

## User's Guide



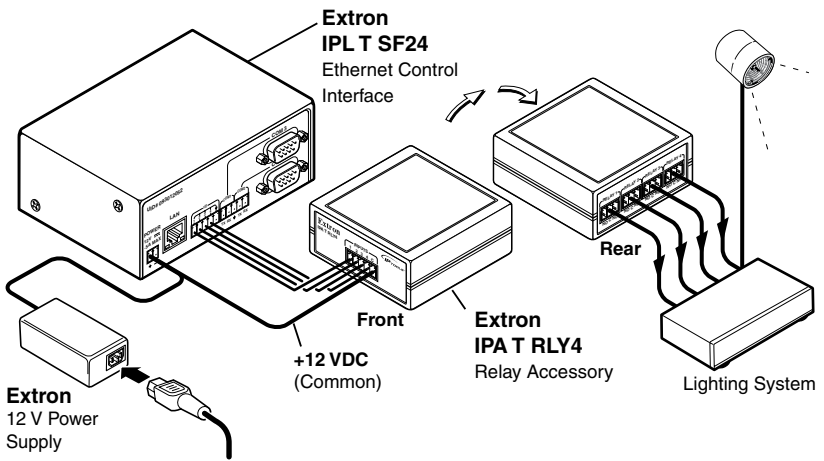
## *IPA T RLY4* Relay Accessory Box

# Introduction

## Description

The Extron IPA T RLY4 Relay Accessory is an IPLink® Accessory product. The Relay Accessory consists of four output relays with normally open (when the relay is de-energized) (NO) and normally closed (NC) contacts.

The Relay Accessory converts a solid state (up to 12 VDC) signal, from a source such as the Flex I/O port of an Extron IPL T SF24 or the digital I/O port of an MLC 104 IP Plus, to a relay contact closure. The relay contacts can handle up to 24 VAC or 24 VDC as a tally signal, contact closure signal, or control signal to drive devices in your system, such as a lighting system (figure 1) or remote screens. The relay contacts are protected by an overvoltage circuit.



**Figure 1 — Typical IPA T RLY 4 application**

The compact IPA T RLY4 can be concealed out of the way anywhere in your system with the included Velcro® strip.

## Connections

### NOTE

The 5-pole captive screw input connector and four 3-pole captive screw output connectors are included with the unit, but you must supply the cable. Extron recommends its CTL Series cable, part #22-148-**nn** (non-plenum bulk rolls), 26-119-**nn** (plenum bulk rolls), or 26-461-**nn** (plenum pre-cut lengths).

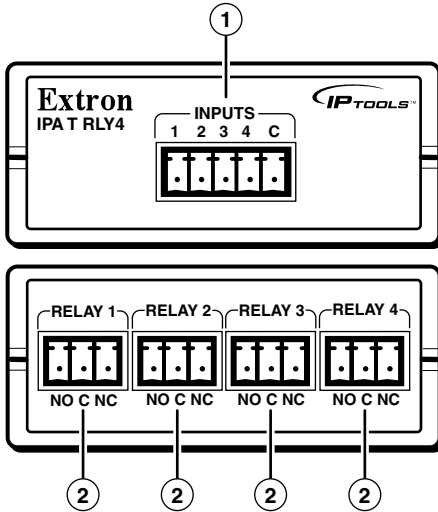


Figure 2 — IPA T RLY4 connections

## Input connections

- ① **Inputs** — Connect the 12 VDC source to the common voltage (C) terminal of the 5-pole captive screw connector. Connect the appropriate input terminal (1 through 4) to the digital output(s) of the IPL T SF24, MLC 104 IP Plus, or other device.

### CAUTION

Connect +12 VDC to the C pin only and connect the return to one or all of the Input pins (1 through 4) for the relays that you will use. Reversing the connections can damage the power supply.

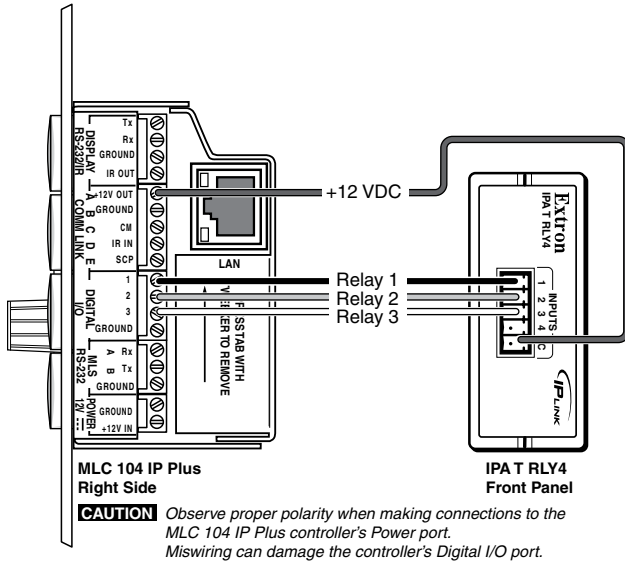
### NOTE

Connect the I/O control line to the Input 1 terminal for relay 1, Input 2 for relay 2, and so on.

**NOTE**

Figure 3 is a wiring diagram of a typical application: an Extron MLC 104 IP Plus controlling an IPA T RLY4 relay function.

Refer to the MLC 104 Plus Series Manual for information on configuring the MLC to control the IPA T RLY4.



**Figure 3 — Wiring diagram for connection to an MLC 104 IP Plus**

## Output connections

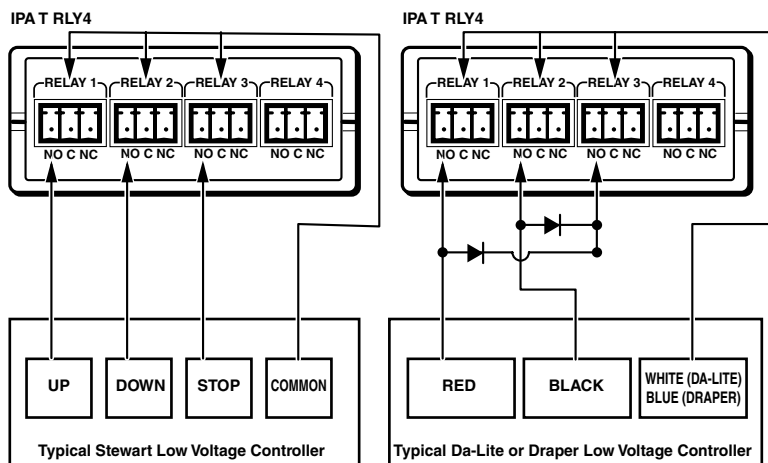
- ② Outputs — For each relay:

**For the normally open contacts**, connect a device between the NO and C terminals of the 3-pole captive screw connectors.

**For the normally closed contacts**, connect a device between the NC and C terminals of the 3-pole captive screw connectors.

# Connections

**NOTE** Figure 4 is a wiring diagram of a typical application: an Extron IPA T RLY4 driving a screen controller. Please be aware that these are examples only. Your equipment may have different wiring requirements. Refer to the manual from the applicable manufacturer for specific wiring instructions.



**NOTE** For a typical Stewart screen controller, a momentary closure on relay 1, 2, or 3 causes the screen to move up, down, or stop.

**NOTE** For a typical Da-Lite or Draper screen controller, a momentary closure on relay 1 or 2 causes the screen to move up or down. A momentary closure on relay 3 causes the screen to stop in its current position. Use 1N4001 or equivalent diodes (not included) for reverse bias protection.

**Recommended diode specifications:**  
 100 mA maximum through diode  
 50 V maximum reverse bias

**Figure 4 — Wiring diagram for connection to a screen controller**

## Operation

When an input signal is applied to one of the relays, the signal toggles the state of that IPA T RLY4's output relay; the relay's NO contacts close, routing the signal for the connected device, and its NC contacts open, interrupting the signal for the connected device. See the chart below for clarification.

I/O mode	I/O state	Relay state	
		NO	NC
Output	On (closed)	Closed	Open
	Off (open)	Open	Closed

# Specifications

## Relay control

- Relay control ports number/type .. 4 momentary
- Relay control connectors ..... (1) 3.5 mm captive screw connectors, 5 pole, for control input and power  
(4) 3.5 mm captive screw connectors, 3 pole, NO & NC for configurable relay outputs
- Relay coil operating current ..... 0.015 A (nominal), 0.025 A (maximum). The coil limits the current; no external resistance is required.
- Relay control contact rating ..... 24 V, 1 A

## General

- Temperature/humidity ..... Storage: -40 to +158 °F (-40 to +70 °C) / 10% to 90%, noncondensing  
Operating: +32 to +122 °F (0 to +50 °C) / 10% to 90%, noncondensing
- Rack mount ..... No
- Enclosure type ..... Plastic
- Enclosure dimensions ..... 1.0" H x 2.4" W x 2.3" D  
2.5 cm H x 6.1 cm W x 5.8 cm D
- Product weight ..... 0.1 lb (<0.1 kg)
- Shipping weight ..... 1 lb (1 kg)
- Vibration ..... ISTA 1A in carton  
(International Safe Transit Association)
- Listings ..... UL, CUL
- Compliances ..... CE, FCC Class A, VCCI, AS/NZS, ICES
- MTBF ..... 30,000 hours
- Warranty ..... 3 years parts and labor

**NOTE** All nominal levels are at  $\pm 10\%$ .

**NOTE** Specifications are subject to change without notice.

## FCC Class A Notice

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. Front Panel 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 Class A limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Front Panel Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

**NOTE** This unit was tested with shielded cables on the peripheral devices. Shielded cables must be used with the unit to ensure compliance with FCC emissions limits.

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