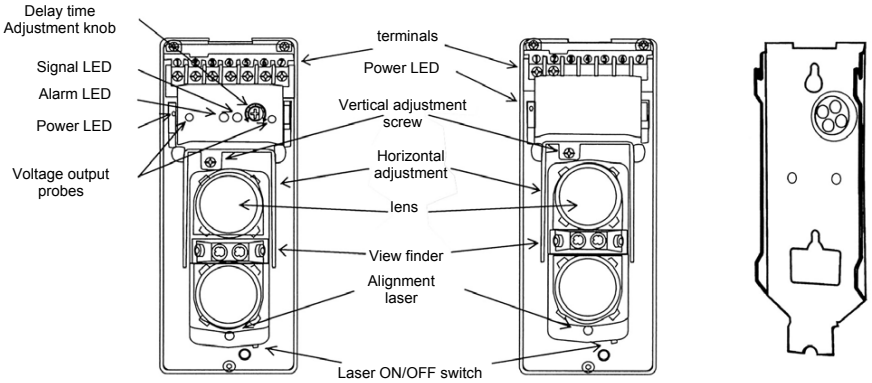
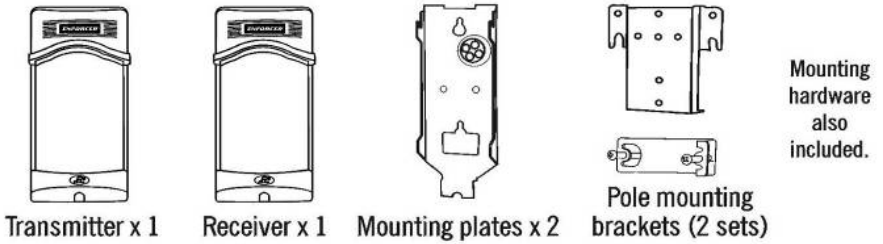
Outdoor codificable twin photobeam infrared detector

1 Description of the product

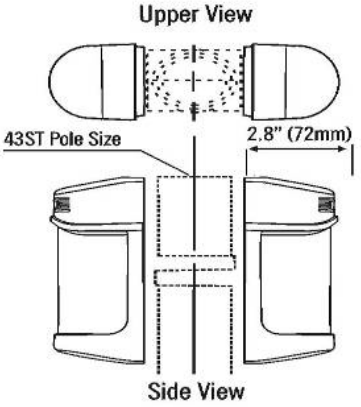


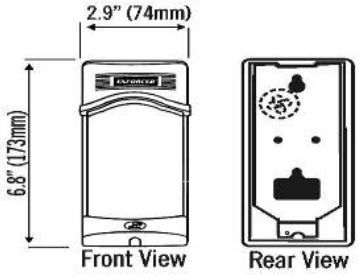
2 Contents of the pack



3 Features

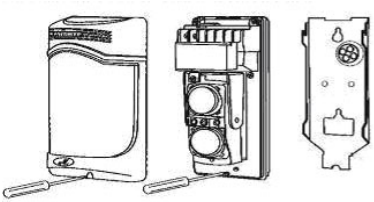
Model	FBX60D	FBX120D	FBX180D	FBX240D
Digital processor for greater stability				
4 selectable channels for frequencies ray				
Protection against lightning				
Protection against frost and dew				
Alignment barriers through laser				
IP 54 (Protection for splashing water and dust)				
Max range (outdoor)	30m	60m	90m	120m
Max range (indoor)	60m	120m	180m	240m
Detection method	2 rays synchronized			
Infrared rays	Double modulated beam with IR LED			
Channels	4 selectable with DIP-SWITCH			
Response time	50 ~ 700 mS			
Power supply voltage	10.8 ~ 18 Vdc (unpolarized)			
Alignment voltage	Alarm: ≤1.5V, Good oper.: 2~2.2V, Excellent oper.:≥2.2V			
Normal current consumption	60mA	70mA	80mA	90mA
LED Transmitter	Voltage: green LED			
LED Receiver	Correct operation: green LED			
	Alarm: red LED			
Alarm output	COM, NC, NO			
	Reset: time interruption + 1 sec			
Operatine temperature	-20 ~ 60 °C			
Tamper	Tx and Rx			
Alignment angle	Horizontal: 180° (±90°), Vertical: 20° (±10°)			
Possibility of assembly	Outside / Inside			
Material	External Cover: Polycarbonate, Base: ABS			
Weight	Transmitter : 335g, Receiver : 348g			
Box protection level	IP54			





4 Installation

- Remove the cover of the transmitter



- Make a hole on the rubber plate assembly and to pass the cable through the hole. Then make a second hole on the wall and run the cable through the same. Follow the passage as shown in the picture (figura1: mounting wall; Figure 2: mounting pile).

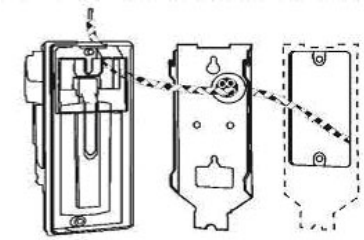


Figure 1

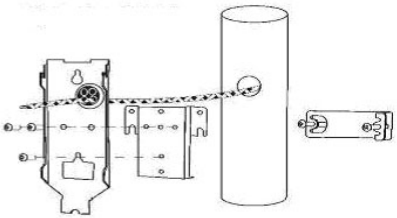
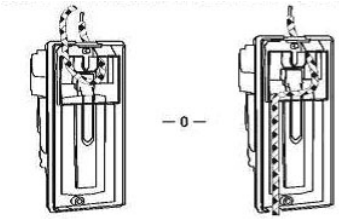
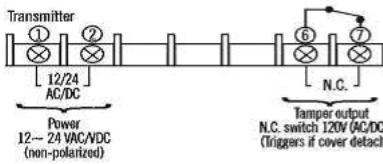


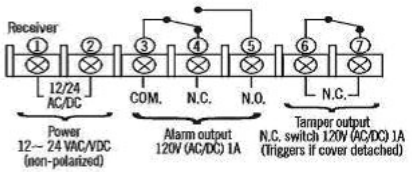
Figure 2

- Pass the cable as shown

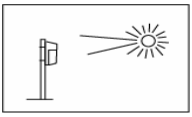


- The connections on devices must be made as shown:

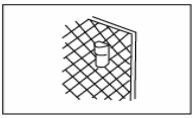




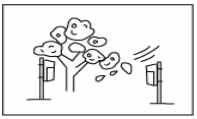
4.1 Precautions for installation



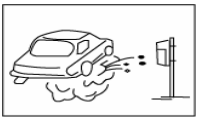
Avoid the installation of the direction of strong sources of light (avoid light in a direct route of ± 2 ° of optical axis).



Do not install the equipment on unstable surfaces.

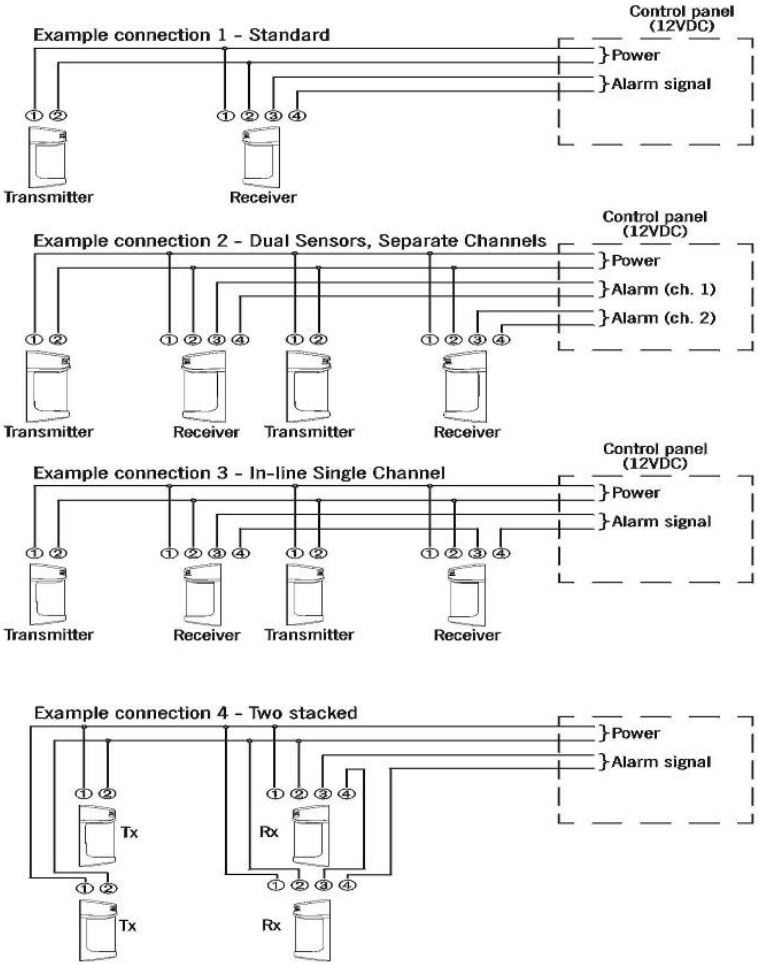


Do not install the equipment by directing the rays toward trees or objects that may obstruct them.



Do not install in places where the product can be continuously invested by water or mud.

4.2 Examples of possibile way sto connect one or more sensors



4.3 Beam Frequency Selection Chart

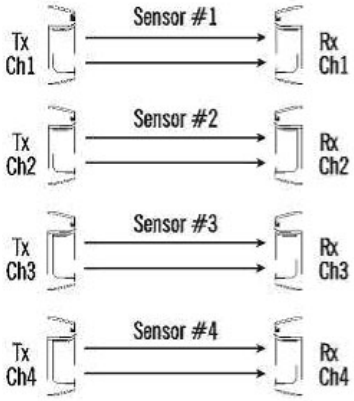
Setting the switches as shown respectively for the channel chose:

Table 2: Beam Frequency Selection Chart

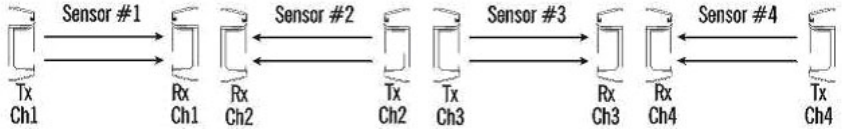
Frequency channel	CH1	CH2	CH3	CH4
Switch position				

4.4 Multiple sensor sample applications

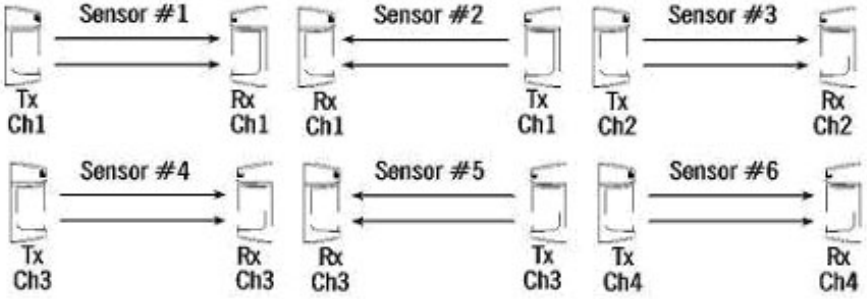
4.4.1 Single pair multiple layer application



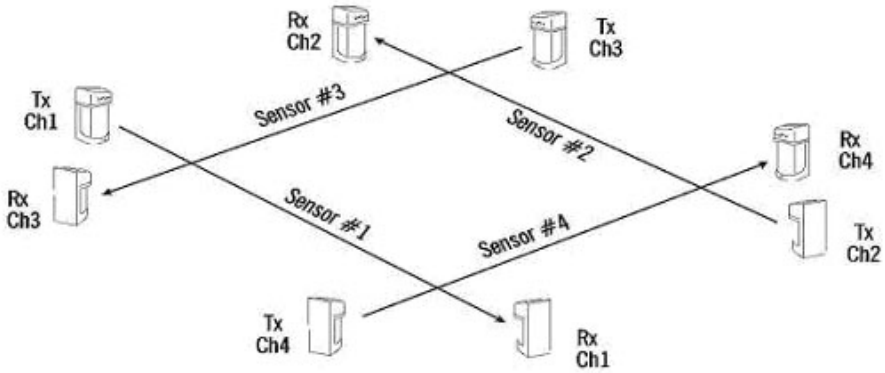
4.4.2 Long distance series application



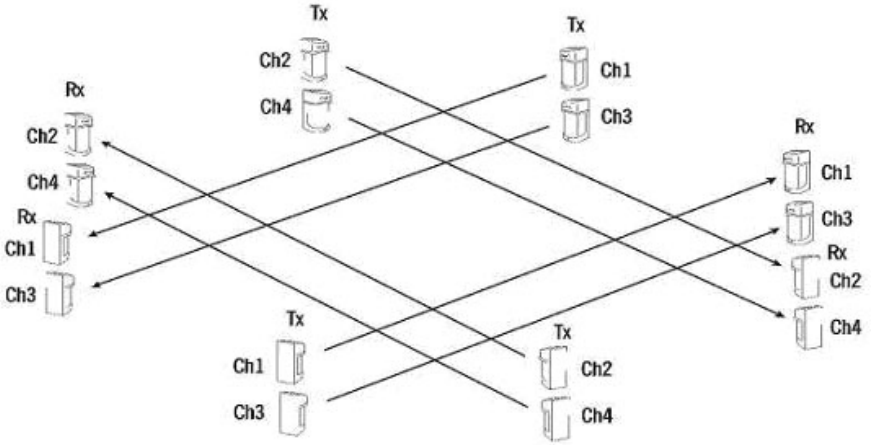
4.4.3 Two layer (double stacked) applications



4.4.4 Perimeter security application



4.4.5 Two layer (double stacked) perimeter security application



4.5 Running the cable

Model	FBX60D		FBX120D		FBX180D		FBX240D	
Wire	12V	24V	12V	24V	12V	24V	12V	24V
0.33mm2 0.0005in2	320m	2,800m	280m	2,400m	200m	1,600m	110m	900m.
0.52mm2 0.0008in2	550m	4,800m	450m	4,200m	350m	3,000m	170m	1,400m
0.83mm2 0.0013in2	800m	7,200m	700m	6,200m	500m	4,200m	250m	2,200m
1.03mm2 0.0016in2	980m	8,800m	850m	7,600m	590m	5,200m	310m	2,600m

5 Adjust the alignment

The transmitter and receiver can be adjusted ± 5 º vertically and ± 90 degrees horizontally. There are three stages to adjust the alignment correctly

5.1 Eyeball adjustment

- Remove the cover of the transmitter and watch in one of two holes in the sides, with an angle of 45 degrees.
- Adjust the transmitter in vertical and horizontal until the receiver is clearly seen in the viewfinder.
- Repeat operations for the receiver.

5.2 Laser adjustment

- Remove the cover of the transmitter, then turn the laser with the ON / OFF.
- Adjust the transmitter so that the red dot emitted by the laser is centered on the receiver and that both led the receiver are turned off.
- Repeat operations for the receiver.

ATTENTION: Do not look directly at the laser.

5.3 Fine tuning the receiver

- Once the sensor is mounted and aligned, can be adjusted with the voltage output.
- Then set the interval of a volt-ohmmetro (VOM) 0 ~ 10VCC.
- Insert the probe red (+) in the terminal (+) and the probe black (-) in terminal (-).
- Measure the voltage (for the values refer to table below) and adjust the angle horizontal hand until the VOM indicates the higher voltage.
- Adjust the vertical angle until the VOM indicates the higher voltage.

Voltage	Alignement quality
3.0~5.0V	Excellent
2.0~3.0V	Good
1.2~2.0V	Bad
<1.2V	Re-adjust

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PROGETTAZIONE E DISTRIBUZIONE SISTEMI DI SICUREZZA

DECLARATION CE OF CONFORMITY

ACCORDING to the Standards ISO/IEC GUIDE 22 EN 45014

IMPORTER: **CIA Trading S.r.l.**

ADDRESS: **Via Caserta al Bravo, 218 - 80144 - Napoli - Italia**

USED TRADE MARK:

PRODUCT OCDE: **FBX60D, FBX120D, FBX180D, FBX240D**
PRODUCT DESCRIPTION: Outdoor codificable twin photobeam infrared detector

The product described above comply with the requirements prescribed in the following rules:

APPLIED STANDARD	TITLE
EN50130-4	PRODUCT STANDARD FOR IMMUNITY
EN50081-1 (1992)	GENERIC STANDARD OF EMISSION Class of the generic standard: domestic, commercial and light manufacturer
EN50082-1 (1992)	GENERIC STANDARD OF IMMUNITY Class of the generic standard: domestic, commercial and light manufacturer.

Conformity was valued on tests made by sample with setup that rispects the original operating configuration of the product.
So it satisfies the requirement of directive EMC 89/336/CEE and BT 73/23/CEE.

Napoli, 08 October 2004

THE MANAGING DIRECTOR