



**OWNER'S MANUAL**

# **LED Kit**

## Collision Avoidance

**SCA-LE-50T**

**Single Event – Dual Direction**

**SCA-LE-50S**

**Single Event – Single Direction**

## Table of Contents

<b>1.0 General Product Information</b> .....	<b>3</b>
1.1 Warning .....	3
1.2 General Information .....	3
1.3 Compliance .....	3
<b>2.0 Installation Guide</b> .....	<b>4</b>
2.1 Mounting and Alignment.....	4
2.2 Wiring the Sensor- Terminals 1 & 2 .....	4
2.3 Wiring the Sensor- Terminals 4 & 5 .....	4
The white and gray leads are normally closed and are the ones generally used for collision avoidance applications. They should be wired in series with the direction circuit to be interrupted. ....	4
2.4 Mounting the Reflector Array.....	4
2.5 Setting the Sensor Trigger Point .....	4
<b>3.0 Maintenance / Cleaning</b> .....	<b>5</b>
3.1 Cleaning .....	5
<b>4.0 Parts</b> .....	<b>6</b>
<b>5.0 Electrical Drawing</b> .....	<b>7</b>
<b>Starke Products Warranty</b> .....	<b>10</b>

## **1.0 General Product Information**

We would like to Thank you for purchasing a Starke collision avoidance kit. This manual covers installing the parts of this kit and provides instructions on how those parts work together to provide accurate collision avoidance that can prevent machine failures. Please read this entire manual before attempting to install your kit. This manual includes important information relating to your safety and the safety of others in the area where this is installed.

The Starke SCA-LE-50T kit comes with

- (2) LED Sensor Units with harness
- (2) Sensor Mounting Brackets and Hardware
- (2) Reflector Arrays with Mounting Hardware
- Electrical Schematic Sheets

The Starke SCA-LE-50S kit comes with

- (1) LED Sensor Units
- (1) Sensor Mounting Brackets and Hardware
- (1) Reflector Arrays with Mounting Hardware
- Electrical Schematic Sheets

### **1.1 Warning**

Make Certain that the power supply is disconnected before installing, repairing, or making adjustments to this device. This device is to be installed by qualified electrical personnel only.

### **1.2 General Information**

- Omron LED
- Operates on 24-240 VDC or 24-240 VAC
- Sensor Rating- 3 amps max

### **1.3 Compliance**

This product is designed to operate at distances of 5 - 50 feet. Do not exceed these distances.

## 2.0 Installation Guide

Use the following steps to mount, align, and wire the device.

**Warning! Do not adjust the sensitivity on the sensor unit!** It must remain in the factory set, full clockwise, maximum gain position.

**Warning! If multiple photoelectric units are being used in the same proximity, installation locations must be far enough apart that there is no chance that one sensor will intercept the light beam from another unit.**

### 2.1 Mounting and Alignment

Mount sensor and reflector using supplied bracket and hardware to suitable locations for stability and proper alignment. When mounting the sensor to the bracket, make sure the screw heads are on the bracket side and the nuts are captive inside the sensor. Do not over tighten the sensor mounting screws.

### 2.2 Wiring the Sensor- Terminals 1 & 2

Wire the sensor with a round cable, properly rated for voltage and application. The rubber bushing must fit tightly around the cable. As with all sensors of this type, it is important to keep dust, moisture and contaminants from inside of the unit. Connect power leads to the brown and blue leads

### 2.3 Wiring the Sensor- Terminals 4 & 5

The white and gray leads are normally closed and are the ones generally used for collision avoidance applications. They should be wired in series with the direction circuit to be interrupted.

### 2.4 Mounting the Reflector Array

Mount the reflector array securely to a solid object. The reflector array **must be** centered and aligned both horizontally and vertically on the same plane as the sensor unit.

### 2.5 Setting the Sensor Trigger Point

2.5.1 With the unit (bridge crane) positioned at the trigger point you desire, move the sensor unit so that the visible red light spot is just to the left or right of the reflector array.

2.5.2 Slowly move the sensor unit towards the center of the reflector array until the indicator light on the sensor switches on. The visible red light spot will be at the edge of the reflector array.

2.5.3 Secure the sensor unit in this position

2.5.4 Check the switching action by moving closer to and further away from the trigger zone

2.5.5 Slight adjustment of the sensor unit may be necessary to attain desired switching point

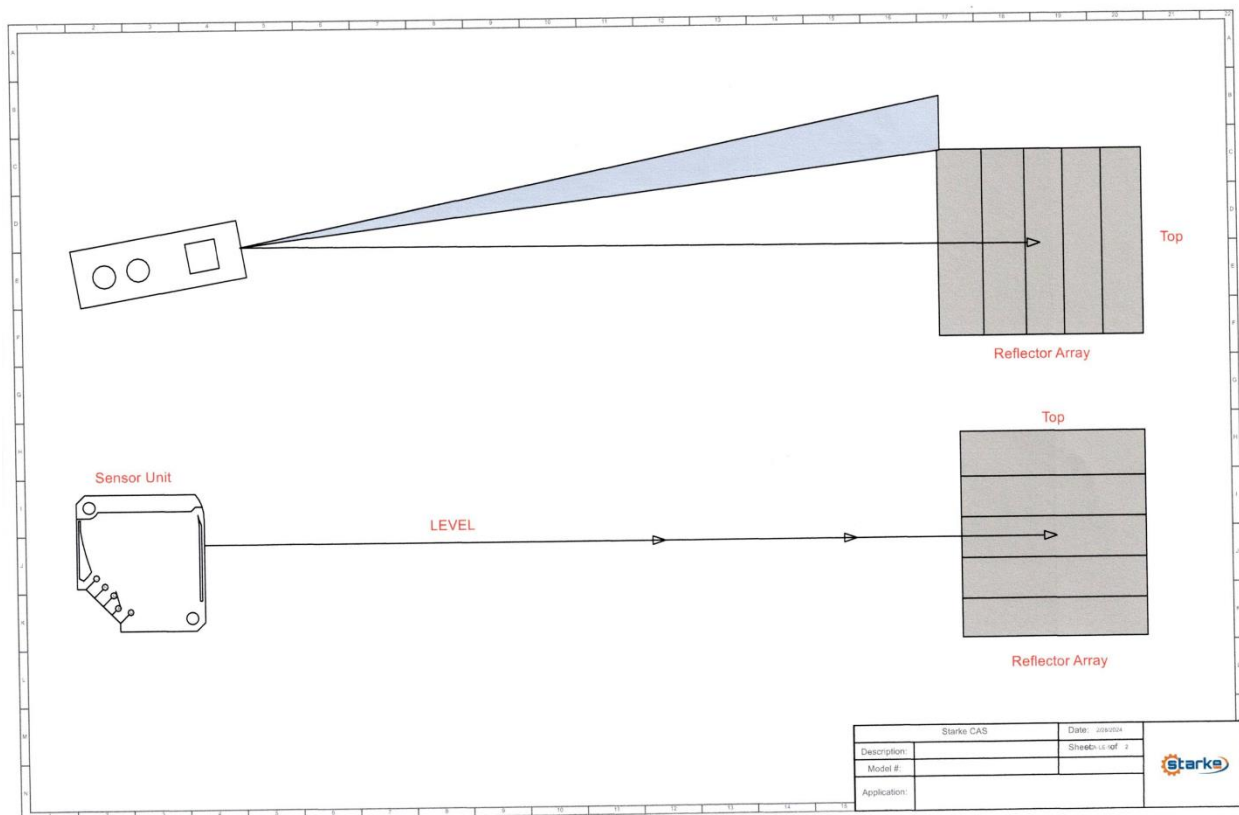
### 3.0 Maintenance / Cleaning

#### 3.1 Cleaning

Common to photoelectric sensors, it is necessary to keep excessive dust or dirt from diminishing the optical effectiveness of the device. Wiping the sensors' optical surface and the reflector array occasionally with a moist, not wet, cloth should be made part of anormal maintenance procedure.

**\*\*REPEAT STEPS FOR 2<sup>ND</sup> SENSOR AS NEEDED\*\***

#### Aiming the sensor



## 4.0 Parts

### 4.1 Mounting Brackets with Hardware



### 4.2 Sensor



### 4.3 Reflector Array





## Collision Avoidance Kits

SKU	Description	Application	Net Weight
SCA-LE-50S	Single Event LED	Simple uni-directional bridge collision avoidance with (1) adjustable event (0-50 ft)	3 lbs
SCA-LE-50T	Single Event Twin LED	Simple uni-directional bridge collision avoidance with (2) adjustable events (0-50 ft)	5 lbs
SCA-LZ-200S	Dual Event Single LASER	Precision uni-directional bridge collision avoidance with (2) programmable events (0-200ft)	5 lbs
SCA-LZ-200T	Dual Event Twin LASER	Precision bi-directional bridge collision avoidance with (2) programmable events (0-200ft)	8 lbs

- All kits include LED or LASER device(s), mounting brackets, reflector(s) on mounting bracket, control cable(s), and any required relay controls
- An “Event” is simply a measurable action that can dictate the speed or the stopping of the moving crane. A single laser may have dual events, but can still only point in one direction, which may require a “Twin” system if there are functions to be controlled in both directions



Single Event LED



Single Event Twin LED

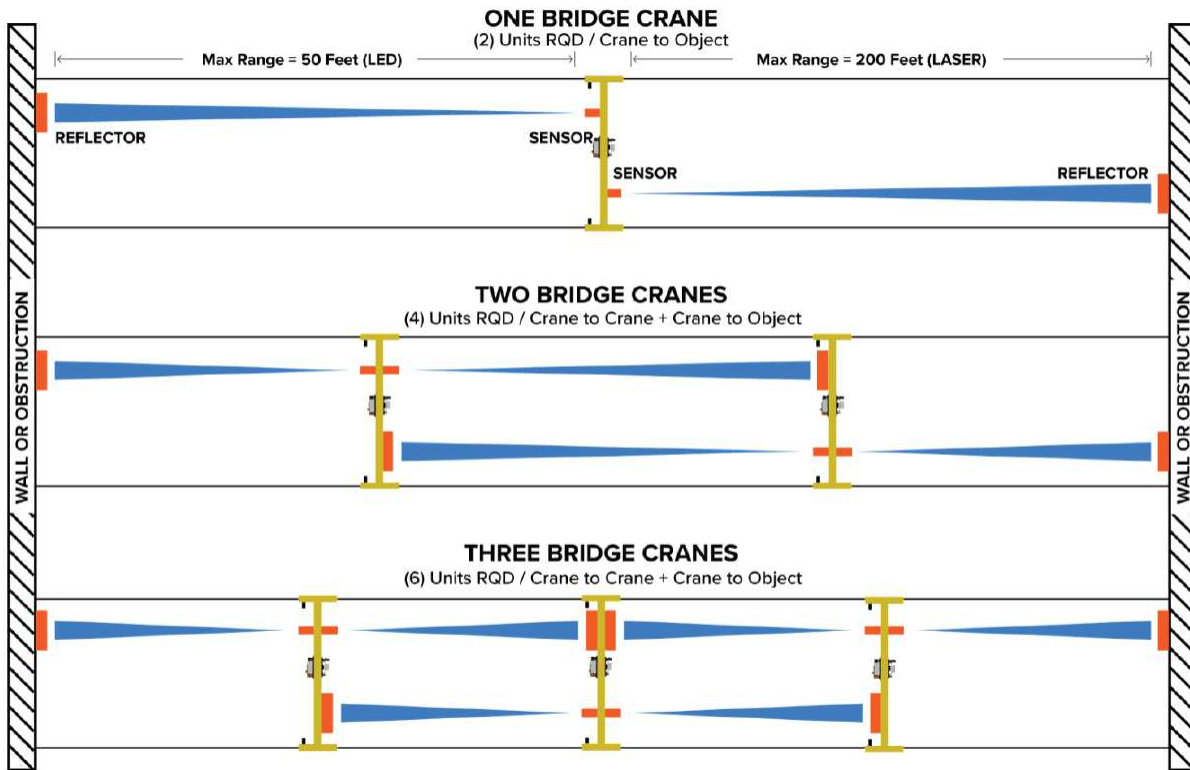


Dual Event Single LASER



Dual Event Twin LASER







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## **Starke Products Warranty**

### **1 Year (12 Month) Parts & Labor Warranty**

Unless otherwise specified, Starke guarantees that our products are free from material defects in design and workmanship under normal use, proper maintenance, and service.

This warranty is strictly limited to 12 months for single shift operation or 2,000 hours after installation, or 14 months after shipment, whichever is shorter. Within ten days after defect is found, warrantee must deliver a written notice to Starke providing defect information. All requested warranty information must be received promptly by Starke in no more than 5 business days.

**Customer is responsible for all shipping charges on returned/warrantable items. Starke will cover the repair (parts and labor) at no charge or provide a replacement item at Starke's discretion.**

This warranty does not cover defects or damage caused by acts of God, unusual wear and tear, improper use, or improper maintenance by the user. No responsibility for consequential damage is expressed or implied, and the responsibility under this warranty/guaranty is limited to the repair or replacement of the defective materials. Repair or replacement of the item is fully at the discretion of Starke.

*ALL OTHER REPRESENTATIONS, EXPRESS OR IMPLIED, WARRANTY, OR LIABILITY RELATING TO THE CONDITION OR USE OF THE PRODUCT ARE SPECIFICALLY DISAVOWED, AND IN NO EVENT SHALL STARKE BE LIABLE TO BUYER, OR ANY THIRD PARTY, FOR ANY DIRECT OR INDIRECT CONSEQUENTIAL OR INCIDENTAL DAMAGES*

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Contact Your Starke Representative for More Information on Products to Help Maximize Your Workplace Efficiency



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**Crane Kits**



**Slings**



**Safety**

