

## KUBE Cone Optics TR230

Integrated optics for PIR detectors

KUBE PIR Cone Optics TR230 is extremely compact with a window opening of 11.5 x 4mm and much smaller than conventional lens designs. Nevertheless, KUBE integrated optics provides 110° 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 a dual-element Pyro Sensor like the KUBE type C172.

The small and flat front opening does allow for an unobtrusive and vandal proof design. Also, environmental effects like air draft or lights are largely compensated.

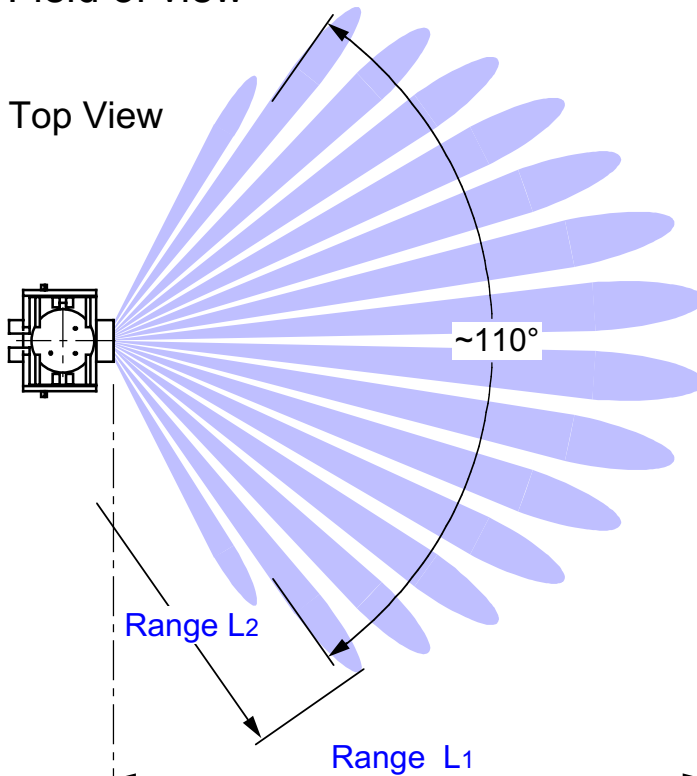


Range:	12 Meters or more (up front)
Typical mounting position:	Wall
Alternative mounting position:	Ceiling, various
Horizontal viewing angle:	110°
Vertical viewing angle:	+/- 15°
Window size:	15.5 x 6.5mm (flat)
Focal length:	n/a
Front window:	TR231 or PIR film, different colors
Ideal to comply with:	IEC 669-2-1 & CE safety requirements
Sensor case:	TO-5

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

## Field of view

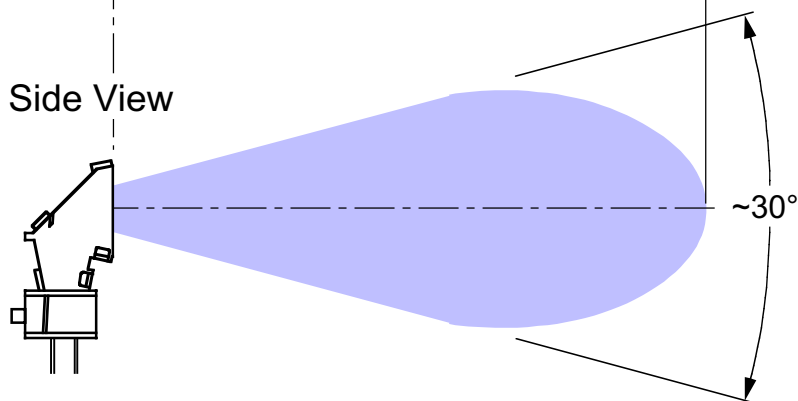
Top View



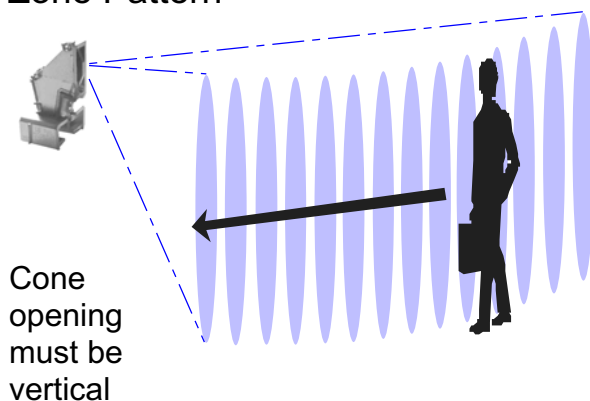
Sensitivity	Range *	
	L1	L2
high	12m	8m
medium	9m	6m
low	6m	4m

\* tangential movement

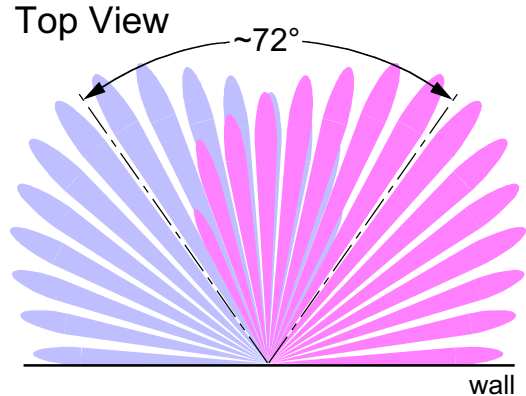
Side View



Zone Pattern

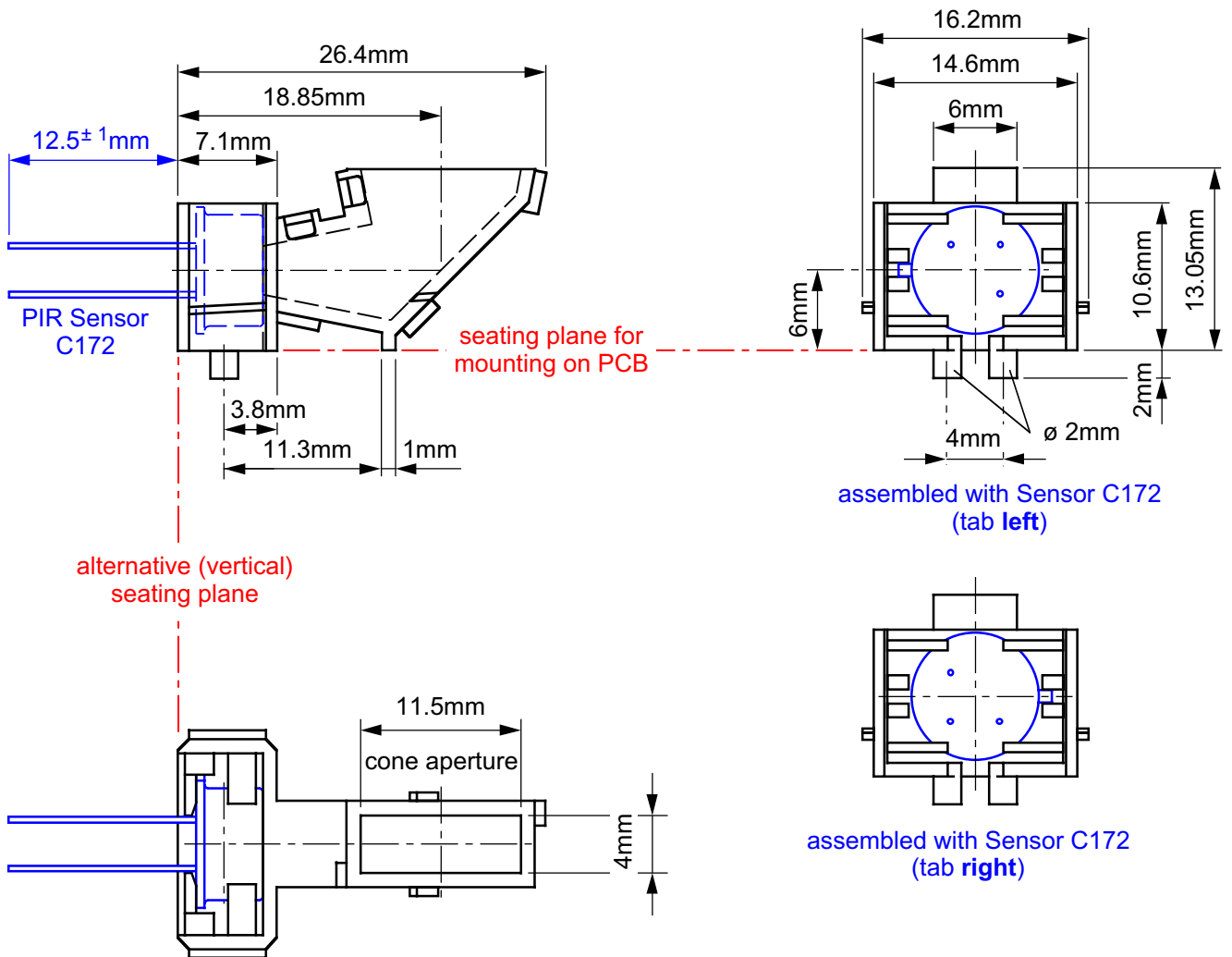


Top View



use two Cone Optics to get a true 180° viewing angle

## Mechanical data



The coated surfaces are electrically conducting



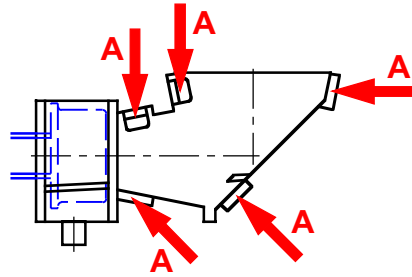
Application using a TR231 window



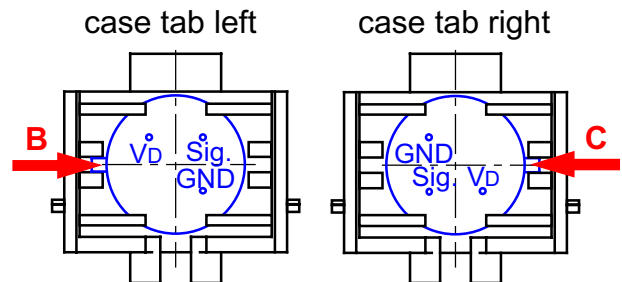
For use with the flat type 6192 Sensor, see the TR232 Cone Optics

## Assembly Instructions:

1. Carefully separate the two shells by pulling them apart and slightly moving them against each other. If necessary, assist opening of latches (A) with fingernail or small screwdriver.

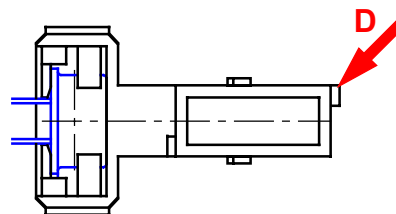


2. Insert pyroelectric sensor with case tab between holding pins, either left (B) or right (C). Any other orientation will NOT work.



3. Close shells by pressing them together. Assist locking by slightly twisting the cone. It must be completely closed in optical section. If needed, close latches with fingernail or add a drop of plastic glue (Do not use cyanoacrylate).

4. Then apply a gentle diagonal force according to the red arrow (D) so that the corner latch snaps in (hear it click).



5. Check correct mounting.