

S400

AC / DC Line Monitor



DESCRIPTION

The S400 is a highly advanced optically isolated power monitor in an 8-pin dual-in-line epoxy package. It plugs into standard IC sockets as used in PC boards. The input is composed of back-to-back LEDs that can be connected in series with a limiting resistor across either AC or DC power loads to monitor their status. The output is a normally open MOS transistor capable of switching a 1 Amp pulsed load or up to 200mA of continuous load current.

FEATURES

- Monitor for AC or DC lines and loads
- Replacement for AC and DC input modules
- Feedback for "Closed Loop" systems
- Sensor for drop outs, hold overs, partial voltages, and zero-volt crossing

APPLICATIONS

- Long term reliability
- High Input / Output Isolation Voltage (up to 3750V_{rms})
- Adjustable delay on drop out
- 200mA continuous load rating
- Standard 8-pin DIP package
- Tape & Reel option available

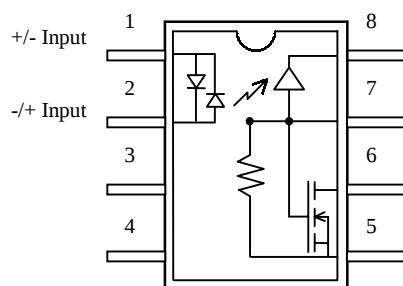
OPTIONS / SUFFIXES

- -H High Output Isolation
- -S Surface Mount Option
- -TR Tape and Reel

MAXIMUM RATINGS

PARAMETER	UNIT	MIN	TYP	MAX
Storage Temperature	C	- 55°	-	125°
Operating Temperature	C	- 40°	-	85°
Continuous Input Current	mA	-	-	40
Transient Input Current	mA	-	-	400
Reverse Input Control Voltage	V	6.0	-	-
Output Voltage	V	-	-	60
Output Power Dissipation	mW	-	-	500

SCHEMATIC DIAGRAM



APPROVALS

- UL FILE # E90096

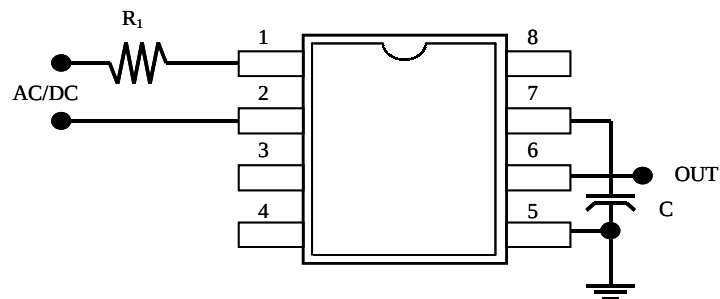
ELECTRICAL CHARACTERISTICS - 25°C

PARAMETER	UNIT	MIN	TYP	MAX	TEST CONDITIONS
INPUT SPECIFICATIONS					
LED Forward Voltage	V	-	1.2	1.5	$I_f = 10\text{mA}$
LED Reverse Voltage	V	6.0	12	-	$I_r = 10\mu\text{A}$
Turn-On Current	mA	-	2.0	5.0	-
Turn-Off Current	mA	-	0.5	-	-
OUTPUT SPECIFICATIONS					
Supply Voltage	V	4.5	-	30	$I_o = 10\mu\text{A}$
Supply Current	μA	-	-	10	$V_{cc} = 5.0\text{V}$
Output Voltage Drop:					
$I_{\text{sink}} = 10\text{mA}$	V	-	-	0.12	-
$I_{\text{sink}} = 100\text{mA}$	V	-	-	0.8	-
$I_{\text{sink}} = 200\text{mA}$	V	-	-	2.0	-
COUPLED SPECIFICATIONS					
Isolation Voltage -H Suffix	V	2500 3750	-	-	$T = 1 \text{ Minute}$
Isolation Resistance	Ω	10^{11}	-	-	-
Coupled Capacitance	pF	-	6.0	-	-

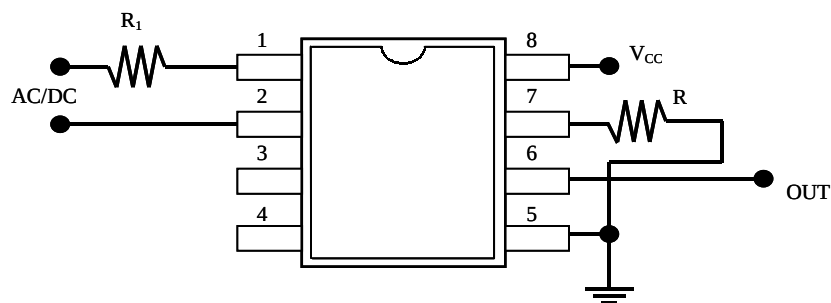
S400

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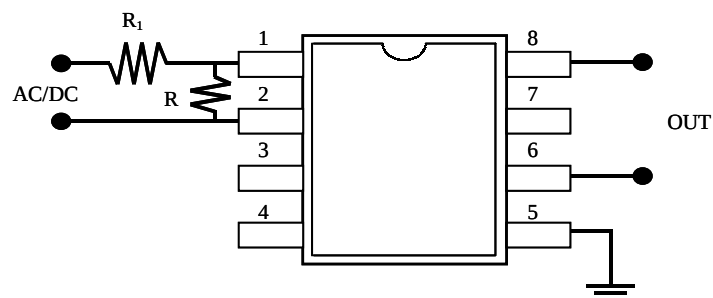
TYPICAL APPLICATIONS



Using an External Capacitor (C_o) to obtain Delay on Dropout



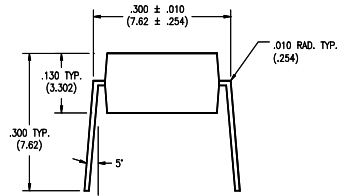
Using an External Resistor (R_o) to detect Zero-Volt Crossing



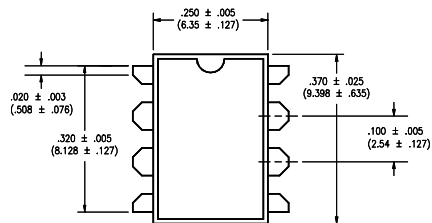
Using an Input Resistor (R_1) to detect Input Voltage Variation

MECHANICAL DIMENSIONS

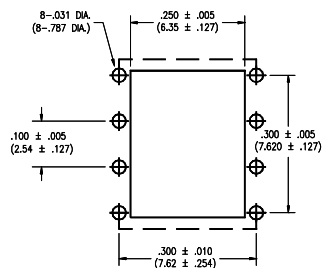
8 PIN DUAL IN-LINE PACKAGE



END VIEW

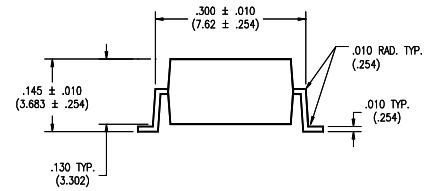


TOP VIEW

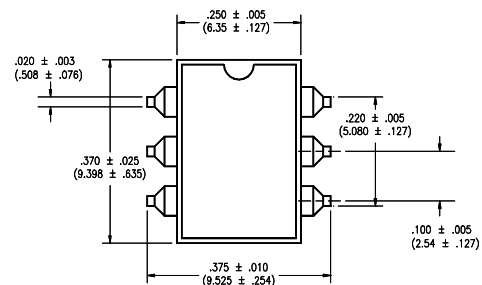


BOTTOM VIEW /
BOARD PATTERN

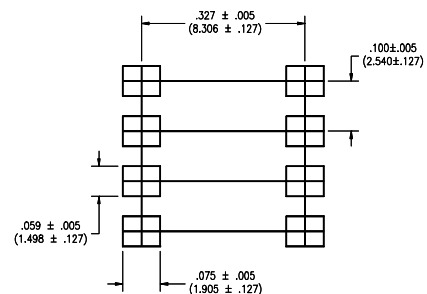
8 PIN SURFACE MOUNT DEVICE



END VIEW



TOP VIEW



BOTTOM VIEW /
BOARD PATTERN