



ACCURATE  
ROBUST

# CRANE AUTOMATION AT CONTAINER PORTS

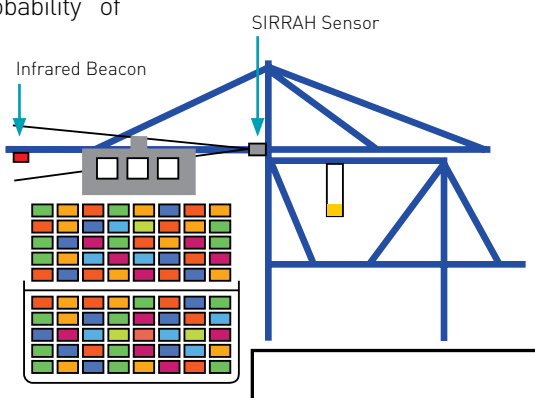


## BOOM TO VESSEL ANTI COLLISION

For picking-up or setting down a container, the crane driver needs to be very concentrated to avoid any collision with the upper part of the vessel.

When SIRRAH® sensor detects the presence of the upper part of the vessel, it gives a sign to stop the crane movement. The system has a high probability of detection.

Should the crane boom approach the upper part of a vessel or it drifts towards the crane, the system will generate alarms to the control systems OR stop the crane depending on the wiring of that crane.



### Benefits and gain: decisive advantages

Arck Sensor products will:

- Increase productivity.
- Reduce containers transfer cycle times and operations.
- Increase safety for people, materials and equipment.

### Accurate and Robust:

The patented sensor technology, its specific design and ruggedness are approved for severe environments; ambient light immunity.

## ACCURATE ROBUST

Arck Sensor is a French company specialized in optical measurement in harsh industrial environments. Our mission is to provide the most robust and accurate sensors for container ports and heavy industries in the frame of automation and safety concerns.

Since 1998, Arck Sensor has been constantly improving its technology to deliver long term solutions for major container terminals and metal industry companies, world-wide.

## OUR EXPERTISE IN CONTAINER PORTS

- Load Movement Measurement
- Anti-Collision for Cranes and Vehicles
- Truck or Straddle Carrier Positioning
- Container Detection Prior to Handling or Stacking
- Boom to Vessel Anti-collision

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## BOOM TO VESSEL ANTI-COLLISION



SIRRAH®

### System presentation

Arck Sensor solution is composed by 2 optical sensors (SIRRAH®) and 2 smart emitted infrared LED sources (BMU Beacons). Each sensors

is synchronized with one beacon. The set sensor/beacon is installed on both side of the crane boom, one sensor in front of a beacon.

### How does it work?

When the upper part of a vessel enters the red line, the infrared light emission is interrupted and the SIRRAH® sensor will not receive any signal. The emergency STOP is therefore activated.

The distance between the crane boom and infrared beacon should be adjusted according to the maximum speed of the STS.

### Option

The end of the boom can be fitted with 2 beacons on each side.

The first beacon is used for "slow down" and the second beacon for "crane stop".

### Main Advantage

The sensor is not sensitive to boom bending or flexing.

Up to +/-5m is authorized for a boom of 50m.

Long working range up to 50 or 60m. PLC is not needed.

It operates accurately in all weather conditions.

### Required material

2 SIRRAH® Sensors SC10 and 2 Beacons BMU-01 (or 4 beacons as option).

