1116 Wireless Relay Output

Description

The 1116 Wireless Relay Output provides a Form C (SPDT) dry relay contact rated for 1 Amp @ 30 VDC. Regardless of the state of the relay, the 1116 operates on constant minimal standby current. The 1116 relay can be controlled from a DMP Command Processor™ panel output programmed to respond to a variety of conditions such as armed area annunciation, ambush alarm, burglary alarm, exit timer, entry timer, schedules, or communication failure. The 1116 is designed to operate on one CR123A battery or connect to an optional 12 VDC power supply.

The 1116 operates with the XR500 or XR100 Series Command Processor™ panels version 119 using the 1100X Wireless Receiver version 104 or with the XRSuper6, XR20, and XR40 Command Processor™ Panels version 304 using the 1100D Wireless Receiver version 104.

What is Included

The 1116 includes the following:

- One 1116 Wireless Relay Output
- One 3V Lithium CR123A battery
- Hardware pack
- Serial number label

Optional items available:

- One Model 376 DC Power Supply
- One Model 378 Barrel Connector with Cord

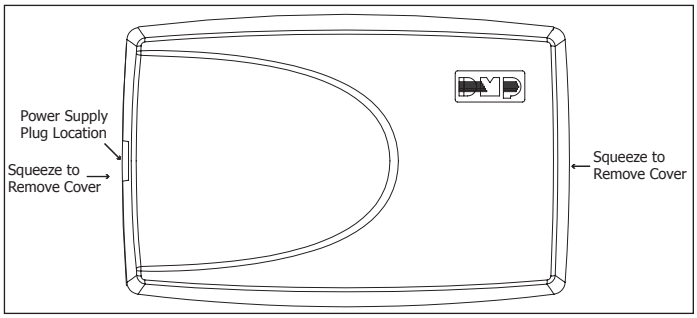

Figure 1: 1116 Wireless Relay Output

Serial Number

For your convenience, an additional pre-printed serial number label is included. Prior to installing the relay, record the serial number or place the pre-printed serial number label on the panel programming sheet. This number is required during programming.

Programming the 1116 in the Panel

In Output Information, enter the output number, output name, eight-digit serial number, and supervision time. Specific output numbers are available for wireless devices. XR100 and XR500 Series panel output numbers 450-474 or XRSuper6/XR20/XR40 panel output numbers 31-34 indicate whether the wireless device responds within 15 seconds to trip the output (slow response). XR100 and XR500 Series panel output numbers 480-499 or XRSuper6/XR20/XR40 panel output numbers 41-44 indicate whether the wireless device responds within 1 second to trip the output (fast response). Program the 1116 Wireless Relay Output in Output Options. Refer to the XR500 Series Programming Guide (LT-0679), XR100 Series Programming Guide (LT-0896), or the XRSuper6/XR20/XR40 Programming Guide (LT-0305) as needed.

Note: When a receiver is installed, powered down and powered up, the panel is reset, or programming is complete, the supervision time is reset. If the receiver has been powered down for more than one hour, the 1116 may take up to an additional hour to send a supervision message unless tripped, tampered, or powered up. This operation extends battery life. A missing message may display on the keypad until the supervision message is sent.

Selecting the Proper Location (LED Survey Operation)

The 1116 provides a survey capability to allow one person to confirm communication with the receiver while the cover is removed. The 1116 PCB Red Survey LED (See Figure 2) turns on whenever data is sent to the receiver then immediately turns off when the receiver acknowledgement is received. Pressing the tamper switch is a convenient way to send data to the receiver to confirm operation. When the 1116 does not receive an acknowledgement from the receiver the survey LED remains on for about 8 seconds to let you know communication is not established. Communication is also faulty when the LED flashes multiple times in quick succession. Relocate the 1116 or receiver until the LED immediately turns off indicating the 1116 and receiver are communicating properly. Proper communication between the 1116 and receiver is verified when for each press or release of the tamper switch, the LED blinks immediately on and immediately off. Repeat this test to confirm five separate consecutive LED blinks. Any indication otherwise means proper communication has not been established.

1116 Relay Output Annunciation

The following table shows the 1116 annunciation operation options.

Panel Programmed Action	Annunciation
STEADY	Relay output turns on and remains on
PULSE	Relay output alternates one second on, one second off
MOMENTARY	Relay output turns on once for one second
TEMPORAL (XR500 and XR100 Series only)	Relay output repeats the following sequence: • on 1/2 second, off 1/2 second, • on 1/2 second, off 1/2 second • on 1/2 second, off 1-1/2 second

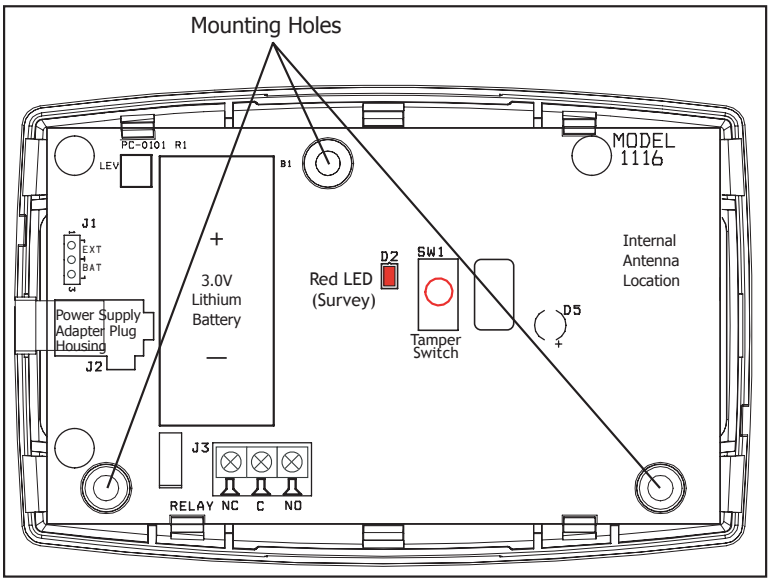

Figure 2: 1116 Relay Output PCB

Installing the 1116

Locate the 1116 on a flat surface such as a wall or single-gang box. When using the optional Model 376 plug-in power supply, mount the 1116 near a wall outlet. See Figure 2 for mounting hole locations.

1116 Relay Wiring

Use 22 or 18 AWG wire to connect the relay output. The Form C relay can be connected to operate as Normally Closed (NC) or Normally Open (NO).

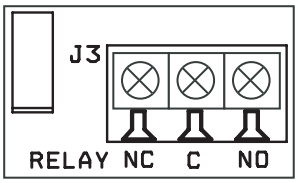

Figure 3: 1116 Relay Connector

Powering the 1116

The 1116 transmitter can be powered by:

- CR123A 3.0 VDC battery
- Model 376 plug-in power supply
- 12 VDC Power Supply

Note: When setting up a wireless system, it is recommended to program outputs and connect the receiver before installing batteries in the 1116 or connecting an optional power supply.

Battery Power

Observe polarity when installing the battery. Use only 3.0V Lithium batteries, DMP Model CR123, or the equivalent battery from a local retail outlet. Do not connect the power supply adaptor when operating using battery power.

1. Squeeze the cover left and right sides together to remove. See Figure 1.
2. Install the supplied jumper on the two J1 pins next to BAT to enable battery operation.

   Note: Battery operation is not enabled if the jumper is on the J1 pins next to EXT.
3. If replacing the battery, remove the old battery and dispose of it properly.
4. Place the 3.0V Lithium battery in the holder and press into place. See Figure 2 for Battery location.
5. Snap the cover back into place.

Caution: Properly dispose of unused batteries. Do not recharge, disassemble, heat above 212°F (100°C), or incinerate. Risk of fire, explosion, and burns.

Battery Life Expectancy

Typical battery life expectancy for the 1116 is two months when programmed as a fast response output and five years when programmed as a slow response output. Refer to the XR500 Series Programming Guide (LT-0679), XR100 Series Programming Guide (LT-0896), or the XRSuper6/XR20/XR40 Programming Guide (LT-0305) as needed. DMP wireless equipment uses two-way communication to extend battery life.

The following situation can extend battery life expectancy:

- Extend supervision time in panel programming.
- Program the relay as a slow response output in panel programming.
- Minimal relay on/off operations.

The following situations can reduce battery life expectancy:

- Multiple relay on/off operations.
- If a receiver is unplugged, too far away, or not installed.

  Note: Transmitters continue to send supervision messages until a receiver returns an acknowledgement. After an hour the transmitter only attempts a supervision message every 60 minutes.
- When installed in extreme hot or cold environments.

Optional External DC Plug-in Power Supply

When using the optional Model 376 plug-in DC power supply, mount the 1116 near a wall outlet. Do not install a battery when operating using the plug-in power supply. The power supply does not charge the battery.

Use the following steps to connect the plug-in power supply:

1. Squeeze the left and right cover sides together to remove. See Figure 1.
2. Install the supplied jumper on the two J1 pins next to EXT to enable power supply operation.

   Note: Power supply operation is not enabled if the jumper is on the J1 pins next to BAT.
3. Snap the cover back into place.
4. Plug the barrel connector into the J2 barrel jack at the side of the 1116 cover. See Figure 4.
5. Plug the power supply into a 110 Volt AC outlet.

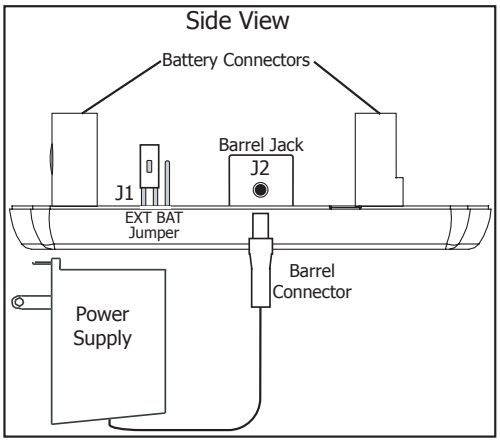

Figure 4: 1116 Side View

Optional External 12 VDC Power Supply

The 1116 can also be powered from a 12 VDC power supply such as a DMP Model 502-12. Use DMP Model 378 Barrel Connector with Cord, or the equivalent 5.5 x 2.1 mm barrel connector from a local retail outlet and 22 AWG wire to connect to the power supply. Do not install a battery when operating using the external power supply. The power supply does not charge the battery.

Use the following steps to connect the power supply:

1. Squeeze the left and right cover sides together to remove. See Figure 1.
2. Install the supplied jumper on the two J1 pins next to EXT to enable power supply operation.

   Note: Power supply operation is not enabled if the jumper is on the J1 pins next to BAT.
3. Snap the cover back into place.
4. If using the Model 378, connect the Black wire with White stripe to the J6 positive terminal on the 502-12 power supply PCB and the Black wire to the J6 negative terminal.
5. Plug the Model 378 barrel connector into the J2 barrel jack at the side of the 1116 cover. See Figure 4.
6. If installing a purchased 5.5 x 2.1 mm barrel connector, use 22 AWG wire to connect the positive wire to the pin and negative wire (GND) to the ring (barrel). See Figure 5.
7. Connect the 22 AWG wire ends to the J6 DC connector on the 502-12 power supply PCB. Observe positive and negative polarity on all connections.
8. Plug the barrel connector into the J2 barrel jack at the side of the 1116 cover. See Figure 4.

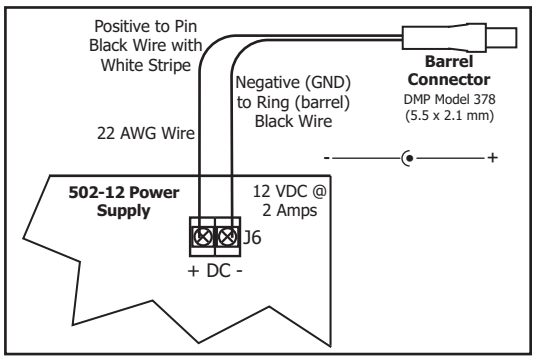

Figure 5: Power Supply Connection

FCC Information

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and
(2) this device must accept any interference received, including interference that may cause undesired operation.

The antenna used must be installed to provide a separation distance of at least 20 cm (7.874 in.) from all persons. It must not be co-located or operated in conjunction with any other antenna.

Changes or modifications made by the user and not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Specifications

Battery	
Life Expectancy	2 months (Fast Response) 5 years (Slow Response)
Type	3.0V Lithium CR123A
See Battery Life Expectancy for full details.	
Dimensions	4.65" L x 3.1" W x 1.4" H
Color	White
Housing Material	Flame retardant ABS

Accessories

CR123	DMP 3.0V Lithium Battery
376	DC Plug-in Power Supply
378	Barrel Connector with Cord
502-12	12 VDC Power Supply

Compatibility

The 1116 Wireless Relay Output is compatible with:

XR500 or XR100 panels version 119
1100X Wireless Receiver version 104

XRSuper6, XR20, and XR40 panels version 304
1100D Wireless Receiver version 104

Patents

Patent(s) Pending

Listings and Approvals

FCC Part 15 Registration ID CCKPC0101
IC Registration ID 5251A-PC0101

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