

E909.01 HALIOS® optical switch
 E910.41 Hall sensor- and contact monitor
 E910.84 PIR light controller
 E910.92 PIR motion detector
 E910.98 Hall sensor interface 4 x, par. out
 ▶ E910.99 PIR light controller for DC/AC
 E909.05 HALIOS® multi-purpose sensor

► PIR light controller for DC/AC applications

E910.99

FEATURES

- ▶ Fully integrated PIR motion detector
- ▶ Dimmer function
- ▶ Open drain high voltage relay output
- ▶ PWM output
- ▶ Suitable for DC and AC applications
- ▶ Adjustable soft on/off switching (fading)
- ▶ Digital signal processing
- ▶ Temperature compensation input
- ▶ On chip supply regulator with wide operating voltage range
- ▶ Low power consumption
- ▶ SO20w package

APPLICATION

- ▶ Automatic bedroom night lights
- ▶ High end lighting switches
- ▶ Outdoor and indoor motion sensor lights
- ▶ Battery operated lights
- ▶ Solar powered garden lights
- ▶ Energy saving

DESCRIPTION

The integrated circuit E910.99 combines all required functions for a single chip Passive Infra Red (PIR) light controller. It is designed for load switching with a transistor or a relay in 3 wire AC and DC systems.

A conventional PIR sensor connects directly to the PIR input. The pull-down resistor and DC decoupling circuitry are integrated on chip. The PIR signal is converted to a 15 bit digital value. All signal processing is performed digitally.

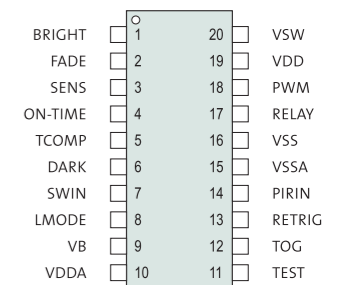
External potentiometers or resistors are used to set the operating parameters for sensitivity, on-time, brightness, fade, day-light sensor and environment temperature correction. The corresponding voltage levels are converted to digital values with a 4 bit resolution.

The features and the minimum amount of external components makes the E910.99 most suitable for all PIR sensor light applications.

PINNING

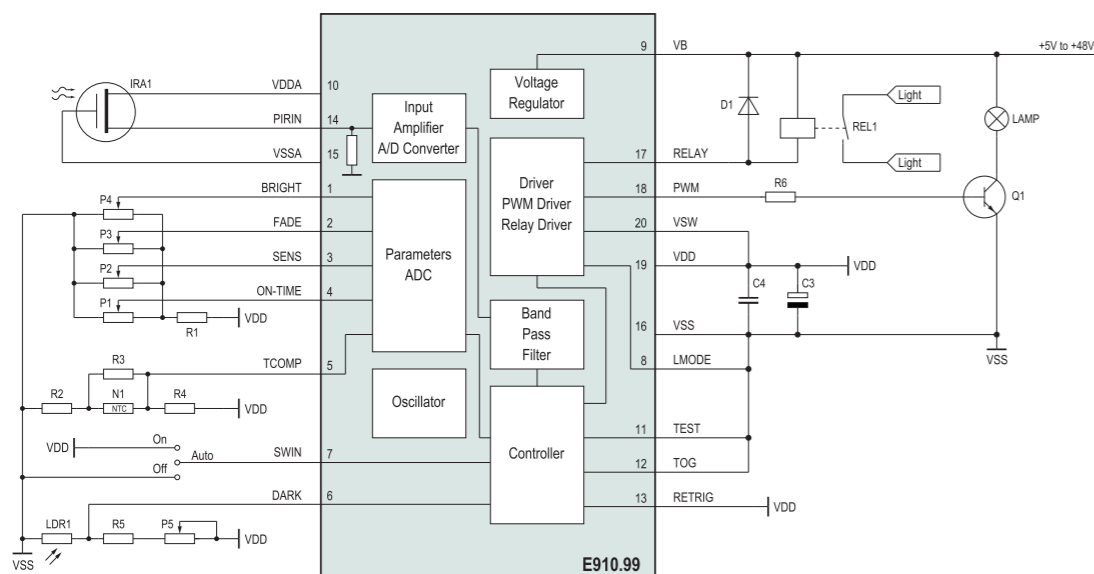
Pin	Name	Description
1	BRIGHT	Brightness adjustment
2	FADE	Fade time adjustment
3	SENS	Sensitivity threshold adjustment
4	ON-TIME	Light on-time adjustment
5	TCOMP	Temperature compensation input
6	DARK	Dark mode input, connected to LDR/Photodiode
7	SWIN	ON-AUTO-OFF selct input
8	LMODE	LED mode select
9	VB	Supply voltage input
10	VDDA	Analog supply
11	TEST	Reserved test mode, has to be connected to VSS
12	TOG	Reserved test mode (TOG), has to be connected to VSS
13	RETRIG	Retrigger mode select input
14	PIRIN	PIR sensor input
15	VSSA	Analog ground
16	VSS	Digital ground
17	RELAY	Relay output
18	PWM	Light output (PWM)
19	VDD	Digital VDD
20	VSW	Voltage sense input

PACKAGE



SO20

BLOCK DIAGRAM



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