MicroP Driven Wireless PIR Detector

Available also in **dual band** - 434 & 868 Mhz

SIR 2008

DESCRIZIONE

Rivelatore d'intrusione ad effetto piroelettrico passivo con segnalazione remota mediante trasmissione codificata RF controllata tramite filtro SAW.

Codifiche possibili:

- HCS Keeloq (Microchip™)
- Fixed codes
- Custom codes

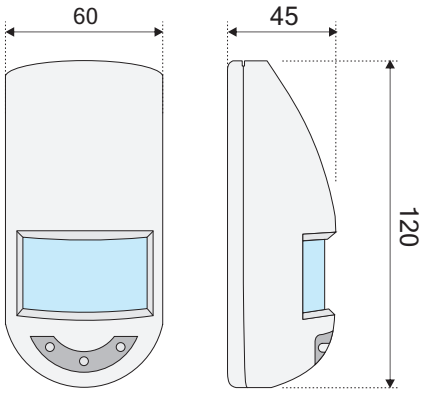
DESCRIPTION

Wide angle low-power coverage PIR detector with built-in coded RF SAW transmitter.

Possible encoders:

- HCS Keeloq (Microchip™)
- Fixed codes
- Custom codes

DIMENSIONS



TECHNICAL SPECIFICATION

Ta = 25 °C

Characteristics	Caratteristiche	Min	Typ	Max	Unit
Battery supply Voltage	Alimentazione a batteria	2.1	3	3.6	Vdc
Stand-by mode consumption	Consumo a riposo		10		µA
Alarm mode consumption	Consumo in allarme		9		mA
Working frequency	Frequenza di lavoro		433.92		MHz
RF emitted power	Potenza RF		1		mW
Alarm inhibit time	Tempo di inibizione tra allarmi		240		s
Test inhibit time	Tempo di inibizione in test		4		s
Coverage range	Copertura	8		20	mt
Operating temperature range	Temperatura di lavoro	-10		+55	°C

NOTE

Available also in dual band: 434.15 Mhz, 868.30 Mhz
Disponibile anche in doppia banda: 434.15 Mhz, 868.30 Mhz

PRELIMINARY

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http://www.aurelwireless.com • email: rfcomm@aurel.it

Infrared sensor with radio transmission.

The SIR 2008 is a microprocessor based unit, mainly used as a "Hardware" base that can be tailored to obtain several products with different radio characteristics:

A) Keeloq rolling code or fixed codes (choice of HT12E and 145026 simulation)
B) Transmission frequency of 433.92 MHz or Dual band at 433.15/868.30MHz.

Different versions can vary from model depicted down here, as only needed components for that particular version are mounted.
Furthermore one of two possible versions of software can be loaded in:

A) Version 1 with possible selection of HCS30x or HT12E code simulation
B) Version 2 with possible selection of HCS30x o Motorola 145026 code simulation.

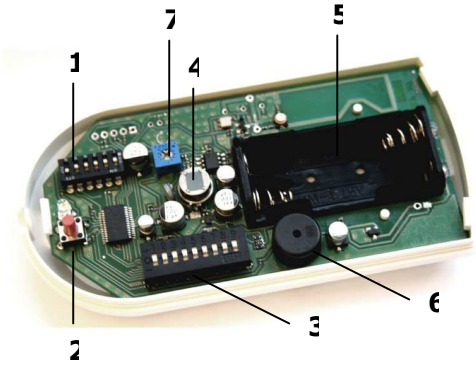

Fig. 1 – Internal view

1 – Configuration Dip switches
2 – Anti Tamper switch
3 – Combination for Fixed Code (HT12 or 145026 simulation according to installed software version)
4 – Double element PIR Sensor
5 – Battery holder
6 – Buzzer for low battery indication
7 – Sensor sensitivity regulation trimmer

How configure the product

Pls set the Configuration dip switches bank referred as –1- in Fig. 1 above.

Dip pos. 1: Choice of code system (HCS of fixed code). Software version 1 makes possible choice between HCS 300 and HT12E. Version 2 allows selection of HCS 300 and MC145026.

Dip pos. 2: used only when HCS rolling code is chosen. Allows supervisory functions on sensor.

Dip pos. 3: pulse counter control, selects number of ray beams that has to be interfered to activate alarm. If the Dip Pos 3 is set ON, alarm will be triggered only if two beams of rays are interrupted in a time shorter than 20 sec. If Dip Pos 3 is OFF, only one ray beam interference is sufficient to trigger the alarm.

Dip pos. 4: Inhibit time, choice of time between two alarm transmissions. The device will anyway memorize alarm conditions detected in time elapsed between two alarms transmissions. The 4 min time is used for regular sensor in field use, 4 sec time is used during test and set up.

Dip pos 5: Radio Mode selection. The unit will transmit for 1 minute and then stops. This to prevent battery drainage. Used to "learn in" the transmitter into the receiver unit and to verify radio range.

Dip pos 6: Used to control LED indication. LED indication is useful for installation and testing of alarm investigation. Then, in regular field use, the LED indication should be interdicted to reduce battery drainage.

Dip switch pos.	Function	On	Off
1 – Soft. ver 1	Code type	HT12E	HCS 30x
1 - Soft. ver 2	Code type	MC145026	HCS 30x
2	Supervision (1)	On	Not active
3	Pulse counter	On (two pulses)	Not Active
4	Inhibit time	4 min	4 sec
5	Radio Mode	On	Not active
6	LED indication	On	Not Active

(1) Transmission of supervision message is forced every 60 minutes, not shown from Led.

Pls note that buzzer will inform of low battery conditions at 2,1 Volt across battery. When working with HCS 300 or HT12 coding scheme, the condition is also signaled via radio.

How to set sensor

1) Remove cover and, BEFORE battery insertion, set Configuration dip switches bank –1- Fig. 1 Pos. 1 to choose the preferred code simulation. For sensor versions that allow selection to fixed code emulation, the Combination for Fixed Code Dip switch bank will be at 10 position, two conditions for HT12 emulation and at 9 position, three conditions for MC145026 emulation. No Dip switches for HCS only versions.
   Note: Selection of Configuration Dip switches Pos. 1 MUST be performed before battery insertion. For any subsequent change, batteries must be removed before action on switch, then insert again batteries.

2) Insert batteries.

3) Set dip-switch Pos. 6 (LED) to On, and dip-switch Pos. 4 (Inhibit) to Off.

4) Set dip-switch Pos. 5 (radio mode) to start "learn in" of transmitter at receiving unit. Reset dip-switch Pos. 5 to Off.

Reset sensor cover in place and, at 20 meters, move changing direction several times and check for LED turning on. If sensitivity should be reduced, set the internal Sensitivity trimmer to proper position. Minimum sensitivity distance should be 8 meters.