

Introduction

The anti-collision system is a safety device to avoid collision of two electric overhead traveling cranes on the same bay. The system works on the principle of retro-reflective infrared waves.

The system comprises of an emitter cum receiver module and a reflector. The emitter continuously emits infrared waves in the direction of the reflector. The waves are reflected back to the receiver end of the system which activates an alarm signal and stops/reduce the speed of the crane. If two cranes are away from each other the reflected waves will not reach the sensor and the cranes operate normally.

The advanced digital anti-collision system incorporates a **Micro-Controller Based Circuit for taking digital inputs for easy range setting and gives an accurate cut-off range to the device.** Two sets of anti-collision systems are required for collision avoidance between the two cranes.

Technical Specifications:

Micro Controller Based System	
Supply Voltage	110VAC - 220VAC
Operating Temperature	Upto 70°C
Output	Upto 2 Potential free relays
Sensing Distance (adjustable)	1 - 3 / 3 - 10 meters

Installation Procedure:

1. Mount the Transmitter/Emitter (Control Unit) on one crane as shown in installation scheme.
2. Connect the power supply as per the connection diagram.
3. Press the laser switch and mark the point for reflector mounting. Mount the reflector on the second crane.
4. Similarly follow the procedure to mount the control unit and reflector for the other crane.
5. Connect the relay output as shown in the figure. The Anti-collision device works like an LT limit switch.

Range Adjustment Setting:

1. Make sure the system is powered off.
2. For Relay 1, keeping Inc key pressed, power on the system. For Relay 2, keeping the Shift key pressed, power on the system. The display should show SET/(r1) or SET/(r2), then show digit (d00).
3. Using the Inc. key, set the number to the distance at which the relay should cut-off.
4. After selecting the range, press the Set key.
5. Restart the system.

