

# Evolution

CONTROLS INC.

EVO™RLSW

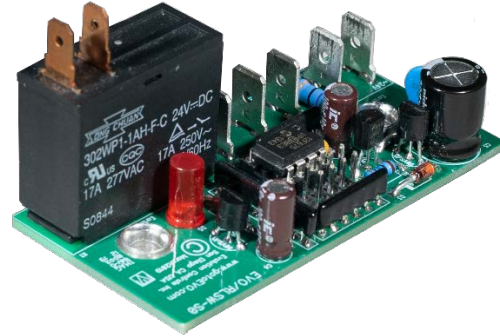
Relay Switch

PWM or 0-10V Signal

## Application

The EVO/RLSW Relay Switch is a signal sensitive dry contact relay. It senses the PWM or 0-10V signal to automatically switch equipment on/off at selected signal levels for a variety of HVAC applications.

The EVO/RLSW allows building automation systems to switch off power to equipment, depending on signal level.



EVO/RLSW

## Specifications

Power ~24V  $\pm$ 20% 50/60 Hz NEC Class 2 <sup>USA</sup>  
+24V IEC Class II  
2.0 VA, 1.0 W

Inputs PWM  
or 0-10V

Output Relay with Form A contact <sup>1</sup>  
17A ~277V

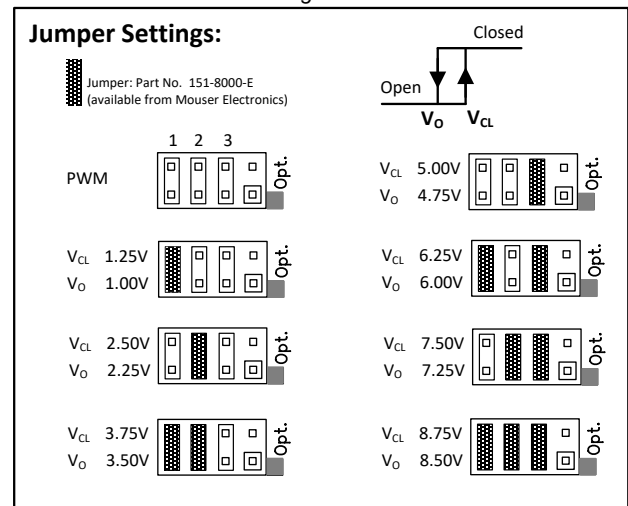
Thermal Stability >0.01%/°F (>0.018%/°C)

Operating Environment 0°F to 130°F (-18°C to 55°C)  
10%-80% rh

Connections Inputs: 0.250 in. / 6.35 mm Tabs  
Relay: 0.187 in. / 4.75 mm Tabs

**0-10V** input is selected when jumpers are installed per figure 1 below. The EVO/RLSW closes the relay contact when the input voltage is greater than the selected  $V_{CL}$ . The relay contact is open when the input voltage is lower than the corresponding  $V_O$ .

Figure 1



## Ordering

EVO/RLSW

Please use our model number as your part number, or include in your order description.

## Operation

The EVO/RLSW is a dual input relay switch. Either PWM or 0-10V input can be selected.

**PWM** input is selected when no jumpers are installed. The EVO/RLSW closes the relay contact when the PWM signal is detected. The relay contact is open when the PWM signal is missing.

Note: The pilot pulse for EC motor control must be disabled since it will keep the relay contact closed even when the motor is not running.

<sup>1</sup> Form A = Normally Open Contact

San Diego, CA USA

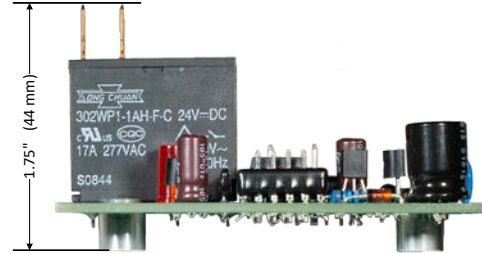
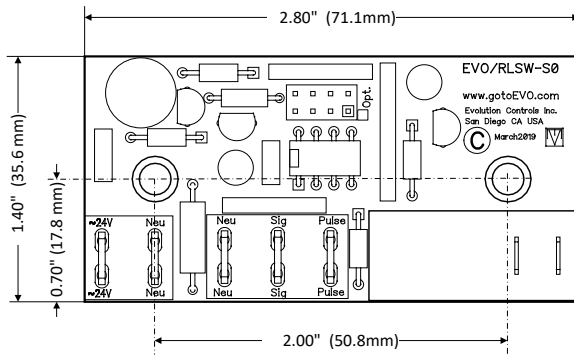
<http://www.gotoEVO.com>

Made in USA

Voice 858.748-7359

Fax 858.679-3365

## Dimensions



## Wiring

Power the EVO/RLSW with a ~24V NEC Class 2<sup>USA</sup> power supply. DC supplies from +20V to +30V may also be used to power the control. Observe all code agency requirements and follow all safety practices regarding low voltage power supplies and circuits to insure a safe, reliable installation. Be sure to use removable push on connectors. Locking push on connectors required for high voltage motor connections are not required for low voltage connections to the EVO/RLSW. Removing locking push on connectors often destroys the EVO/RLSW when the push on must be removed to correct wiring or troubleshoot problems.

Ground one leg of the ~24V power source at the transformer. Then connect it to the EVO/RLSW's neutral connection. Connect the other leg of the ~24V power source to the EVO/RLSW's ~24V connection.

Connect the input wires from the controller to the EVO/RLSW using 18-22-gauge wire with 0.250 in. / 6.35 mm non-locking push on connector. Connect the PWM signal to the "PWM" terminal or the 0-10V signal to the "Sig" terminal.

Connect the EVO/RLSW relay contacts to the equipment using 16-18-gauge wire with 0.187 in. / 4.75 mm push on connector. Some applications may need locking push on connectors for the relay connections.

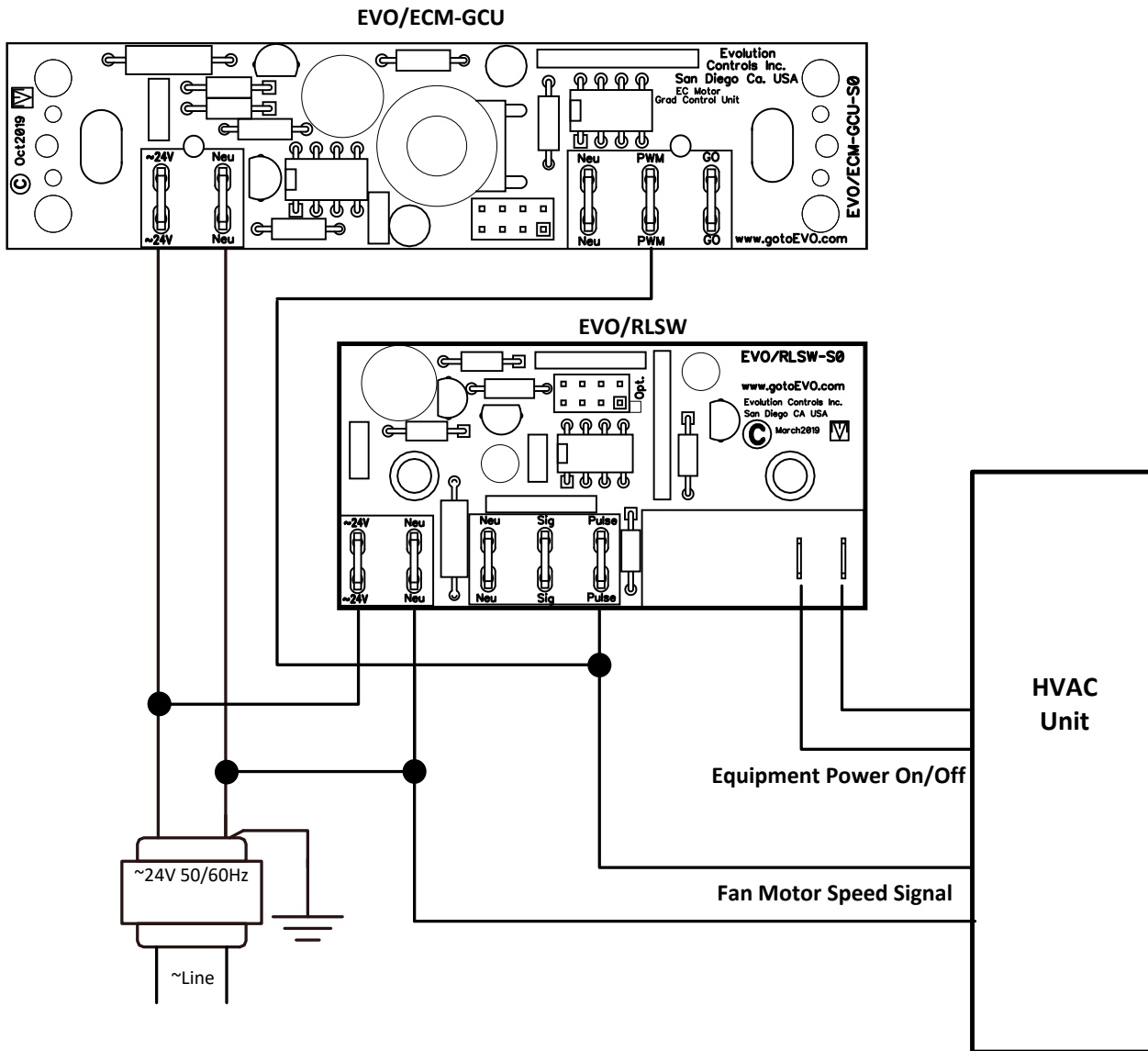
Do not route or bundle the control cable with motor power or other high voltage wiring.

## Mounting

Mount the control inside a metal control cabinet or enclosure. Fasten the control mounting posts to an earthed metal surface. Mounting posts are 3/32" / 2.38 mm I.D. Use #8 flat or oval head screws or aluminum blind rivets through the two metallic mounting posts. The countersink taper forces a good earth connection between the mounting post and the PC board.



EVO/ECM-GCU with the EVO/RLSW Application:



EVO/10Y-4Spd with the EVO/RLSW Application:

