

ADPRO[®] PRO 250A, PRO 150D, PRO 75A, PRO 45, PRO 18W

Passive Infra-red Detectors

The ADPRO PRO Series are highly sensitive, standalone passive infra-red detectors designed for outdoor perimeter protection.

The PRO 150D and PRO 250A are designed for the protection of sensitive, high security perimeters and the PRO 75A, PRO 45 and PRO 18W for protection of medium risk perimeters.

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

All units are specifically designed to operate in a range of outdoor environments and conditions.

Advanced passive infra-red detection technology ...

- The PRO Series have sensing areas that will detect people up to 100 metres (330 feet) away, depending on the model, by sensing temperature differences between them and the background.
- Provides protection in low visibility conditions such as snow or fog.
- The area protected by the detector cannot be identified by an intruder due to passive operation of the unit.
- Use in the smallest single detector installation, right up to the largest high security multi-detector environments.

Engineered for trouble-free operation ...

- Sealing against dust and moisture ensures reliable operation even under extreme weather conditions.
- Sensitivity adjustment to suit site conditions.

- Sound design principals ensure long life and reliable operation with minimal maintenance.
- Adaptive threshold circuitry reduces the number of nuisance alarms caused by moving vegetation, small animals and sudden environmental changes.
- Low power consumption.

PRO 250A only

- Precision optics provide an accurately defined narrow sensing curtain giving continuous detection coverage from 1 metre (3.3 feet) in front of the mounting pole to 100 metres (330 feet) or beyond.
- Sophisticated signal analysis optimises detection probability over a wide range of operating conditions while reducing nuisance alarms.

PRO 250A & PRO 150D

- Automatic temperature compensation adjusts the sensitivity to compensate for changes in thermal contrast.
- Thermostatically controlled heater prevents internal condensation and ensures reliable operation even under extreme weather conditions.
- Computer designed optical system provides excellent uniformity in coverage over the full range.

PRO 45 and PRO 18W

- Precision Optics with Creep Zones.
- Adaptive Threshold Decoding (ATD).
- Temperature Compensation.
- Two-way RS485 communication.
- Remote adjustment and signal monitoring with installation program (Windows).

Positioning

In perimeter protection applications, or similar fixed installations for intruder detection, it is recommended that the detection range be limited to 100 metres (330 feet) for the PRO 150D and PRO 250A, 75 metres (245 feet) for the PRO 75A and 45m (150 feet) for the PRO 45.

Longer sections of a perimeter should be divided into portions not exceeding the above nominal ranges. The PRO 18W is a volumetric wide angle unit providing an area coverage of up to 200m² (2000sq ft).



Rugged construction allows cost-effective outdoor installation ...

- Housing is completely weatherproof and ready for outdoor installation.
- Simple to install on a pole or against a wall using standard brackets.
- Passive operation enables single ended configuration (instead of transmitter and receiver), providing cheaper and simpler installation and alignment. An ideal complement to video surveillance or light switching.
- Vertical shape of the detection zone allows convenient mounting at the same height as video cameras and out of reach of casual vandalism or snow build-up.
- An alignment Telescope (AD851) and installation tester (IT44) or interface module (IF 485) are available to optimise installation.

Internal Heater (PRO 250A & PRO 150D only)

The PRO 150D and PRO 250A have an internal heater with temperature compensation to prevent condensation on internal components.

The heater has separate terminals to allow for an independent AC or DC supply to be connected.

Mounting

Recommended mounting height is 2.5m to 4m (8 to 13 feet). A universal mounting bracket to suit most applications is available. The PRO 75A comes complete with a facility to allow mounting on a standard camera bracket using a 1/4" whitworth thread. The PRO 45 and PRO 18W are supplied complete with a universal bracket.

An Installation Tester (IT 44) is available to aid in accurate adjustment of signal gain. It provides an indication of alarm output state, signal strength, background noise, actual alarm threshold and alarm count. For the PRO 45 and PRO 18W, an interface unit (IF 485) is available for the same purpose plus for remote adjustments from a PC when the software setting mode is selected.

Terminating Barrier

A terminating barrier is generally required to stop the PIR from detecting beyond the sterile area. The barrier should be made from a non-reflective material that is capable of blocking

thermal infra-red radiation and should have good thermal insulating properties. Wood or plastic materials are suitable.

Ordering Options

PRO 250A

Long Range Outdoor PIR (extra downward coverage)

PRO 150D

Long Range Outdoor PIR

PRO 75A

Medium Range Outdoor PIR

PRO 45

Mid Range Outdoor PIR

PRO 18W

Volumetric Area Outdoor PIR

AD851 Telescope

PRO 150/250/75 Alignment Telescope

AD652 Bracket

Bracket for PRO 150D

ZAP100 Bracket

Bracket top for PRO 250A

AD653 Bracket

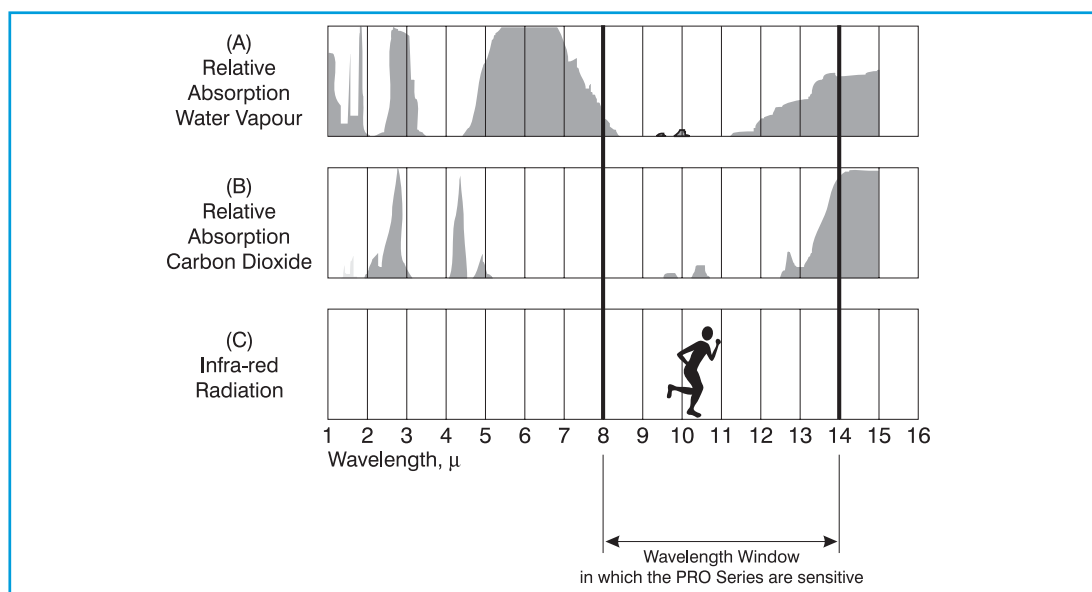
Bracket bottom for PRO 250A

IT44

PRO 150/250/75 Installation tester

IF 485

PRO 45/PRO 18W interface module



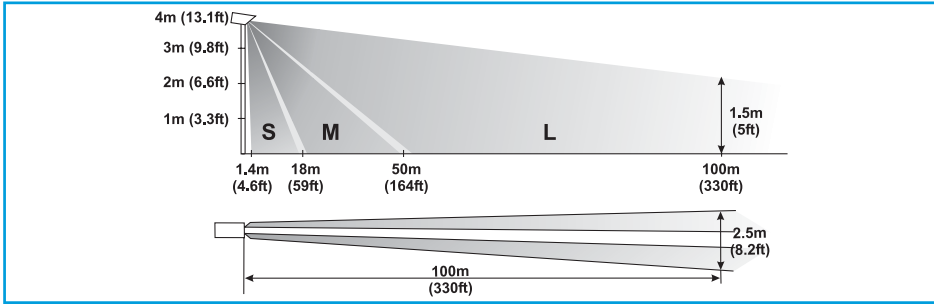
The wavelength of infra-red absorption of primary atmospheric constituents compared to the wavelength of infra-red radiation produced by humans

SPECIFICATIONS	PRO 250A	PRO 150D	PRO 75A	PRO 45	PRO 18W
Nominal Range	100m (330 ft)	100m (330 ft)	75m (245 ft)	45m (150 ft)	18m (60 ft)
Spectral Response	8-14 micrometers, double filtered	8-14 micrometers, double filtered	8-14 micrometers, double filtered	8-14 micrometers, double filtered	8-14 micrometers, double filtered
Sensors	Differential pyro-electric array	Differential pyro-electric array	Differential pyro-electric array	Differential pyro-electric	Differential pyro-electric
Alarm Output	SPDT relay, 3W, 0.25A, 28VDC/20VAC, Transistor, NPN open collector, 20mA/30V	SPDT relay, 3W, 0.25A, 28VDC/20VAC, Transistor, NPN open collector, 20mA/30V	SPST relay, 10W, 0.25A, 28VDC/20VAC, Transistor, NPN open collector, 20mA/30V	SPST relay, 10W, 0.25A, 28VDC/20VAC, Transistor, NPN open collector, 20mA/30V	SPST relay, 10W, 0.25A, 28VDC/20VAC, Transistor, NPN open collector, 20mA/30V
Output Protection	PTC resistor	PTC resistor	PTC resistor	PTC resistor	PTC resistor
Alarm Indicator	Internal LED	Internal LED	Internal LED	Internal LED (visible thru small plastic window on rear of unit)	Internal LED (visible thru small plastic window on rear of unit)
Alarm Hold Time	Adjustable between actual event duration and 10 seconds	0.2-10 seconds, adjustable	N/A	N/A	N/A
Detection Speed Range*	0.2 m/s to 5.0 m/s (0.7 ft/s to 16ft/s)	0.2 m/s to 5.0 m/s (0.7 ft/s to 16 ft/s)	0.2 m/s to 5.0 m/s (0.7 ft/s to 16 ft/s)	0.2 m/s to 5.0 m/s (0.7 ft/s to 16 ft/s)	0.2 m/s to 5.0 m/s (0.7 ft/s to 16 ft/s)
Sensitivity Adjustment	Switch presettable for range & mounting height	20-140% of nominal	20-140% of nominal	40%, 75% & 100% (Hrdwr adjust.) 20 - 140% (Software adjust.)	40%, 75% & 100% (Hrdwr adjust.) 20 - 140% (Software adjust.)
Temperature Compensation	Automatic adjustment of signal processing	Gain control 50-100% (automatic)	N/A	Automatic adjustment of signal processing	Automatic adjustment of signal processing
Internal Switches	Sensitivity & Adaptive threshold system (ATD on/off)	Adaptive threshold system on/off	Adaptive threshold system on/off	Sensitivity & Adaptive threshold system (ATD on/off)	Sensitivity & Adaptive threshold system (ATD on/off) & Pulse Count Delay (on/off)
Supply Voltage	10.5 to 28VDC (nominal 12VDC)	10.5 to 28VDC (nominal 12VDC)	10.5 to 26VDC (nominal 12VDC)	10.5 to 28VDC (nominal 12VDC)	10.5 to 28VDC (nominal 12VDC)
Supply Current	Typ 25 mA at 12VDC (without heater)	Typ 20 mA at 12VDC (without heater)	Typ 15 mA at 12VDC	Typ 25 mA at 12VDC	Typ 25 mA at 12 VDC
Heater Power	Approx 1 W at -40°C	Approx 1 W at -40°C	N/A	N/A	N/A
Operating Temperature	-40°C to 60°C (-40°F to 140°F)	-40°C to 60°C (-40°F to 140°F)	-20°C to 60°C (-4°F to 140°F)	-20°C to 60°C (-4°F to 140°F)	-20°C to 60°C (-4°F to 140°F)
Sealing	Splash proof to IP64 **	Splash proof to IP64 **	Splash proof to IP64 **	Splash proof to IP64 **	Splash proof to IP64 **
Weight	1500 grams (3.3 lbs)	1200 grams (2.6 lbs)	1250 grams (2.8 lbs)	900 grams (2 lbs) incl. bracket	900 grams (2 lbs) incl. bracket
Dimensions	275mm (10.8") long x 100mm (3.94") diam	314mm (13") long x 90mm (3.5") diam	242.5mm (9.5") long x 90mm (3.5") diam	247mm (9.7") long x 100mm (3.9") wide x 104mm (4.0") high	247mm (9.7") long x 100mm (3.9") wide x 104mm (4.0") high
Cable Feedthrough	Cable diameter 9-12mm (PG16), Splashproof to IP53	Cable diameter 9-12mm (PG16), Splashproof to IP53	Cable diameter 6-9mm (PG11), Splashproof to IP53	Cable diameter 6-9mm (PG11) (2 pieces). Splashproof to IP53	Cable diameter 6-9mm (PG11) (2 pieces). Splashproof to IP53
Cable Termination	Screw terminals	Screw terminals	Screw terminals	Screw terminals	Screw terminals
Mounting	Universal mounting bracket (optional)	Universal mounting bracket (optional)	Universal mounting bracket (optional) or camera bracket	Universal mounting bracket included	Universal mounting bracket included
Test Socket	For connection to IT44 Installation Tester	For connection to IT44 Installation Tester	For connection to IT44 Installation Tester	For connection to IF 485A Installation Tester	For connection to IF 485A Installation Tester
Warranty	24 months	24 months	24 months	24 months	24 months

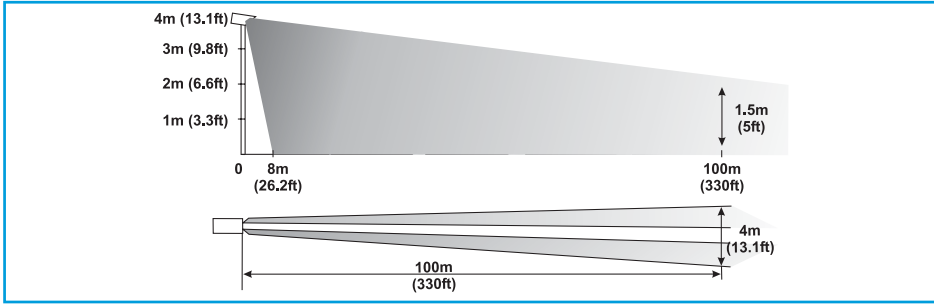
* The detection pattern and frequency response have been optimised for the detection of human targets crossing the field of view at 90° to the PIR curtain.

** Housing only. IP53 for cable gland.

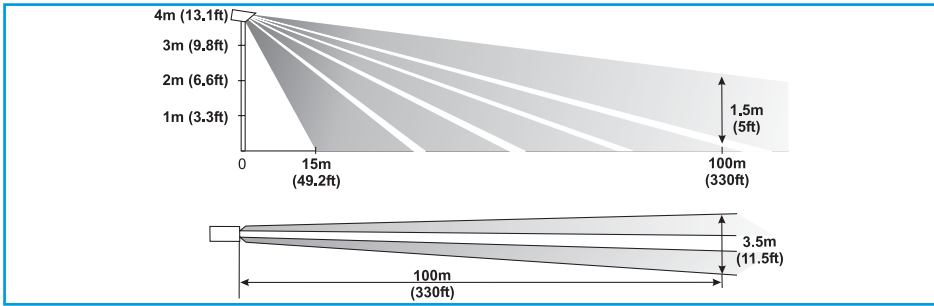
Top and Side view of PRO 250A field of view



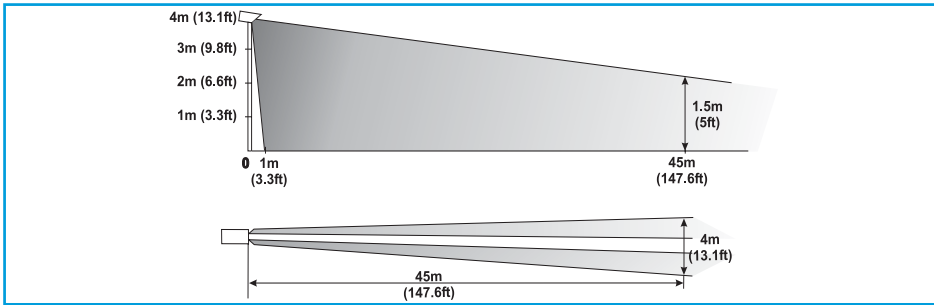
Top and Side view of PRO 150D field of view



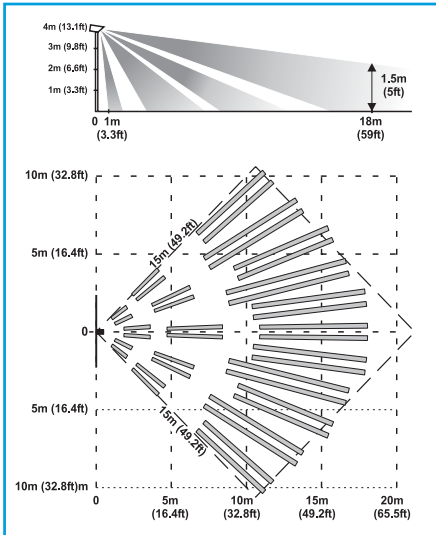
Top and Side view of PRO 75A field of view



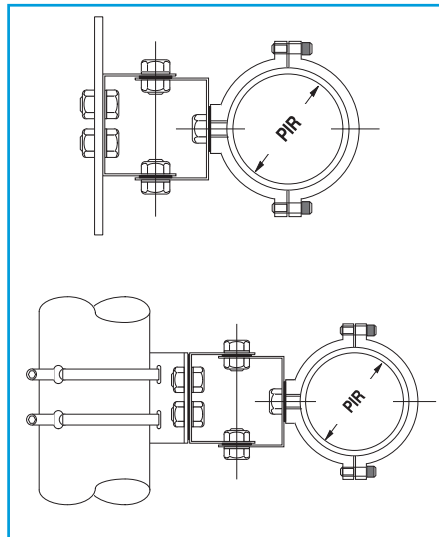
Top and side view of PRO 45 field of view



Top and side view of PRO 18W field of view



Mounting Bracket PRO 250A, PRO 150D and PRO 75A (optional)



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