

The logo for TAKEX, featuring the word "TAKEX" in a bold, red, sans-serif font with a white outline, set against a dark background.

TAKEX

The model name "PX B-100 ATC" in a white, stylized, sans-serif font, centered on the page. The background features faint white line drawings of the device's front and side views.

PXB-100ATC

For over 50 years TAKEX has provided active infrared detection devices for industrial, commercial and domestic installation. In this time we have developed a patented combination of technologies to provide the most reliable point-to-point active infrared detection units available...

HIGH SECURITY

Unrivalled detection performance

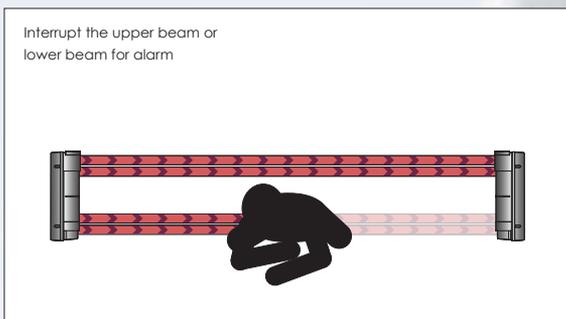
TAKEX PXB-100ATC photoelectric beam sensors were developed for high-risk applications where detection of all intrusion attempts is critical. The PXB-100ATC uses a unique synchronized timing system to achieve unrivalled detection performance and versatility.



The modular design of the PXB-100ATC sensors ensures that systems can be implemented based on the needs of the application and environment. Sensors can be integrated in a 'tower' configuration to create a high security detection zone of 100m outdoors, to a height of over 8m.

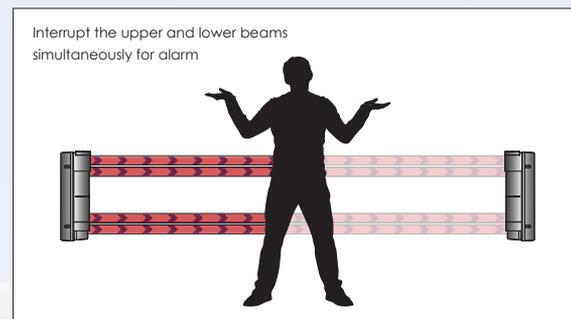
Intelligent dual response system

The PXB-100ATC uses a sophisticated dual response and output system that has been designed to distinguish and allocate specific alarm responses based on the size and speed of target objects moving through the detection area.



OR Gate - AT

The 'OR' response is initiated when an opaque object of 216mm in height passes through the detection area at ground level and either the lower or upper beams are broken. When an 'OR' detection occurs, beam interruption time is determined by the settings applied during calibration. The adjustable response times for 'OR' detection are 0.1, 0.2, 0.3 & 0.5 seconds. The four configurable 'OR' detection response times ensure that small animals such as birds and rats can pass through the detection area undetected, but attempts by humans to crawl through a portion of the detection area are always detected and reported to the alarm controller.

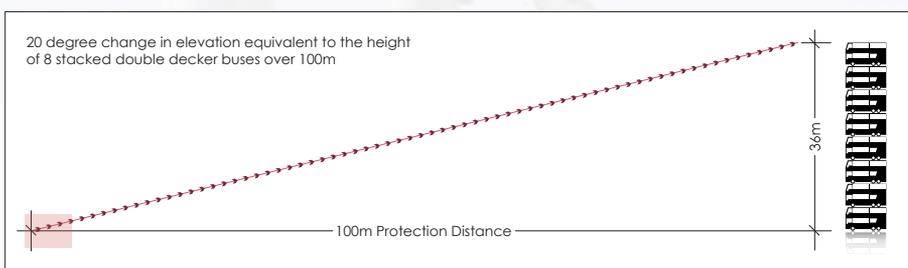
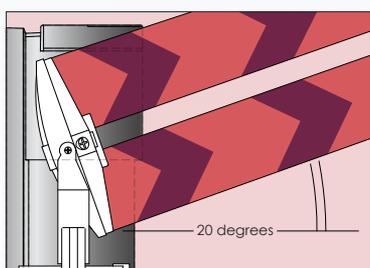


AND Gate - HF

The 'AND' response is initiated when an opaque object of 513mm in height passes through the detection area at ground level and both lower and upper beams are broken simultaneously. When an 'AND' detection occurs, beam interruption time reduces to 0.05 seconds ensuring that large objects cannot pass through the detection area undetected. During an 'AND' alarm condition, both the AT & HF output are engaged to communicate a full alarm. The unique size and speed processing reduces the likelihood of nuisance alarms caused by birds or debris flying through the detection area, while maximizing the catch performance of legitimate targets.

The combination of the HF (AND) & AT (OR) outputs allows for unsurpassed performance and event reporting capabilities. TAKEX's unique processing system allows control equipment to respond appropriately to prone crawling and general perimeter breaches.

±20 degree vertical adjustment



Anti-mask & anti-cloak

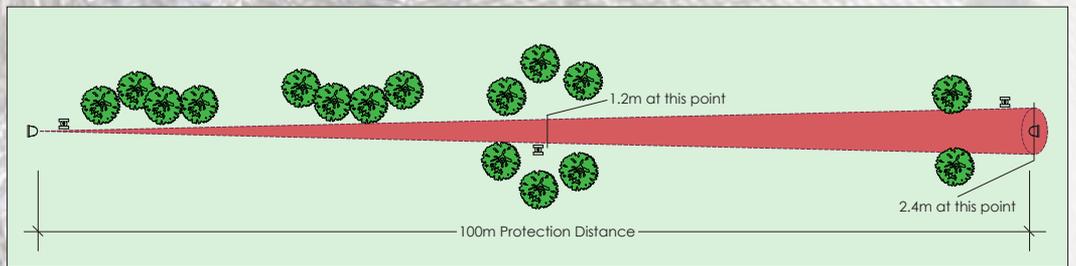
The PXB-100ATC photoelectric beam sensor is Anti-Mask & Anti-Cloak by nature. It is not possible to defeat the system using masking or cloaking methods anywhere in the 100m detection area. Placement of any opaque object big enough to mask the IR signal in the detection zone will be registered as an alarm.

Alignment aids

The PXB-100ATC is supplied with convenient and easy to use alignment aids. Vivid colour coded internal casings allow for easier visual alignment over long distances, and the integrated 'sound check' tone generator and 'monitor output' allow the installer to measure the signal strength using a standard voltage tester. For the most accurate and simple calibration, the optional ER-02 is available as a specialist wireless calibration tool.

Narrow envelope

Some Perimeter Intrusion Detection technologies require very wide open spaces in order to function without interference or signal blocking. The PXB-100ATC can be utilized in narrow corridors and environments where obstacles are in close proximity to the line of protection without compromise.



Dual output and response processing

The advanced dual output and response timing system of the PXB-100ATC ensures that the sensor can respond appropriately to different alarm conditions. When smaller objects such as birds or debris pass through the detection area they are unlikely to be detected, but if they are detected they will be granted a small window of time to pass through without causing an alarm. When larger objects pass through, such as human beings, the response time decreases to 0.05 seconds, initiating an instantaneous alarm.

Rate of change

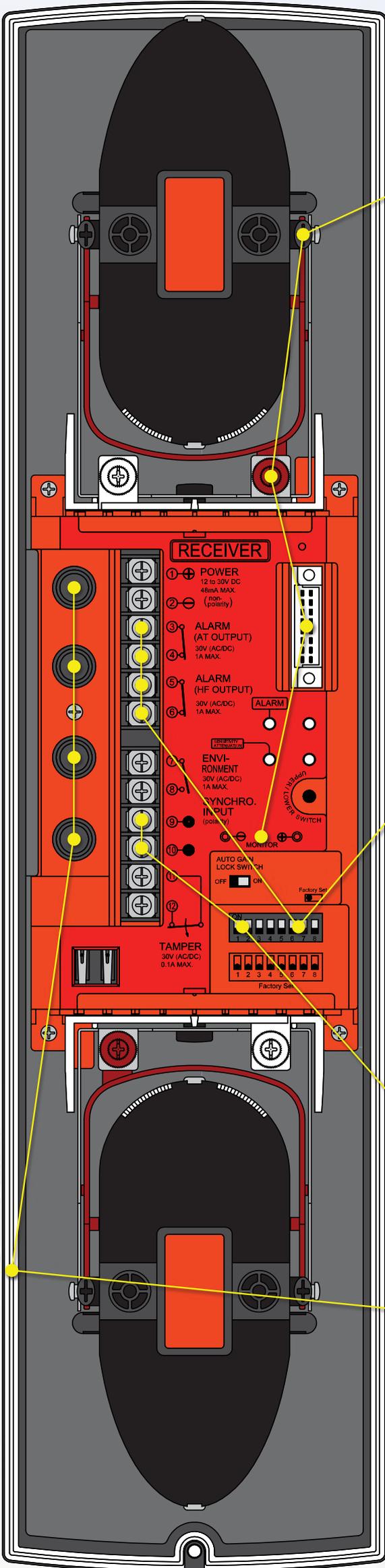
Many perimeter intrusion detection technologies have a weak point in processing and accurately registering targets with a very slow rate of change. This may include extremely slow moving/crawling intruders. This kind of system defeat is not possible with the PXB-100ATC.

Advanced synchronisation

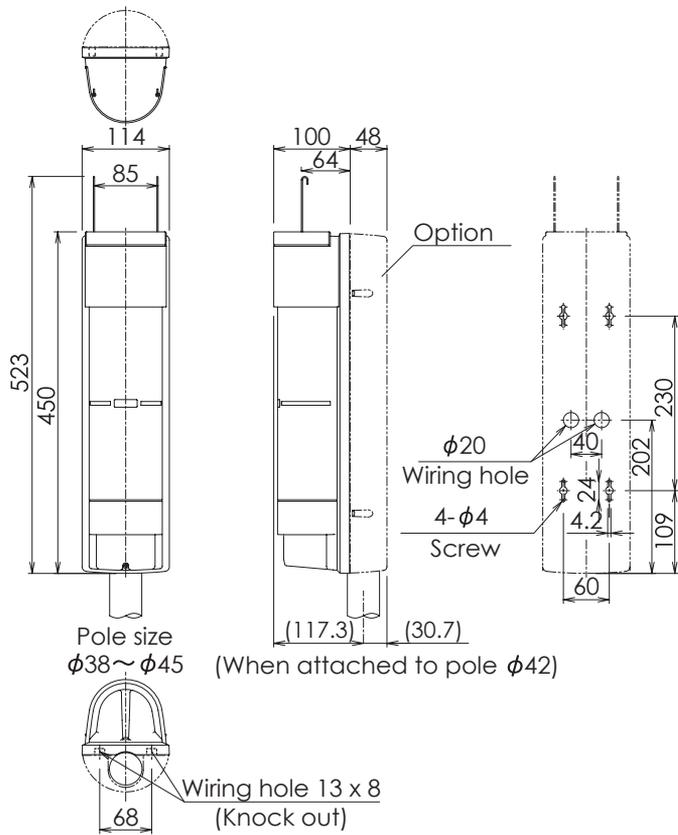
Through the use of an advanced synchronized timing system; it is possible to stack more TAKEX sensors than ever before. Our synchronisation system reduces the risk of cross talk in installations where there are high and tight stacks or multiple linear zones.

Ingress protection

The PXB-100ATC is supplied in an IP65 rated casing with specially designed 'cable hugging' insect bushings to ensure that the sensors remain dry and bug free. For extra peace of mind, the sensors have been fitted with a specially designed waterproof but breathable fabric vent to ensure moisture and condensation is never a problem.



Dimensions



Tower Enclosures

For additional security, our range of rugged wall and floor mount tower enclosures ensure peace of mind protection by concealing the number and position of TAKEX photoelectric beams from would-be intruders.

TAS series

180 degree single sided floor mounted enclosure

TAD series

360 degree double sided floor mounted enclosure

TAW series

180 degree single sided wall mounted enclosure

FEATURES

- anodized aluminium column for high oxidation resistance
- tamper protected lid to prevent unauthorised interference
- vandal resistant polycarbonate covers

The tower covers are made from Ultra-Violet and vandal resistant polycarbonate, which appear completely opaque to disguise the mounting height and number of beams from observers, but transparent in the infrared spectrum for maximum beam transmission.

Specifications

PHOTOELECTRIC SENSOR	
MODEL	PXB-100ATC
DETECTION SYSTEM	Near infrared beam interruption system (4 beams simultaneous interruption or upper/lower 2 beams interruption)
INFRARED BEAM	Double modulation pulsed beam by Infrared LED
PROTECTION DISTANCE	Outdoor 100m (330ft) or less
Max. arrival distance	1,000m (3,300ft)
External light immunity	50,000 lux
Response time	OR gated : upper 2 beams and lower 2 beams simultaneous interruption 0.05 sec. upper 2 beams interruption or lower 2 beams interruption : 0.1/0.2/0.3/0.5 sec. (selectable) AND gated : upper 2 beams and lower 2 beams simultaneous interruption 0.05 sec.
Power supply	12-30VDC (non-polarity)
Current consumption	Transmitter : 27mA / Receiver : 48mA
Alarm output	Dry contact output : N/C or N/O selectable Contact action : Interruption time (min. 2 sec) * During the synchro signal down, alarm signal output continuously Capacity : AC/DC30V 1A (resistive load) Protective resistor
Environmental output	Dry contact output : N/C or N/O selectable Action : activated when weather condition worsens Capacity : AC/DC30V 1A (resistive load) Protective resistor
Tamper output	Dry contact output : N/C Action : activated when cover is detached Capacity : AC/DC30V 0.1A (resistive load) Protective resistor
Alarm LED	RED LED (only receiver) ON : when an alarm is initiated
Attenuation LED	RED LED (only receiver) ON : when beam is attenuated
Function	Modulated beam frequency selection, Tone indicator, Environment module Beam Power selection, Transmitting power adjustment Programmed AGC, Synchro timing selection, Auto-gain lock function, Monitor jack, Tamper, Response time adjustment Alarm output selection, Environment output selection, Upper/Lower beam switch, Wireless Alignment Checker connecting function.
Beam adjustment	Horizontal : $\pm 90^\circ$ / Vertical : $\pm 20^\circ$
Ambient temperature	-13°F to 140°F (-25°C to $+60^\circ\text{C}$)
mounting positions	Outdoor, Indoor
Wiring	Terminals
Weight	Transmitter : 49oz (1,400g) / Receiver : 51.5oz (1,470g)
Appearance	PC resin (wine red)
Accessory	Pole attachment, Anti-Bird spike, Screws, Instruction manual

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