

**INSTRUCTION MANUAL  
ANTI CRANE COLLISION SYSTEM  
WITH 2 OUTPUT**

Dt. 17/09/2012

**Set Consists of:**

- 1. Sensor Unit - 1 Nos.
- 2. Reflector - 1 Nos.

**Specifications:-**

- 1) SUPPLY : 110V AC  $\pm$  10% 50 Hzs. **OR**  
220V AC  $\pm$  10% 50 Hzs
- 2) OUTPUT : Potential free contacts two sets
- 3) SENSITIVITY : Range adjustment provided on unit for two independent outputs. Settable by two separate potentiometers.
- 4) RANGE : Max. adjustable upto 8 mtrs. for Output 1 and  
Max. adjustable upto 10 mtrs. for Output 2
- 5) LASER ALIGNMENT TOOL : A Laser alignment tool is provided for perfect alignment of Sensor unit and reflector
- 6) Dimensions : Sensor Unit : 190 X 145 X 50mm  
Reflector : 130 X 75mm

**Terminal strip connection:**

- |     |    |   |               |   |
|-----|----|---|---------------|---|
| 1.  | P  | - | Phase 220V AC | } <b><u>CAUTION : Connect 110V / 220V<br/>AC at appropriate terminals.<br/>Never connect 220V AC supply<br/>to 110V AC terminal No. 2</u></b> |
| 2.  | P  | - | Phase 110V AC |   |
| 3.  | N  | - | Neutral       |   |
| 4.  | E  | - | Earth         |   |
| 5.  | NC | } | Output 1      |   |
| 6.  | C  |   |               |   |
| 7.  | NO |   |               |   |
| 8.  | NC | } | Output 2      |   |
| 9.  | C  |   |               |   |
| 10. | NO |   |               |   |

Two potentiometer are provided on the sensor unit. Following are the details.

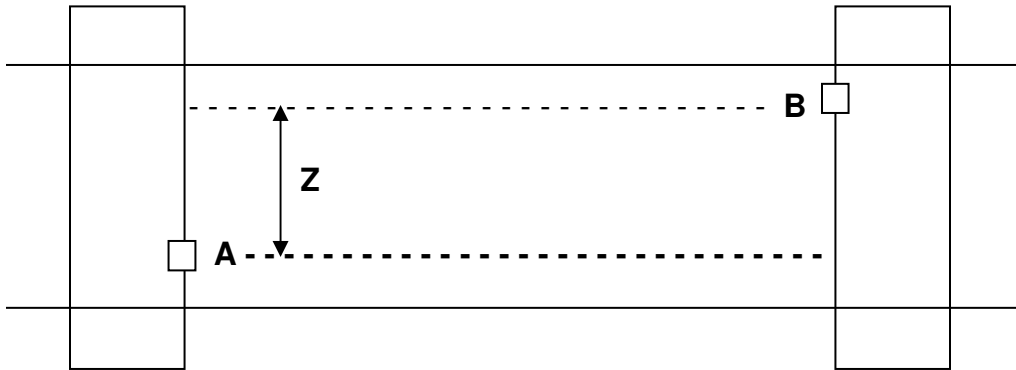
1. Range Adj. for Output 1 - Factory adjustment maximum range for output 1 is 8 mtr. – User can adjust the range maximum upto 8 mtr and minimum . upto 4 mtr. approx.
2. Range Adj. for Output 2 - Factory adjustment maximum range for output 2 is 10 mtr. – User can adjust the range maximum upto 10 mtr. and minimum upto 5 mtr. approx.

#### **LED INDICATIONS :-**

- a. Output LED :  
When reflector is in the range of 10 mtr then output 2 LED gets OFF. When the reflector goes out of the range output 2 LED gets ON.  
  
When reflector is in the range of 8 mtr then output 1 LED gets OFF. When the reflector goes out of the range output 1 LED gets ON.

#### **INSTALLATION AND PROCEDURE:**

1. Connect unit as per the terminal strip connection
2. Mount the reflector on the crane.
3. Press the laser alignment switch provided on the back plate and keep it pressed. A red spot will be seen. Now align the reflector with this red spot at the required distance on the other crane. Now release the switch. The red spot will turn OFF. You can align the reflector ad control unit with this switch. This switch should be used only at the time of alignment.
4. Adjust the range for output 1 and output 2 with the help of pots provided on the sensor unit. Factory adjusted range setting for output is 8 mtr and for flasher is 10 mtr.
5. When crane is out of the set range then output 1 and output 2 LED's are ON.
6. In case both the cranes are moving, install another set with reflector on the crane carrying the control unit of 1<sup>st</sup> crane and control unit on 2<sup>nd</sup> crane. Install 2 units as shown below for proper working.



Unit A on crane 1, Unit B on crane 2., Distance Z shown in figure should be minimum 2 mtr.

7. Make sure that both the control units should not be placed opposite to each other.

### To Adjust Range

1. When the crane are out of their range, the output relay will be ON. LED will remain ON.
2. Keep the required distance between the two cranes, at which the moving crane should stop. Locate a potentiometer at the backside of the unit. Rotate this potentiometer so as to turn the output relay ON. LED will turn ON.
3. Clockwise rotation of this pot increases the range whereas anticlockwise rotation decreases it.

**NOTE :** For effective range regularly clean the Reflector and front acrylic cover of Control unit.

### MASTER SETTING POT

Provided one multiturn Trim pot for adjusting the maximum range. Maximum range can be adjusted from 4 mtr. To 10 mtr.

Note : Factory setting at 10 mtr.

Following is procedure for adjusting / changing the maximum range-

1. Put the crane at required range.
2. Output 2 LED gets OFF.
3. Rotate the Trim pot anticlockwise such that Output 2 LED gets ON. That indicates, the range is less than required.

4. Now Rotate the Trimpot clockwise till the output 2 LED gets OFF.  
That indicates that range is setted
5. Now by using the regular Range adjustment pot you can set the range from minimum to maximum. .

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