Xtralis ADPRO PRO Series

Passive Infrared Outdoor Detectors

The ADPRO PRO Series PIR detectors are specifically designated for intrusion detection. Designed and manufactured in Switzerland, PRO detectors are engineered to provide unparalleled reliability and accuracy in the harshest environments. Utilising Passive Infrared (PIR) technology and combining it with precision mirror optics and advanced digital signal processing (DSP), PRO Series detectors in fact achieve unsurpassed performance in all environmental conditions.

The PRO Series of PIR detectors is available in a wide variety of models to balance for type of perimeter, performance and budget.

The PRO-250H is the most advanced of the detectors in the lineup. It is equipped with sophisticated optics for close-up detection of as little as 1.3 m (4 ft) from the mounting location. The ultra-narrow field of view has a nominal range of 150 m (500 ft) where it is only 3.3 m (11 ft) wide. Further, a silicon wafer window and environmental-controlled heater ensure superior performance and longevity in extreme environments.

The PRO Series employs the latest signal processing and environmental adaptive circuitry to provide the highest reliability of detection while minimising nuisance alarms.

Advanced passive infrared detection technology

- After 20 years of positive results from PRO outdoor detector technology, it is now widely accepted to be well suited for perimeter protection in harsh environments
- PIR provides protection in low visibility conditions such as snow, fog, rain and darkness
- The area protected by the detector cannot be identified by an intruder due to the passive nature of the unit
- It's easily adaptable for small single detector installations up to large, high security multi-detector applications

Product Highlights

- **Up to 4 m (13 ft) mounting height** to minimise the risk of vandalism
- **Gap-free, uniform coverage with creep zones (curtain-models only)** No finger-and-gap coverage patterns with detection zone starting as little as 1 m (3.3 ft) from the mounting location, at recommended mounting height of 4 m (13 ft)
- **Ultra-low nuisance alarm rate** thanks to advanced digital signal processing (DSP), and adaptive threshold discrimination
- **Directional discrimination** for additional 60% nuisance alarm reduction (D-models only), allowing for right-to-left or left-to-right intrusion alarms only
- **Advanced tamper detection** signals an alarm if detector alignment is altered, in addition to traditional cover switch
- **Low cost per unit of coverage** cutting edge Swiss designed and manufactured precision engineering results in a highly reliable, cost efficient product
- **Low power consumption - ideal for wireless and solar applications** 18 mA at 12 V DC / 10 mA at 24 VAC (does not include heater in H-models)
- **Auto-sensing** supply voltage 10.5 to 30 VDC and 24 VAC
- **Heater and heavy-duty silicon wafer front window** for -40 to +60ºC (-40 to 140ºF) operating temperature, ideal for extreme environments (H-models only)
- **Integrated bracket** for wall mounting
- Detection of intruders **crawling, walking or running** at speeds from 0.2 to 5 m/s (0.7 to 16 ft/s)
- **Remote configuration and alarm management** via RS485 data port for two-way serial communication

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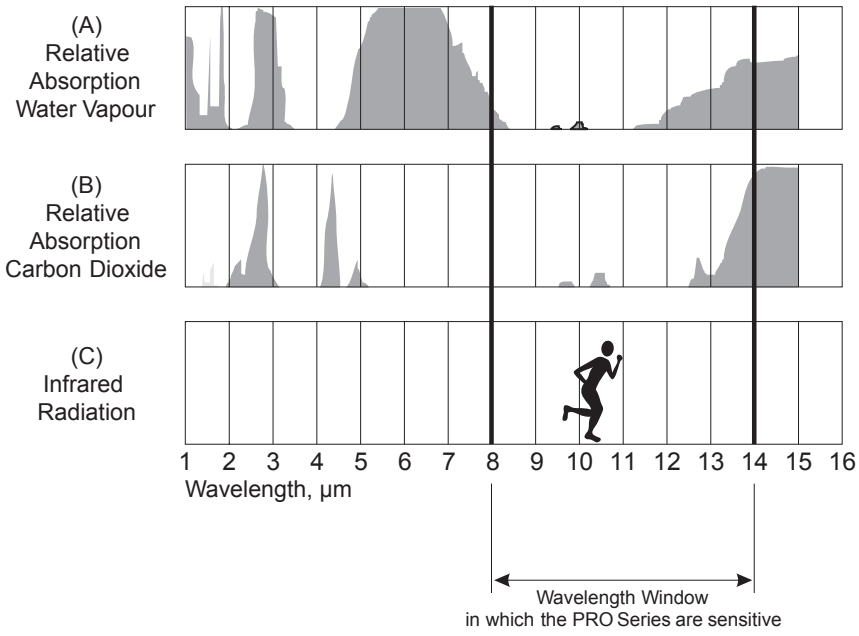
Rugged construction for durable performance and longevity in harsh environments

- Enclosure is specifically designed for outdoor use
- Bracket for easy on-wall installation (except PRO-250H) is included; polemount accessory is available separately
- No need for separate transmitter and receiver - technology allows for single-ended operation for lower installation cost
- Exceptional mounting height of up to 4 m (13 ft) combined with gap-free coverage makes it a true intrusion detection device, setting it apart from the standard PIR detector
- Available installation tools are designed to minimise time for setup and commissioning
- All detectors feature RS485-based data port for remote access of vital configuration settings and live status

Internal Heater

All H-models have an internal heater with temperature compensation to prevent condensation on internal components.

The wavelength of infrared absorption of primary atmospheric constituents compared to the wavelength of infrared radiation produced by humans



Recommended Ranges and Positioning

Xtralis ADPRO PRO Series detectors offer the best value per foot of coverage among similarly effective intrusion detection technologies. Xtralis ADPRO has pushed the limits of the PIR technology to new frontiers, thus making it the ideal choice for cost conscious decision makers unwilling to compromise on security.

Longer perimeters are easily divided into sections not exceeding the nominal range of the chosen detectors. Special attention must be paid to the presence or absence of coverage near the mounting location (“creep zone”) to ensure gap-free coverage throughout.

Mounting

Recommended mounting height is 2.5–4 m (8–13ft). All PRO detectors (except PRO-250H) are supplied with a wall-mount bracket. The PRO-250H requires a separate mounting bracket, suitable for wall, pole or ceiling mount.

Installation

All detectors are equipped with a two-way data port. Using the PRO software via IF485B interface, configuration details and live signals, as seen by the detectors, can be changed and reviewed. The IF485B interface module and the PRO software are very helpful during both the installation process but also the operation later on. For example, detector configuration changes can be applied in real time without climbing any ladders!

Terminating Barrier

It is considered good design practise to terminate a detector’s field of view with a barrier if the PIR field of view exceeds the desired detection zone, especially if it borders onto unknown or busy terrain.

Wire mesh fence alone will not work, a closed surface area is necessary, wood or plastic materials are perfectly suitable.

Accessories:

AD851 Telescope
Alignment telescope for models PRO-100, 100H, 250H

AD653
Universal bracket with pole-mounting attachment for PRO-250H

IF485B
Interface module and PRO software for PC-based installation and management of all PRO detectors

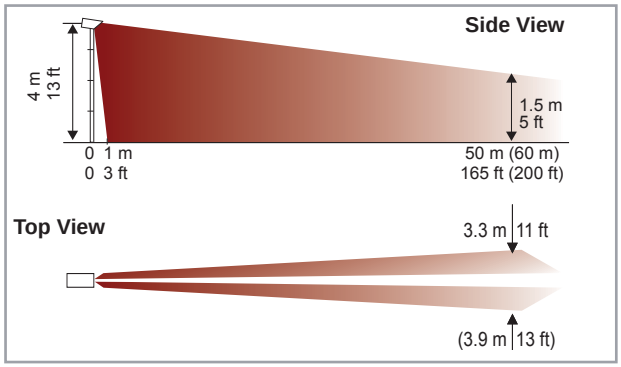
CT PRO
Cordless walk tester for all PRO detectors

SPECIFICATIONS	PRO-45	PRO-100	PRO-250H	PRO-18	PRO-30	PRO-40	PRO-50	PRO-85
Nominal range (LxW), width at nominal range (*)	PRO-45: 50 m x 3.3 m (165 ft x 11 ft) PRO-45H: 60 m x 3.6 m (200 ft x 13 ft) PRO-45D: 50 m x 3.9 m (165 ft x 12 ft) PRO-45DH: 60 m x 4.2 m (200 ft x 14 ft)	PRO-100: 120 m x 2.9 m (400 ft x 9 ft) PRO-100H: 150 m x 3.3 m (500 ft x 11 ft)	150 m x 3.6 m (500 ft x 12 ft)	PRO-18: 24 m x 21 m (80 ft x 70 ft) PRO-18H: 30 m x 27 m (100 ft x 90 ft) PRO-18W: 21 m x 24 m (70 ft x 80 ft) PRO-18WH: 27 m x 30 m (90 ft x 100 ft)	30 m x 20 m (100 ft x 65 ft)	40 m x 10 m (130 ft x 33 ft)	50 m x 30 m (165 ft x 100 ft)	PRO-85: 60 m x 18 m (200 ft x 60 ft) PRO-85H: 75 m x 23 m (250 ft x 75 ft)
Spectral Response	8-14µ, double filtered	8-14µ, double filtered	8-14µ, double filtered	8-14µ, double filtered	8-14µ, double filtered	8-14µ, double filtered	8-14µ, double filtered	8-14µ, double filtered
Sensors	pyroelectric, differential single-channel PRO 45D and PRO 45DH: pyroelectric, differential dual-channel	pyroelectric, differential triple-channel	pyroelectric, differential triple-channel	pyroelectric, differential single-channel	pyroelectric, differential single-channel	pyroelectric, differential single-channel	pyroelectric, differential single-channel	pyroelectric, differential triple-channel
Alarm output	1 Relay SPST 30 V DC @ 100 mA max. Open collector 30 V DC @ 50 mA max.	1 Relay SPST 30 V DC @ 100 mA max. Open collector 30 V DC @ 50 mA max.	1 Relay SPST 30 V DC @ 100 mA max. Open collector 30 V DC @ 50 mA max. Alarm zone via 3 opto-coupler outputs	1 Relay SPST 30 V DC @ 100 mA max. Open collector 30 V DC @ 50 mA max.	1 Relay SPST 30 V DC @ 100 mA max. Open collector 30 V DC @ 50 mA max.	1 Relay SPST 30 V DC @ 100 mA max. Open collector 30 V DC @ 50 mA max.	1 Relay SPST 30 V DC @ 100 mA max. Open collector 30 V DC @ 50 mA max.	1 Relay SPST 30 V DC @ 100 mA max. Open collector 30 V DC @ 50 mA max.
Alarm indicator	Internal LED	Internal LED	Internal LED	Internal LED	Internal LED	Internal LED	Internal LED	Internal LED
Detection speed range	0.2 - 5 m/s (0.7 - 16 ft/s)	0.2 - 5 m/s (0.7 - 16 ft/s)	0.2 - 5 m/s (0.7 - 16 ft/s)	0.2 - 5 m/s (0.7 - 16 ft/s)	0.2 - 5 m/s (0.7 - 16 ft/s)	0.2 - 5 m/s (0.7 - 16 ft/s)	0.2 - 5 m/s (0.7 - 16 ft/s)	0.2 - 5 m/s (0.7 - 16 ft/s)
Sensitivity adjustment (as % of standard)	Via DIP switch: 40%, 75% 100% Via PRO software: 20 - 140%	Via DIP switch: PRO-100: 60 m, 84 m, 120 m PRO-100H: 75 m, 105 m, 150 m Via PRO software: 50 - 150%	Via DIP switch: 75 m, 105 m, 150 m Via PRO software: 50 - 150%	Via DIP switch: 40%, 75% 100%" Via PRO software: 20 - 140%	Via DIP switch: 40%, 75% 100%" Via PRO software: 20 - 140%	Via DIP switch: 40%, 75% 100%" Via PRO software: 20 - 140%	Via DIP switch: 40%, 75% 100%" Via PRO software: 20 - 140%	Via DIP switch: PRO-85: 30 m, 45 m, 60 m PRO-85H: 40 m, 60 m, 75 m Via PRO software: 50 - 150%
Temperature Compensation	Full compensation entire operating temperature range	Full compensation entire operating temperature range	Full compensation entire operating temperature range	Full compensation entire operating temperature range	Full compensation entire operating temperature range	Full compensation entire operating temperature range	Full compensation entire operating temperature range	Full compensation entire operating temperature range
Internal Switches	Range, ATD, Test, Anti-Tamper, Mounting Height	Range, ATD, Test, Anti-Tamper, Mounting Height	Range, ATD, Test, Anti-Tamper, Mounting Height	Sensitivity, ATD, Pulse Count, Test, Anti-Tamper, Mounting Height	Sensitivity, ATD, Pulse Count, Test, Anti-Tamper, Mounting Height	Sensitivity, ATD, Pulse Count, Test, Anti-Tamper, Mounting Height	Sensitivity, ATD, Pulse Count, Test, Anti-Tamper, Mounting Height	Range, ATD, Test, Anti-Tamper, Mounting Height
Supply Voltage	10.5 - 30 V DC, 24 V AC ±15% (excluding heater)	10.5 - 30 V DC, 24 V AC ±15% (excluding heater)	10.5 - 30 V DC, 24 V AC ±15% (excluding heater)	10.5 - 30 V DC, 24 V AC ±15% (excluding heater)	10.5 - 30 V DC, 24 V AC ±15% (excluding heater)	10.5 - 30 V DC, 24 V AC ±15% (excluding heater)	10.5 - 30 V DC, 24 V AC ±15% (excluding heater)	10.5 - 30 V DC, 24 V AC ±15% (excluding heater)
Supply Current	18 mA @ 12 V, 14 mA @ 24 V	18 mA @ 12 V, 14 mA @ 24 V	18 mA @ 12 V, 14 mA @ 24 V	18 mA @ 12 V, 14 mA @ 24 V	18 mA @ 12 V, 14 mA @ 24 V	18 mA @ 12 V, 14 mA @ 24 V	18 mA @ 12 V, 14 mA @ 24 V	18 mA @ 12 V, 14 mA @ 24 V
Heater Power (H-versions only)	2 W / 176 mA @ 12 V at -40ºC (40ºF)	2 W / 176 mA @ 12 V at -40ºC (40ºF)	2 W / 176 mA @ 12 V at -40ºC (40ºF)	2 W / 176 mA @ 12 V at -40ºC (40ºF)	N/A	N/A	N/A	2 W / 176 mA @ 12 V at -40ºC (40ºF)
Operating Temperature	-20º to +60ºC (-4º to +140ºF) H-version: -40º to + 60ºC (-40º to +140ºF)	-20º to +60ºC (-4º to +140ºF) H-version: -40º to + 60ºC (-40º to +140ºF)	-40º to + 60ºC (-40º to +140ºF)	-20º to +60ºC (-4º to +140ºF) H-version: -40º to + 60ºC (-40º to +140ºF)	-20º to +60ºC (-4º to +140ºF)	-20º to +60ºC (-4º to +140ºF)	-20º to +60ºC (-4º to +140ºF)	-20º to +60ºC (-4º to +140ºF) H-version: -40º to + 60ºC (-40º to +140ºF)
Sealing	IP 64	IP 64	IP 64	IP 64	IP 64	IP 64	IP 64	IP 64
Weight	900 g (2 lbs), incl. bracket	900 g (2 lbs), incl. bracket	1.5 kg (3.3 lbs), ex. bracket	900 g (2 lbs), incl. bracket	900 g (2 lbs), incl. bracket	900 g (2 lbs), incl. bracket	900 g (2 lbs), incl. bracket	900 g (2 lbs), incl. bracket
Dimensions (L x W x H)	247 mm x 100 mm x 104 mm (9.7" x 3.9" x 4")	247 mm x 100 mm x 104 mm (9.7" x 3.9" x 4")	275 mm x 100 mm x 100 mm (10.8" x 3.94" x 3.94")	247 mm x 100 mm x 104 mm (9.7" x 3.9" x 4")	247 mm x 100 mm x 104 mm (9.7" x 3.9" x 4")	247 mm x 100 mm x 104 mm (9.7" x 3.9" x 4")	247 mm x 100 mm x 104 mm (9.7" x 3.9" x 4")	247 mm x 100 mm x 104 mm (9.7" x 3.9" x 4")
Cable Feed	2 x 4-7 mm dia (0.16" - 0.27")	2 x 4-7 mm dia (0.16" - 0.27")	2 x 6-9 mm (PG 11, 0.24" - .35")	2 x 4-7 mm dia (0.16" - 0.27")	2 x 4-7 mm dia (0.16" - 0.27")	2 x 4-7 mm dia (0.16" - 0.27")	2 x 4-7 mm dia (0.16" - 0.27")	2 x 4-7 mm dia (0.16" - 0.27")
Cable Termination	Removable screw terminals	Removable screw terminals	Removable screw terminals	Removable screw terminals	Removable screw terminals	Removable screw terminals	Removable screw terminals	Removable screw terminals
Mounting	Wall mounting bracket included, pole mount ZA P-L1 separate	Wall mounting bracket included, pole mount ZA P-L1 separate	Separate bracket for wall or pole mount	Wall mounting bracket included, pole mount ZA P-L1 separate	Wall mounting bracket included, pole mount ZA P-L1 separate	Wall mounting bracket included, pole mount ZA P-L1 separate	Wall mounting bracket included, pole mount ZA P-L1 separate	Wall mounting bracket included, pole mount ZA P-L1 separate
DataPort	RS 485, 9.6 KBps, 8E1	RS 485, 9.6 KBps, 8E1	RS 485, 9.6 KBps, 8E1	RS 485, 9.6 KBps, 8E1	RS 485, 9.6 KBps, 8E1	RS 485, 9.6 KBps, 8E1	RS 485, 9.6 KBps, 8E1	RS 485, 9.6 KBps, 8E1
Model Variants	PRO-45 - standard version H - high-performance D - directional discrimination left-right / right-left	PRO-100 - standard version H - high-performance	PRO-250H - high-performance	PRO-18 - standard version, 50º W - wide-angle, 90º H - high-performance	PRO-30 - standard version No PRO-30H available, use PRO-18H instead	PRO-40 - standard version No PRO-40H available, use PRO-45H or PRO-45DH instead	PRO-50 - standard version	PRO-85 - standard version H - high-performance
Tamper detection	Cover switch 30 V, 100 mA max detection of changes in alignment	Cover switch 30 V, 100 mA max detection of changes in alignment	Cover switch 30 V, 100 mA max detection of changes in alignment	Cover switch 30 V, 100 mA max detection of changes in alignment	Cover switch 30 V, 100 mA max detection of changes in alignment	Cover switch 30 V, 100 mA max detection of changes in alignment	Cover switch 30 V, 100 mA max detection of changes in alignment	Cover switch 30 V, 100 mA max detection of changes in alignment
Window	Plastic, IR transmissive H-version: Silicon Wafer Window	Plastic, IR transmissive H-version: Silicon Wafer Window	Silicon Wafer Window	Plastic, IR transmissive H-version: Silicon Wafer Window	Plastic, IR transmissive	Plastic, IR transmissive	Plastic, IR transmissive	Plastic, IR transmissive H-version: Silicon Wafer Window

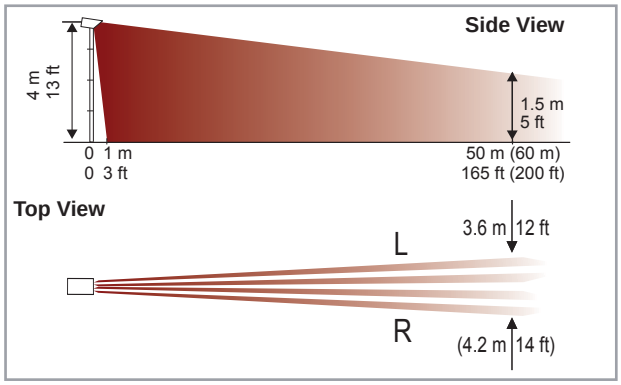
* The nominal detection range is defined for a person walking upright at normal speed. The actual detection range depends on the background noise and the thermal contrast, size and speed of a target. Recommended range for typical application is 60 … 75% of nominal range depending on site specific requirements.

Coverage patterns of PRO Series

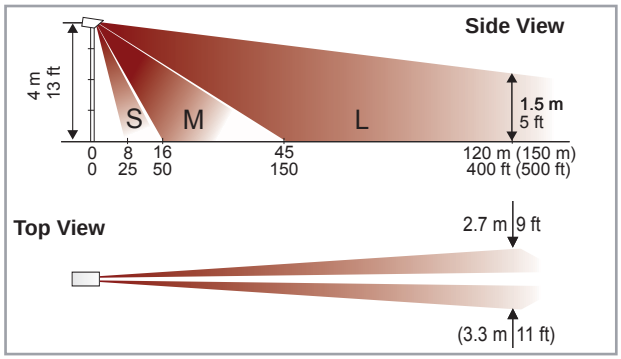
Top and side view of PRO-45 / PRO-45H detection pattern (H-version distances)



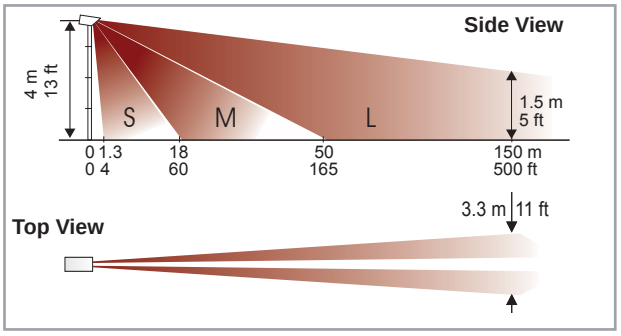
Top and side view of PRO-45D / PRO-45DH detection pattern (H-version distances)

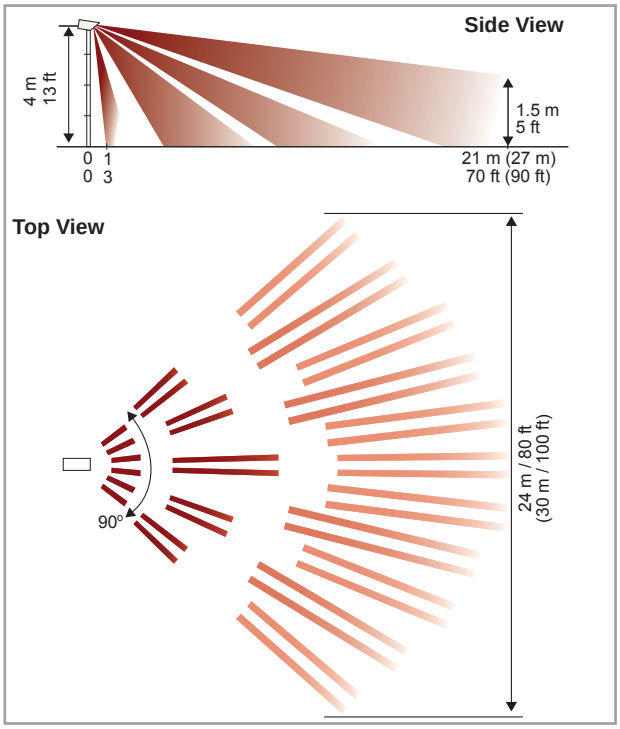


Top and side view of PRO-100 / PRO-100H detection pattern (H-version distances)

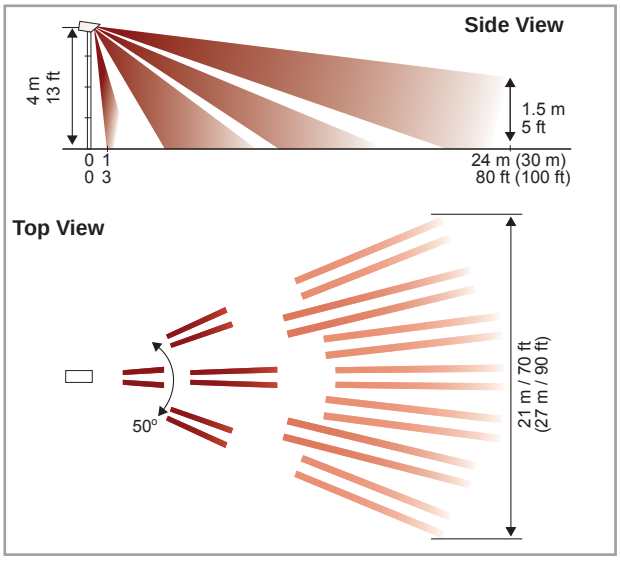


Top and side view of PRO-250H detection pattern

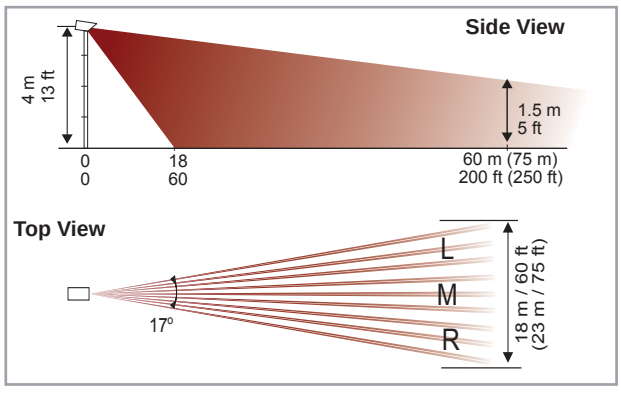




Top and side view of PRO-18W / PRO-18WH detection pattern (H-version distances)



Top and side view of PRO-18 / PRO-18H detection pattern (H-version distances)



Top and side view of PRO-85 / PRO-85H detection pattern (H-version distances)

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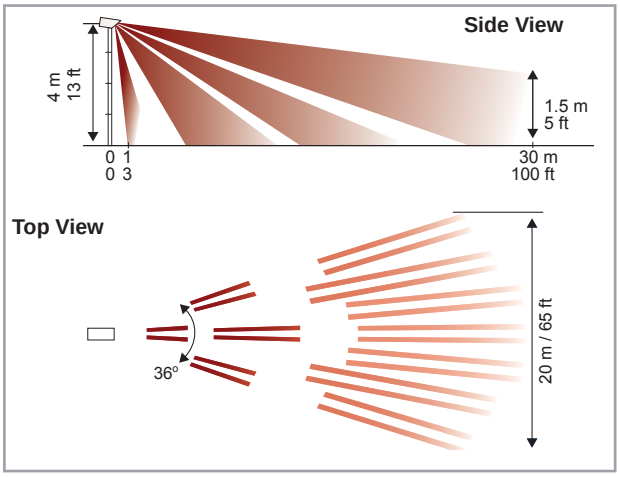
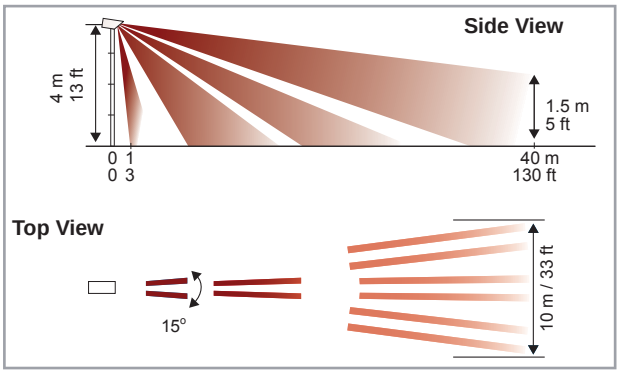
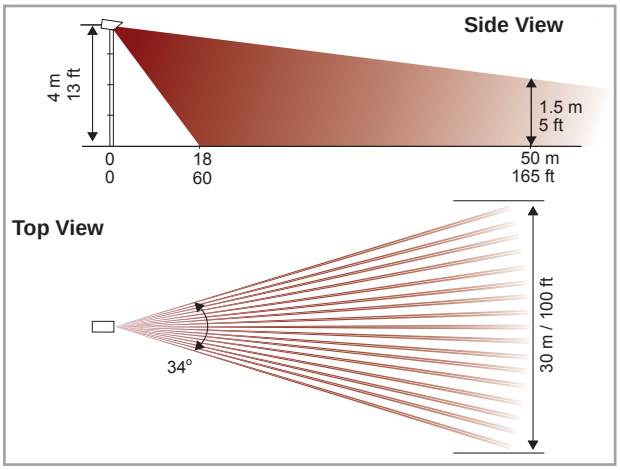


Top and side view of PRO-30 detection pattern



Top and side view of PRO-40 detection pattern



Top and side view of PRO-50 detection pattern

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