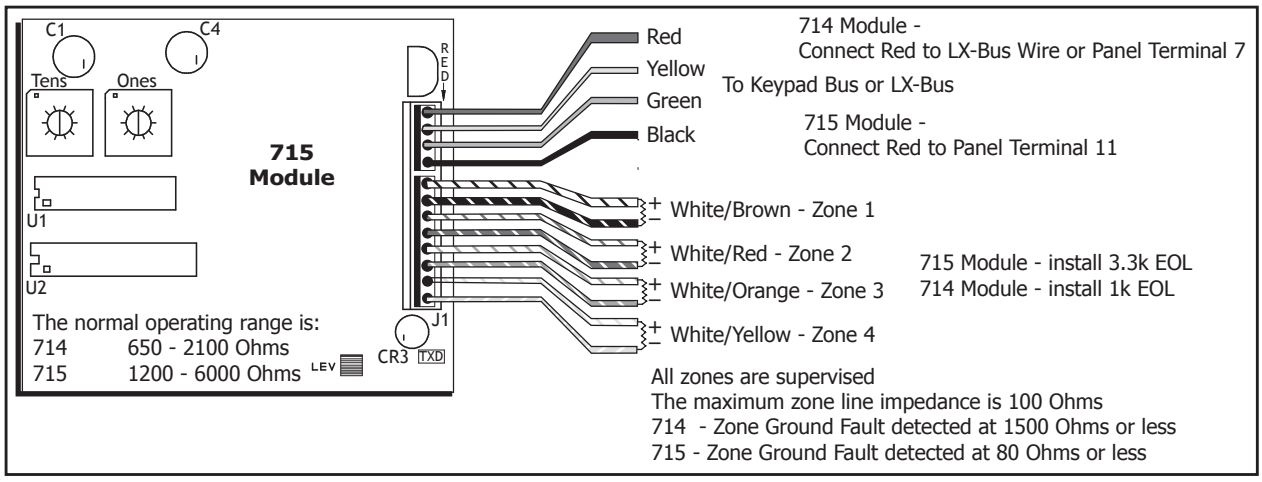

Figure 1: 714/715 Wiring Diagram

Setting Address Switches

714 and 715 Zone Expanders use two rotary switches (TENS and ONES) to set the module address. For keypad bus addresses, set the switches to match the device address. For LX-Bus addresses, set the switches to match the last two digits of the addresses. For example, for address **02** set the switches to **TENS** = 0 and **ONES** = 2 as shown in Figure 2.

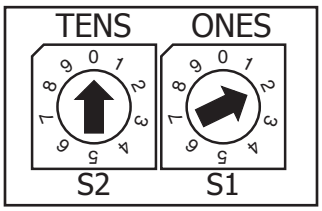

Figure 2: Switches

Keypad Bus Zone Numbers

Refer to Table 1 for keypad bus zone numbers and the panels where they operate.

Keypad Bus Address	Switches Tens	Switches Ones	Zone Numbers	
			XT30/XT50, XR100 and XR150 Series	XR500 and XR350/XR550 Series
1	0	1	11 to 14	11 to 14
2	0	2	21 to 24	21 to 24
3	0	3	31 to 34	31 to 34
4	0	4	41 to 44	41 to 44
5	0	5	51 to 54	51 to 54
6	0	6	61 to 64	61 to 64
7	0	7	71 to 74	71 to 74
8	0	8	81 to 84	81 to 84
9	0	9	N/A	91 to 94
10	1	0	N/A	101 to 104
11	1	1	N/A	111 to 114
12	1	2	N/A	121 to 124
13	1	3	N/A	131 to 134
14	1	4	N/A	141 to 144
15	1	5	N/A	151 to 154
16	1	6	N/A	161 to 164

Table 1: Keypad Bus Zone Numbers

LX-Bus Zone Numbers

The 714 and 715 modules provide 4 zones. When set to an address the modules use four zone numbers. For example, setting the module to the LX-Bus address 502 (**TENS** = 0, **ONES** = 2) sets the module zone numbers to 502, 503, 504, and 505.

Refer to Table 2 for a partial listing of XR100/XR500 and XR150/XR350/XR550 panel LX-Bus zone numbers.

Note: XR100 and XR150 panels only use LX500 Bus and XR350 panel only use LX500 - LX700.

Start Address		Panel LX-Bus Numbers and their corresponding Zone Numbers					
Switch Tens	Ones	XR100 and XR150 Series	XR500 and XR550 Series (LX500 - LX900)				
			XR350 Series (LX500 - LX700)				
		1(LX500)	1(LX500)	2(LX600)	3(LX700)	4(LX800)	5(LX900)
0	0	500	500	600	700	800	900
0	1	501	501	601	701	801	901
0	2	502	502	602	702	802	902
0	3	503	503	603	703	803	903
0	4	504	504	604	704	804	904
...	...	...	...	...	...	...	...
9	5	595	595	695	795	895	995
9	6	596	596	696	796	896	996
9	7	597	597	697	797	897	997
9	8	598	598	698	798	898	998
9	9	599	599	699	799	899	999

Table 2: LX-Bus Zone Numbers

Optional Accessories

You can replace the standard wiring harness with the optional 718T Plug-in Screw Terminal. The enclosure base can also accommodate the 719T Terminal Boards for the 714 or the 720T Terminal Boards for the 715, both of which pass through panel LX-Bus wiring. The 719T includes 1k EOL resistors. The 720T includes 3.3k EOL resistors.

Wiring Specifications for Keypad and LX-Bus

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 feet 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 2.0 VDC. 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.

For additional information refer to the panel installation guide and LX-Bus/Keypad Bus Wiring Application Note (LT-2031) or the 710 Installation Guide (LT-0310).

Compliance Listing Specifications

UL Commercial Burglary

To comply with ANSI/UL 365 Police-Connected Burglary System or ANSI/UL 609 Local Burglary Alarm Systems, the module must be mounted in the supplied, UL listed enclosure with a tamper.

UL Commercial Fire

Please see the panel installation guide for details for selecting compatible 2-wire smoke detectors.

Any auxiliary power supply used must be regulated, power limited and listed for Fire Protective Signaling.

ULC Commercial Burglary (XR100/XR500 and XR150/XR350/XR550 Series Panels)

Place the zone expander module in a listed enclosure and connect a DMP Model 307 Clip-on Tamper Switch to the enclosure programmed as a 24-Hour zone.

The 714/715 zones can be installed in Medium or High Risk applications when two zones are used as shown in the Dual Zone Protection diagram in the XR100/XR500 and XR150/XR350/XR550 Canadian Installation guides. Otherwise, 714/715 zones can only be used in Low Risk Applications.

ULC Residential Fire (XR100/XR500 and XR150/XR350/XR550 Series Panels)

Refer to the table below for ULC approved 2-Wire Smoke Detectors. Refer to the panel installation guide for the complete list of UL approved smoke detectors.

Manufacturer	Model	Detector ID	DC Voltage Range	# of Detectors
Sentrol/ESL	528B, 528BXT	S09A	6.5-20	12

Specifications

Operating Voltage	12 VDC
Operating Current	
714	7mA + 1.6mA per zone
Zone Voltage	5 VDC, max 2mA
715	7mA + 4mA per active zone + 30mA per smoke in alarm + 58mA per zone shorted
Zone Voltage	12 VDC, max 58mA
Dimensions	4.5” H x 2.75” W x 1.75” D
Zones	Four Supervised Class B Style A Power Limited

Accessories

718T	Plug-in Screw Terminal for 714 and 715
719T	Terminal Boards for 714 module
720T	Terminal Boards for 715 module

Compatibility

XT30/XT50 Series panels

XR100/XR500 Series panels

XR150/XR350/XR550 Series panels

Certifications

California State Fire Marshal (CSFM)

New York City (FDNY COA #6167)

ANSI/UL 365	Police Station Connect Burglar Alarm Systems
ANSI/UL 609	Local Burglar Alarm Units & Systems
ANSI/UL 864	Fire Protective Signaling Systems
ANSI/UL 985	Household Fire Warning System Units
ANSI/UL 1023	Household Burglar Alarm System Units
ANSI/UL 1076	Proprietary Burglar Alarm Units & Systems
ANSI/UL 1610	Central Station Burglar Alarm Units
ANSI/UL 1635	Digital Alarm Communication System Units

ULC Subject-C1023	Household Burglar
ULC/ORD-C1076	Proprietary Burglar
ULC S304	Central Station Burglar
ULC S545	Household Fire

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