

# **Eagle PIR-45D / PIR-100D**

## **Medium Range Directional Curtain Coverage**

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### **Description**

PIR detectors react to the slightest positive or negative change in thermal radiation. The passive nature of PIR ensures interference-free operation when multiple devices are covering overlapping areas. Unlike emitting detection systems, PIR detectors are passive only and therefore cannot be located by electronic devices.

The Eagle PIR-45D and PIR-100D are characterized by their dual curtain with individual signal processing, that can determine not only whether an intruder has penetrated a perimeter, but also if a person is moving from right to left or vice versa. This results in ultra low rates of nuisance alarms.

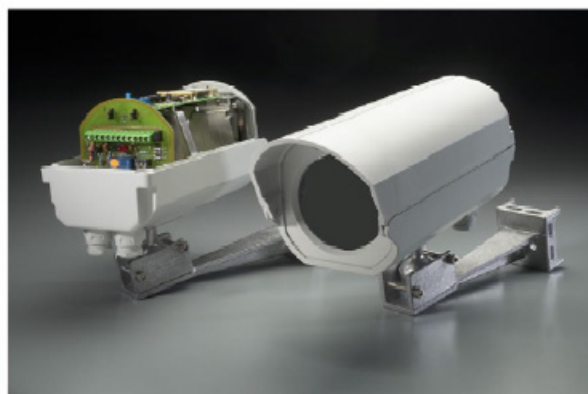
The Eagle PIR-45D and PIR-100D are designed to detect people walking or crawling through the detection curtain at speeds of 0.2 to 5 m/s. Animals may also be detected, depending on their size and thermal contrast.

Adaptive Threshold Decoding (ATD) influences the alarm threshold in function of the background noise, thus reducing the probability of unwanted alarms.

Temperature compensation and digital signal processing significantly reduce variations of sensitivity caused by changes of the environmental conditions.

Should directional detection not be required, the Eagle PIR-45D and PIR-100D can easily be converted into enhanced narrow curtain PIRs, detecting in both directions. The performance will be better than the standard PIRs because they use both the curtains to determine if they should make an alarm e.g. if an object is present in both curtains.

The Eagle PIR detectors feature a tamper switch which is activated whenever the device is opened. This allows the security guards to identify any attempt to disable the Eagle PIR detector. Moreover, the guards can be alerted if the unit is out of service due to maintenance work.



### **Main Features**

- Selectable Directional Detection
- Precision Optics with Creep Zones
- Advanced Digital Signal Processing
- Ultra Low Nuisance Alarm Rate
- Temperature Compensation
- RS 485 Alarm Management

### **Applications**

The Eagle PIR-45D and PIR-100D are Outdoor Passive Infrared Detectors featuring directional detection. The Eagle PIR-45D and PIR-100D utilise a medium range, curtain shaped detection pattern designed specifically for security related applications.

Used for the detection of people or vehicles in a variety of settings, the Eagle PIR-45D and PIR-100D are the ideal component for:

- Triggering CCTV Cameras
- Activation of VMD Systems
- Remote Alarming

Utilising the included hardware, the Eagle PIR-45D and PIR-100D can be quickly and easily mounted on a wall or optional on a pole. The easy installation allows for fast deployment in both permanent as well as temporary protection systems.

# Installation

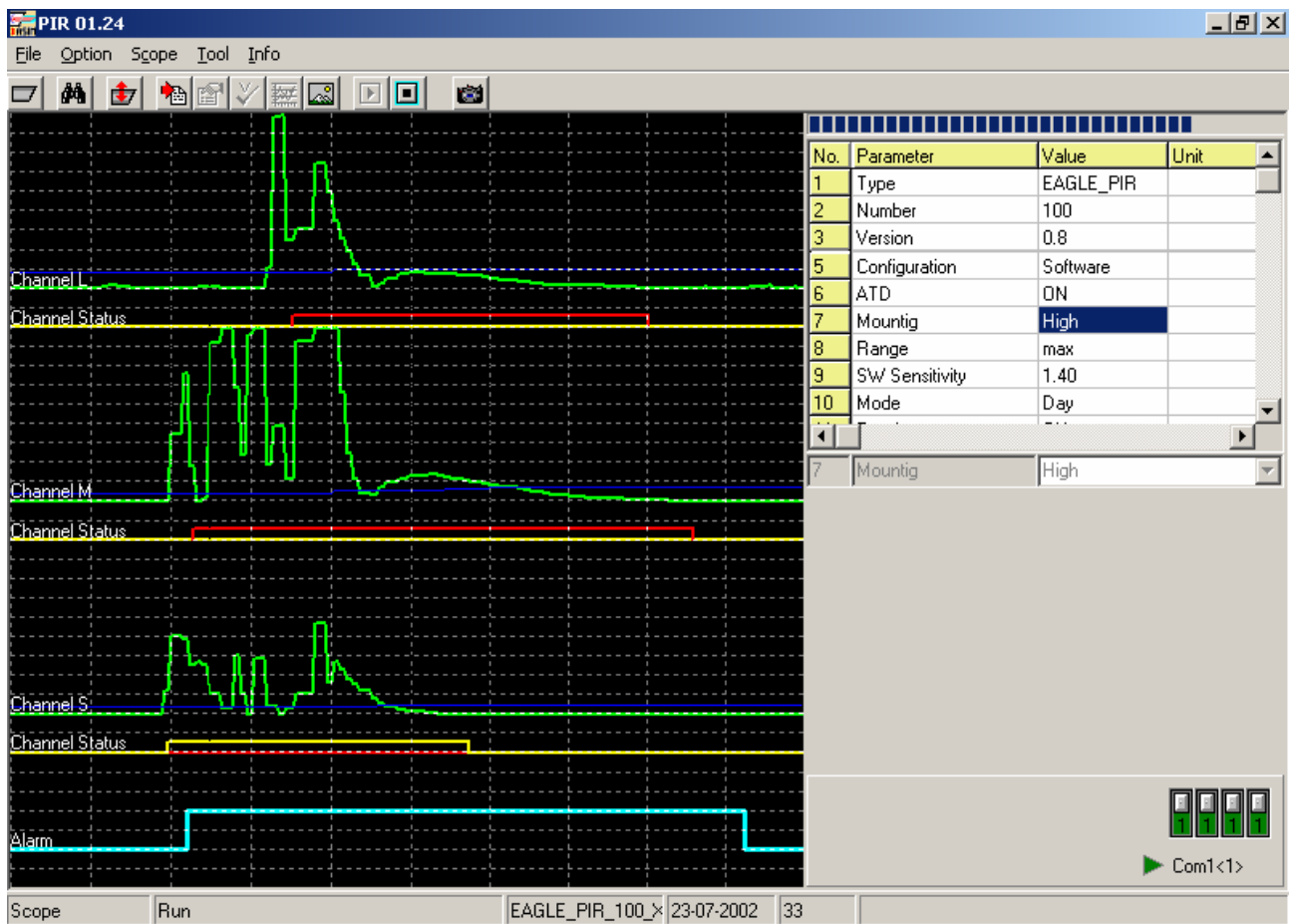
These Eagle PIRs feature an integrated bracket suitable for either pole or wall mount installation.

An optional PC-based software is available for installation and servicing purposes. The software is included with the PIR-IF485 Interface Module which provides an interface between the PC and up to 32 Eagle PIRs.

The installation software provides a possibility for changing the settings of the Eagle PIRs without having to open the device itself. The software also incorporates a "scope" function which shows the amplitude of the measured infrared signal as well as the thresholds. This makes the fine-tuning of the detectors much easier and more accurate.

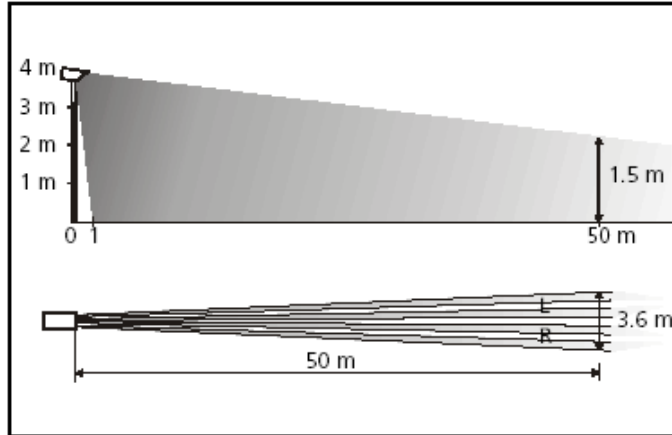


Accessory PIR-IF 485A Interface module and communication software for use with a PC.

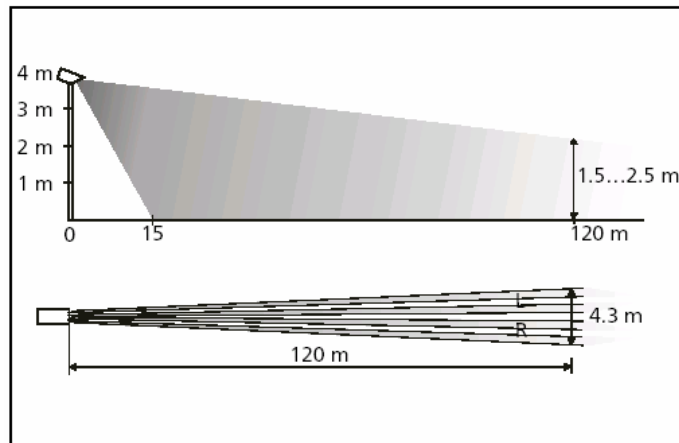


Example of the scope function display included in the PC software

## Field of view

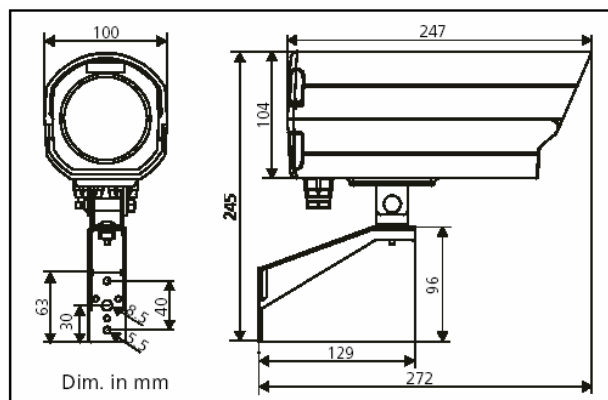


*Typical top and side view of the detection area of the Eagle PIR-45D*



*Typical top and side view of the detection area of the Eagle PIR-100D*

## Dimensions



*Dimensions for Eagle PIR-45D and Eagle PIR-100D*

# Specifications

<b>Optical Specifications</b>	<b>Eagle PIR-045D</b>	<b>Eagle PIR-100D</b>
Nominal/Max. range:	50	120 m
Spectral response:	8 – 14 µm, double filtering	
Sensor type:	Differential pyroelectric	
Field of view:	Please see diagrams showing field of view	
Min. speed of object for detection:	0.2 m/ sec.	
Max. speed of object for detection:	5 m/sec.	
<b>Alarm Output</b>		
Output types:	SPST Relay and Open Collector Transistor	
Maximum voltage, relay:	28 V DC / 20 VAC	
Maximum current, relay:	250 mA	
Maximum voltage, transistor:	60 V	
Maximum current, transistor:	20 mA	
Other alarm indications:	RS-485 Interface	
<b>Electrical Specifications</b>		
Supply voltage:	10.5 to 28.0 V DC	
Current consumption:	Typ. 20 mA @ 12 V DC	
Warm-up time:	Approx. 1 min.	
<b>Environmental Specifications</b>		
Operating temperature range:	- 20° C to + 60° C	
Relative humidity:	< 95%	
Sealing:	IP53 / IP64*	
EMC / EMI:	EN 50081, EN 50130-4	
<b>Mechanical Specifications</b>		
Weight:	Approx. 900 g	
Cable feed-through:	2 pcs PG11 (6 - 9 mm)	
Dimensions:	Please see diagram below	
Housing material:	Heavy duty plastic	
Recommended installation height:	2.5 to 4.0 m	
Mounting:	Pole or wall mount with integrated bracket	
<b>Optional Accessories</b>		
PC Installation software incl. 485 converter:	PIR-IF485	

\*The housing itself is IP64. The cable gland is IP53. The cable entry may not be modified as this may cause condensation within the unit.

**Please note!** For a reliable operation of the detector, an accurate alignment and a stable installation are required.



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