

PWR-DRV1

Universal Power Driver

200/300/400 V
300 mA/500 mA



Product Highlights

Can operate from rectified AC or DC power source

- 200, 300, and 400 V versions
- Drives up to 50 W loads from rectified 120 VAC input

Accepts inputs from mechanical switches, digital logic (TTL or CMOS), or analog sensors

- Can pulse on or off
- Can have output follow input (High Off/Low On mode)
- Threshold detects an analog signal

Supplies its own low voltage power for control circuitry

- Eliminates an external power supply

Output power can be varied

- Can operate low voltage loads from high voltage
- Reduces power consumed by the load

Measures current without external voltage drops

- Detects current is flow
- Can be used to detect overcurrent (short circuit)
- Comparator output can turn on an LED indicator

Description

The Power Integrations PWR-DRV1 relay/solenoid driver is a cost effective interface between control electronics and high voltage loads such as displays, relays and solenoids. It accepts analog or digital inputs, while operating from rectified AC or DC.

The PWR-DRV1 is controlled by the ON and OFF inputs, which can be driven by pulses or continuous signals. It is capable of accepting inputs from mechanical switches, analog signals, or digital logic. The output is an N-channel MOSFET power transistor with a output blocking capability of up to 400V. This provides an excellent safety margin when operating from rectified 120 Volts AC.

The PWR-DRV1 derives power from the high-voltage rail using an on-chip Zener diode. This eliminates the need for an external power supply for the low voltage control section.

The PWR-DRV1 is available in both 8- and 16-Pin plastic DIP packages.

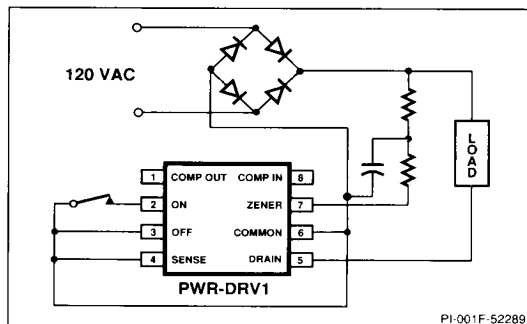


Figure 1. Typical Application.

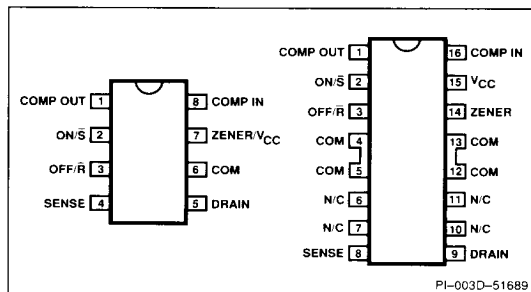


Figure 2. Pin Configurations.

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ORDERING INFORMATION

PART NUMBER	PACKAGE	OUTPUT VOLTAGE
PWR-DRV1BNC1	16-pin PWR PDIP	200 V
PWR-DRV1BNC2	16-pin PWR PDIP	300 V
PWR-DRV1BNC3	16-pin PWR PDIP	400 V
PWR-DRV1PFC1	8-pin PDIP	200 V
PWR-DRV1PFC2	8-pin PDIP	300 V
PWR-DRV1PFC3	8-pin PDIP	400 V



Pin Functional Description

(Pin Number in Parenthesis is for 16-Pin Version)

Pin 1(1):
COMPOUT provides an output capable of driving a LED, or can be used to drive the ON and OFF controls based on the comparator input.

Pin 2(2):
ON controls the output switch. When pulled to COM, it latches the switch.

Pin 3(3):
OFF controls the output switch. When pulled to COM, it latches the switch OFF.

Pin 4(8):
SENSE provides a current mirror output proportional (1:50) to the DRAIN current to be used for overcurrent protection, current indication, or PWM operation.

Pin 5(9):
 Open **DRAIN** coil driver output.

Pin 6(4,5,12,13):
COMMON terminal for logic and output switch (Ground).

Pin (14):
 Internal **ZENER** diode which generates the logic supply for the device from a high-voltage input. An external resistor is required to set the zener current, and a capacitor is required if the source is an AC input.

Pin 7(15):
 5V V_{CC} input which generates the logic supply for the device. In the 8-pin version, this is internally connected to the ZENER diode (see Pin (14)).

Pin 8(16):
 Non-inverting **COMPIN** which can be used for sensor inputs, overcurrent protection, or basic PWM control. The inverting input is tied to a resistor network that sets the comparator threshold at 150 mV. The comparator has a built-in ± 50 mV hysteresis.

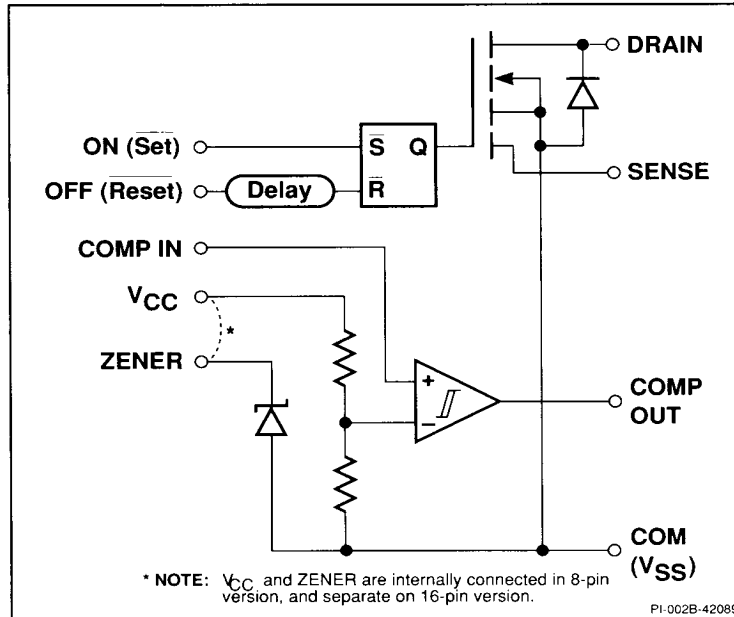


Figure 3. Functional Block Diagram of the PWR-DRV1.

**FOR A MORE DETAILED SPECIFICATION ON THIS PRODUCT
 PLEASE CONTACT YOUR LOCAL POWER INTEGRATIONS SALES OFFICE.**

