

**Description**

The 716 Output Expander Module provides four independently programmable Form C (SPDT) relays and four zone following annunciator (open collector) outputs for use on the LX-Bus™ of DMP 1912XR and XR200 Command Processor™ Panels. You can use the 716 module in a variety of remote annunciation and control applications. In addition to the panel's on-board Form C relays, you can connect multiple 716 modules to the panel for over 200 unique auxiliary relays and annunciator outputs (one for each zone). The 716 module connects only to the LX-Bus of an interface card. It cannot connect to the keypad data bus.

**Addressing the 716**

You set the 716 module to an address that is then used by the panel to turn on and off the outputs. For easy addressing, the 716 contains two on-board rotary switches you can set with a small screwdriver.

**Form C Relays**

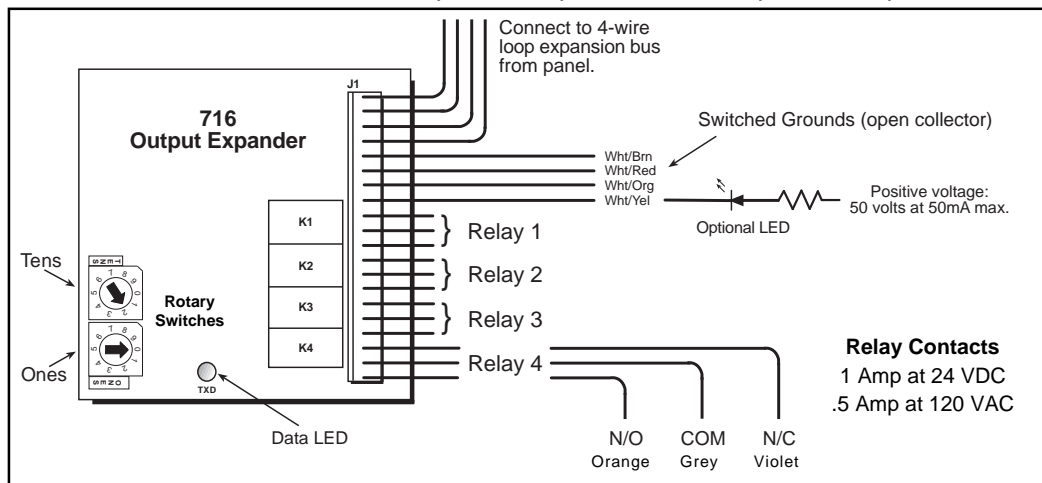
Once addressed, you can assign each of the four Form C relays on the 716 to any one of the panel's Output Options such as Ready, Phone Trouble, or Communication Fail. These options are programmed with the output number that matches the 716 module's rotary switch address setting. For example, you can program the panel's Phone Trouble Output to operate Output # 120 so that a trouble on the panel phone line would toggle relay #1 on a 716 module set to address 120 (Output # 121 would toggle relay # 2 on the same 716).

**Duplicating addresses**

Any DMP 711, 711E, 714, 715, 5845LX, DS775LX, or 6155LX zone expander modules also used in the system can be set to the same address as the 716 without conflicting with the module or any of the panel's Output Options. Although set to the same address, the Form C relays on the 716 operate independently of the zone expander zones.

**Wiring the 716 module**

The 716 requires only 3 wires from the panel: Auxiliary power, Receive Data, and a panel Common. The Transmit Data wire can be used on the 716 module for supervised operation. See Supervised Operation.



**Figure 1: 716 Output Expander harness descriptions**

**Supervised Operation**

You can install the 716 as a supervised device by connecting all four wires of the data bus to the module and programming an appropriate zone as a **Supervisory** type. See below:

716 Address	00	01	11	20	40	51	60	80
Supervisory Zone	100	101	111	120	140	151	160	180

When installing **Zone Expander** modules on the same LX-Bus as a supervised 716 module, start *their* address at the next zone number. For example, a 716 set to address 20 uses zone 120 for supervision. A zone expander on the same bus would be set to address 21 to start at zone 121.

If a supervised 716 module loses communication with the panel, an open condition (Trouble) is indicated on its Supervisory zone.



## Non-Supervised Operation

For a non-supervised 716, connect only the **Red, Black, and Green** wires from the LX-Bus to the module.

Non-supervised operation allows you to install multiple 716 modules and set them to the same address. You do not need to program a zone address for non-supervised operation.

## Annunciator outputs (open collector)

Unlike the Form C relays, the four annunciator outputs on the 716 module follow the state of the zones having the same address. For example, output #1 (white/brown) on a 716 set to address 120 shorts to ground each time zone 120 is in alarm or trouble **while armed**. You can use this feature to operate relays or LEDs to show changes in the state of the panel's **armed** zones. See below:

Panel	Armed Zone State	The 716 Annunciator Output Action
1912XR XR200	Normal Normal	Off - No ground reference Off - No ground reference
1912XR XR200 XR200	Alarm, Trouble, wireless low batt, missing Trouble, wireless low batt, missing "A" or "L" in Report to Transmit	On - Steady short to ground On - Steady short to ground Pulse (1.6 seconds On, 1.6 seconds Off)
1912XR XR200	Zone Bypassed Zone Bypassed	Slow pulse (1.6 seconds On, 3.2 seconds Off) Slow pulse (1.6 seconds On, 4.8 seconds Off)

## Exceptions to output expander addressing

Because the 716 module can only be wired to the LX-Bus of an interface card, special addresses have been set up to allow the annunciator outputs to follow the panel and keypad zones. To configure the annunciator outputs to follow any of these zones, use the following addresses:

Set to Address - For zones		Set to Address - For zones		Set to Address - For zones	
101	1 to 4	105	5 to 8	109	9 to 10
111	11 to 14	121	21 to 24	131	31 to 34
141	41 to 44	151	51 to 54	161	61 to 64
171	71 to 74	181	81 to 84		

## Setting the Rotary Switches

The 716 provides two rotary switches labeled **ONES** and **TENS** that you use to set the module's device address. When using the annunciator outputs, set the 716 address to match the zones you want the outputs to follow. If you are only using the Form C relays, set the address to match the output numbers you want to operate.

To set the address, use a small slotted screwdriver and gently turn the center arrows clockwise to the address you want.

### Programming Tip

To use both the Form C relays and the annunciator outputs, set the rotary switches to match the address of the zones you want the outputs to follow (see Exceptions to output expander addressing). Then, individually assign the Form C relays (for example 102 to 105) to any of the panel's Output Options.

## Rotary Switch Settings

The table at right gives some examples of the 716 module set for different device addresses. For XR200 panels, use the same addressing for zones 200 to 299.

Individual modules can be set to any address.

716 Output Expander Module								
Outputs	Tens	Ones	Outputs	Tens	Ones	Outputs	Tens	Ones
100 to 103	0	0	136 to 139	3	6	172 to 175	7	2
104 to 107	0	4	140 to 143	4	0	176 to 179	7	6
108 to 111	0	8	144 to 147	4	4	180 to 183	8	0
112 to 115	1	2	148 to 151	4	8	184 to 187	8	4
116 to 119	1	6	152 to 155	5	2	188 to 191	8	8
120 to 123	2	0	156 to 159	5	6	192 to 195	9	2
124 to 127	2	4	160 to 163	6	0	196 to 199	9	6
128 to 131	2	8	164 to 167	6	4			
132 to 135	3	2	168 to 171	6	8			

Figure 3: Sample address settings for the 716 module.

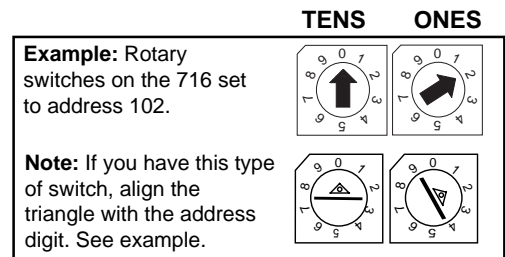


Figure 2: Address switch settings