

WR-6172-xx - Mechanical Latching Relay 2-Pole HID relay



Project Name: _____
Part Numbers: _____ Date: _____

Features

- Mechanical Latching Relays
- Status Indicator
- Manual Override Lever
- Option for Auxiliary Contact Relay

The Most Reliable Relays for Modern Lighting Solutions

The core of our panel systems is the HID (High In-Rush Duty) relay. These Universal Douglas relays have been the industry standard for decades because durable design provides reliable control for lighting and plugs loads and makes safety a priority. These mechanically latching relays require only a momentary pulse to change the state and requires **no energy** to maintain the state. They are available with an auxiliary contact output for low voltage status feedback to systems by others.

High “in-rush” currents can be 50 to 100 times the normal operating current and will damage any connected switching component not designed for that current. Our relays are rigorously tested, and UL certified to withstand excess in-rush currents.

Typical Applications: upto 20A in a 2-Phase lighting load ON/OFF switching

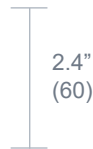
PART NUMBER	DESCRIPTION
WR-6172	2-pole HID relay 20A: 120/240/277/347/480VAC
WR-6172-382	2-pole HID relay (auxiliary contact) 20A: 120/240/277/347/480VAC, Auxiliary contacts: 1A, 125VAC

Dimensions

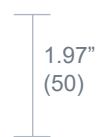
Inches [mm]

Relays mount to a snap rail built into Douglas PWEx series relay panels

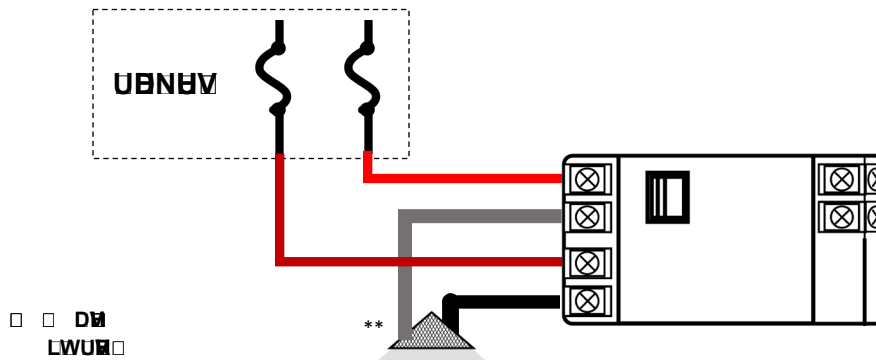
WR-6172
WR-6172-382



WR-6172
WR-6172-282



Load Wiring Diagram

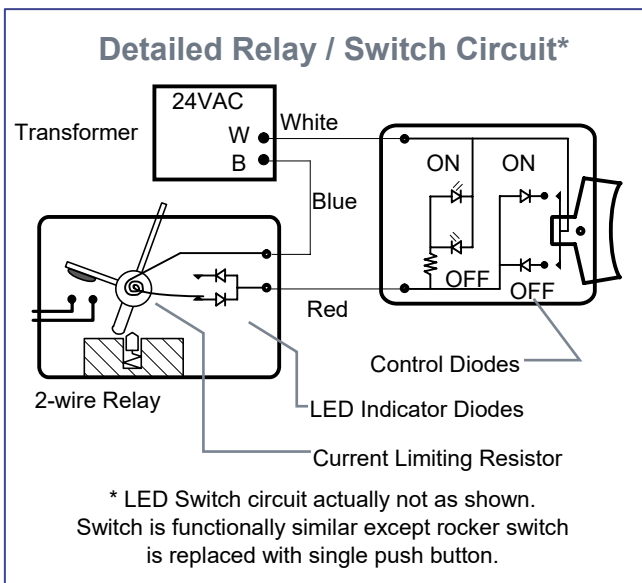
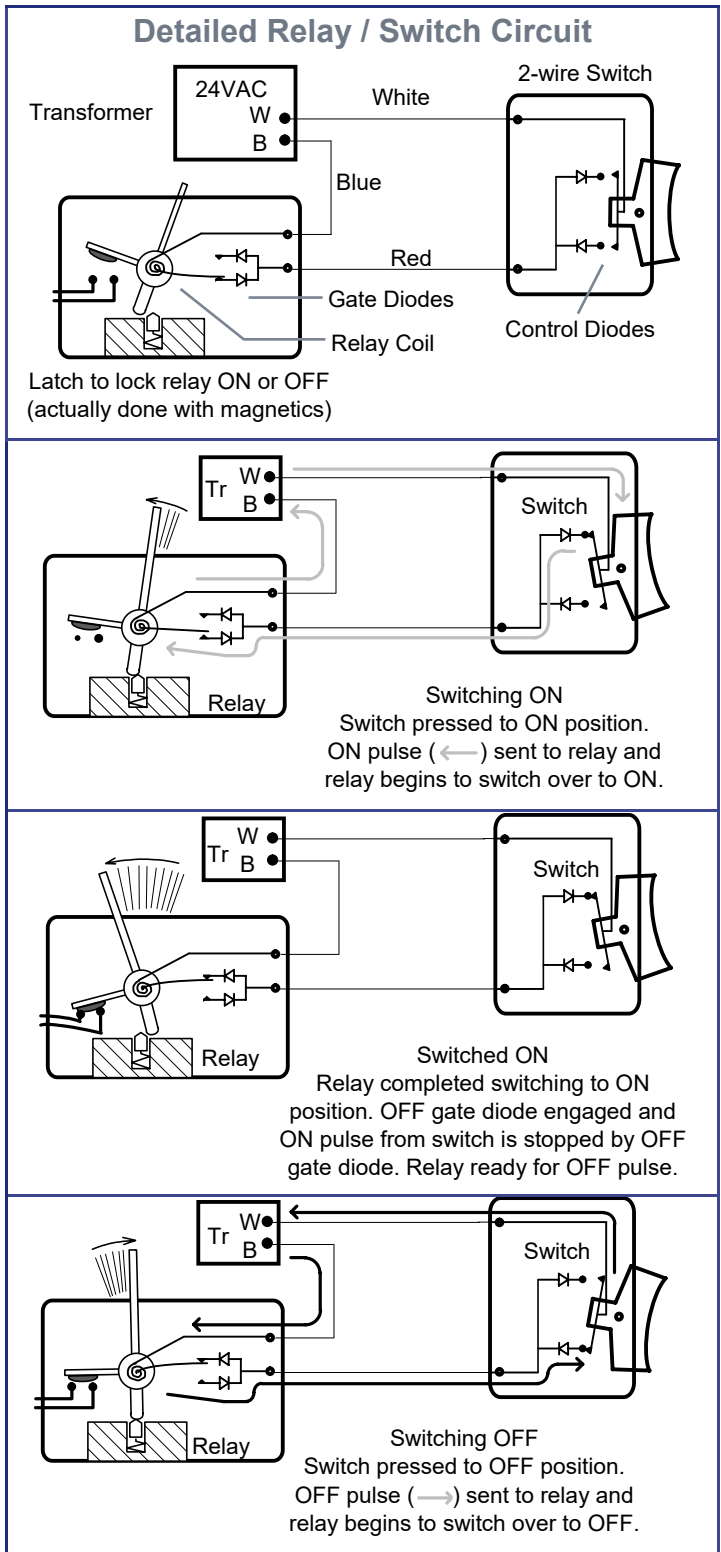


RELAY TECHNOLOGY

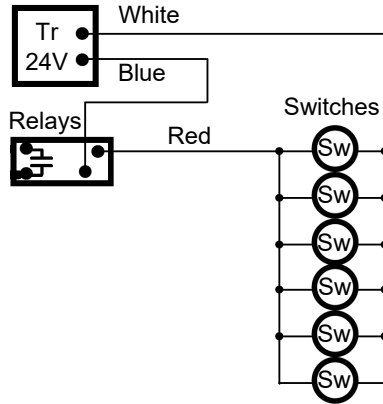
Panasonic relays utilize an ingenious control method that permits simple and minimal wiring. All functions for low voltage control: ON, OFF, indication and location are provided with only a 2-wire connection of which one is often a common.

OPERATION

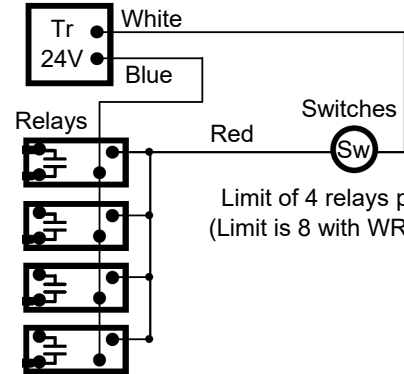
- A negative pulse turns the relay ON and a positive pulse turns it OFF. Using a diode, an AC signal can be rectified to turn the relay either ON or OFF. Douglas switches have 2 diodes built into the switch to provide the ON and OFF signals.
- The relay has 2 similar diodes built inside that are in series with the relay coil. The diodes in the relay act as gates for the switch signal.
- To turn the relay ON or OFF, the rocker switch completes the circuit by selecting the ON or OFF diode. If the diode selected is in the same direction as the gate diode in the relay, the relay will switch. If the gate diode is not in the correct direction, then nothing will happen since the relay is already in the correct state for the action selected by the switch. When the switch is released, a spring returns it to the central neutral position.
- Indication (ON state) and location (OFF state) are obtained by utilizing LED diodes built into the switch. Only the LED which is connected in the same direction as the gate diode in the relay will light. Although the LED current passes through the relay coil, it is not large enough to cause the relay to trip. However, there is a limit: the maximum number of LED switches that can be connected to the same relay is 6.
- For additional convenience (especially during installation) all standard models have a manual control lever and indicator permitting a nonelectrical method of switching and status check at the panel.



LOW VOLTAGE CONNECTIONS



Limit of 6 switches per relay.



Limit of 4 relays per switch.
(Limit is 8 with WR-8001 Sw.)

Technical Details

CONTROL INPUT	<ul style="list-style-type: none"> Class 2 circuit 0.350A (350mA) 24V reversible polarity pulse 	<ul style="list-style-type: none"> Input terminals: #16 - #20AWG Output terminals: #10 - #14AWG
LISTINGS	UL <ul style="list-style-type: none"> 20A 480VAC General Use 2400W 120VAC Tungsten 20A 480VAC Ballast 	CSA <ul style="list-style-type: none"> 20A 347VAC General Use 2400W 120VAC Tungsten 20A 347VAC Ballast
OUTPUT	<ul style="list-style-type: none"> 60,000 operations with 20A load, 2000A inrush @20 times / min. switch speed 	
ENVIRONMENT	<ul style="list-style-type: none"> Indoors, stationary, non-vibrating, non-corrosive atmosphere and non-condensing humidity Ambient temperature: 15°F to 120°F (-10°C to 50°C) 	<ul style="list-style-type: none"> Note: 2-pole relay (WR-6172) has the same input ratings as the 1-pole relay. Use this feature to double the load switching capacity of a low voltage switch.
WARRANTY	<ul style="list-style-type: none"> Standard 5-years 	