



**DASMA**  
Door & Access Systems  
Manufacturers Association  
International

DOOR OPERATOR & ELECTRONICS DIVISION

# TECHNICAL DATA SHEET

**#364**

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## Installation Location of Photoelectric Sensors

### Introduction

Garage door operators labeled and listed to UL 325 must be designed and manufactured with features that aid in the prevention of an individual from becoming entrapped beneath a closing garage door. One way to achieve this entrapment protection is the incorporation of an external entrapment protection device. This can consist of a photoelectric sensor, an edge sensor, or any other system that meets the protection requirements tested in accordance with UL 325.

Additional information about federal and state legislation related to garage door operators can be found in DASMA TDS-351, *Federal and State Garage Door Operator Legislation Guidelines for Dealers and Installers*.

### Photoelectric Sensor

A photoelectric sensor consists of a photoelectric beam that extends across the garage door opening. This sensor is designed to detect an obstruction while the door is closing and to send a signal to the garage door operator to reverse the door movement, thus avoiding a potential entrapment situation.

**▲WARNING** – To reduce the risk of severe injury or death, it is essential that photoelectric sensors be installed properly according to manufacturer's instructions.

### Installation Height and Horizontal Location

The top of each photoelectric eye lens is to be installed no higher than six (6) inches above the garage floor. If installation is above six (6) inches, the photoelectric eyes may not detect what they are intended to protect, an individual lying down on the garage floor under the descending door.

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**Note:** Technical Data Sheets are information tools only and should not be used as substitutes for instructions from individual manufacturers. Always consult with individual manufacturers for specific recommendations for their products and check the applicable local regulations.

This Technical Data Sheet was prepared by the members of DASMA's Operator & Electronics Division Technical Committee. DASMA is a trade association comprising manufacturers of rolling doors, fire doors, grilles, counter shutters, sheet doors, and related products; upward-acting residential and commercial garage doors; operating devices for garage doors and gates, sensing devices, and electronic remote controls for garage doors and gate operators; as well as companies that manufacture or supply either raw materials or significant components used in the manufacture and installation of the Active Members' products.

Horizontal positioning is limited to typical manufacturer testing constraints. Photoelectric sensors should be located no greater than 20' apart, unless other instructions are provided by the manufacturer. Sensors should also be located within 6-inches of the path of the door measured perpendicular to the door.

Installation should in all cases be per the garage door operator manufacturer's instructions. Contact the manufacturer if any variations may be needed from the instructions or from the guidelines in this Technical Data Sheet.

### **Important**

DASMA encourages homeowners and building maintenance personnel to conduct the required regular testing of automatic garage door and operator systems to ensure ongoing safe operation. The manufacturer's instructions provided with the garage door operator should be reviewed concerning this testing.

### **Testing**

Testing of the safety systems includes monthly testing of the inherent reversing mechanism for residential garage door as well as monthly testing of the photoelectric sensors for both residential and commercial garage door openers to verify proper working order. To test the photoelectric sensor, start the door moving down. Then apply a controlled obstruction in the path of the photoelectric beam. Verify that the garage door movement reverses direction and that the door returns to the fully open position.

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