

Features

- ▶ Digital signal processing
- ▶ On chip supply shunt regulator
- ▶ Low power consumption
- ▶ Differential PIR sensor input
- ▶ Excellent power supply rejection
- ▶ Insensitive to RF interference
- ▶ Inputs for sensitivity, on time and daylight sensor
- ▶ Outputs for relay and LED
- ▶ Instantaneous settling after power up
- ▶ Adaptive Zero Crossing Switching

Applications

- ▶ Mains powered motion sensor lights that require relay switching on zero crossing, common requirement for low cost relays and capacitive loads.

General Description

The E931.98 integrated circuit combines all required functions for a single chip Passive Infra-Red (PIR) motion sensor. Motion detection is signaled through the push-pull REL output. A digital input OEN enables REL output.

The load is switched during mains voltage zero crossing. The algorithm adapts to the relay type and mains frequency. A LED output indicates whenever the PIR Signal is above the selected threshold.

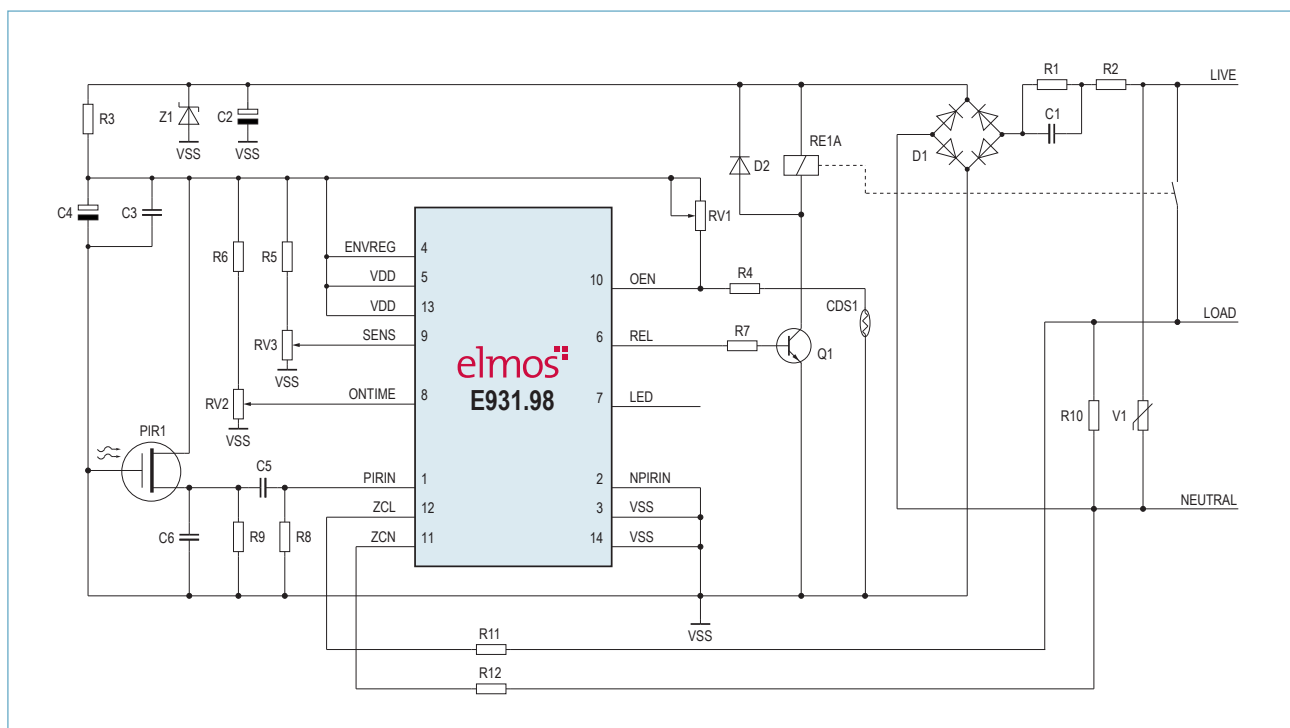
The E931.98 interfaces directly with up to two conventional PIR sensors via a high impedance differential input. The PIR signal is converted to a 15 bit digital value on chip.

The parameters for sensitivity and timing are set by connecting the corresponding inputs to DC voltages. The voltage levels on the inputs are converted to digital values with 7 bit resolution. All signal processing is performed digitally.

Ordering Information

Product ID	Op. Temp. Range	Package
E931.98	-25°C to +85°C	SOIC14N/TSSOP14

Typical Application Circuit



This document contains information on a pre-production product. Elmos Semiconductor AG reserves the right to change specifications and information herein without notice.

Elmos Support 12/2013

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