0-10V to Contact Closure Interface

PNL-GTWY-010V-1STGCC-120V-NEMA1

The Nuvospec 0-10V to Contact Closure Interface converts a standard 0-10V analog dimming signal into a single dry contact relay output with a field-adjustable voltage setpoint. When the input signal exceeds the setpoint, the relay closes; when it drops below, the relay opens. Ideal for integrating 0-10V lighting control systems with equipment that requires simple on/off contact closure signaling. Just connect AC power, 0-10V control wiring, and the contact output — no programming or external controllers required.

KEY FEATURES

- ✓ Converts 0-10V analog signal to a single SPDT dry contact relay output
- ✓ Field-adjustable voltage setpoint via precision multiturn potentiometer
- ✓ Red LED status indicator shows relay state at a glance
- ✓ DIN-rail mounted components including logic module and 24VDC power supply
- ✓ Compact 6x6x4 inch NEMA 1 steel enclosure with knockouts and screw cover
- ✓ Terminal blocks for AC line in, 0-10V control, and relay contact output
- ✓ Compatible with both current sourcing and sinking 0-10V controllers
- ✓ Plug-and-play installation — no software or external controller required
- ✓ UL Listed for electrical code compliance

SPECIFICATIONS

Input Signal	0-10VDC analog (sink or source), 100kΩ input impedance
Setpoint	Field-adjustable on/off voltage threshold via precision multiturn potentiometer
Outputs	1x SPDT dry contact relay
Relay Ratings	2A at 24VDC / 0.5A at 120VAC resistive
Power Supply	120VAC input to 24VDC output, 10W Class 2
Enclosure	6H x 6W x 4D inches, steel, screw cover, surface mount
Enclosure Rating	NEMA 1 (indoor)
Operating Temperature	-4°F to +122°F (-20°C to +50°C)
Compliance	UL Listed

APPLICATION EXAMPLES

- Building Management System (BMS) integration — trigger BMS binary inputs from 0-10V zones
- Contactor coil control — energize a contactor or relay coil based on dimming signal level
- Equipment enable/disable — turn auxiliary loads on or off in sync with lighting zones
- Indicator or pilot light activation — signal zone status to remote locations
- Exhaust fan or ventilation interlock — activate equipment when lighting is above threshold
- Third-party interface bridging — adapt 0-10V systems to equipment requiring contact closure inputs

ORDERING INFORMATION

Part Number	Description
PNL-GTWY-010V-1STGCC-120V-NEMA1	0-10V to Contact Closure Interface, 1x SPDT relay, adjustable setpoint, 120VAC, NEMA 1

UL Listed

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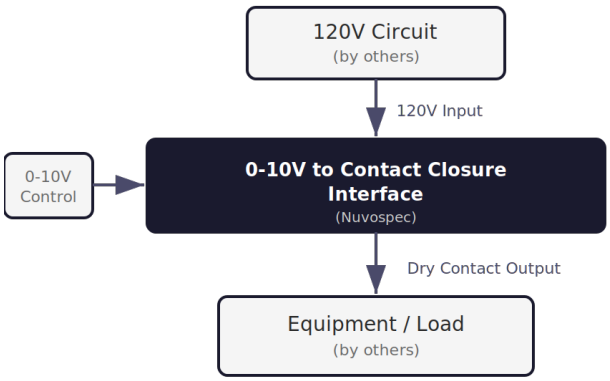
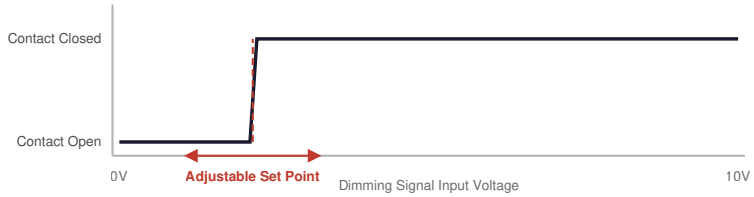
SYSTEM DIAGRAM



SETPOINT OPERATION

The on/off setpoint is field-adjustable using the precision multiturn potentiometer on the control board. When the 0-10V input signal rises above the setpoint voltage, the relay closes (contact output energizes). When the signal drops below the setpoint, the relay opens. The red LED on the control board illuminates when the relay is in the closed state.



TUNING / SETUP INSTRUCTIONS

1. Set the 0-10V control signal to its minimum output (typically 0%). Do not energize the load circuit yet.
2. Energize the 120VAC power source to the interface enclosure.
3. The relay should be in the open state and the red LED on the control board should **not** be illuminated.
4. If the red LED is illuminated, turn the brass setpoint screw on the blue potentiometer **counterclockwise** with a small flat-head screwdriver until the LED turns off. The potentiometer is a multiturn precision device — multiple turns may be needed.
5. Ramp the 0-10V dimming signal upward. The relay should close and the red LED should illuminate as the signal passes through the setpoint.
6. Ramp the signal back down to 0%. The relay should open and the LED should turn off just before reaching 0%.
7. Adjust the setpoint as needed: turn **clockwise** to increase the threshold, **counterclockwise** to decrease. Avoid very slow adjustments near the transition point, which may cause relay chatter.

DIMENSIONAL DETAILS

Height:	6.00 in (152 mm)
Width:	6.00 in (152 mm)
Depth:	4.00 in (102 mm)
Mounting:	Surface mount, 4x screw holes (0.25 in dia.)
Knockouts:	Multiple 0.41 in dia. on bottom face
Weight:	Approx. 3 lbs (1.4 kg)

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