

## KUBE Cone Optics TR230

### Integrated optics for PIR detectors

Integrated optics for PIR detectors are available in various models.

KUBE PIR Cone Optics TR230 is extremely compact (1.5 x 1.5 x 3 cm) and much smaller than any conventional design. Nevertheless, KUBE integrated optics provide 90° field of view and up to 15 meters of detection range. It will work with any conventional PIR circuit and performs like much larger fresnel lenses. It is used with the C172 Sensor.



### Advantages

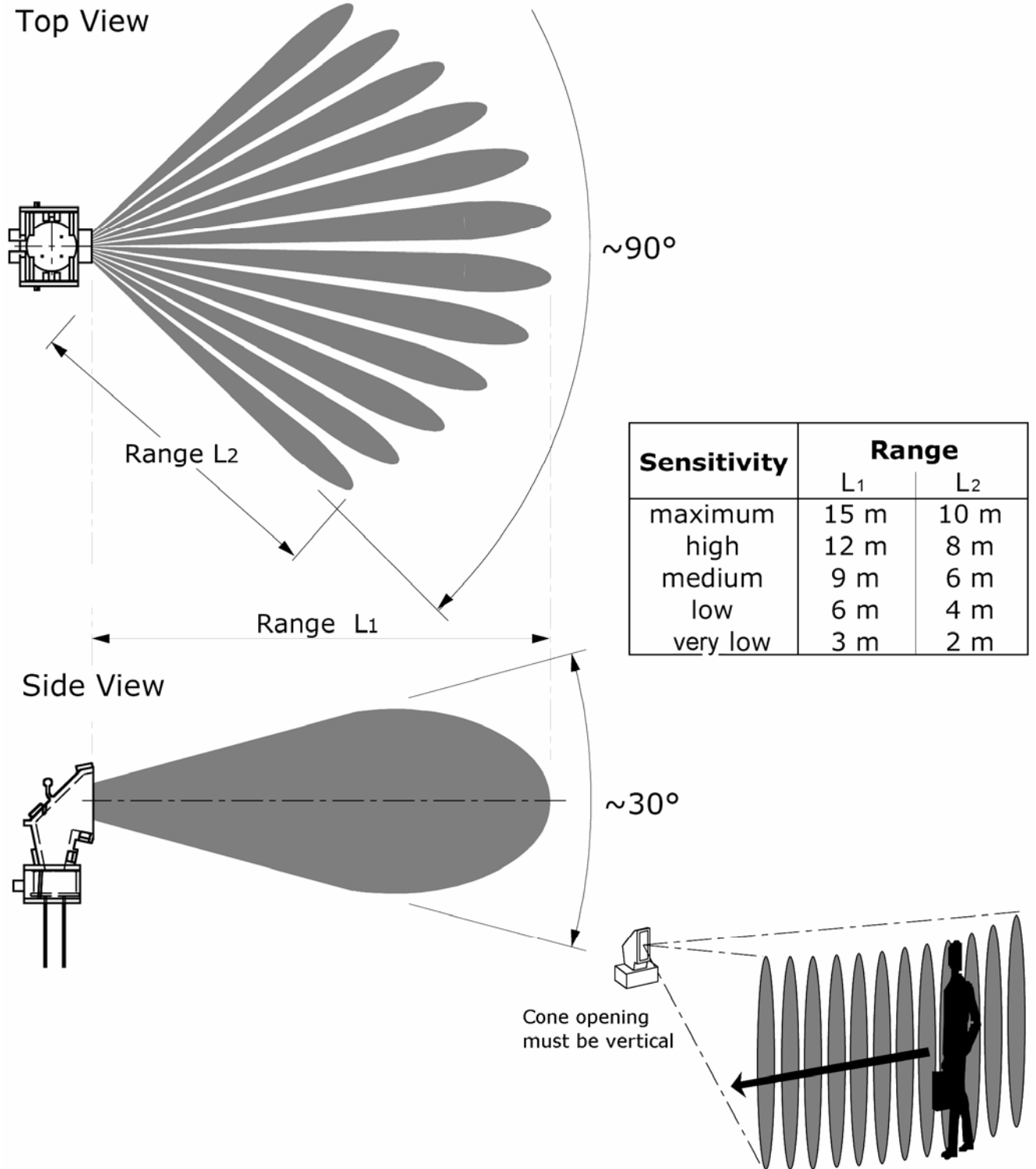
Beyond the compact size, KUBE cone optics have distinctive advantages:

- The front opening is so small that PIR detectors are unobtrusive and cannot be identified as such.
- The front window is mechanically stable and vandal proof. It cannot be damaged with a finger.
- The cone receives all directions through the same opening. Consequently, most environmental effects such as from light and wind are compensated. This results in much lower false alarm rates caused by direct sunshine or warm air when mounted above a heating radiator.
- KUBE Cone Optics TR230 meets IEC 669-2-1 and corresponding CE safety requirements.

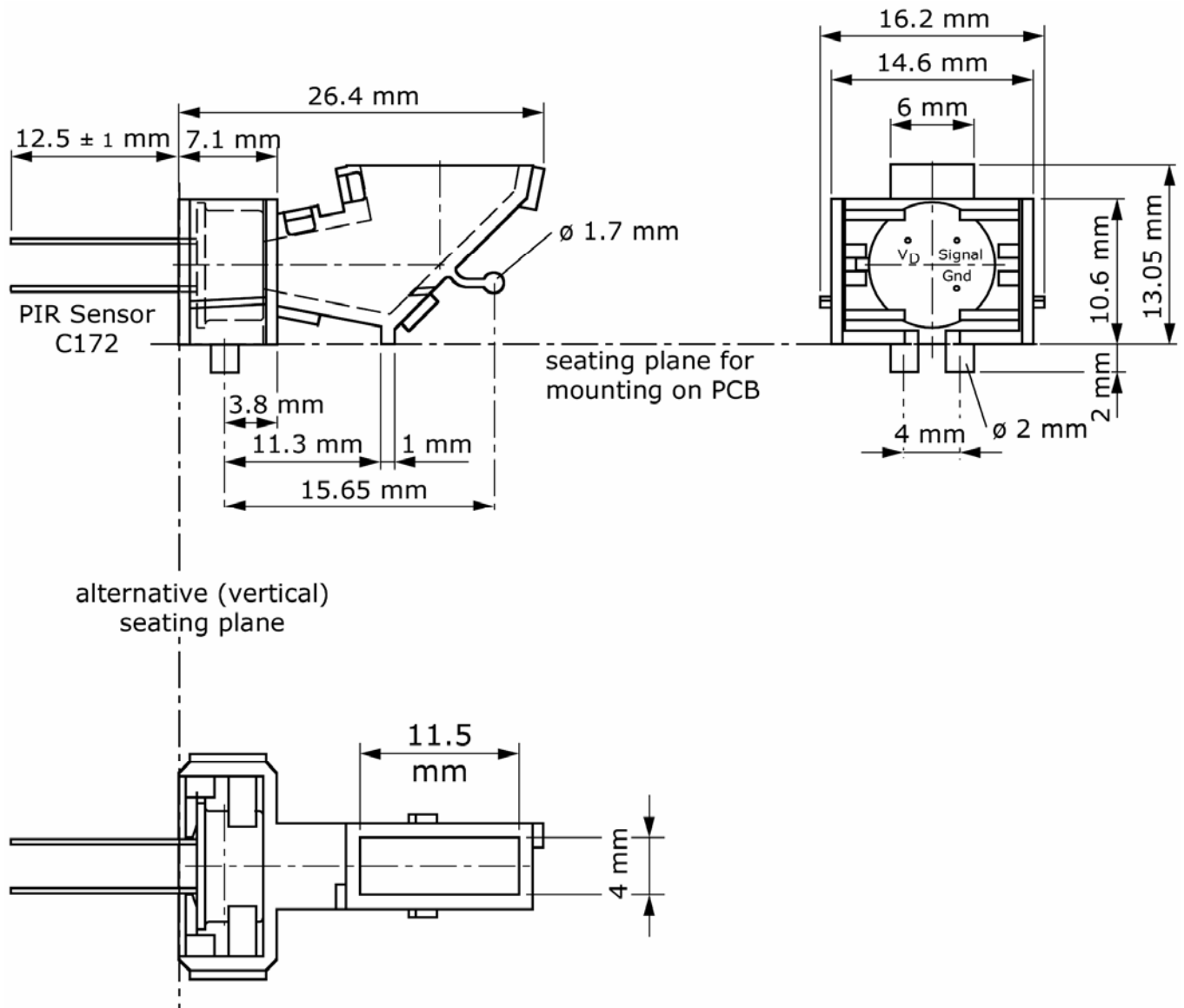
### Properties

Model Nr.	TR230 (for use with C172 Pyro Sensor)
Suitable for Range min.:	0.2 Meter
Range max.:	15 Meters
Typical mounting position:	Wall
Alternative mounting position:	Ceiling, various
Horizontal angle:	90°, 180° with 2 sensors
Vertical angle:	+/- 15°
Lens size:	11.5 x 4 mm
Focal length:	n/a
Front window needed:	Yes, TR231 or PIR film
1st advantage:	Compact
2nd advantage:	Vandal proof
Ideal to comply with:	IEC 669-2-1 & CE safety requirements

## Cone optics TR230: Field of view



## Cone optics TR230: Mechanical data



Dimension from vertical seating plane to center of window opening: 18.85mm

The coated surfaces are electrically conducting

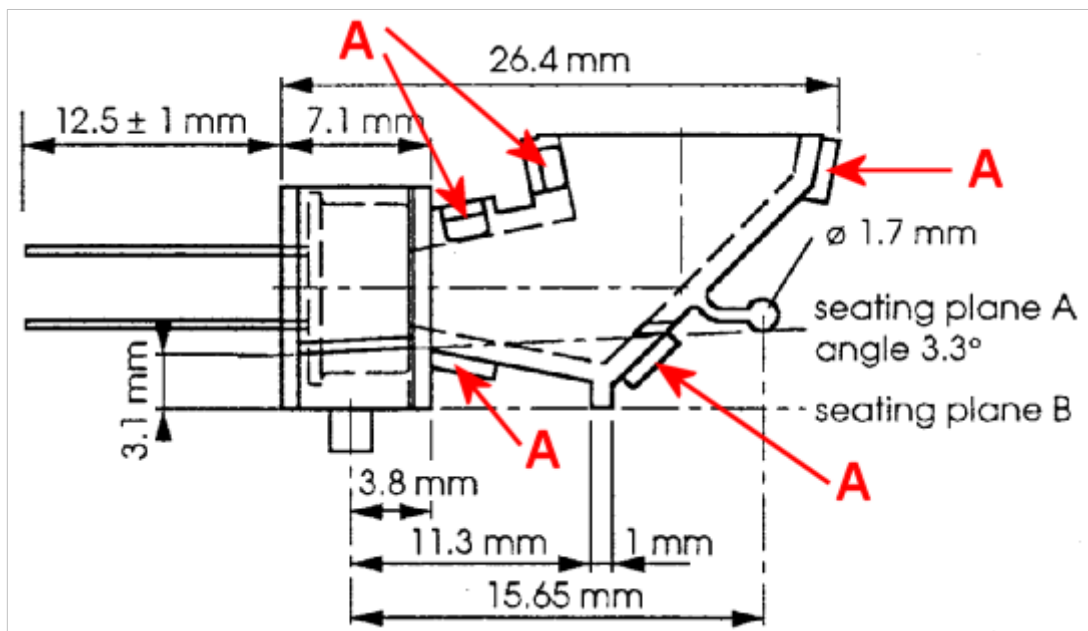
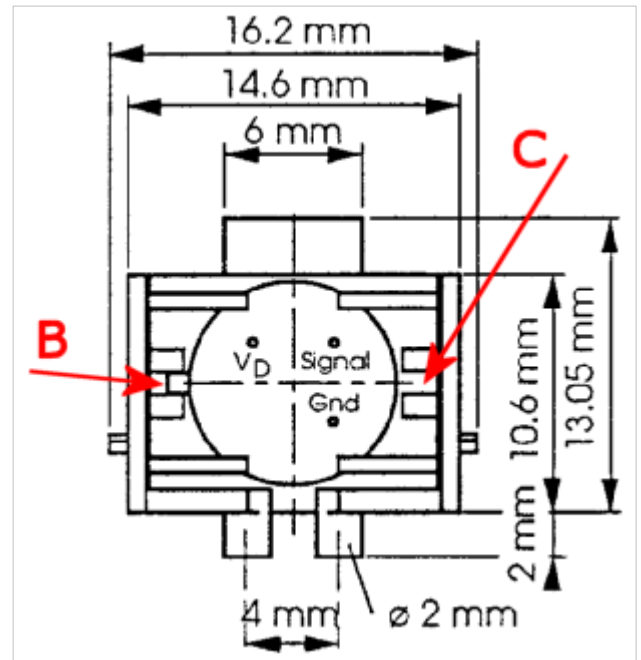
## Availability

KUBE Cone optics are available from stock, are low cost and will save you any further investment in tools.

Also, special requirements can be discussed, and licenses are available if you prefer to design your own cone.

### Assembly Instructions:

- Carefully separate the two shells by pulling them apart and slightly moving them against each other. If a problem arises, assist opening of locker (A) with fingernail or small screwdriver.
- Insert pyroelectric sensor (dual type only) with case tag between holding pins, either left (B) or right (C). Any other orientation will NOT work.
- Close shells by pressing them together. Assist locking by slightly twisting cone. Cone must be completely closed in optical section. If needed, close lockers with fingernail or add dot of plastic cement (Do not use cyanoacrylate).
- Check correct mounting position according to datasheet. Cone opening must be vertical for horizontal 90° pattern. Cover cone opening with TR231 window or IR transmissive plastic film.



Cone optics are patented in the US and Europe under: EP 821804, US 5006712, CH 690383