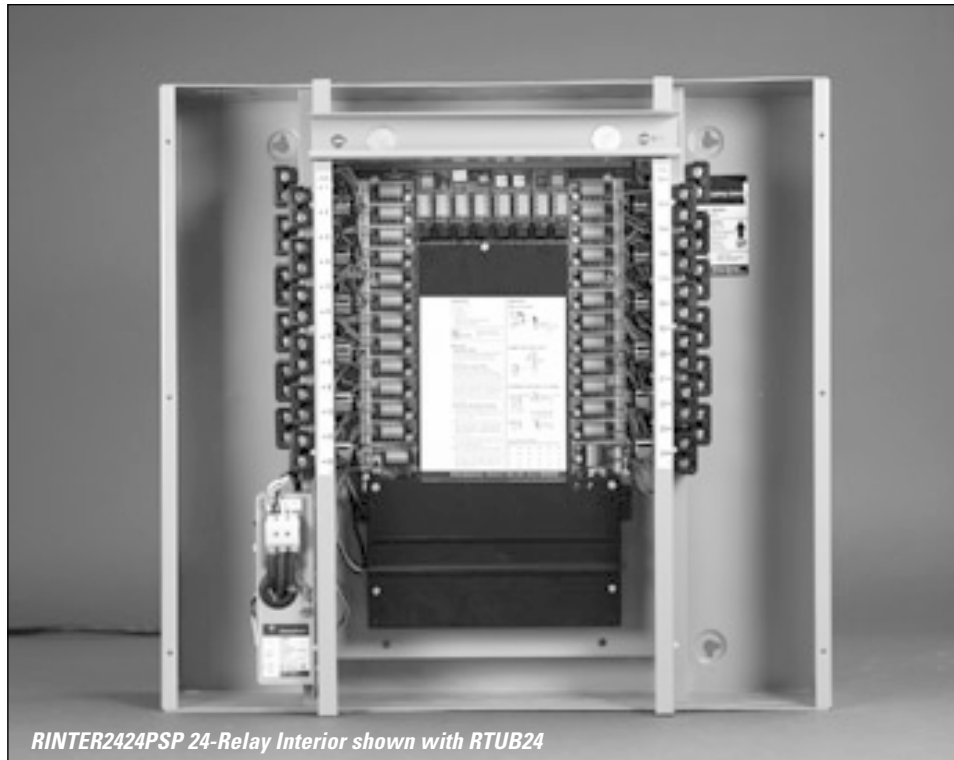




GE Total Lighting Control

ProSys Lighting Control System
Catalog Number RINTERxxxPS(P)

ProSys™ Lighting Control System Relay Panels



RINTER2424PSP 24-Relay Interior shown with RTUB24

DESCRIPTION

The ProSys Lighting Control System is a small network of relay panels and occupant control switches linked by a 4-wire dataline. Together, these devices form a reconfigurable switching platform — one that uses “softwiring” instead of hardwiring to link occupant switches to relays. Scheduling capability can be readily added by simply mounting an RCLK8PS Softwired Clock to the DIN rail in any relay panel.

The RINTERxxxPS(P)¹ is the interior for a ProSys Lighting Control System Relay Panel. The complete relay panel assembly will include the following:

1. Tub (RTUBxx)
2. Interior (RINTERxxxPS or RINTERxxxPSP)
3. Power Supply (RPWRxxx)
4. Cover (RCOVxxx)

This instruction sheet will show you how to:

1. Install the Relay Panel(s)
2. Install and Test the Dataline
3. Document the Relay Panels

Full descriptions of the installation and operation of Softwired Switches and the Softwired Clock and other optional automation devices are located in other sections of this manual and are provided with each hardware unit.

Before starting, read the following installation instructions. If you have questions, call GE Total Lighting Control Service at:

1-877-584-2685 (LTG-CNTL) in the USA and Canada.

These instructions do not cover all details or variations in equipment nor do they provide for every possible contingency that may be met in connection with installation, operation or maintenance. Should further information be desired or should particular problems arise that are not covered for the purchaser's purposes, the matter should be referred to the GE Company.

CAUTION: Make sure all power is OFF before wiring. Do not energize wiring until the unit is fully assembled. Conform to all applicable codes.

RELAY PANEL INSTALLATION

Figure 1

Dimensions (A x B)

RINTER1212PS(P)
16.0" (406mm) x 16.5" (419mm)

RINTER2424PS(P)
22.5" (572mm) x 24.0" (610mm)

RINTER4848PS(P)
36.0" (914mm) x 24.0" (610mm)

Relay Capacities (C)

RINTER1212PS 12 RR7 relays
RINTER1212PSP 12 RR9 relays

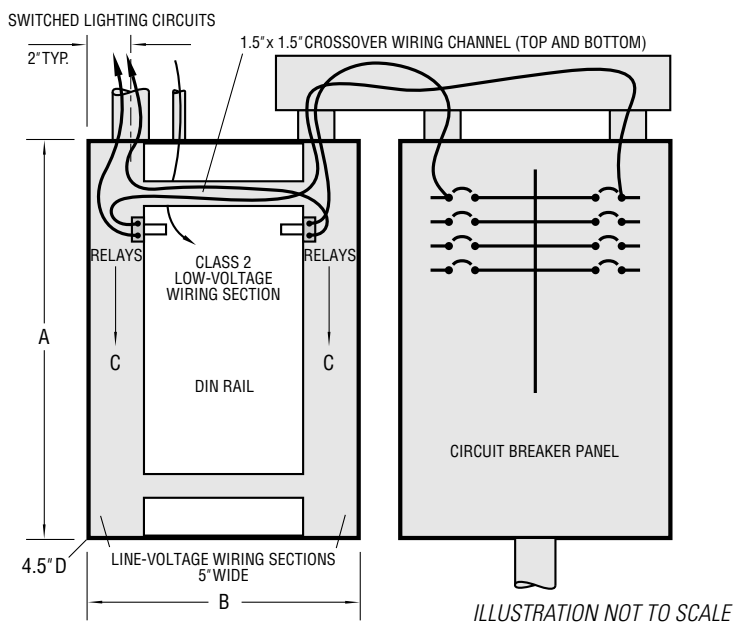
RINTER2424PS 24 RR7 relays
RINTER2424PSP 24 RR9 relays

RINTER4848PS 48 RR7 relays
RINTER4848PSP 48 RR9 relays

DIN Rail Capacities

RINTER1212PS(P) One module
RINTER2424PS(P) Two modules

RINTER4848PS(P) Two modules



If you have purchased the ProSys II Lighting Control System (the stand-alone system), the devices (panels, switches and clock) will be in self-install mode, which means that as soon as they are connected to the network, they are operational and can communicate with each other.

If you have purchased the ProSys LM Lighting Control System along with the ProSys LM software, the devices will be in software-install mode. This means that in order for them to function on the network you must:

- assign network addresses to the devices and
- bind network variables and message tags using your network management tool.

Addresses and binding are necessary for the devices to function on the network. ProSys LM users please refer to the ProSys LM Software User Guide for instructions on installing devices.

Rough-In Tub

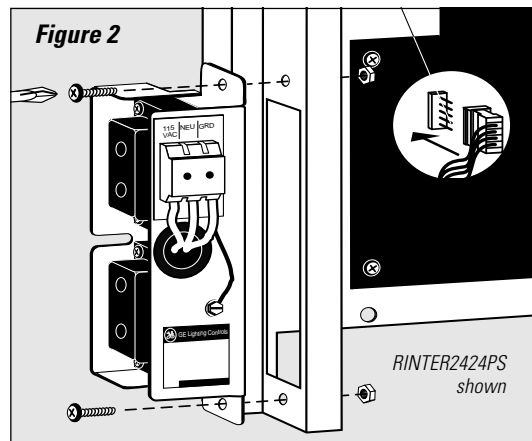
- **Environment**
32 to 131°F (0 to 50°C), 0 to 95% relative humidity, stationary applications
- **Mounting**
The tub should be level, plumb and rigidly installed with hardware sufficient to hold 100 lbs. (48kg). For flush-mount panels, the front flange should be flush with the final finished surface. For multiple panels, allow ¼" minimum between panels for showbox cover clearance.
- **Pulling Wires**
Route line-voltage wiring through the 2½" knockouts in either the top or bottom of the tub. Route Class 2 low-voltage dataline from the remote switches or other controls through the ¾" knockouts in either end.

Install Interior

- **Power Supply**
Attach the power supply to the frame (bottom of 12-relay interior and left side of 24- or 48-relay interiors) and plug the low-voltage connector to the terminal marked "POWER" as shown in Figure 1 above.
- **Interior**
Mount the interior in the tub and secure it to the studs with the hardware provided. Make sure that all line- and low-voltage wiring is confined to the appropriate areas.

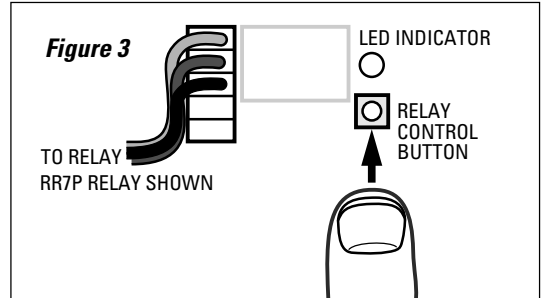
Wire Line Voltage

Before making any connections to the relays, make sure that none of the load circuits are shorted. Wire from the circuit breaker through each relay's SPST output terminals, and from there to the loads. Confirm that each circuit is wired to the relay specified in the drawings. Wire the power supply.



POWER UP AND TEST RELAYS

1. **Apply power to the power supply only.** As shown in **Figure 3**, to the right, press the Relay Control Button next to each relay's yellow plug-in termination to toggle it ON/OFF. The relay should "click" and the LED status indicator should change state. Confirm the operation by measuring the continuity at the line-voltage terminations of each relay.
2. **Apply power to the relays.** Being careful not to touch any line-voltage wiring, toggle each relay ON/OFF again and confirm that each relay controls the appropriate load.



DOCUMENT RELAY WIRING

Record the circuit controlled by each relay on the **RELAY SCHEDULE** which was shipped with the interior. The relays

associated with automation channels A-H are recorded later.

Figure 4

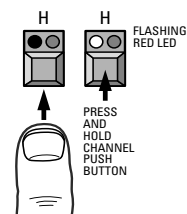
PROSYS RELAY SCHEDULE

PANEL # 01

RELAY #	SUPPLY	LOAD DESCRIPTION
-01	LP1-1	OPEN OFFICE - FIRST FLOOR NW
-02	LP1-2	"
-03	LP1-3	OPEN OFFICE - FIRST FLOOR NE
-04	LP1-4	"
-05	LP1-5	OPEN OFFICE - FIRST FLOOR SW

SOFTWIRING A RELAY GROUP TO A CHANNEL

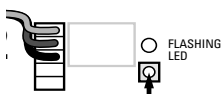
Figure 5 – Softwiring a Relay Group



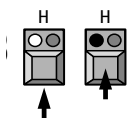
1 Press and hold the Channel Push Button for several seconds.

2 Select the relays to be controlled.

3 Press the Channel Push Button again.



Test. Press the Channel Push Button to toggle the group ON/OFF/ON.

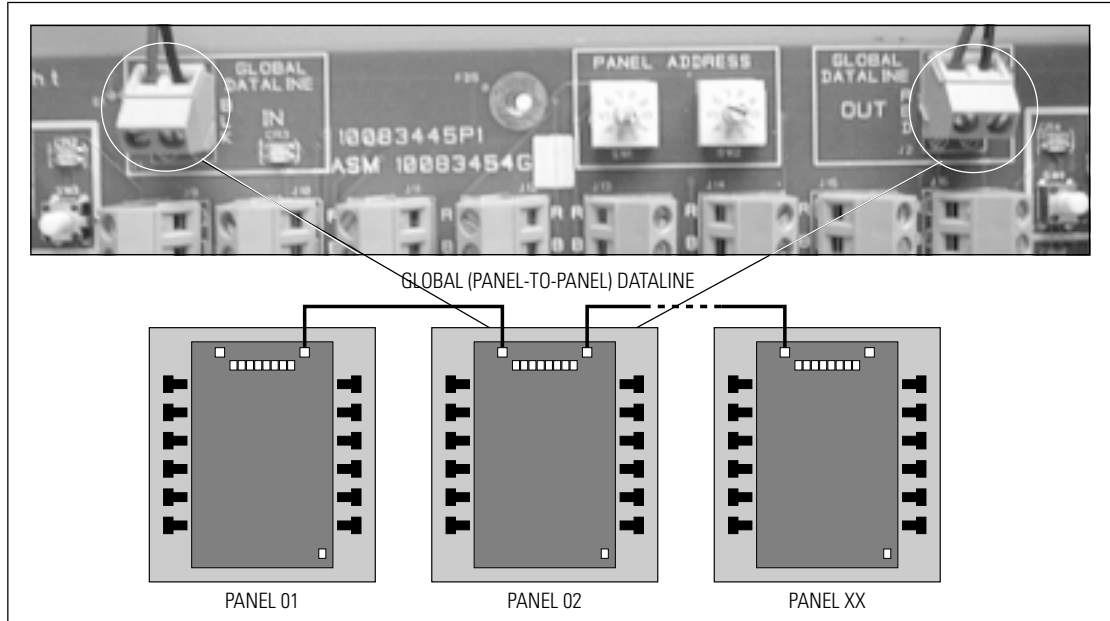


Each ProSys panel includes eight "channels" (A-H) which may be softwired to relays within the panel. Channels are used to group relays for common control.

When a ProSys system includes an automation module (RCLK8PS Softwired Clock), we strongly recommend you turn to the installation instructions for that automation module and **complete the documentation before softwiring any relays to channels.**

However, if automation is to be provided by an interface to another system, or by using manual switches only, the channels may be used simply for grouping relays. Follow the instructions in **Figure 5** to the left.

DATALINE INSTALLATION



The dataline connects the relay panels, switches and optional control modules. Within the 4-wire dataline are two twisted pairs: the red and black wires, carrying data; and the blue and white wires, providing power to the dataline switches and control modules.

For simplicity, we refer to a 4-wire dataline running between a relay panel and the dataline switches as a "Local Dataline". The relay panel provides the low-voltage power to all of the intelligent devices on that section of the dataline.

The dataline running between relay panels is known as the "Global Dataline," and it uses only the red and black data wires. The blue and white wires are not connected and should be trimmed.



Panel Addressing

The two rotary switches on each relay panel set its address, allowing the differentiation between relays in different panels.

NOTE: The first panel address must be set at 01 and the others numbered sequentially 02, 03, and so on, between 02 and 30 as shown to the right. If the panel address is set higher than 30, the channel LEDs in the panel will flash. Setting the panel address to 30 or below will return the panel to normal operation. If a panel is set to the same address as another panel, then the two panels will not operate properly. The ProSys LM panels can be setup in groups of 30 where the panels in a group can be numbered from 00 to 30.

Note: To ensure good communications between panels, the installer must comply with the dataline specification. GE will not warrant a system using a dataline that does not meet our specification. To avoid questions, use GE RLOWIRE-4P (plenum rated). Do not run the dataline in conduit or wiring trays with power wires. Do not connect the local datalines from two different panels.

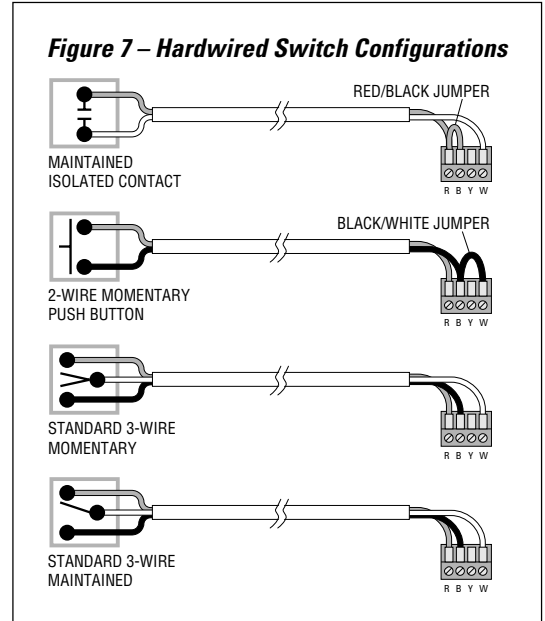
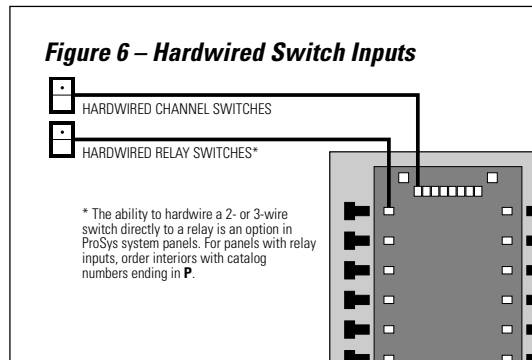
GE RLOWIREP-S4 Dataline Wire Specifications

- #18 AWG (7 strands x 26 AWG)
- 2 independent twisted pairs – black/red, blue/white
- Unshielded copper conductors
- 2 inch twist lay on pairs, 6 inch twist lay on cable
- Plenum-rated copolymer jacket, 0.230" O.D.
- FEP 0.010" insulation, 0.060" O.D.
- 30 pF/foot maximum capacitance
- -20°C to 150°C operating temperature range
- 17 lbs. per 500 foot reel
- UL rated

HARDWIRE LOW-VOLTAGE SWITCHES (OPTIONAL)

Each of the ProSys panel's eight channels has a single switch input which will accept any of the dry-contact configurations shown in **Figures 6 and 7**, and also provides status feedback for that channel.

ProSys panels whose catalog numbers end in "P" also include inputs for each relay. Like the channel inputs, these support all of the dry-contact configurations shown.



PANEL TESTING AND TROUBLESHOOTING

Panel Testing

The panel-to-panel dataline should be tested for continuity and isolation from ground.

To test for continuity, remove the red and black dataline wires at panel 01 and wire nut together (short the wires together). Go to the last panel in the series and measure the resistance between the red and black terminals. It should be less than 3 ohms. Return to panel 01 and restore the red and black wires to their associated terminals.

For shorts, test from red to white and black to white anywhere in the low-voltage section of the panel. You should see an open circuit.



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