

BEL-PIR90

- Passive infrared detector (PIR)**
- Detects movement by e.g. a person**
- Indoor applications**
- Smart-house output**
- Operating distance: 0 - 10 m**
- Operating angle: 90° (10 m)**
- Walk test: LED indication on I/O 5**
- Channel coding by BGP-COD-BAT**
- Supplied by smart-house**
- Delivered with pre-programmed addresses on I/O 1 and I/O 5**



GENERAL SPECIFICATIONS

Channel programming	BGP-COD-BAT
Channel assignment	Three freely programmable channels I/O 1: pre-programmed to address N6 I/O 2: Not programmed I/O 5: pre-programmed to address N6
Power ON delay	Typ. 1 min. It is therefore advisable to keep the unit connected to smart-house
Walk test indication	LED, red

Environment	
Degree of protection	IP 40 For indoor applications
Operating temperature	-10° to +50°C (+14° to +122°F)
Storage temperature	-30° to +70°C (-22° to +158°F)
Connection	
Max. wires in terminals	4 x 0.75 mm ²
Terminal D+.	Smart-house signal
Terminal D-	Smart-house signal
Material	
Housing	Colour Off-white
Lens	Polyethylene
Dimensions (WxHxD)	
84 x 84 x 48 mm	
Weight	
Approx. 150 g	

INPUT SPECIFICATIONS

Inputs	PIR on I/O 1
Lens	Dual detecting zones
Segments	24
Levels	3
Angle	90°
Operating distance	≤ 10 m (see radiation diagram)

Wave length	7 to 14 µm
Input detection speed	0.5 to 5 pulses/s
Default channel status	
Switch OFF (Position P)	NO
Switch ON (Position A)	NC
I/O number 2	Status signal (Allways active when a channel is coded ti I/O 2)

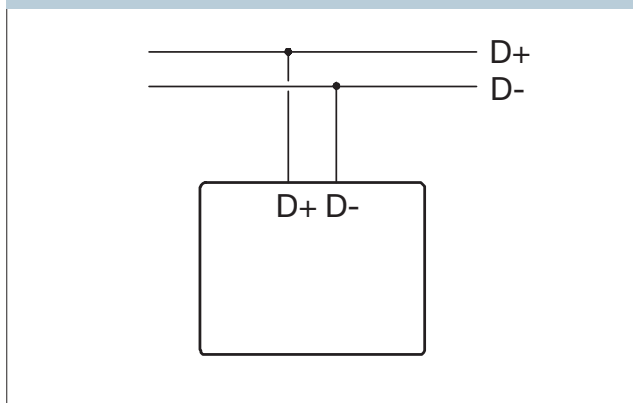
SUPPLY SPECIFICATIONS

Power supply	Supplied by smart-house
Rated operational current	
LED OFF	< 1.5 mA
Rated operational current	
LED ON	< 3.0 mA

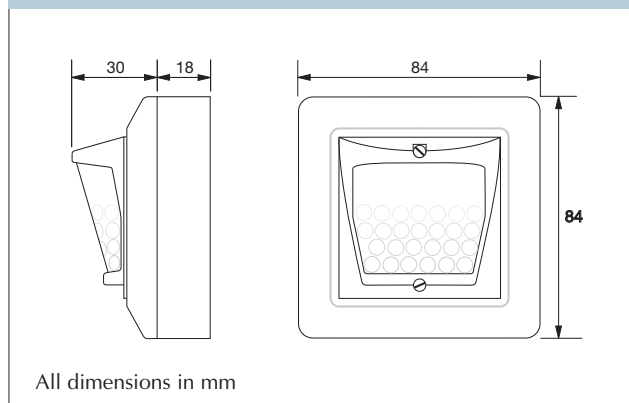
TYPE SELECTION

Supply	Ordering no.
By smart-house	BEL-PIR90

WIRING DIAGRAM



DIMENSIONS



MODE OF OPERATION

BEL-PIR90 is a 1-channel monostable transmitter with a PIR detector, which operates by means of a dual-element detector.

The transmitter is activated if the temperature suddenly changes (most often it will be heat radiation from a person) in relation to the background radiation. Consequently, the transmitter can be used for ON/OFF switching of lighting, air conditioning, burglar alarm etc. If a person moves within a detection zone, BEL-PIR90 is activated.

If I/O 1 and I/O 5 are coded to the same channel, the LED turns ON when the PIR is activated and remains ON for approx. 2 s. Then a non-trigger time period of 2 s will follow before the PIR and LED can be activated again.

If the default channel status switch is in position P, the PIR changes the channel status to ON if it detects a change in temperature. If the default channel status switch is in position A, the PIR changes the channel status to OFF if it detects a change in temperature.

Slow movements between zones resulting in a detection speed of less than 0.5 pulses/sec will not be detected. Nor will rapid movements resulting in a detection speed of more than 5 pulses/sec be detected. As BEL-PIR90 is a passive device, several detectors can be placed in the same room without interfering with each other.

Status signal

If a channel is coded on I/O 2, it will be transmitted as long as the PIR is connected to smart-house.

The module should not be installed in the following places:

- a) Outdoors.
- b) In places exposed either to sunlight or to motor vehicle headlights pointing directly at the sensor.
- c) In places exposed to direct air flow from a heater or air conditioner.
- d) In places where rapid temperature changes occur.
- e) In places exposed to severe vibration.
- f) Close to glass or other objects which might reflect the infrared radiation.

RADIATION DIAGRAM (M)

