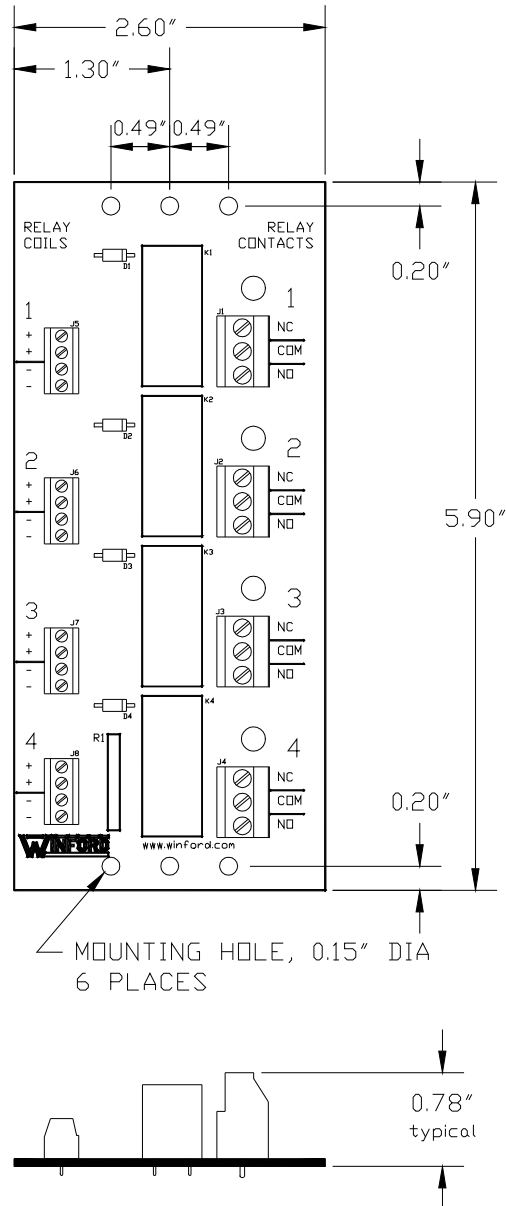


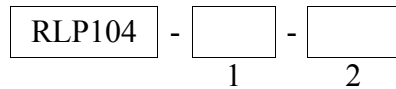
RLP104 Rev B-D Datasheet



Overview

The RLP104 provides four SPDT relays with convenient screw terminal connections for the coils and contacts. The input screw terminals are wired directly to the relay coils with no active driver circuitry (in contrast to the RLY104) and each relay channel is independent and electrically isolated. Clamping diodes are included on the relay coils to clamp the inductive spike generated when a relay is turned off. LEDs provide visual indication on the status of each relay.

Part Number Ordering Information

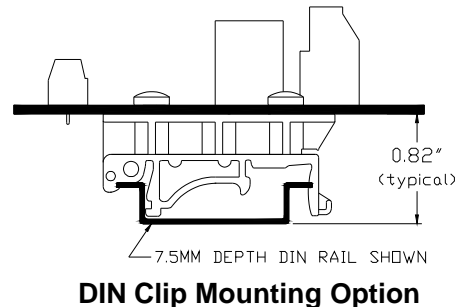


1. Relay Coil Voltage (DC)

- 5V
- 12V
- 24V
- 48V

2. Mounting Option

- **FT** Rubber Feet on bottom side of PCB
- **DIN** DIN Rail Mounting Clips



RLP104 Stocked Part Numbers

The following part numbers represent standard options and are stocked:

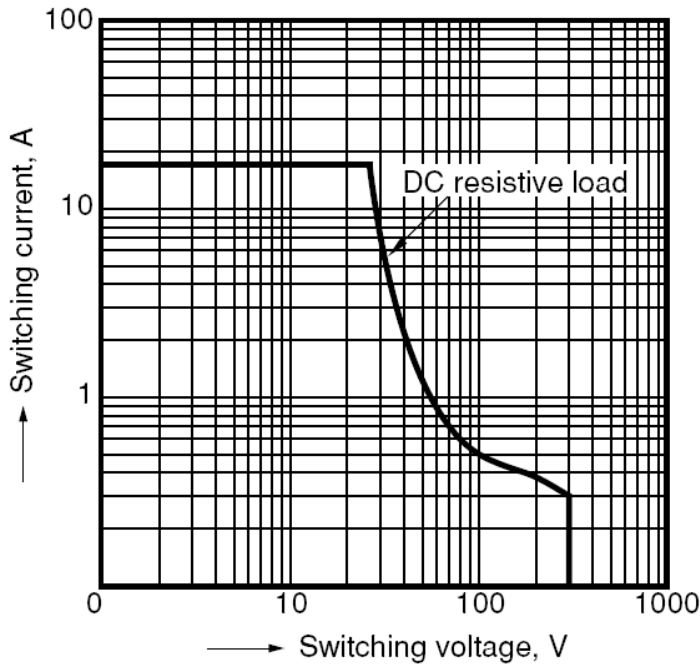
- RLP104-5V-FT
- RLP104-12V-FT
- RLP104-24V-FT
- RLP104-48V-FT
- RLP104-5V-DIN
- RLP104-12V-DIN
- RLP104-24V-DIN
- RLP104-48V-DIN

For parts other than RLP104-*, please see the other datasheets for a list of stocked part numbers.

Electrical Characteristics

<i>Specification</i>	<i>RLP104-5V</i>	<i>RLP104-12V</i>	<i>RLP104-24V</i>	<i>RLP104-48V</i>	<i>Unit</i>
Relay coil acceptable DC voltage range	4.0 - 6.5	10 - 15	19 - 28	40 - 56	V
Nominal current per active relay (at coil voltage: RLP104-5V=5.0V, RLP104-12V=12.0V, RLP104-24V=24.0V, RLP104-48V=48.0V)	87	37	22	11	mA
Relay contact rating @ 250 V AC	15				A

DC Breaking Capacity of Relay Contacts



Operating Conditions

Ambient Temperature Range	-25°C to 75°C
Relative Humidity Range - not freezing or condensing	5% to 85% RH

Screw Terminal Wire Sizes

- Relay coils: 16-26 AWG
- Relay contacts: 12-24 AWG

Component Part Numbers

- Relays: Panasonic Electric Works ALZ12Fxx (xx=voltage)

Changes

Rev B	• Changed input screw terminals from 2-position to 4-position. Each input now has two screw terminals for the “+” signal and two for the “-” signal, which allows easy daisy-chaining if desired.
Rev D	• PCB layout modifications

Note About Inductive Loads

If the relay board is used to switch an inductive load, such as a solenoid coil or a larger relay, it is recommended that a "snubber" circuit be implemented to reduce electromagnetic interference with nearby electronics and reduce possible arcing across the relay contacts as they open. For example, if a DC solenoid coil is being controlled, each time the coil is switched off, the magnetic field around the coil collapses and creates a high-voltage reverse-polarity spike. If this is not absorbed, it may cause arcing as the relay contacts open as well as create an electromagnetic pulse that could interfere with nearby electronics. The appropriate snubber circuit will vary widely depending on the type of load and supply current utilized. In order to remain general-purpose, no snubber circuits are included on the relay board for the loads. For a DC inductive load, typically a diode is placed across the load such that the reverse-polarity spike is conducted and absorbed. Care should be taken to research and select an appropriate snubber circuit for each situation.

*Note that the above paragraph applies to the **loads** connected through the relay **contacts**. The RLP104 **does** include a clamping diode to absorb the reverse spike generated the relay **coils** themselves.*

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