

TAKEX

3.46" (88mm)

PB SERIES

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...

13.78" (350mm)

BEAM TECHNOLOGY

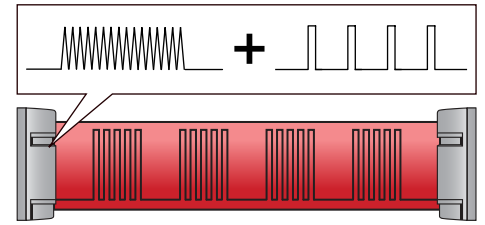


peace-of-mind pro

“As the challenges and demands of an external environment are so much greater than an internal environment, different products and technologies need to be employed. External detectors need to provide peace of mind that an intruder will always be detected before gaining access to the premises, and that unexplained activations are kept to a minimum.”

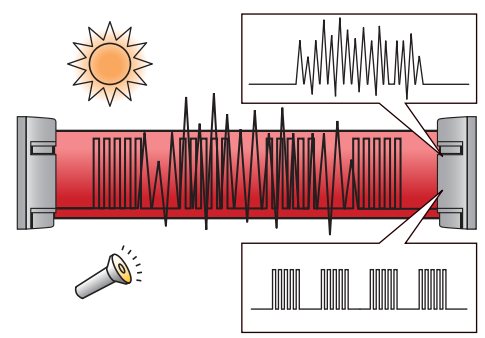
The fundamentals of an active infrared beam are simple; a transmitter emits a signal, a receiver recognizes that signal, and a break in the signal causes the receiver to report an alarm. The stability of this signal is paramount to the reliability and effectiveness of the system. In a world filled with competing sources of infrared light, including car head lamps, security illuminators and of course the sun, it can be difficult for an infrared receiver to distinguish between the intended transmitted signal and the myriad of alternative signals. TAKEX have developed and combined features which are specifically designed to overcome these issues, providing unsurpassed protection.

one. Double Modulation



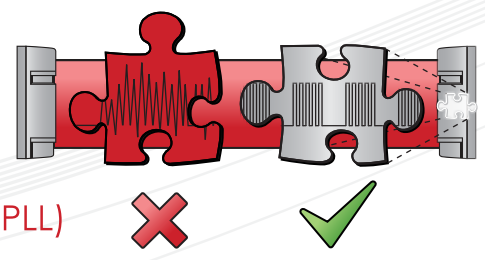
Most light sources emit a wide spectrum of light, not just the visible white light we can see, including infrared. This means that manufacturers of active infrared beams must use pulsed or modulated signals in order to try and discriminate their transmitted signal from other light sources. TAKEX were the first company to develop a double modulated signal, which doesn't occur naturally or by chance, making the job of discrimination for the receiver much easier and more reliable.

two. Resonance Filter



Before the received signal is analysed, the receiver has a filtration circuit which removes unwanted background noise and cleans up the signal.

three. Phase-Locked Loop (PLL)

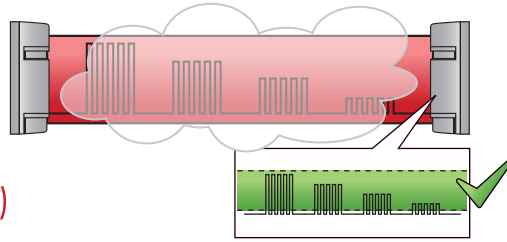


Each TAKEX receiver carries an imprint of the unique double modulated signal to verify that the received signal is in fact genuine. The PLL circuitry continually monitors the signal levels and optimises the system for maximum performance in changing environmental conditions.



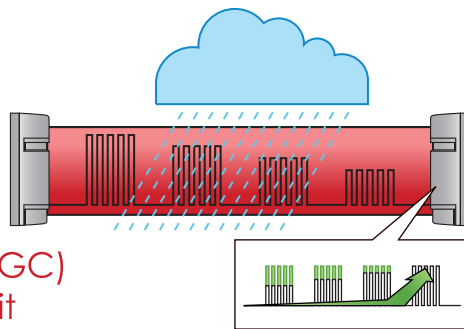
protection

FOUR. Auto-Gain Lock (AGL)



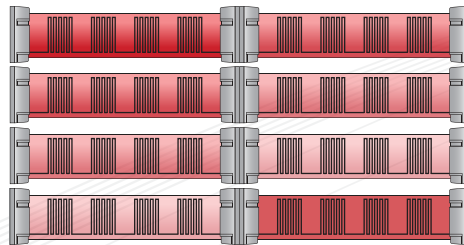
Most beams are equipped with this function, which determines on the level of signal degradation that can be withstood before an alarm is generated. What does vary between manufacturers is the percentage of signal tolerated. With all TAKEX beams the signal can degrade by over 99% before the receiver will report an alarm, meaning that at only 1% visibility the reliability is still assured.

FIVE. Auto-Gain Control (AGC) + Environmental Circuit



This feature enables the receiver to constantly monitor and react to the signal strength it receives. If the signal drops below a certain threshold the receiver can increase its sensitivity by up to 300% to maintain the protection integrity. If the signal continues to deteriorate at a consistent level, the receiver has an output to warn the system that the environmental conditions may cause the unit to drop into alarm condition.

SIX. 4-ch selectable



Many TAKEX beams are equipped with the ability to select one of 4 clearly defined channels, allowing the installation of multiple sets of beams in close proximity without the worry of crosstalk interference, and without the need for costly sync cabling within zones.



model	PB-30/60/100TK	PB-20/40/60TE	PB-100ST	PB-50/100/200F	PB-IN-50/100/200HF	PB-50/100/200HF-KH	PB-IN-100AT
type	synchro-twin	synchro-twin	synchro-twin	synchro-quad	synchro-quad	synchro-quad	anti-crawl
coverage	30m 60m 100m	20m 40m 60m	100m	50m 100m 200m	50m 100m 200m	50m 100m 200m	100m
double modulation	•	•	•	•	•	•	•
resonance filter	•	•	•	•	•	•	•
PLL	•	•	•	•	•	•	•
AGL	•	•	•	•	•	•	•
AGC/environmental	-/-	-/-	-/-	-/-	•/•	•/•	•/•
4-ch selectable	-	•	-	-	•	•	•

all models are:

- ✓ designed and manufactured in Japan, from component upwards
- ✓ subject to a rigorous 6-stage quality control process
- ✓ confidently supplied with a 5 year guarantee



“For any external detection device to be effective and reliable, it must be able to cope with any variety of environmental conditions, such as rain, snow, fog and sunlight. TAKEX have taken all of these considerations into account and combined technology and features to overcome these conditions to provide a stable, reliable product designed to give years of trouble free service.”

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