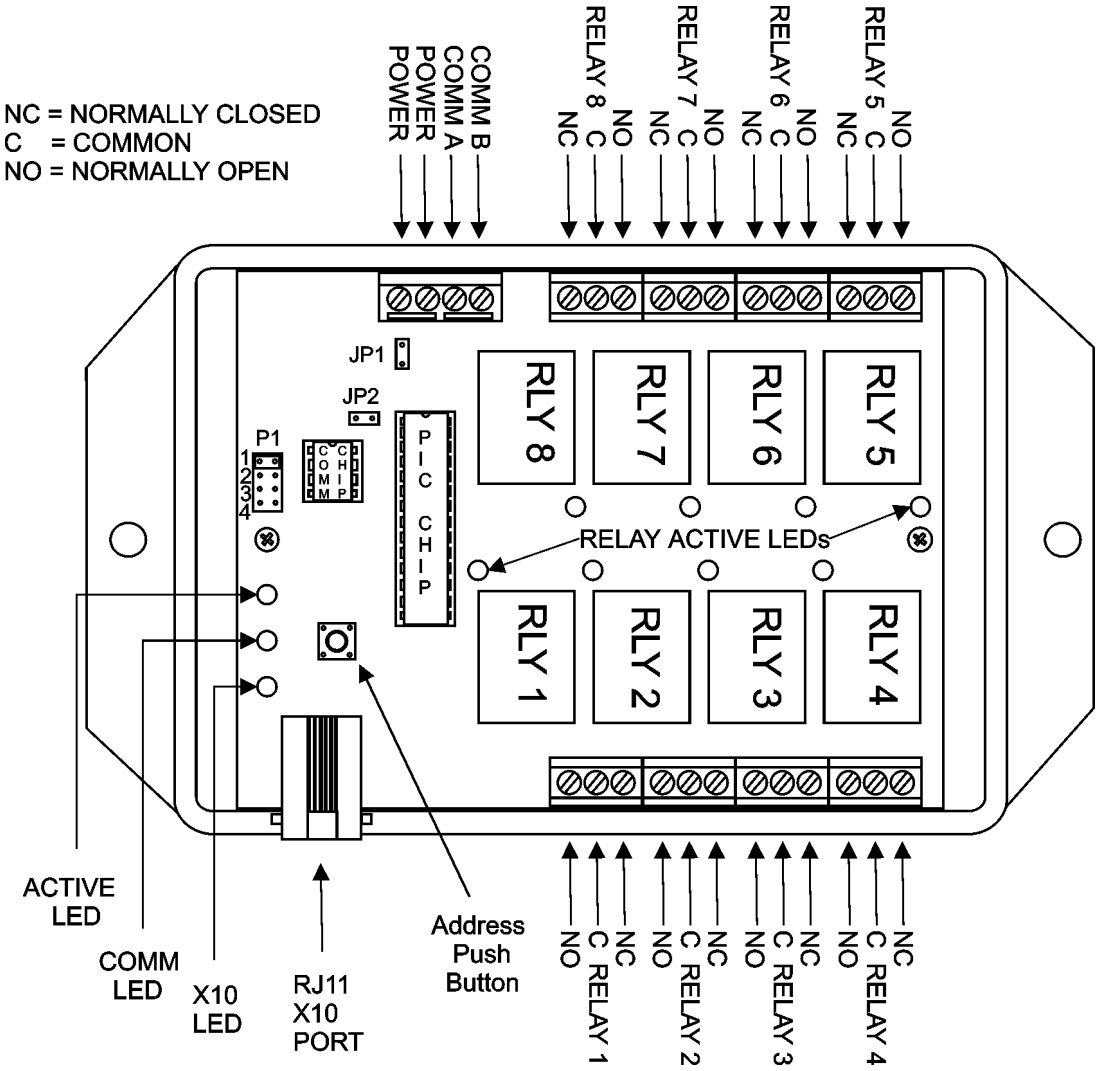
RLY8-XA™



Introduction

The RLY8-XA™ module provides 8 high current relay outputs. The RLY8-XA™ can be controlled by either the ADICON™ 2500 or X10 communication protocols. To use the X10 protocol a TW523 module must be connected to the RLY8-XA™.

Specifications

Power:	Input Voltage	9 - 16V DC or AC
	Input Current Max	800mA
I/O:	Relay Output: Form C, 120V 10A, 220V 5A	
	X10 Input: RJ-11 to RJ-11 Cable wired straight thru 4 wire	
Dimensions:	5.65”W x 3.75”L x 1.38”D	
Operating Temperature:	32ºF to 158ºF	

Setup

ADICON™ Installation

Remove the RLY8-XA™ top cover.
Attach the power supply to the screw terminal block labeled POWER.
Connect the COMA and COMB of the ADICON bus to COMA and COMB on the RLY8-XA™.
Remove JP1.
Replace the top cover.

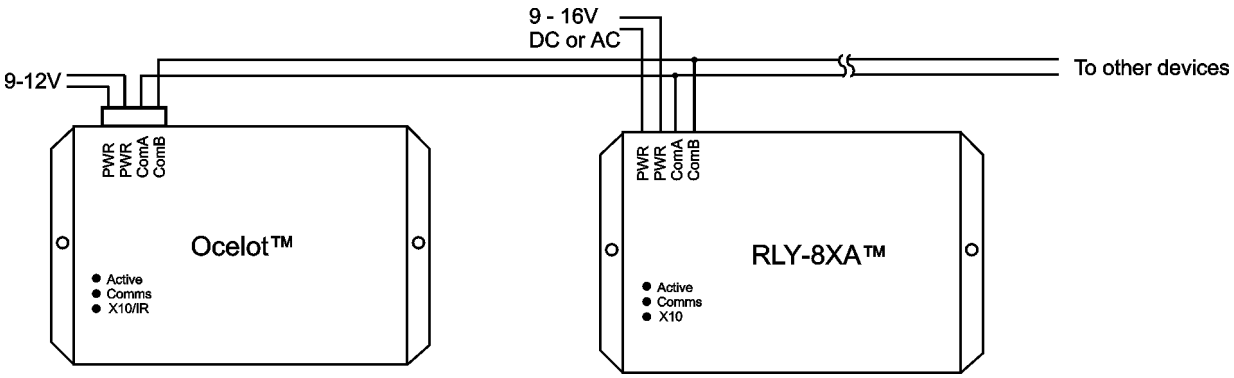


Figure 1. Typical ADICON Wiring Diagram

X10 Installation

Remove the RLY8-XA™ top cover.
Attach the power supply to the screw terminal block labeled POWER.
Connect on end of the RJ-11 cable to the RJ-11 Port on the RLY8-XA™.
Connect the other end of the RJ-11 cable to the RJ-11 Port on the TW523.
Set the House Code of the RLY8-XA™. Refer to Table 1 for P1 jumper settings.
Replace the top cover.
Plug in the power supply for the RLY8-XA™ and plug in the TW523.

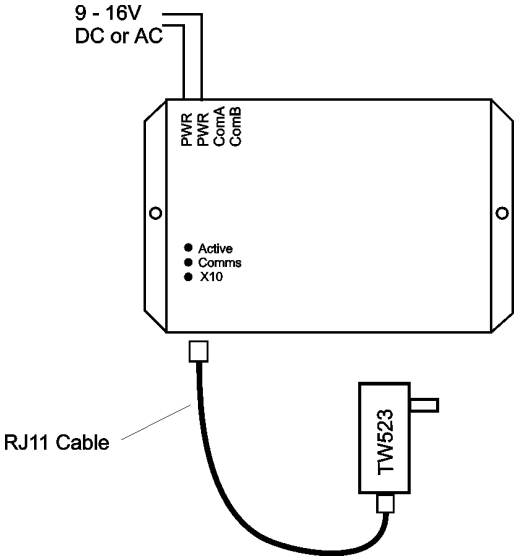


Figure 2. Typical X10 Wiring Diagram

P1-1	P1-2	P1-3	P1-4	House Code	Blink Code
OFF	OFF	OFF	OFF	A	0
ON	OFF	OFF	OFF	B	1
OFF	ON	OFF	OFF	C	2
ON	ON	OFF	OFF	D	3
OFF	OFF	ON	OFF	E	4
ON	OFF	ON	OFF	F	5
OFF	ON	ON	OFF	G	6
ON	ON	ON	OFF	H	7
OFF	OFF	OFF	ON	I	8
ON	OFF	OFF	ON	J	9
OFF	ON	OFF	ON	K	10
ON	ON	OFF	ON	L	11
OFF	OFF	ON	ON	M	12
ON	OFF	ON	ON	N	13
OFF	ON	ON	ON	O	14
ON	ON	ON	ON	P	15

Table 1. P1 Jumper settings

Operation ADICON™

ADICON™ LED Codes

ACTIVE led – On solid, ADICON™ Mode
ACTIVE led – Rapid Blink, ADICON™ Auto Address mode active
COMMS led – Blinks rapidly during ADICON™ communications
X10 led – Off

Parameter	Function
0	Relay Watchdog
1	Module Address

Each relay in the RLY8-XA™ is represented by a module number and a point number. The module number is the ADICON™ address of the unit and the point is the logical relay number (0 – 7) within each module. For example if the RLY8-XA™ is module 2 and you want to turn on relay 5 you would have C-Max™ turn on module 2/ point 4, see example below. The relay will remain on until instructed to turn off or the relay watchdog times out. The relay watchdog will be covered later.

Line#	Program Text	Comments
1	If Time of Day is = Sunrise + 0 minute(s)	At Sunrise
2	Then Module# 2/ Point# 4 Turns ON	Turn Sprinkers On

Turning off a relay is similar to turning on a relay. See code below.

Line#	Program Text	Comments
1	If Time of Day is = Sunrise + 0 minute(s)	At Sunrise
2	Then Module# 2/ Point# 4 Turns ON	Turn Sprinkers On
3	If Time of Day is = Sunrise + 10 minute(s)	10 minutes after sunrise
4	Then Module# 2/ Point# 4 Turns OFF	Turn Sprinklers Off

The relay watchdog is used to turn all the relays off if communication with the ADICON™ controller is lost. A value of 255 in the relay watchdog parameter will turn off the relay watchdog function, that is, once a relay is turn on it will remain on until instructed to turn off. Set the relay watchdog parameter to the number of seconds (1 – 254) to timeout after ADICON™ communication is lost. Zero is not a valid relay watchdog value.

Operation X10
X10 LED Codes
X10 led - On solid, X10 Mode.
X10 led – Blinks off when X10 activity detected
ACTIVE led – blinks a number of times to indicate the House Code. See Table 1
COMMS led - blinks a number indicating the code version.

Each relay in the RLY8-XA™ is represented by a house code and a key code. The house code (A – P) is the X10 address of the unit and the key code (1 – 8) is the relay within the module. The examples below show how to turn a relay on and off using X10.

Line#	Program Text	Comments
1	If Time of Day is = Sunrise + 0 minute(s)	At Sunrise
2	Then turn X10 A/1 ON	Turn Sprinkers On
3	If Time of Day is = Sunrise + 10 minute(s)	10 minutes after sunrise
4	Then turn X10 A/1 OFF	Turn Sprinklers Off

X10 Pulsed Relay Commands
Sending an X10 Dim command to a relay will turn the relay on for approximately 2 seconds.
Sending an X10 Bright command to a relay will turn the relay on for approximately 4 seconds.

Relay LEDs
Each relay has an LED to indicate when the relay is energized. These LEDs can only be seen when the top cover is removed.