

Infrared Anti-Collision Device



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 **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 Specification

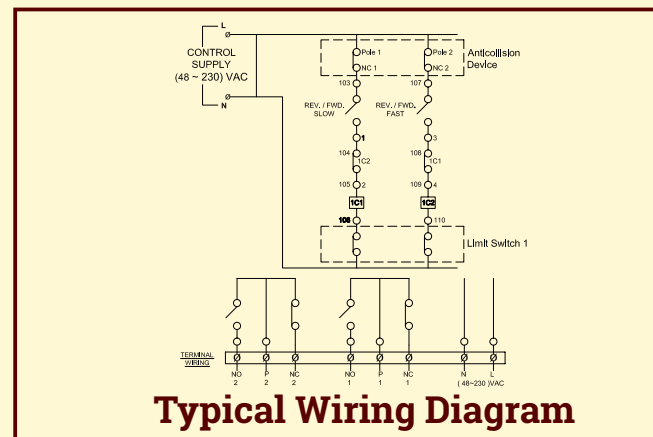
Micro Controller Based Infrared Anti-Collision System	
Model ACD3	(1 - 3) Meters Adjustable Range
Model ACD10	(3 - 10) Meters Adjustable Range
Supply Voltage	(48 ~230) VAC
No. Of Output/ Relay	Upto 2 Potential Free Relays Rated 5Amps @ 230 VAC
Set Point Adjustment	Push Button & Led Display
Housing Material	Polycarbonate
Ingress Protection	IP-65 IS/IEC 60529 (2001)
Operating Temperature	Upto 70°C
Ambient Temperature	50°C
Terminal Block	Screw Terminal (16-20AWG)

Installation Procedure:

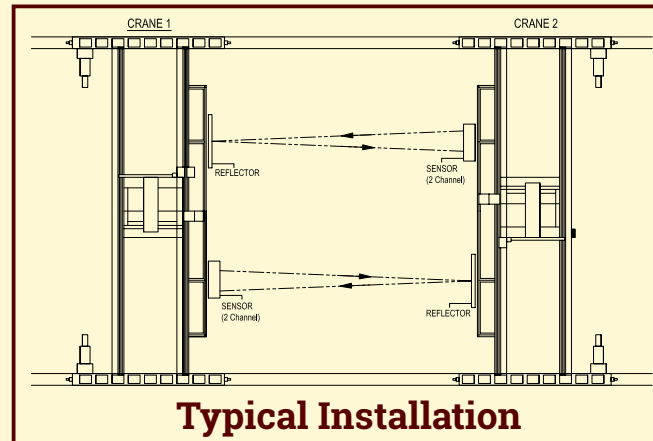
1. Mount the Transmitter/Emitter(Control Unit) on one crane as shown in installation scheme.
 2. Connect the power supply as per the connection diagram.
 3. Press the Laser switch and mark the point for reflector mounting. Mount the reflector on the second crane.
 4. Similarly follow the procedure to 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 Adjustments 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.



Typical Wiring Diagram



Typical Installation

