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...
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

www.takex.com.au
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.
**Specifications**

### Dimensions

![Diagram of Dimensions]

- Pole size: Φ38 ~ Φ45
- Wiring hole: 13 x 8 (Knock out)
- Option: (117.3 x 53.7)
- 4-4 Wiring hole
- Screw

### Tower Enclosures

For additional security, our range of rugged wall and floor mount tower enclosures ensure peace of mind 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 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.

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