GIGASENSE

QUALITY AND SERVICE TAKEN SERIOUSLY

GIGASENSE® II

Intelligent Microwave Anti Collision System

GIGASENSE

Gigasense products within Force Measurement and Crane Safety are well known high quality products, built from many years' experience and used by leading heavy duty industry around the world.

Gigasense products meet the highest demands of performance level requirements.

We are represented by many selected local partners in more than 30 countries on six con nents.

GIGASENSE® II

Anti Collision System for track bound cranes (EOT) in heavy duty industrial environment. Fail-safe, easy to install, robust and maintenance free. Protects Property and production.

Function

To protect two cranes: one crane uses an A-unit and one crane uses a B-unit. A- and B-units each consists of an active antenna and a relay box. The antenna sends a Microwave signal to the opposite unit. By using SFCW (Stepped Frequency Continuous Wave) radar, the distance and relative speed are calculated.

To protect a crane from a wall or a track end: one transponder without the relay box can be used together with a complete A- or B- unit on the crane.

The output relays switches at preset alarm limits to reduce speed and stop the crane movement.

Settings and readout of parameters are easily accessible via a display and push buttons in the relay box.
The relay box contains three relays:
Relay 1 = Warning (speed reduction) or flashing light.
Relay 2 = Stops crane movement.
Relay 3 = Failure/unidentified object alarm.

One analogue output, 4-20mA is available for e.g. remote display.

Control of the output relay functions

These setting modes are available:

Mode 1. Speed dependent relays (the alarms are active if the speed exceeds the minimum speed settings).

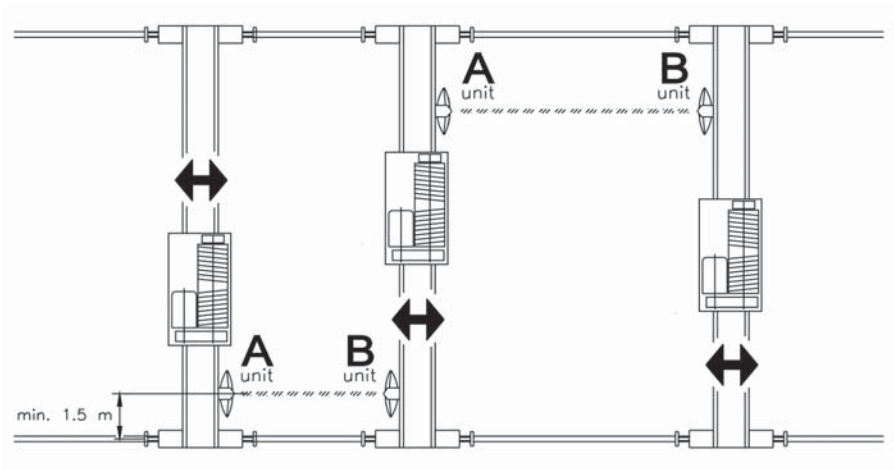
Mode 2. Distance dependent (the relays are in alarm state when the crane is within the alarm limit distances).

Mode 3. Speed dependent relays (as Mode 1), except that Relay 2 alarm must be reset before operating the crane at active alarm.

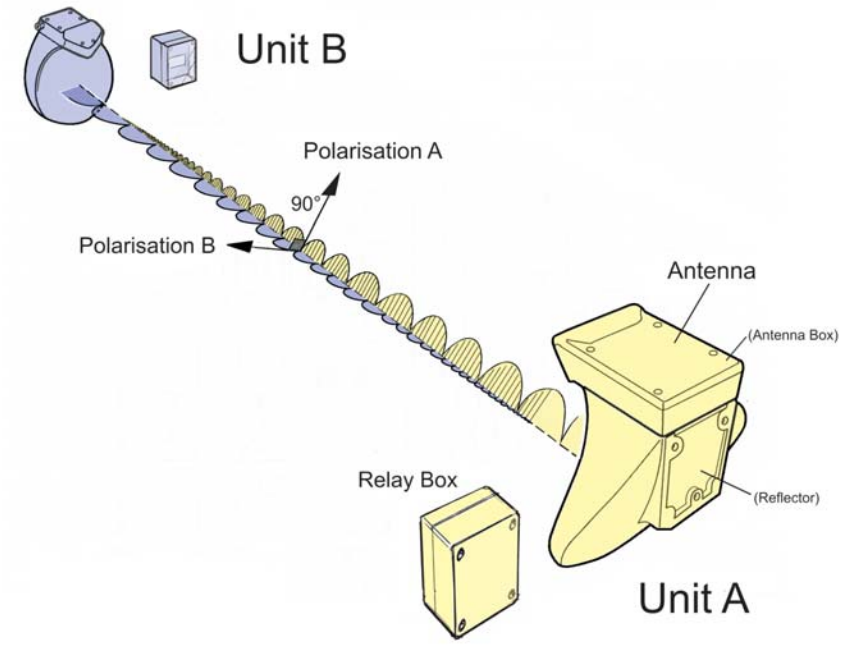
Safety & Environment

- Avoids crane accidents and protects property and production.
- Designed to work in the toughest conditions such as in Steel works, Harbours, Mines etc.
- Fail Safe operation due to supervision of function, both in antenna box and relay box.
- The signal is very hard to disturb, the A- and B-units use different frequencies, different polarization of the Microwaves and a ”fingerprint” radar reflection. The function has a backup capacitor in case of power failure.
- The anti collision system is not disturbed by rain, dust/metal particles, fog or sunlight.

Two complete systems protecting three EOT cranes



Anti Collision System



Technical Data

WORKING RANGE

Between 2-20 and 2-50 m (varies due to country limitations).

SPEED RANGE

0.05 – 5 m/s relative speed between two moving cranes.

RELATIVE SPEED COMPENSATION

The alarm limits can be compensated 0-200 % for different speeds.

RELAY OUTPUTS

Three potential free relays (250 VAC / 8A).

ANALOGUE OUTPUT

4-20 mA (distance).

DIGITAL INPUT

24 VDC for reset of relay 2 (Mode 3).

TEMPERATURE RANGE

-25°C to +70°C.

SUPPLY VOLTAGE

24 VDC
(alternative Voltages available as option).
Transponder unit 12 VDC.

DEGREE OF PROTECTION

IP56 (Antenna unit).
IP66/67 (Relay unit).

TRANSMITTER FREQUENCY

9.4 - 10.6 GHz (country specific).

WEIGHT/DIMENSIONS

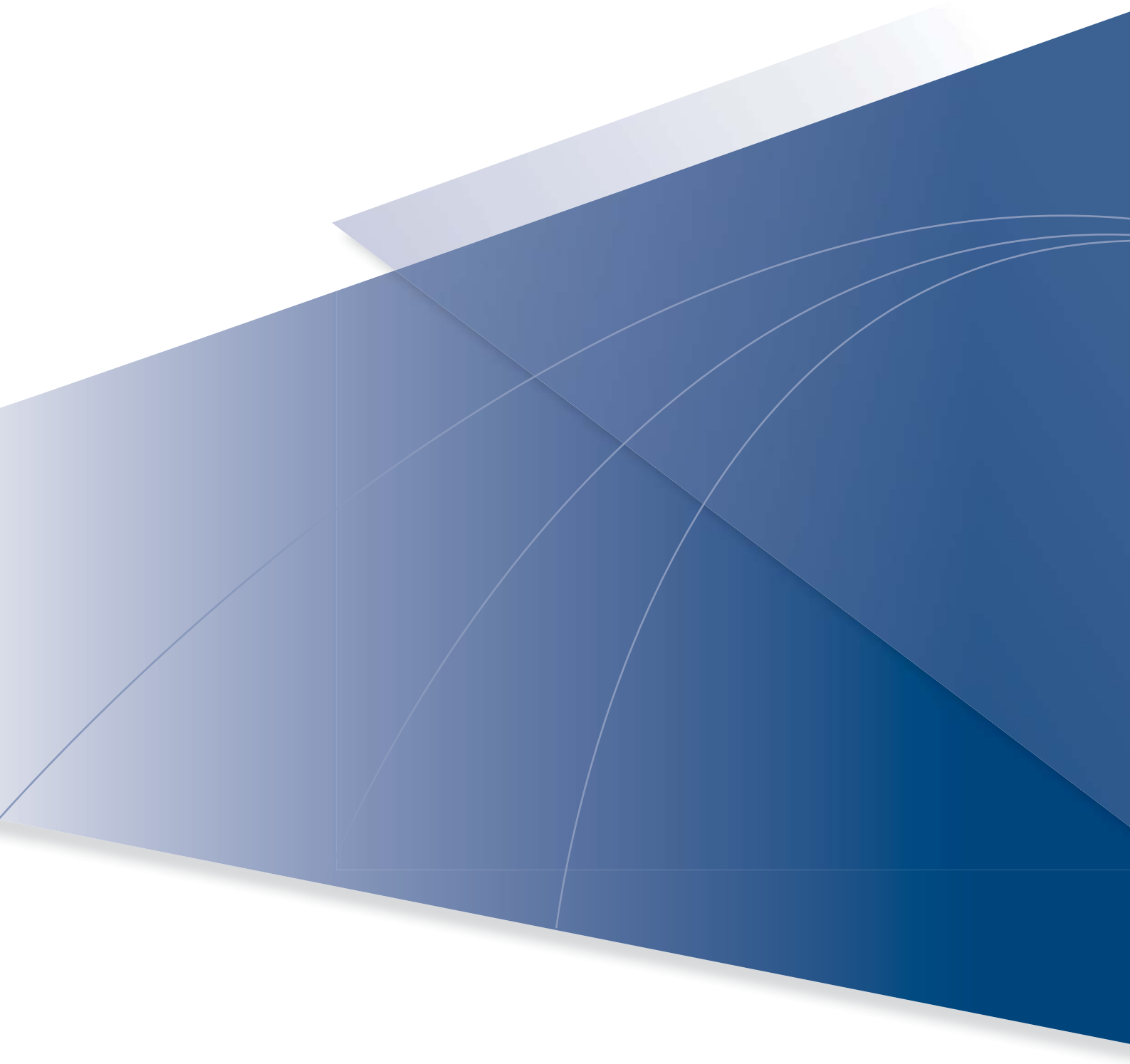
Antenna: 4.0 kg /
428 x 350 x 265 mm.
Relay Box: 0.8 kg /
175 x 125 x 75 mm.

GROSS WEIGHT/ DIMENSION

System incl. packaging (Unit A + Unit B): 12.5 kg / 370x370x330 mm.

CE-CERTIFICATION

This equipment complies with EMC, LVD and RED directives.



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