



Takex Europe Limited

Aviary Court, Wade Road
Basingstoke, Hampshire RG24 8PE U.K.

Tel: (+44) 01256 475555

Fax: (+44) 01256 466268

Email: sales@takexeurope.com

Website: www.takexeurope.com

TAKEX PB-IN-75SW LOW-CURRENT ACTIVE INFRA-RED BEAMS- SUPPLEMENTARY INFORMATION FOR BATTERY / WIRELESS OPERATION

The Takex PB-IN-75SW is an active (Point-to-Point) infra-red quad beam, designed specifically for low-current, low-voltage use, each beamset comprised of a Transmitter (Tx) and Receiver (Rx).

This makes them particularly suited for wireless applications, or sites or areas difficult to cable to, or with no mains power where the beams have to run on battery-power alone (or solar panels, Takex Type BA-6SL. NOTE: due to UK sunlight levels, solar-powered option may not be suitable for UK use- please contact Takex for advice) or for systems where mains power is unstable, regularly interrupted, or fed from generators which switch over to stand-by batteries in quiet periods.

They can be used with any make of wireless transmitter (or GSM diallers) to create temporary or permanent secure wireless systems capable of running for months on battery-power alone, or be integrated into conventional wired systems at a later date, should mains power become available.

They can also be used where conventional low-voltage power supplies (12 / 24VDC) are so remote that volt-drop is unavoidable, as they will operate on voltages as low as 5-8VDC.

Each PB-IN-75SW beamset has 4 site-selectable operating frequencies to avoid cross-talk on multiple-stacked or serial in-line systems, allowing protection on the largest of perimeter sites.

As all four beams (of the quad beam system) have to be broken simultaneously to generate an alarm they are particularly suited to use outdoors as they are less likely to generate false alarms due to small mammals, birds, leaves, or blown litter.

BRIEF SPECIFICATION (Full Data Sheet Available On Request):

Each PB-IN-75SW beamset has a recommended maximum operating distance (Tx to Rx) of 75m Outdoors, and 150m Indoors, each beamset using approx. 6mA at 5-8VDC, or 25mA at 10-30VDC.

(Note that, as with all infra-red beams, each model has an external and internal operating range: this is because externally the range may be affected by thick mist or fog, driving rain or snow etc).

THE MATHS OF CURRENT CONSUMPTION (To Work Out Your Power Requirements / Battery Duration Time):

Example One: 1 x Beamset (Transmitter and Receiver) Operating on 6VDC

$0.006 \text{ Amps (6mA)} \times 24 \text{ (Hours)} \times 30 \text{ (Days per Month)} = 4.32 \text{ AH (Amp-Hours) Power Required Per Month}$

Example Two: 1 x Beamset (Transmitter and Receiver) Operating on 12VDC

$0.025 \text{ Amps (25mA)} \times 24 \text{ (Hours)} \times 30 \text{ (Days / Month)} = 18.00 \text{ AH (Amp-Hours) Power Required Per Month}$

BATTERY OPERATION / EXPECTED DURATION:

Beamsets can be run on 6VDC or 12-30VDC, but the minimal current requirement of 6mA at 6VDC makes 6VDC battery systems a preferred option due to the increased running time compared to battery capacity, and being physically smaller than 12V batteries may be easier to house on site in lockable boxes or similar containers.

You can use any combination of DC power for a beamset eg. Power both Tx and Rx from the same battery, or have a battery at each end, or have a 12VDC supply hardwired to one end only, and power the other end from a battery.

Many sites use rechargeable batteries changed on a routine maintenance cycle of several months, either standard 6VDC or 12VDC 'Intruder Alarm' type, or high capacity 6V or 12VDC 'Deep Discharge / Leisure' type batteries (as used in caravans, boats etc) for extended running times at remote locations, or to increase service intervals.

Multiple batteries can be connected in parallel to achieve greater battery capacity / longer operating duration.

Example Duration For Fully-Charged Batteries (Approx.)

BATTERY TYPE	Powering 1 x Beamset	Powering One End Only
	(Tx AND Rx)	(Tx OR Rx)
6V 12AH	2.7 Months	5.4 Months
6V 24AH	5.5 Months	11 Months
6V 80AH	18 Months	36 Months
6V 210AH (Deep Discharge Type)	48 Months	48+ Mths (Excessive Discharge Time)
12V 12AH	0.66 Months	1.3 Months
12V 24AH	1.3 Months	2.6 Months
12V 38AH	2.1 Months	4.2 Months
12V 65AH	3.6 Months	7.2 Months
12V 80AH (Deep Discharge Type)	4.4 Months	8.8 Months
12V 230AH (Deep Discharge Type)	12 Months	12+ Mths (Excessive Discharge Time)

FOR PRODUCT SELECTION OR SYSTEM DESIGN ADVICE, CONTACT TAKEX ON:

Tel: 01256-475555