

Doppler Radar - RH series

This radar ensures the following basic functions:

- Vehicle detection up to 150 meters
- Travel direction discrimination
- Over speed detection adjustable up to 170 kmh (32 thresholds)
- IP 68 waterproof connector
- Easy adjustment on front panel
- Infrared remote control
(in option as from September 2001)



Typical applications:

- Traffic lights control
- "Green wave" regulation
- Over speed and driving direction detection

General characteristics

Direction:

Selection of approaching or receding travel direction by switch.

Detection distance:

The detection distance depends on several factors:

- Aiming axis ... taking into account a 20 x 30° sensitive angle.
- Sensitivity adjustment on 4 levels.
- Vehicle equivalent energy

Speed threshold:

Selectable on 16 positions rotating switch x 2 ranges = 32 thresholds.
1 km/h / 2 / 4 / 6 / 8 / 12 / 16 / 20 / 25 / 30 => then +5 kmh up to 55 km/h and +10kmh up to 170 km/h (Maxi).

Adjustment access:

Easy removable window on front panel.
New version with remote control Capsys™ : Fall 2001.

Output relay / hold time:

Output contact is given when a vehicle is detected according to the selected parameters (range detection, direction, speed threshold).
Relay holding time = 1 sec.

Operation / control:

Microwave detection at 24.125 Ghz (K Band)
Controlled by LED on face-plate.

Power Supply:

230 VAC +/- 10%
24 VAC 48 - 62 Hz
24 - 12 VDC
5 VA max
Protected by fuse.

Wiring:

IP68 connector with screw terminals for cable Ø 6-8 mm.

Housing Environment:

Aluminium housing IP66 + cap protection against rain and sun.
Colour: black.
Weight about 1 kg.
Dimension out of connector and mounting bracket about 200 x 80 x 65 mm.
Fully adjustable mounting bracket supplied.
Using temperature - 30 to +70°C.

Options:

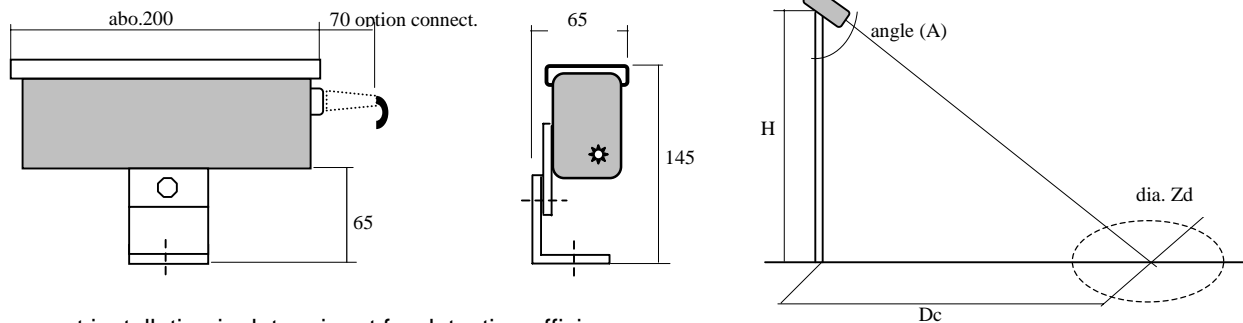
- Passage relay + over speed relay
- "Green wave" regulation with selected speed threshold.
- Infrared Remote control

Doppler Radar

RHB series

Mounting:

Detector orientation by 2-axis bracket adjustment.



A correct installation is determinant for detection efficiency.

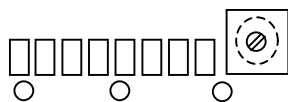
The theoretical detection field (e x H) is of 20 x 30°. The detection zone Zd is function of both the angle (A) and the height (H) which also determines the distance Dc to the center.

Hereafter are given some typical values allowing a quick "assessment" of the situation:

Angle (A) =>		75°	80°	85°	87°
Distance Dc	For H = 3m	11m	17m	34m	57m
	H = 5m	19m	28m	57m	95m
Diameter Zd	For H = 3m	4m	6m	12m	20m
	H = 5m	7m	10m	20m	34m

Parametering:

Parametering elements are reached after easy removal of the front panel window:



- 1 selector x 16 speed thresholds in each range.
- 2 LEDs => passage => over speed detection
- 8 switches ... Sw1 / Sw2 => 4 levels distance / Sw3+4 => motion segment 5/10/20/40 cm / Sw5 => Filter / Sw 6 => % tolerance / Sw7 => direction → or ← / Sw8 => 2 speed ranges Low / High

Detection distance:

Depends on 3 parameters ... angular positioning, sensitivity adjustment, target equivalent energy ...

Important note: The reference detection distance 100 % is based on a car ... will vary from 150 to 200% for a lorry, or be about 50 % for a motorcycle and 15% for a pedestrian ...

Travel direction:

By switch selection ... Approaching/Receding

Minimum speed threshold:

Selection by 16 positions rotating switch from 0 to F and giving the hereafter 32 thresholds (in Km/h) depending on the selected range High or Low. (Maximum detected speed 170 km/h)

Posit.	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
Low	1	2	4	6	8	10	12	16	20	25	30	35	40	45	50	55
High	60	65	70	75	80	85	90	95	100	110	120	130	140	150	160	170

Wiring:

Connector IP 68 equipped or not with 5 m cable/ Power supply 230 Vac => 2 pts +1 pt Ground
Relay => 3 pts x 0.5A / 120 VAC or 1A / 24 VDC maxi

RHB- 000 -xxx

Over speed output / 1 relay in positive security

RHB- 010- xxx

Over speed output + **passage** output / 2 relays in positive security

RHB- 012- xxx

Over speed output + **passage** output with **remote control**

LED Indication: When switched on, the detection LED located on front panel gives several pulses. Then the LED stops and the radar is ready for detection. The red LED will switch on for each passage of over speeding vehicle.

Non-contractual specifications