

RELAY CARD

OVERVIEW

Our Relay Card is a state-of-the-art solution that improves control and automation in different settings. It's designed with precision and flexibility, offering smooth integration, top-notch performance, and dependable operation for your electrical systems.

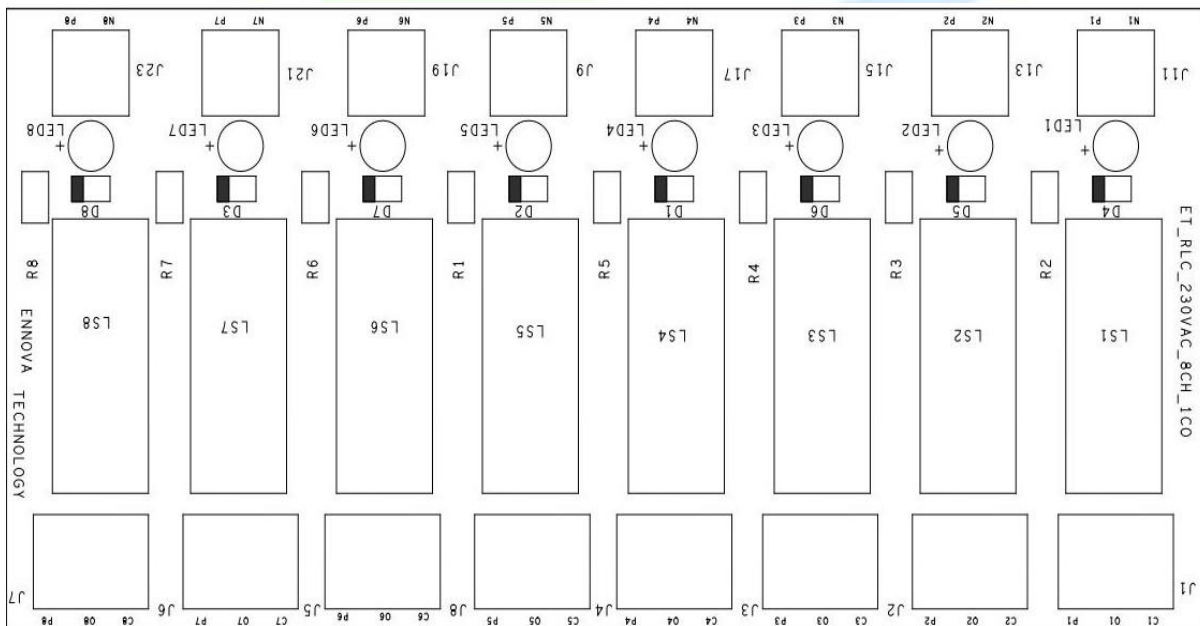
KEY FEATURES :

- **Multi Voltage Compatibility:** Designed for 12V DC, 24V DC, and 230V AC applications, offering versatile compatibility
- **Configurable Channels:** Available in 2, 4, 6, and 8 channels, allowing precise control over multiple electrical circuits.
- **Relay Contact Configuration:** Options include 1CO-SPDT and 2CO-DPDT, providing flexibility for diverse circuit connections.
- **Status Indication:** Green LED.
- **Compact Design:** Space-efficient and suitable for DIN rail mounting.

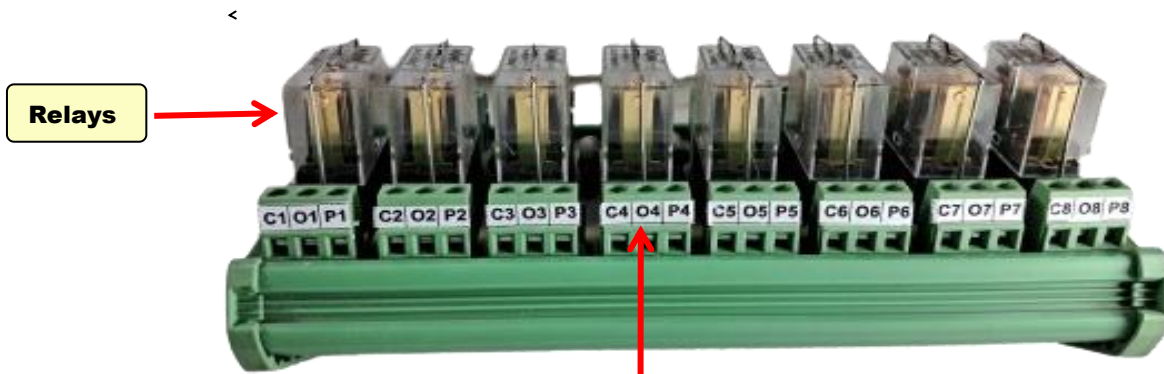
SPECIFICATION:

- **Relay Type:** Omron G2RL-1, Omron G2RL-2,
Leone L2R-1C-230VAC
- **Contact Configuration:** NO/NC selectable for each channel
- **Isolation:** Optically isolated control inputs
- **LED Indicators:** Yes (LED for each channel)
- **Operating Temperature:** -20°C to 70°C
- **Storage temperature:** -10°C to 60°C
- **Humidity Range:** 10% to 90% RH (non-condensing)
- **Protection:** Freewheeling diode across relay coil

LAYOUT :



8 CHANNEL 230V AC RELAY CARD



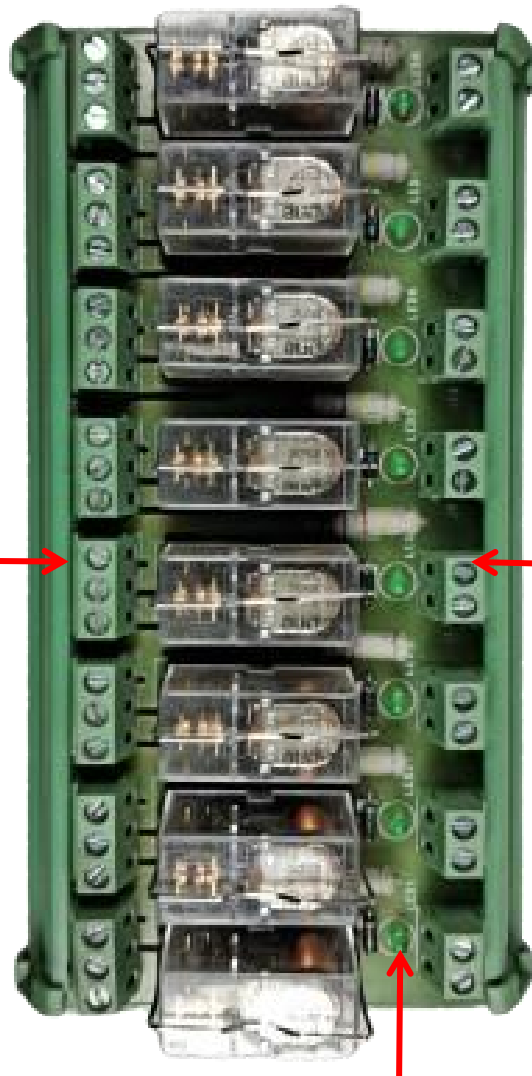
Contact Terminals
C = NC
O = NO
P = COM



Coil Supply Terminals
P = Positive (+) Supply
N = Negative (-) Supply

❖ Connection:

- **Input Connections:** Connect the control signal wires from the control source to the input terminals (IN) of the relay channels.
- **Output Connections:** Connect the load (e.g., lights, motors, heaters) to the output terminals (OUT) of the relay channels. Ensure that the load's voltage and current requirements are within the relay card's specifications.

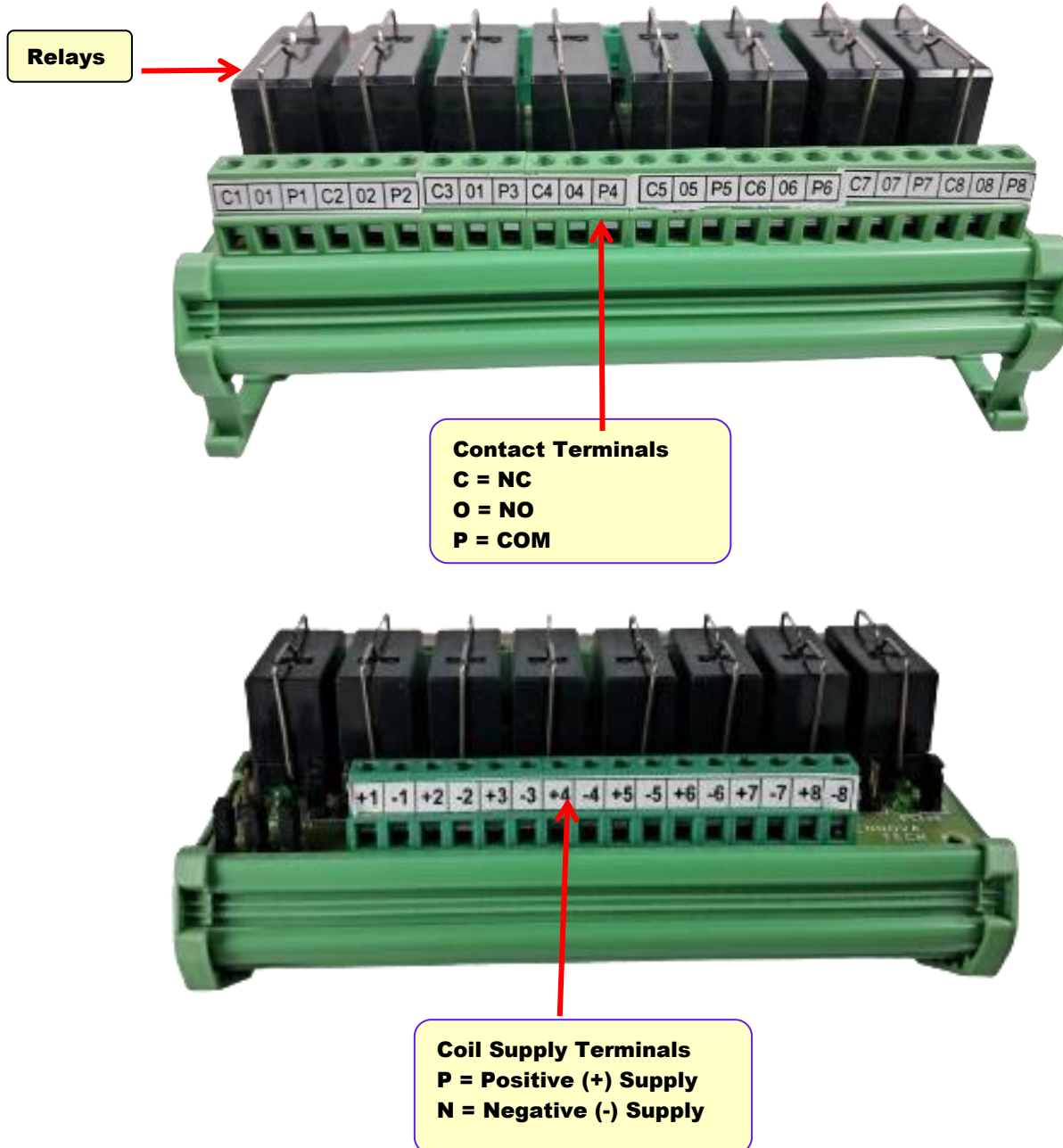


Connect this contact Terminals to control loads (e.g lights, contractors)

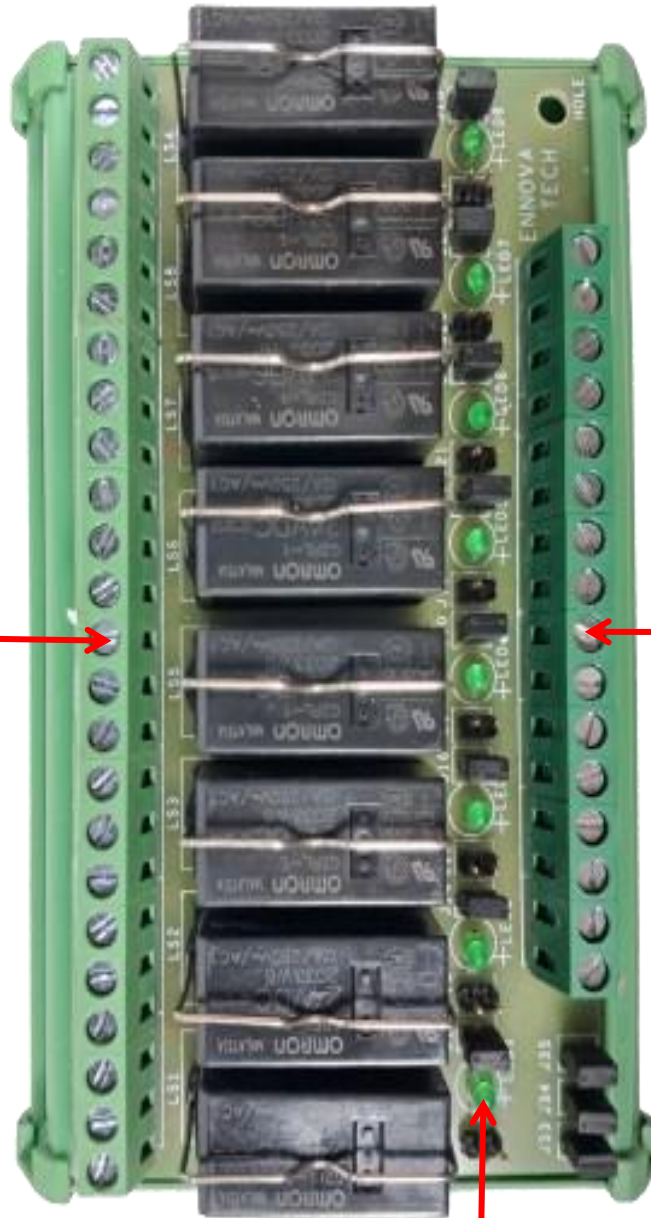
Connect these relay coil Terminals to the control supplies such as PLC

LED Indicator

8 CHANNEL 24V DC RELAY CARD



- Apply the appropriate control signal (typically a low-voltage DC signal) to the input terminals to energize the relay coil.
- The relay contacts will switch state (open or closed) in response to the control signal, allowing or interrupting the flow of current to the connected load.



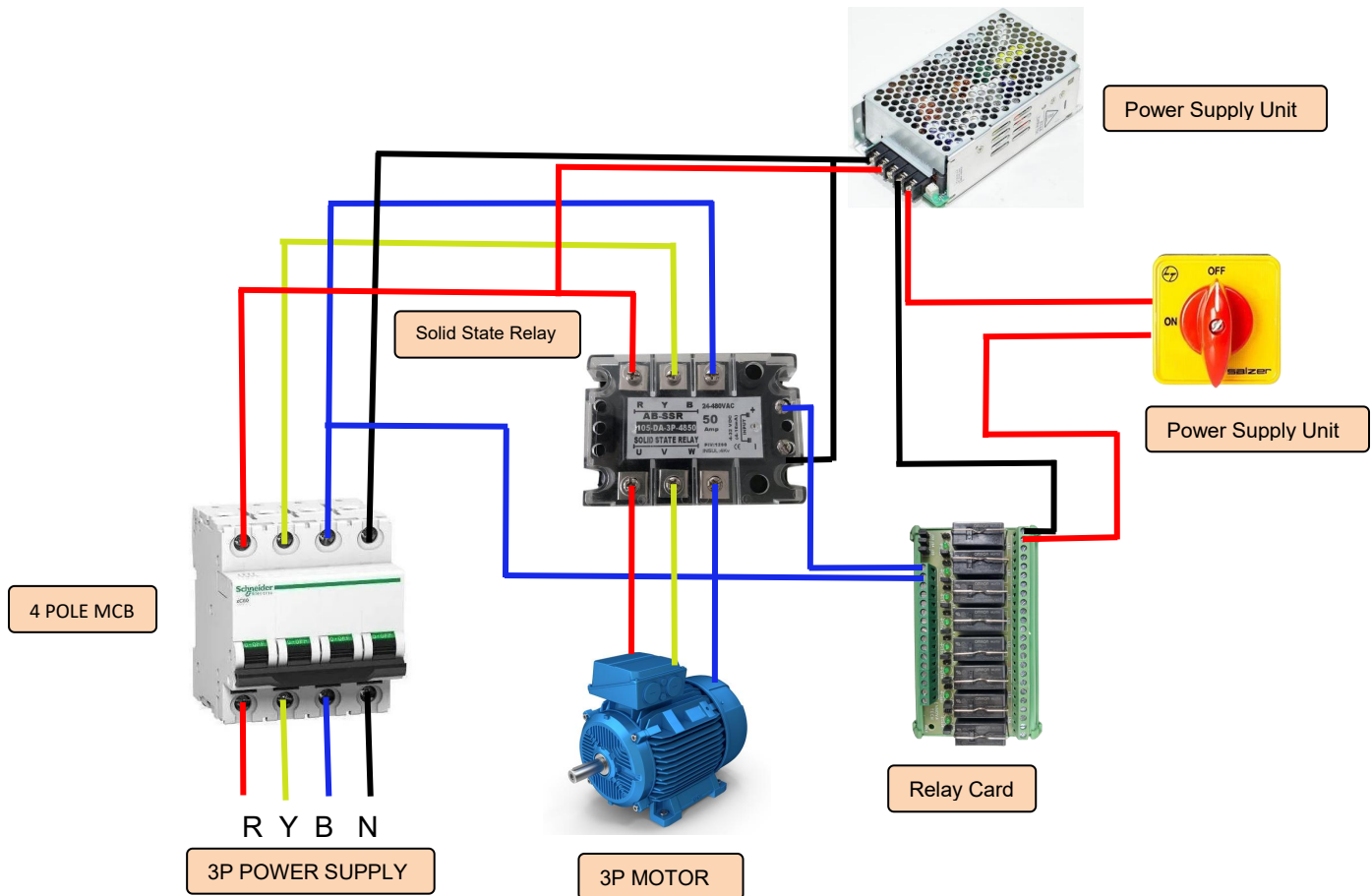
**Connect this contact
Terminals to control
loads (e.g lights,
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**Connect these relay
coil Terminals to the
control supplies such
as PLC**

LED Indicator

RELAY CARD WIRING DIAGRAM AND CONNECTION :

- Here, in the below wiring diagram, we have used a 24V DC-controlled 8-Channel Relay Card to control a Motor. In practice, there may be no application of this wiring diagram it is just designed to understand the connection procedure and working principle of a Relay Card.



- Here, you can see we have connected the motor with the power source through an SSR(solid state relay). And, we have connected the control terminals of the SSR to a 230V AC power source through the relay Card(Common and NO terminals). The coil terminals of the Relay card are connected to a 24V DC Power source(SMPS) through an On/Off Selector Switch.

- So when we turn on the selector switch the 24V DC supply will applied to the relay card and it makes its NO contact into NC and the SSR will get the 230V AC control voltage. Once the SSR gets the control voltage it will conduct the main power supply from the power source to the motor. Now, you may understand how the relay card works with a low-voltage power supply to control a high-voltage system.

SAFETY PRECAUTIONS :

- Always disconnect power before making any connections to the relay card.
- Ensure proper insulation and protection against short circuits.
- Use appropriate wire gauge and connectors for reliable connections.
- Adhere to local electrical codes and regulations.

MAINTENANCE:

- Periodically inspect the relay card and associated wiring for signs of damage or wear.
- Clean the relay card and terminals as needed using a dry, soft cloth.
- Ensure that all connections are secure and tight to prevent intermittent operation or electrical hazards.

TROUBLESHOOTING :

- If the relay card fails to operate as expected, check the input control signal and power supply connections for proper voltage and polarity.
- Verify that the load connected to the relay card does not exceed the rated current and voltage specifications.
- If issues persist, consult the troubleshooting section of this manual or contact ennova technology's technical support for assistance.

COMPLIANCE AND WARRANTY :

- The Ennova technology's Relay Card complies with relevant industry standards and regulations.
- This product is backed by a limited warranty against 6 months defects in materials and workmanship.