

# Power Supply, Conversion, & Relay Diagram

Switch 24VAC to DC

# Power Supply & Conversion

The Sealevel is a DC powered and signaled device. Do not connect an AC power supply or AC signals directly to the Sealevel inputs. This will cause device failure.

However, AC signals can be passed through the relay outputs. These are single pole/double throw (SPDT) dry contact relays that can pass through whatever is connected to the output common terminal.

The Sealevel can be powered by:

- 1) Your DC power source, or
- 2) Your 24VAC power source using the supplied 24VAC to 24VDC converter, or
- 3) A traditional AC to DC power supply.

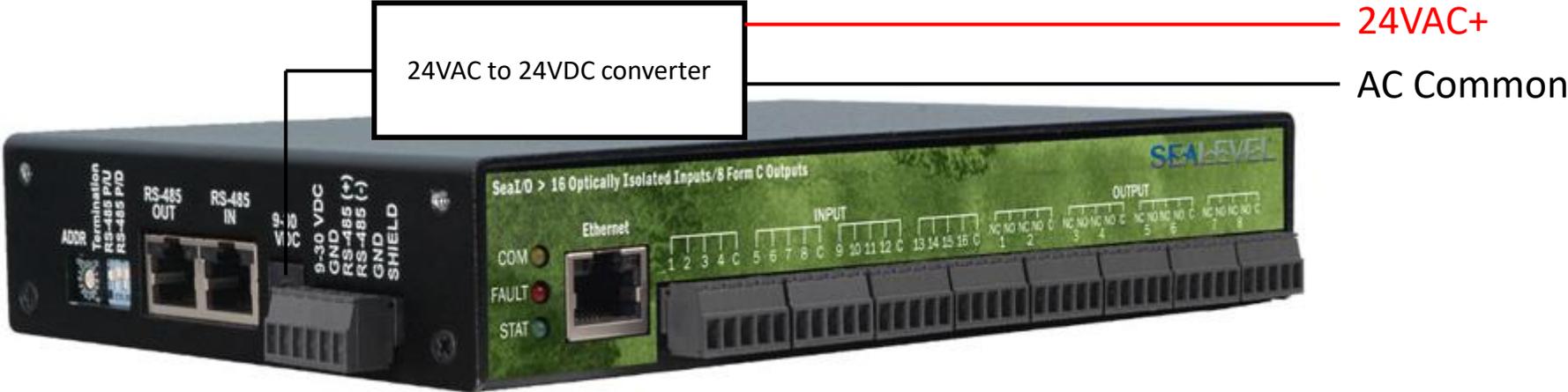
# Option 1 – Your DC power source

Connect your DC power source to the Sealevel



Option 2 – Your 24VAC power source using the supplied 24VAC to 24VDC converter

Connect your 24VAC power source using the supplied 24VAC to 24VDC converter plugged into the 9-30VDC female jack.



Option 3 – A traditional AC to DC power supply.



<https://www.sealevel.com/product/tr156-seai-o-100-240-vac-to-24vdc-1a-international-wall-mount-power-supply/>

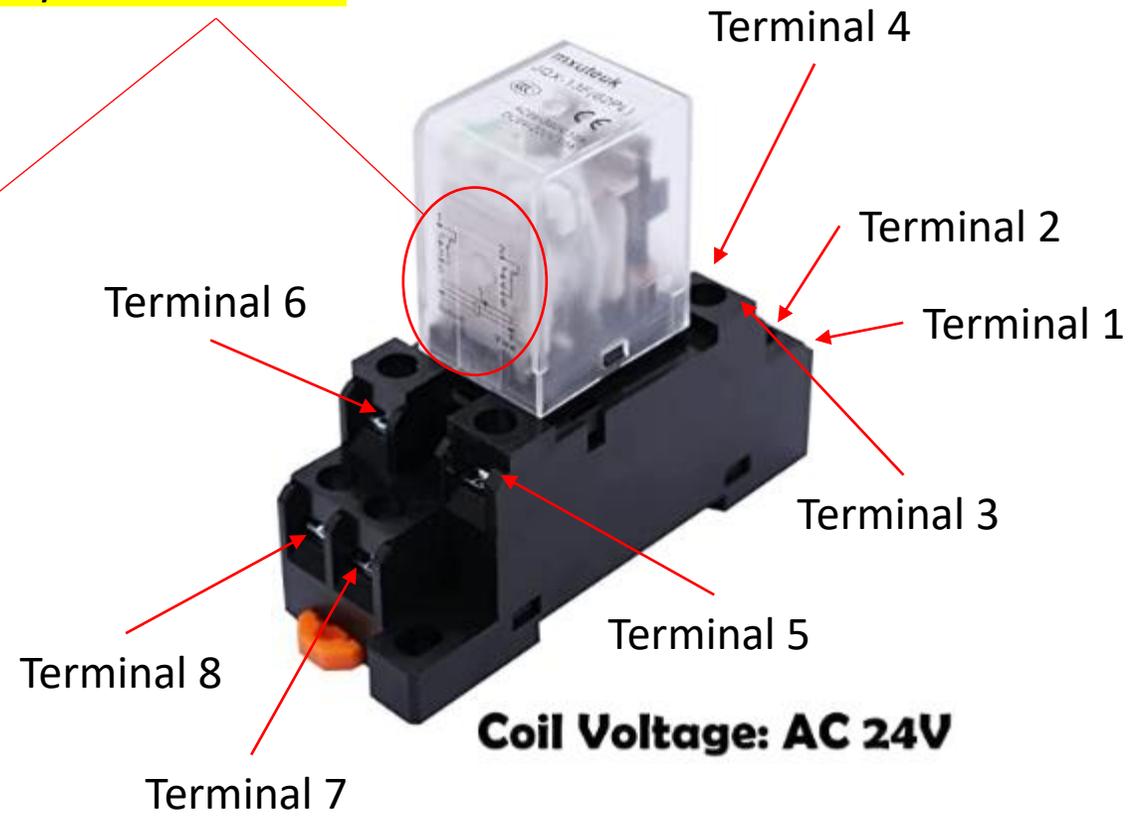
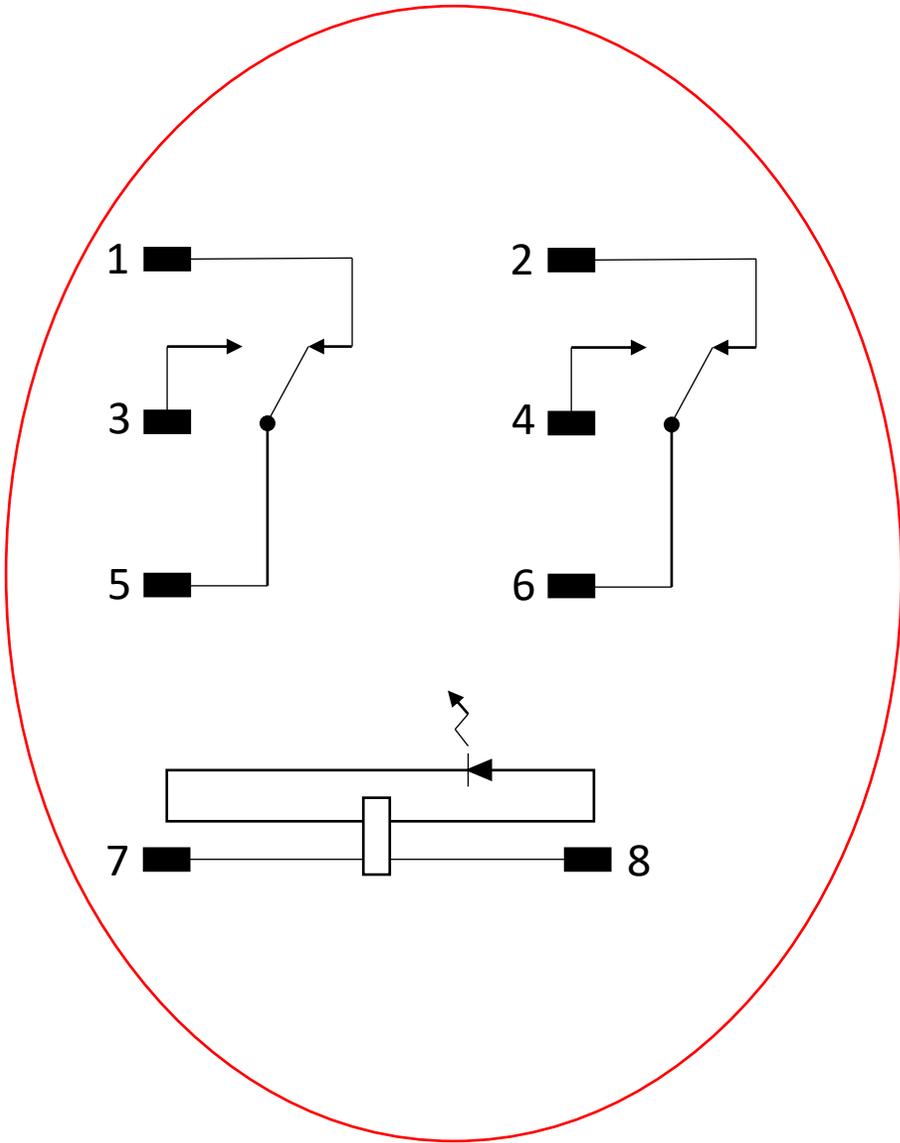
# Sample Relay Diagram

# mxuteuk 2pcs JQX-13FL AC 24V Coil 8 Pin 10A DPDT LED Indicator Electromagnetic Power Relay, with Base, with DIN Rail Slotted Aluminum

- Product Name: Electromagnetic Power Relay; Relay Model : JQX-13FL; Type : DPDT(2NO 2NC); Number of Terminals : 8 ; Socket Model : PTF08A-E
- Coil Voltage: AC 24V; Contact Capacity: 10A 250VAC/10A 28VDC;

[https://www.amazon.com/dp/B07R4RQNGX/ref=cm\\_sw\\_r\\_apai\\_TVVVS246Y7CWBS1MJ856\\_0?encoding=UTF8&psc=1](https://www.amazon.com/dp/B07R4RQNGX/ref=cm_sw_r_apai_TVVVS246Y7CWBS1MJ856_0?encoding=UTF8&psc=1)

Note: the relay diagram printed on the relay is flipped from the actual physical terminals. **Be sure to connect to the correct physical terminals.**



**Coil Voltage: AC 24V**

# DC Signaling the I/O Interface (Sealevel)

If your car wash equipment uses a 24VAC source, you can interface to the I/O Interface (Sealevel) unit with a relay.

The following information shows an example of changing a 24VAC photo eye signal from the car wash equipment to a 24VDC signal and connecting to Sealevel input #5 by using a relay.

## **Relay coil control:**

Connect your 24VAC+ signal to screw terminal #8

Connect your AC common wire to screw terminal #7

## **Relay Contacts for Sealevel signal:**

Connect screw terminal #6 to a 24VDC+ source that is always on. If you use the 9-30VDC source on the Sealevel, the signal will be 9-30VDC as shown in the following diagram. Hence, if you used a 12VDC power source to supply the Sealevel, the 9-30VDC signal would be 12VDC.

Connect screw terminal #4 to Sealevel input #5. This is the first terminal that is on the second block from the front left on the Sealevel. The common terminal for that block (last terminal on the right on that block labeled "C") should already be connected to a DC negative source.

Example of changing a 24VAC photo eye signal from the car wash equipment to a 9-30VDC+ signal and connecting to Sealevel input #5 by using a relay.

