



Motion Detectors – Made by Bosch
Quality You Can Trust



BOSCH

Invented for life



“It has always been an unbearable thought to me that someone could inspect one of my products and find it inferior in any way. For that reason I have constantly tried to produce products which withstand the closest scrutiny – products which prove themselves superior in every respect ...”

Robert Bosch 1918

Contents

1. Innovations for Your Success	3 – 4
2. Superior Performance – Always One Step Ahead	5
2.1 Reliability as a Premise	6 – 7
2.2 Quality as a Given	8
Trust in Bosch – Unique Testing Facilities	9 – 10
Play It Safe	11
2.3 Time Is Money – We Make Installation Easy	12
2.4 Award-Winning Technologies	13
4. Solutions for All Requirements – a Broad Range of Innovative and Reliable Products	14 – 15
3. Your Success Is Our Success	16

1. Innovations for Your Success

For more than a century the Bosch name has been synonymous with excellent quality and continual innovation.

The companies of the Bosch Group constantly strive for the best possible solutions: high-tech, innovative, high-performance, good-looking and ergonomic products that meet evolving needs.

To achieve this, Bosch invests an average of 11 percent of its sales volume in R&D. Around

the world it has more than 25,000 specialists working to improve existing products and develop new products, systems and innovative manufacturing processes. Examples include advanced lithium ion batteries and intelligent video analysis (IVA).

The results are impressive: Bosch applies for an average of over 3,000 patents a year, placing it among the world's top filers.



Bosch Security Systems – Invented for Life

Bosch Security Systems offers a complete range of leading-edge security and communication products and systems. The range of applications include CCTV, access control systems, intrusion alarm systems, fire alarm systems, building management system, public address/voice evacuation, conference systems, paging and personal security, and social alarm systems.

For over 80 years (since being founded as Hanseatische Notruf AG), Bosch has defined the market with innovative, high-quality intrusion alarm products for all kinds of applications.

Intrusion Systems by Bosch

Over the past four decades, Bosch has been awarded over 30 patents in this field. Many of their spin-offs – including Pet Immunity, Multi-Frequency Acoustic Glass Break Detection and Microwave Noise Override – have become industry standards.

In 1999, Bosch established a Research and Technology Center (RTC) with offices in California and Pennsylvania. Strategically located to facilitate close collaboration with leading U.S. universities, it focuses on diverse topics such as wireless technologies for automotive, building technology, consumer goods and industrial applications, sensor and communication technologies.

History of Bosch Sensor Developments

1969	First solid-state modulated LED beam detector	2002	Introduce OD850 outdoor dual with quadrature microwave LTD processing
1971	First long-range beam detector	2004	The industry's first multi-module detector
1972	First use of retro-reflector technology in a detector	2004	MTBF (Mean Time Between Failures) and install time design improvements
1973	First use of digital filtering in ultrasonic motion detectors	2005	Blue Line Series launch
1974	First large-area-coverage ultrasonic system	2006	Tri Focus Optics
1978	Body heat motion sensing (PIR)	2006	Active white light processing without degradation of PIR signal
1985	Flip-mirrored optics	2006	Sensor data fusion at detector level
1987	First reliable dual-technology detector (microwave/PIR)	2008	Professional Series with EN 50131 grade 3 Anti-mask technology
1989	New industry standard request-to-exit sensor	2011	Blue Line Gen 2 launch
1990	Reliable pet discrimination	2011	ISN Series launch
2001	Industry's highest mounting ceiling-mount detector		

2. Always One Step Ahead



Bosch Security Systems is recognized throughout the security industry as a global leader in intrusion detector expertise. It has earned this reputation by consistently providing products that meet customers' needs, focusing on **reliability, durability** and **ease of installation**.

Bosch offers a wide choice of models to suit the requirements of virtually any application. In early 2005, Bosch introduced its **Blue Line** family of passive infrared (PIR) and microwave detectors. Targeting the high-end residential and mid-range commercial markets, they employ Bosch's proprietary First Step Processing (FSP) and TriTech technologies.

In 2011 Bosch launched the Blue Line Generation 2 motion detector range with further improvements.

Now the **Professional Series** of commercial and industrial intrusion detectors has taken this to the next level with several innovative technologies including Sensor Data Fusion (SDF) and the TriFocus optical system.

In 2011 Bosch launched the new **ISN Series**, designed for low risk applications in easy environments. The entry level PIR motion detectors made by Bosch.

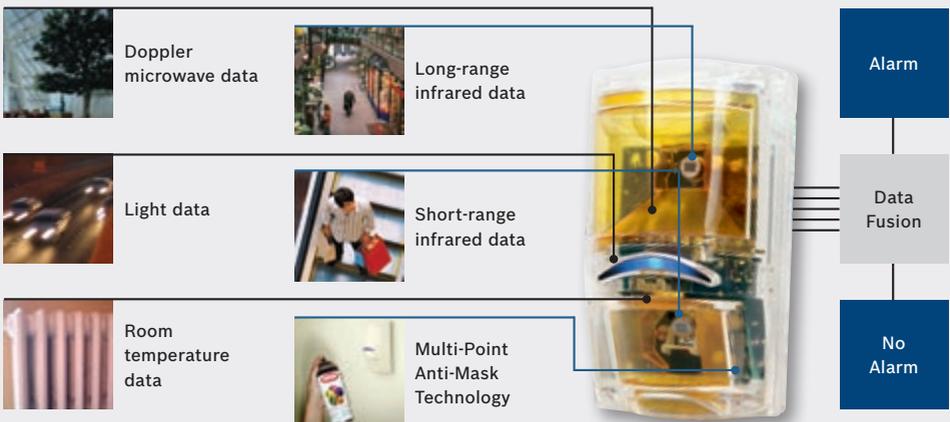
2.1 Reliability as a Premise

The Professional Series intrusion detectors from Bosch Security Systems come close to achieving optimally rapid, accurate detection while eliminating false alarms.

PIR/microwave and other multi-technology motion detectors make alarm decisions by comparing the results obtained by different methods. If they agree, an alarm is output. Although this improves false alarm immunity, merely installing multiple sensors does not increase effectiveness.

Sensor Data Fusion

This innovative technology addresses this weakness by intelligently coprocessing signals from up to five independent sensors: two PIR sensors, a room temperature sensor, a white light sensor and – in some models – a microwave sensor. Proprietary algorithms running on a high-performance microcontroller simultaneously analyze the data from all sensors and make a decision that takes all information into account. This technology takes performance to a new level, virtually eliminating false alarms.



Multipoint Anti-Mask with Integrated Spray Detection

- 1 Through the Lens**
Protects against materials placed in front of the detector
- 2 Bounce Back**
Protects against objects approaching the detector
- 3 Spray Detection**
Protects against materials sprayed on the detector such as print, liquid bandaid, etc.



TriFocus Optics

Three specially designed Bosch lenses cover the short, intermediate and long ranges to eliminate coverage gaps all the way to the detector's maximum detection distance.

Using three lenses and multiple sensors vastly improves the optical signal for each range, resulting in greater resolution and the ability to distinguish intruders from false alarm sources. Professional Series Detectors monitor 86 zones and combine to form 11 continuous curtains of detection within the coverage area.

Multi-Point Anti-Mask Technology

The Professional Series ISC-PPR1-WA16 and ISC-PDL1-WA18 detectors offer anti-masking technology that complies with all of the latest international standards for detecting objects placed in front of a detector. Patented prism lenses and active infrared detection offer protection from all known ways of trying to prevent detectors from operating, including fabric, paper, metal, plastic, tape, and sprays.



2.2 Quality as a Given

Quality You Can Trust

People who buy Bosch products rightly expect quality. Wherever Bosch manufactures – whether it is in Europe, Asia or America – it simply won't permit any deviations from its high standards. The motto is: "Quality means keeping promises". And Bosch doesn't make empty promises.

A wide array of tools and techniques ensures the quality of Bosch products, from the design phase through production. Six Sigma methodology is employed to ensure high-quality designs. Customer expectations are met by tools such as design failure mode effects analysis. Continuous improvement with DMAIC (Define – Measure – Analyze – Improve – Control) methods guarantees the highest level of customer satisfaction.

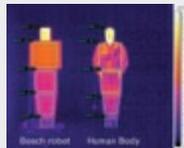
The **durability** of Bosch products makes sure that they meet and exceed environmental and usage requirements. Bosch also uses only the very best materials, which are purchased while applying very strict criteria. In-house quality control standards support the core processes of development, production, logistics and purchasing. Everything is rigorously monitored, from incoming goods all the way to the finished product.

Unique Testing Facilities

Bosch's Intrusion Systems division has invested in state-of-the-art facilities for testing and developing detectors. Their highlights include:

- ▶ Range room: This is the main facility for testing catch performance and false alarm immunity. It can simulate any type of environment.
- ▶ Variable-temperature room: This room has two independent high-capacity HVAC systems for controlling the room temperature to within 0.5°C between 0 and 46°C. This permits the development of superior temperature compensation algorithms to ensure that detectors catch intruders in any environment and ignore false alarm sources.
- ▶ Walk testing: A grid pattern on the floor permits precise walk tests at all distances and angles according to EN50131-2 etc.
- ▶ Simulated walk test target "robot": The temperature of the robot's head, torso, legs and feet can be separately controlled to perfectly simulate a human being.
- ▶ Compliance labs: All detectors are rigorously tested to ensure compliance with each standard.
- ▶ Miscellaneous tests: e.g., to establish immunity to insects, drafts, white light and masking.

Walk test target
with variable speed
control.



Versatile Bosch robot with
independent temperature
control of each body part.

Small animal test target
with independent
temperature control.



HVAC units throughout the
range for performance
testing at any temperature.

Play It Safe – with EN 50131

For several years, the global market has benefited from the European EN 50131 guidelines for electronic intrusion detection systems.

These standards for intrusion alarm systems let installers and final customers such as retailers operating in multiple countries maintain the same level of security and reliability everywhere. They also facilitate comparisons of similar products, services and systems. The EN standards describe both intrusion security requirements and tests to ensure that products will work reliably under demanding environmental conditions.

These guidelines document the standards that devices must meet to achieve different security levels, which are numbered from 1 to 4. They range from low risk (level 1) across low-to-medium risk (level 2) and medium-to-high risk (level 3) to high risk (level 4).

The requirements and test procedures shown in the box are now available. The tests must be performed by an independent, accredited laboratory.



New EN Guidelines for Electronic Intrusion Detection

- ▶ EN50131-1 General alarm-system requirements
- ▶ EN50131-2-2 Passive infrared (PIR) detectors
- ▶ EN50131-2-4 PIR/microwave dual-mode detectors
- ▶ EN50131-2-5 PIR/ultrasonic dual-mode detectors
- ▶ EN50131-3 Alarm panels
- ▶ EN50131-4 Warning devices
- ▶ EN50131-5-3 Wireless link for alarm systems

Standards to Advance the Entire Industry

This ensures that the entire security industry – from manufacturers, distributors and installers to end users – can fully trust the quality and proper functioning of systems. Independent certification also acknowledges the work of system manufacturers' R&D departments as well as the combined efforts of national and European associations to promote correct implementation of the guidelines. End users can count on getting a product that meets all the new standards' requirements.

Going beyond the EN50131 standards, Bosch detectors fulfill the requirements of standards

all over the world: Afnor, VdS, Incert, SBSC, FG, NCP, CCC, A-tick, UL639 and FCC part 15 subpart B, Class B, and many more. The Bosch laboratory, in fact, verifies that all detectors pass the most stringent tests of each standard. Bosch has also designed its own, even more demanding, tests, including customized EMI and RF tests – thus ensuring that its detectors are virtually immune to environmental disturbances. As a result, false alarm immunity and catch performance always exceed by far the requirements of any single country, ensuring that worldwide, with Bosch intrusion detectors, there is no hiding place for intruders.



2.3 Time Is Money – We make Installation Easy



Bosch Security System's products take less time to install than competing makes. Its many years of experience in installing detectors enable it to create industry-leading designs in terms of ease of installation.

Design, Look and Feel

The unique design of Bosch detectors slashes installation time by up to 25 percent and reduces the risk of mistakes. The unique, ergonomic two-piece housing takes only seconds to mount: simply slide it together and it automatically locks in place. A sealed optical chamber keeps out insects and debris while protecting the electronics from being accidentally damaged by screwdrivers, wires, etc. during installation. A built-in bubble level permits accurate horizontal and vertical alignment without the need for any extra tools, and a custom-designed plug-in terminal block with angled wire inlets increases convenience and reliability.

2.4 Award-Winning Technology

Bosch has won numerous industry awards for its Professional Series motion detectors with anti-masking technology:

<p>2009</p>	<p>Medal I Grade award at the International Forum & Exhibition on Security and Safety Technologies in Moscow, Russia</p>	
<p>2008</p>	<p>Inclusion in the "Gallery of New Products" at the International Security, Safety and Fire Exhibition (SICUR) in Madrid, Spain</p>	
<p>2008</p>	<p>Dual Tech Detector becomes the Intruder Alarm Product of the Year at IFSEC in Birmingham, England</p>	
<p>2006</p>	<p>Detektor International Award for "Best Alarm Product"</p>	

3. Solutions for All Requirements

Wall-Mount Detectors, ISN Series, Blue Line Series and Professional Series

				
	ISN-AP1	ISN-AP1-T	ISC-BPR2-W12	ISC-BPR2-WP12
Type of Motion Detector	PIR	PIR	PIR	PIR
EN50131-2-2/4	Grade 1	Grade 2	Grade 2	Grade 2
Pet immunity	No	No	No	20kg
Coverage / Range	7.5m x 7.5m	7.5m x 7.5m	12m x 12m	12m x 12m

				
	ISC-PDL1-W18	ISC-PPR1-WA16	ISC-PDL1-WA18	ISC-PDL1-WC30
Type of Motion Detector	TriTech (PIR plus MW)	PIR	TriTech (PIR plus MW)	TriTech (PIR plus MW)
EN50131-2-2/4	Grade 2	Grade 3	Grade 3	Grade 2
Pet immunity	4.5kg	4.5kg	4.5kg	No
Coverage / Range	18m x 25m	16m x 21m	18m x 25m	30m x 3m

A Broad Range of Innovative and Reliable Products

Bosch offers an extensive range of high-quality motion detectors equipped with leading-edge technology.

				
ISC-BPQ2-W12	ISC-BDL2-WP6	ISC-BDL2-W12	ISC-BDL2-WP12	ISC-PPR1-W16
Quad PIR	TriTech (PIR plus MW)	TriTech (PIR plus MW)	TriTech (PIR plus MW)	PIR
Grade 2	Grade 2	Grade 2	Grade 2	Grade 2
No	45kg	No	45kg	4.5kg
12m x 12m	6m x 6m	12m x 12m	12 x 12m	16m x 21m

Ceiling-Mount Detectors

				
DS936	DS938Z	DS9360	DS939	DS9370
PIR	PIR	TriTech (PIR plus MW)	PIR	TriTech (PIR plus MW)
Grade 2	Grade 2	Grade 2	Grade 2	Grade 2
-	-	-	-	-
7.5m and 360°	18m and 360°	18m and 360°	21m and 360°	21m and 360°



4. Your Success Is Our Success

Programs to Promote Partners

Bosch's partner programs increase the organization's commercial reach. As valuable links in the supply chain, partners receive optimum training and support.

With Bosch behind them, partners can look forward to many years of successful and profitable business. Going a step further, the Bosch Certified Partner Program gives partners receive extra training and certifies them to do highly specialized work. Customers can be sure that a Certified Bosch Partner has the expertise to meet the very highest standards of safety and workmanship.

Training Courses

The Bosch Security Academy holds professionally run local training courses to keep installers up to speed on all products and technologies. Many courses include hands-on practice to make sure that participants leave able to confidently specify, promote and install Bosch Security Systems equipment.

In addition, Bosch helps partners grow their business by providing extensive commercial and marketing training, plus marketing materials that include brochures, quick selection guides and banners.

Please fax to:

I am interested in learning more about

- Bosch Intrusion Detectors
- other Bosch Security products (CCTV, Communication Systems, Fire Alarm Systems, Access Control Systems)
- Bosch partner programs

Please have a representative get in touch with me.



First and last names:

Company:

Street address:

City/town and country:

Phone:

Fax:

E-mail:

Bosch Security Systems

To learn more about
our product offering,
please visit www.boschsecurity.com
or send an e-mail to
emea.securitysystems@bosch.com

© Bosch Sicherheitssysteme GmbH, 2010
Modifications reserved
Printed in Germany | 02/11 | Printer
AS-OT-en-01_F01U521092_02