

Security Products

Infra-Red Motion Detector IR/KB

Technical Data



Description

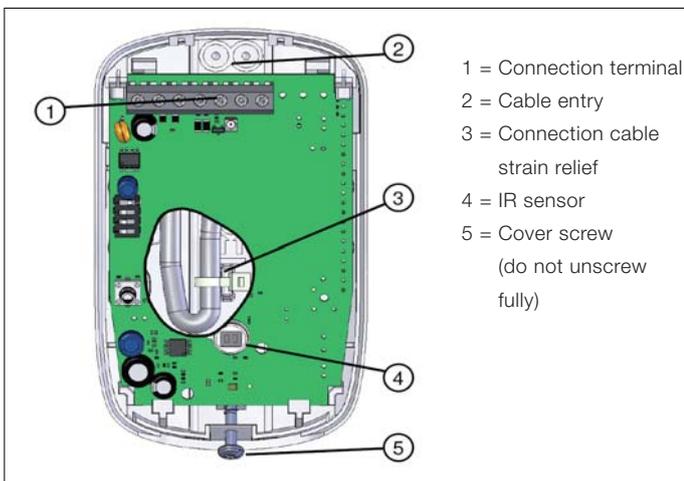
The Passive Infra-Red Detector IR/K is an intrusion detector (VdS class B) that detects and signals motion within its detection range. It facilitates monitoring of an area with a volumetric IR range of up to 15 m and can be optionally set for a hall monitoring function up to 15 m.

The detector features undervoltage monitoring and is fitted with a walk test LED. The “Alarm” (movement) and “Tamper” messages are each provided by a floating contact.

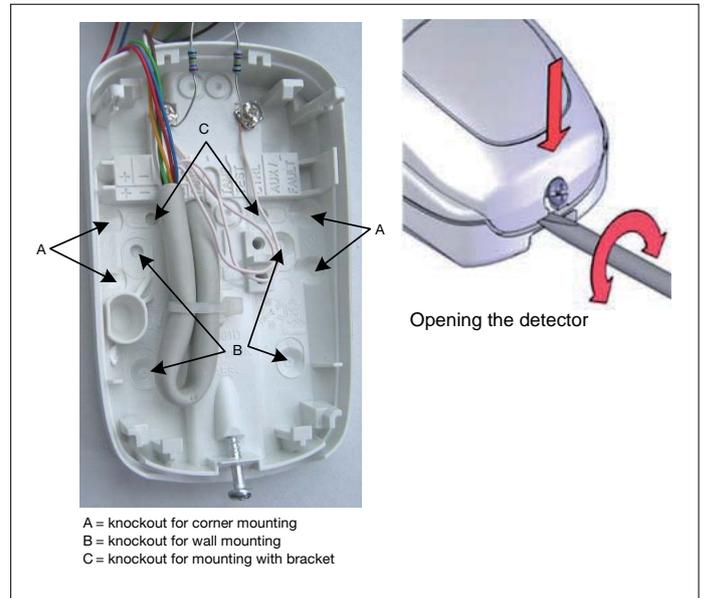
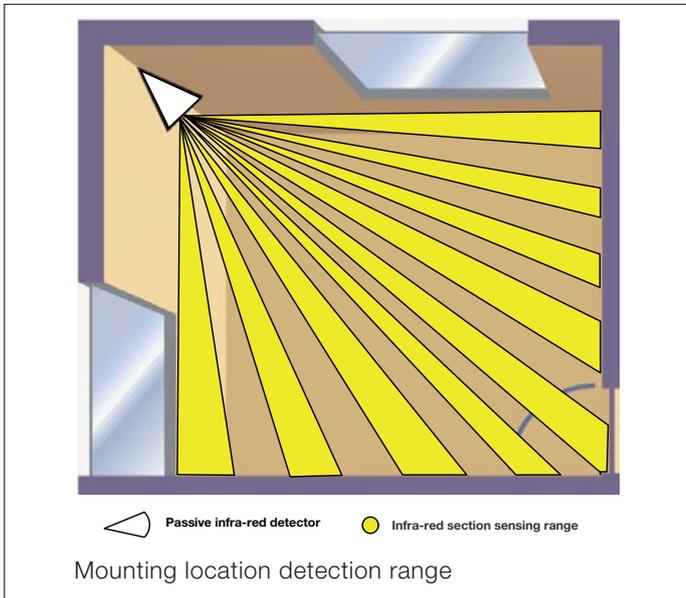
The IR detector achieves its high level of immunity to false alarms by the use of high-quality HEX technology with 12-fold pyro-element detection in every zone and through pulse counting.

Technical data

Voltage	12 V (9 V ... 16 V DC)
Current IR/KB	Quiescent: 8 mA Alarm without LED: 10 mA Alarm with LED: 11 mA
Alarm and tampering	Break contact (NC), Contact load capacity 24 V DC, 50 mA
Test input	Plus potential for LED activation
Effective infra-red range at mounting height of 2.3 m	Angle = 86 ° Range = 15 m Zones = 17 in 6 levels
Temperature range	-10 to +55 °C, environmental class II
Weight	135 g
Dimensions	110 x 66 x 42
VdS approval: IR/KB	Class B No.: G110502



Infra-Red Motion Detector IR/KB



Installation location

The recommended mounting height is 2.3 m. The unit can be mounted between 2.1 m and 2.5 m without adjustment, when mounted on a vertical surface.

It may only be mounted on permanent, vibration-free walls. Large objects situated before the detector obstruct the detection range. The detector may not be subject to direct sunlight, heat sources and strong draughts (e.g. fans of air-conditioning systems) to prevent false alarms.

Preparation and mounting

The screw must be loosened (do not unscrew fully) to remove the cover. Then insert a flat screwdriver into the slot underneath the screw and twist it. When the detector is opened, the electronic circuit board can be unlatched via the two catches and removed simultaneously from the plug-in socket. On the lower housing section, the selected cable entry points and mounting apertures can be knocked out. Introduce the cables, connect them and provide strain relief using the enclosed cable ties.

Wiring

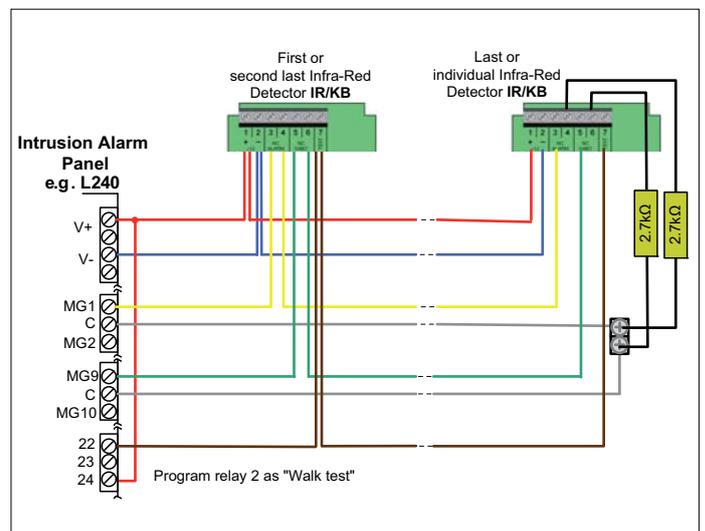
The electronics are reinstalled after mounting the lower section.

Caution: During all work, the light-sensitive sensor may not be touched. To refit the cover, engage the upper half using the two lugs and push both halves together (there will be an audible click), then tighten the screws.

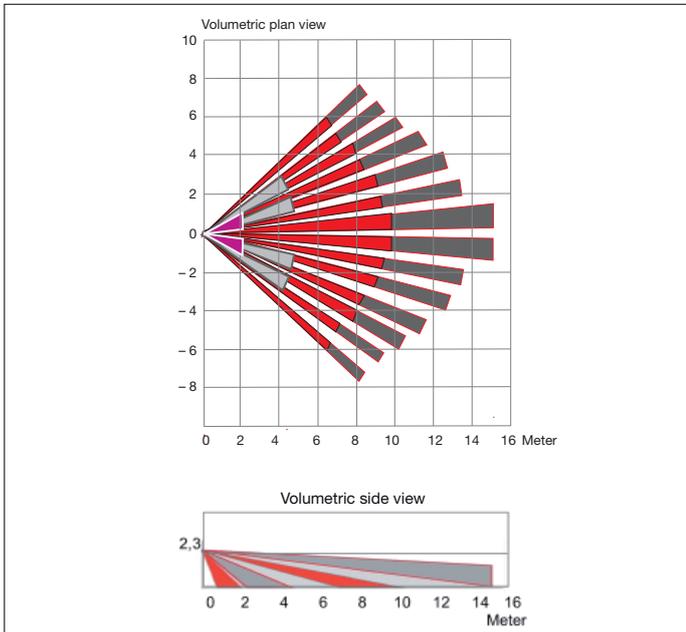
Connect the detector as follows:

Panel	1	2	3	4	5	6	7
	+	-	NC	NC	NC	NC	TEST
	+12		ALARM	SABO			
L108	V+	V-	MG ¹	MG ¹	35	36	
L240	V+	V-	MG ¹	MG ¹	MG ²	MG ²	22 ³
L840/MG4	1	2	MG ¹	MG ¹	MG ²	MG ²	13
MTS 4.12.1	11	12	MG ¹	MG ¹	MG ²	MG ²	10

¹ Circuit - "Circuit for INTERNAL setting can be switched off (Cct 1-3)"
² Circuit - "Tamper"
³ Switch V+ via relay "Walk test" (24)



Infra-Red Motion Detector IR/KB



Function setting

Default DIP switch setting

No.	Function	OFF	ON
1.	Activate LED	Deactivated	Activated
2.	Pulse counter 1	OFF	ON
3.	Pulse counter 2	OFF	ON
4.	PIR range	15 m	10 m

SW2 and SW3: Impulse counting

SW2	SW3	Impulse counting
OFF	OFF	Corridor
OFF	ON	Single pulse (VdS)
ON	OFF	2 pulses
ON	ON	3 pulses

Corridor $\hat{=}$ sole evaluation of the two middle 15 m zones (see plan view).

VdS compliant

The detector IR/KB in switch position SW1, SW3 and SW4 set to "OFF" or SW2 to "ON" comply with the demands of VdS class B.

In Intrusion Alarm Panels conceived according to VdS guidelines, only one detector may be assigned to each detector group or zone.

DIP switch settings

	Description	Function off	Function on
1	LED activation	During operation (VdS) (LED active dependent on control inputs)	For commissioning (LED always active)
2	Impulse counting 1	Corridor or no impulse counting 1	(VdS) impulse counting 1
3	Impulse counting 2	Corridor or no impulse counting 2	(VdS) impulse counting 2
4	PIR range	Full range (15 m)	(VdS) Reduced range (10 m)

The possible LED displays are explained again in the "LED displays" chapter.

Walk test (function test of the detector in the "Unset state" of the EMA)

A manual walk test for initial commissioning is set to "ON" with SW1. The red LED flashes to indicate detection of a slight movement. If the red LED lights for 3 seconds, this indicates detection of movement of a person within the detection range. This message must cause a "Circuit fault" for this detector circuit when the detector zone is wired.

After connection of terminal 7 in accordance with the description and the VdS settings of the DIP switch, the operator menu of the intrusion alarm panel can be used to implement an automatic walk test.

Here it is necessary to ensure that the detector has triggered and that the trigger has led to a fault of the corresponding detector circuit.

LED displays

When programmed compliant to VdS.

System set	No LED displays
System unset	LEDs activated with [Walk test] or via [Alarm]

Red LED:

Permanent ON	Detector error
Flashes once/sec.	Undervoltage
ON for approx. 3s	Movement detected

Approvals

The Motion Detector IR/KB is compliant to EN 50131 part 1.

Intended purpose:	Intrusion detection within closed buildings.
Safety instructions:	The supply voltage must be protected by a separate fuse that is rated < 5 A.



Infra-Red Motion Detector IR/KB

Ordering Information

Product photo	Description	Short designation	Order code	bbn 40 16779 EAN	Price group	Weight 1 pcs kg	Pack unit Quantity
	IR Motion Detector, 15 m, VdS cl. B VdS-No. G110502	IR/KB	2CDG 230 027 R0011	75716 4	50	0.03	1
	Mounting Bracket (VdS)	MW	GH V923 0039 V0020	66580 6	50	0.01	1

Order number 2CDC 541 160 D0201 printed in Germany (12/10-1-ZVD)

ABB STOTZ-KONTAKT GmbH

Eppelheimer Straße 82
69123 Heidelberg, Germany
Phone: +49 6221 701 607
Fax: +49 6221 701 724
e-mail: knx.marketing@de.abb.com

Further information and local contacts:

www.abb.com/knx

Note:

We reserve the right to make technical changes or modify the contents of this document without prior notice. With regard to purchase orders, the agreed particulars shall prevail.
ABB AG does not accept any responsibility whatsoever for potential errors or possible lack of information in this document.

We reserve all rights in this document and in the subject matter and illustrations contained therein. Any reproduction, disclosure to third parties or utilization of its contents - in whole or in parts - is forbidden without prior written consent of ABB AG.

Copyright© 2010 ABB
All rights reserved