



Innovative Microwave
Solutions

CRANE CRASH AVOIDANCE

AN INTRODUCTION TO:

Micro-Robo:

- **MWS-CAS-2A/B**

1. GENERAL

1.1 About WADECO's Crane Collision Avoidance Sensor

- MWS-CAS-2A/B Micro-Robo is a microwave sensor developed specifically for use on overhead cranes as a early warning proximity sensor to avoid collisions between overhead cranes running on the same rails .
- The sensors are installed face-to-face on adjacent overhead cranes running on the same rails. When one crane approaches the detection area of an adjacent crane, its sensor detects the microwaves transmitted by the sensor mounted on the opposite crane and an alarm is generated, thus preventing collision.
- Microwaves are unaffected by most environmental conditions, which means that this sensor will not be affected by weather (rain, snow etc) or dusty, smoke filled environments.



MWS-CAS-2A/B Collision Avoidance Sensor

1. GENERAL

1.2 Generic Features of Microwaves

- Unaffected by environmental conditions:
 - ✓ Heavy dust and airborne particles,
 - ✓ Smoke, vapor, Flames,
 - ✓ Rain, snow etc.
- Unaffected by build-up on the antenna head, thanks to the high penetrability of microwaves.
- Zero maintenance.
- No moving parts for solid state reliability.
- 100% safe for personnel/operators.
- Three dimensional detection area.
The sensor has a conical shaped beam pattern, detection occurs when one sensor enters the detecting area of the others. The detecting area can be adjusted by setting the sensitivity.



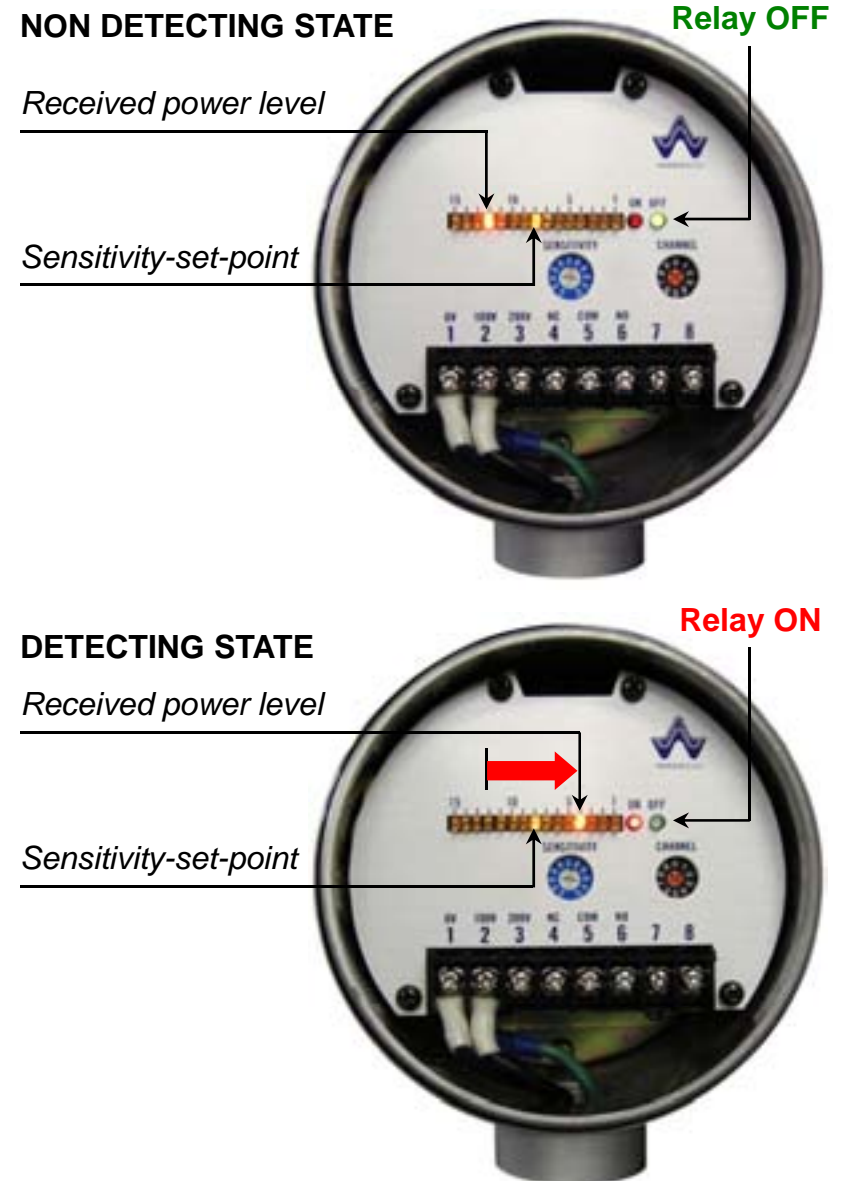
1. GENERAL

1.3 Hardware Features

- **15 LED indicator array**
The receiver is equipped with a 15 LED indicator array which displays the Received Power Level **and** the Sensitivity-Set-Point.

This allows for **VISUAL SENSITIVITY ADJUSTMENT**, and greatly simplifies maintenance – the operational status is easily seen at a glance.
- **No set-to-set interference**
Four operating channels are available, selectable by rotary switch, eliminating set-to-set interference.
- **100m Range with a Ø27mm antenna**
Easily penetrates dust /dirt buildup on antenna, thanks to the increased operating range which is approx. three times that of conventional models.
- **Light weight and compact**
The transmitter and receiver are combined in one compact and economical unit.

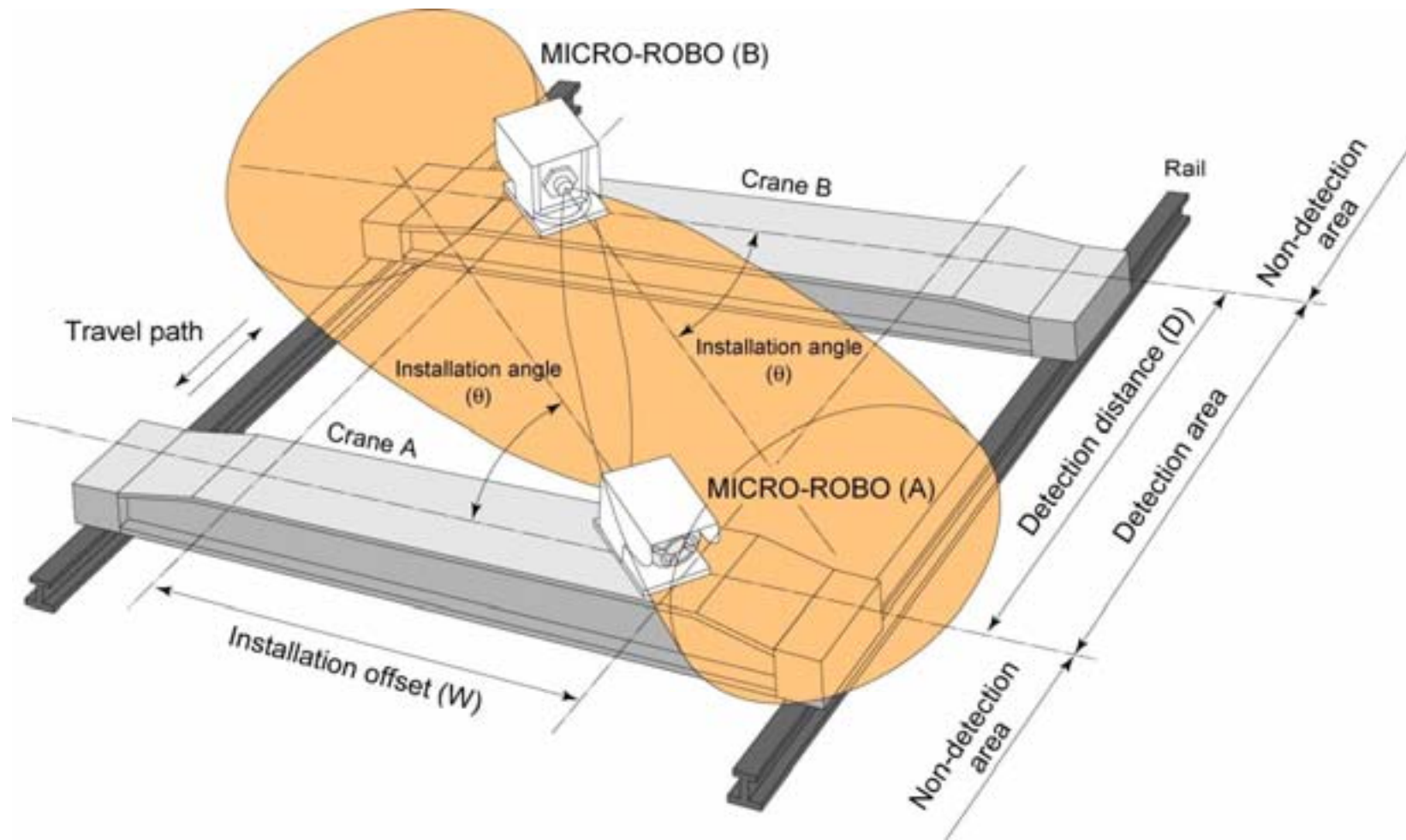
Micro-Robo Controls



1. GENERAL

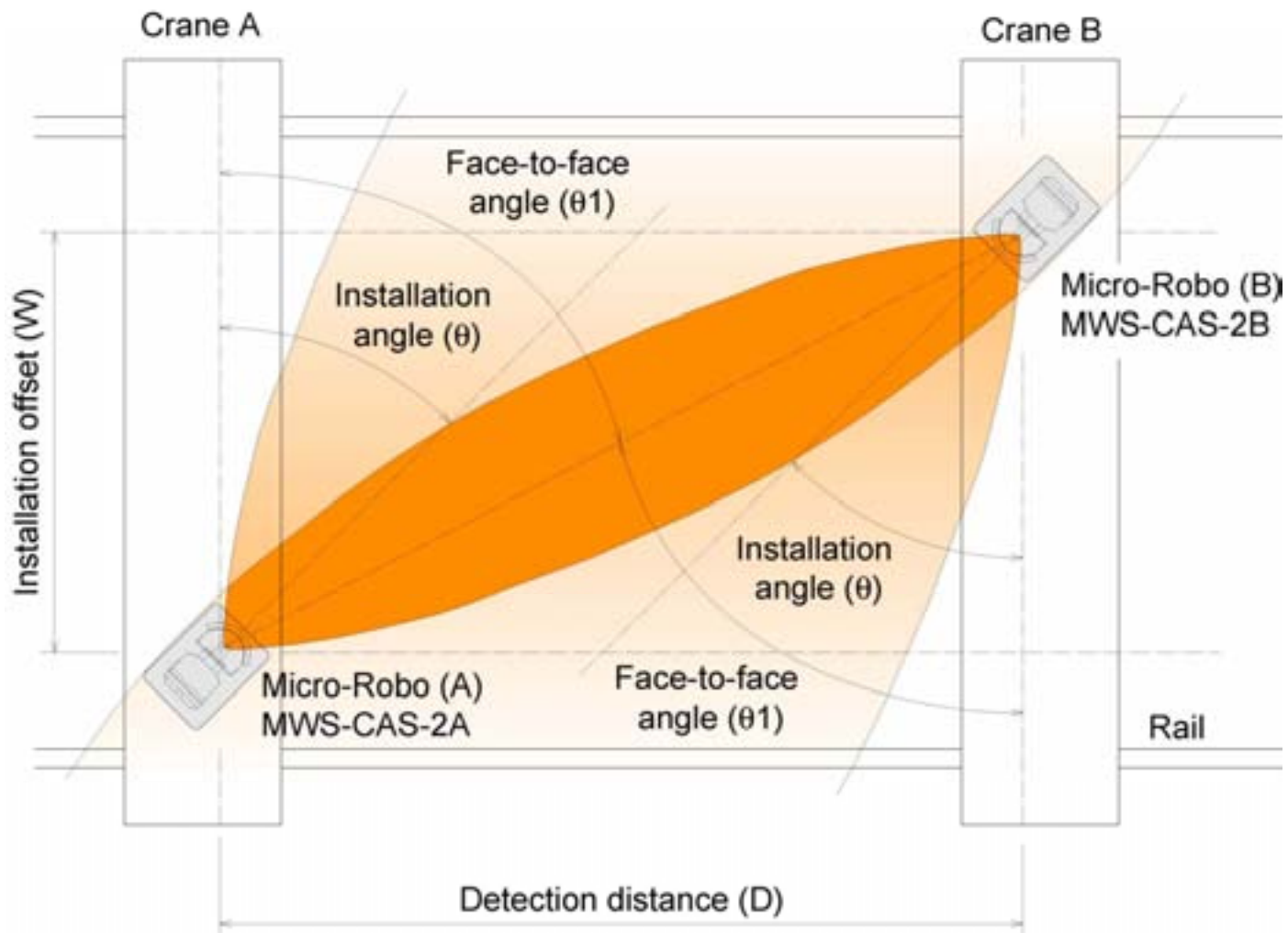
1.4 Detection Principal

- When one crane approaches the detection area of an adjacent crane, its sensor detects the microwaves transmitted by the sensor mounted on the other crane and an alarm is generated by both sensors, thus preventing collision.



2. INSTALLATION

When one crane approaches the detection area of an adjacent crane, its sensor detects the microwaves transmitted by the sensor mounted on the other crane and an alarm is generated by both sensors, thus preventing collision.

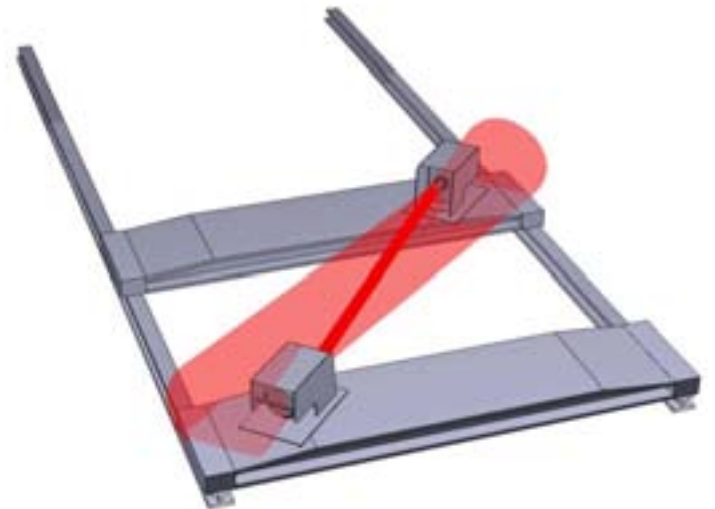
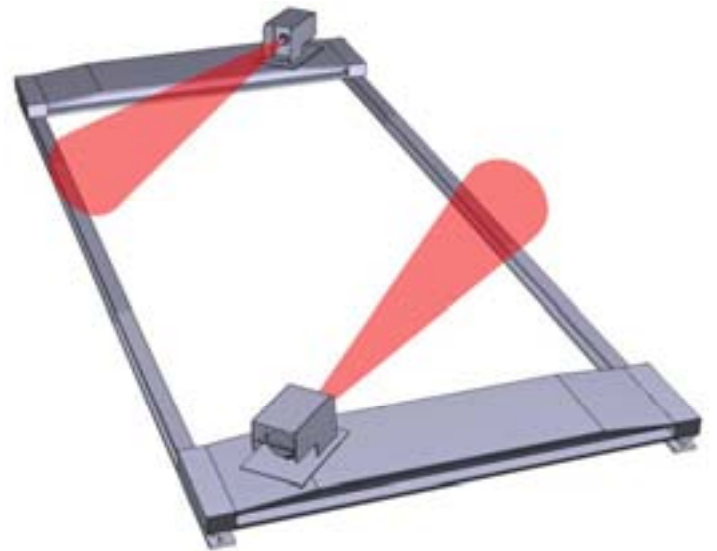


2. INSTALLATION

Micro-Robo A



Micro-Robo B



3. USEFUL LINKS

- **Catalog:**

- [MWS-CAS-2A/B](#) 

- **Operation Manual:**

- [MWS-CAS-2A/B Operation Manual](#) 



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