



Low speed measuring sensor

- Doppler radar based sensor
- LCD display
- Battery powered (autonomy > 48h)
- Adjustable tripod (63 to 170 cm)

Serial communication bus (optional)

- RS232

(1) For a viewing angle of 0°
 (2) See diagram 2 "Sensitivity"

Specifications

RF specifications

Frequency 24.15 to 24.25 GHz
 Output power 1mW (PIRE<20dBm)
 Antenna beamwidth Horiz: 6° / Verti: 9°
 Compliant with EN300440

Performance

Speed range 1.5 km/h to 100 km/h
 Turn on time 200ms
 Measurement visible on LCD screen
 Resolution 0.01 km/h
 Accuracy (1) ±0.2 km/h
 Detection distance (2) > 30m

DC specifications

Supply voltage 12V (battery operated)
 Battery Sealed and maintenance free
 Autonomy > 48h
 Battery and charger included in pack

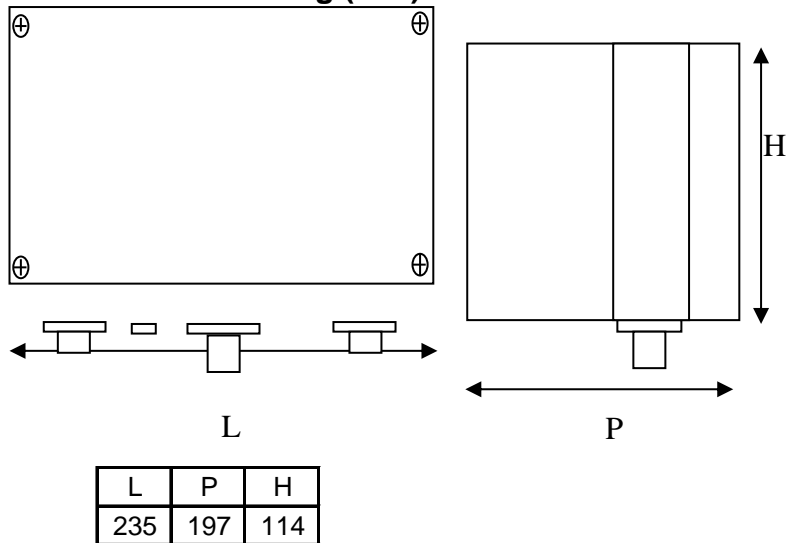
Mechanical specifications

Box type Pelicase
 Weight 2500gr
 Protection classification IP65

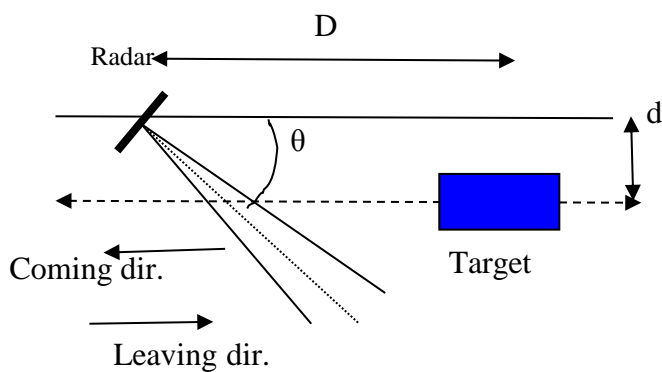
Environmental conditions

Operating temperature -10°C..+50°C
 Storing temperature -20°C..+60°C

Mechanical drawing (mm)

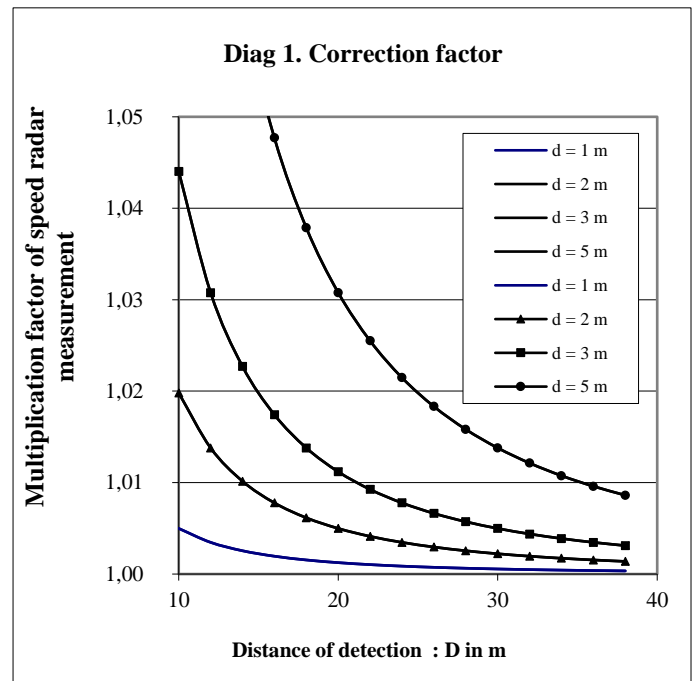


Velocity measurement based on Doppler



The speed is obtained by the difference of the radar radiated frequency and the target reflected frequency.
 Velocity = $F_{\text{Doppler}} \lambda / (2 \cos \theta)$

if $\theta < 10$ deg. error measurement is less than à 2% (see Diag. 1)
 if $\theta > 45$ deg. accuracy is poor.

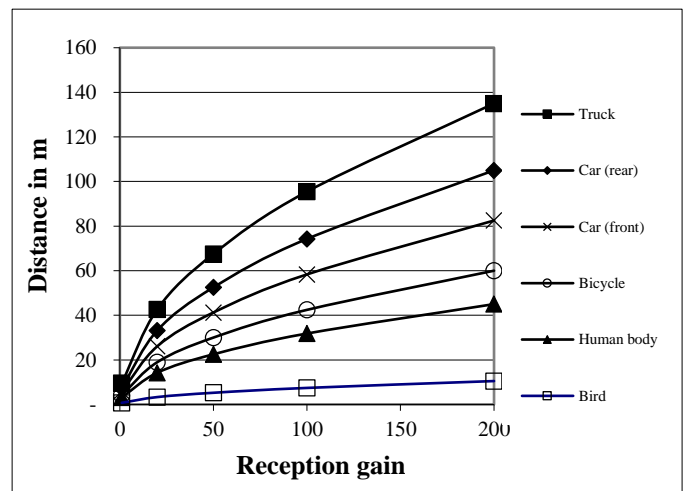


Sensitivity

- The reflectivity of a target depends on its surface, size and composition.
- Metallic surfaces are highly reflective.
- The shape of the target can degrade its detection.
- Radar waves do not cross water films and metallic sheets, but can cross some walls or plastic sheets.
- Radar waves are slightly weakened by the rain and the dirt.
- The shape of the target can influence the distance measurement.
- The thinner the antenna beamwidth is, the more sensitivity it has

Measuring protocol

- Place the radar closer to the axis of movement of the vehicle with a minimum viewing angle.
- To improve the measurement accuracy, measure distance D (on the above diagram) and multiply it by speed displayed by the correction factor (cf. Diag. 1).
- The passage of the vehicle in front of the radar beam triggers a 2s measurement.
- The radar will display a speed measurement on the screen if the detected speed is sufficiently stable during 2s.
- Press the keyboard to start a new measurement cycle.
- The screen will not switch on if battery needs charging.
- The radar will power off automatically once suitcase is closed.



DISCLAIMER :

Different technical specifications are possible upon request, AMG reserves the right to make modifications to the design and characteristic of the product at any times and without prior notice