

SPIDER DUAL

Microwave and double passive infrared detector for indoor and outdoor use

Please refer to SPIDER PA instructions manual in addition to this sheet

General Characteristics

SPIDER DUAL is a detector for indoor and outdoor use, made of a double passive infrared detector and a "patch technology" microwave.

The electronic circuit of the detector is equipped with a microprocessor which analyses the signals coming from the two optical zones as well as from the microwave section; alarm triggers off when all three sections detect the movement at the same time.

max. range	14 meters
min. range	3 meters
suggested installation height	from 1 to 1,2 meters
environmental conditions	- 20°C / + 50° C
size (h x l x d)	217 x 76 x 72,5
nominal tension	12 V \equiv
supplying tension	max 15 V \equiv min 10,5 V \equiv
consumption during quiet	26 mA
consumption during alarm	31 mA
infrared beams for each detector	9 double
signal emitted by the microwave	impulsion type
irradiation peak power	10 mW
alarm output	1 (C/NC or C/NO)
tamper output	1 (C/NC)
range of relay contacts	12 V \equiv 500 mA
AM output	for anti-masking signalling
block input	yes
temperature compensation	yes
walk-test	optical: led acoustic: buzzer
film for area masking	2
protection level	IP 44

WARNING

For working characteristics, installation and test of SPIDER Dual, please refer to SPIDER PA manual, with the exception of what is indicated in this integration sheet

IST0560V2/0

Signal Analysis

Microprocessor constantly analyses signals coming from infrared and microwave sections, which are then compared to standard parameters; only when parameters are valid at the same moment. there will be an alarm condition.

impulsion width: it must be bigger than a standard threshold if positive, smaller if negative

impulsion duration: to be considered valid, it must fall within a standard time interval

distance between impulsions: it is considered valid if at least two impulsions in succession (configuration in double semi-wave) of opposite sign in the same section fall within a standard time interval

polarity of impulsions (for infrared section only): as the two PIR are upside-down one towards the other, two impulsions in succession in the same section, or two single impulsions in both sections, always have to be of opposite sign.

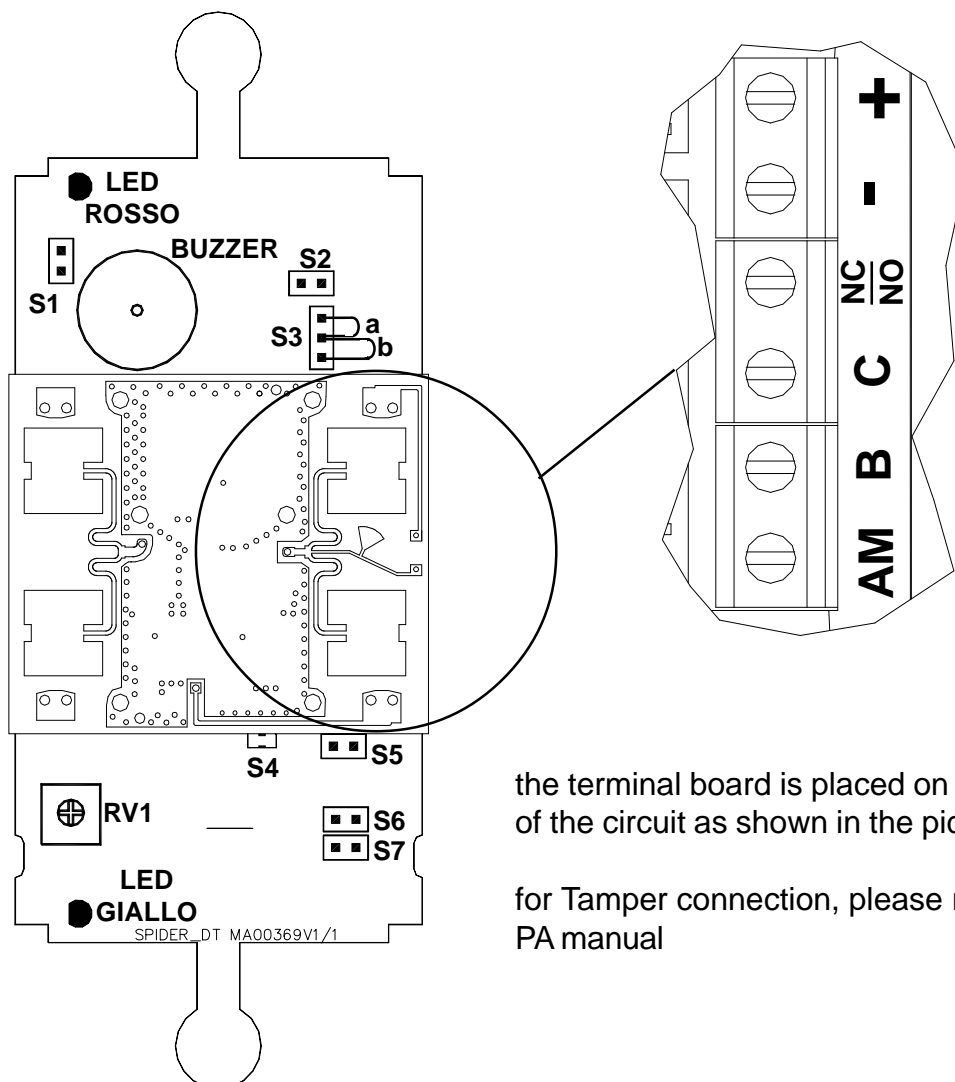
Anti-Masking

This detector is equipped with anti-mask circuit, able to detect any movement within 50 cm from detector.

A possible alarm, caused by masking attempt, is kept in memory by yellow led and an AM output is activated.

AM terminal gives a transistorized negative when anti-masking circuit is active. Both led and output negative are reset at first alarm triggered off by the detector.

Circuit



the terminal board is placed on the bottom side of the circuit as shown in the picture

for Tamper connection, please refer to SPIDER PA manual

TERMINAL BOARD

+	Supplying positive 12 V $\overline{\text{---}}$
-	Supplying negative 12 V $\overline{\text{---}}$
B	Input which allows the detector to know the control unit condition. At disarmed system this input must be closed to positive, in this condition the detector behaves as follows: <ul style="list-style-type: none"> • alarm relay remains closed (activation after 5 sec. from absence of positive on terminal B) • if a passage is detected, led and buzzer are active anyway
AM	Output for anti-masking signalling This terminal gives a transistorized negative when anti-masking circuit triggers off
C NC/NO	Output for alarm signalling. Jumper S3 to select it

JUMPER

			Default
S1	open closed	buzzer and alarm leds activated buzzer and alarm leds de-activated	closed
S2	open closed	alarm contact with 4K7 ohm resistance in series	closed
S3	Pos. A Pos. B	contact relay exchange C/NC contact relay exchange C/NO	Pos. A
S4	open closed	normal working microprocessor reset	open
S5	open closed	output and yellow led of anti-masking signalling	closed
S6 S7		configuration of working mode	OFF OFF

ADJUSTMENT

Range

in order to adjust range of microwave section, turn trimmer **RV1** (clockwise to increase)

in order to adjust range of infrared section, refer to SPIDER PA instructions manual

Alarm mode

position jumpers S6 and S7 as shown below in order to settle working mode:

S6	S7		
OFF	OFF	Normal	See SPIDER PA manual
ON	OFF	Low	See SPIDER PA manual
OFF	ON	Not used	
ON	ON	Microwave Calibration	Working as per NORMAL with the exception of buzzer and led which are managed by microwave only IMPORTANT To be used only during calibration of microwave section. At the end of calibration set jumpers for function NORMAL or LOW.

Information in Conformity to 1999/5/CEE Directives

The product to which this statement refers is in conformity to essential prescriptions of 1999/5/CEE (R&TTE) Directive as far as this concerns low-power radio-transmitting devices as well as the use of frequencies of the radio-electrical spectrum, in accordance with CEPT 70-03 recommendation.

Trade Mark	AVS ELECTRONICS
Model	SPIDER DUAL
Working frequency	10,525 Ghz
Supplying	Continuous current
Nominal tension	12 V $\overline{\text{---}}$
Nominal current (TX and RX)	31 mA
Countries of EC where it will be used	Everywhere, except local restriction
Date	10th May 2004

 AVS ELECTRONICS	
	DICHIARAZIONE DI CONFORMITA (MANUFACTURERS DECLARATION OF CONFORMITY)
	
Costruttore (Manufacturer)	AVS ELECTRONICS SPA
Indirizzo (Address)	Via Valsugana, 63 - 35010 Curtarolo (PD) - ITALY
DICHIARA CHE LA SEGUENTE APPARECCHIATURA (DECLARES THAT THE FOLLOWING EQUIPMENT)	
Nome dell'Apparecchiatura: (Equipment Name)	: SPIDER DUAL
Tipo di Apparecchiatura (Type of Equipment)	: RIVELATORE VOLUMETRICO DA ESTERNO A DOPPIA TECNOLOGIA (Dual Technology outdoors motion detector)
Modello (Model)	:
Anno di Costruzione (Year of Manufacture)	: 2004
RISULTA CONFORME CON QUANTO PREVISTO DALLE SEGUENTI DIRETTIVE COMUNITARIE: (IS IN ACCORDANCE WITH THE FOLLOWING COMMUNITY DIRECTIVES)	
89 / 336 / CEE (EMC)	99 / 05 / CEE
73 / 23 / CEE	
E CHE SONO STATE APPLICATE LE SEGUENTI NORMATIVE (APPLYING THE FOLLOWING NORMS OR STANDARDS)	
EN 50130 - 4	EN 60950
EN 300440 - 2	
EN 301489 - 1	
EN 301489 - 3	
IDENTIFICATORE DI CLASSE DEL DISPOSITIVO (per apparati RF regolamentati dalla direttiva R&TTE) (Equipment class identifier (RF products falling under the scope of R&TTE))	
<input type="checkbox"/> Not Applicable <input type="checkbox"/> None (class 1 product) <input checked="" type="checkbox"/>  (class 2 product)	
<p>Il costruttore dichiara sotto la propria responsabilità che questo prodotto è conforme alla direttiva 93/68/EEC (marcatura) e soddisfa i requisiti essenziali e altre prescrizioni rilevanti della direttiva 1999/5/EC (R&TTE) in base ai risultati dei test condotti usando le normative (non) armonizzate in accordo con le Direttive sopracitate. (We declare under our sole responsibility that this product is in conformity with directive 93/68/EEC (Marking) and/or complies to the essential requirements and all other relevant provisions of the 1999/5/EC (R&TTE) based on test results using (non)harmonized standards in accordance with the Directives mentioned)</p>	
Luogo (Place) :	Curtarolo
Data (Date) :	May 2004
	Firma (Signature)
Nome (Name) :	G. BARO
	Amministratore (Managing Director)