ReFlx 45 Collision Avoidance System
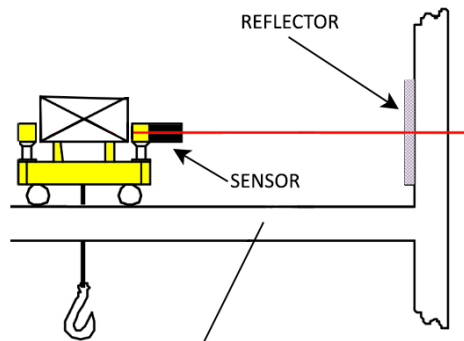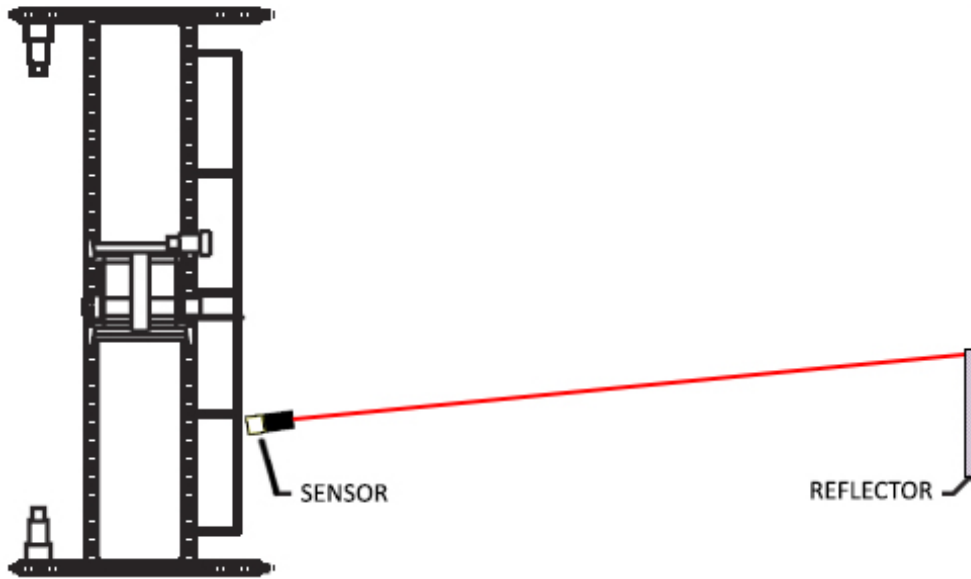
SYSTEM INCLUDES:
1 Sensor (detection range 3-45 ft.)
1 2 ft. x 2 ft. reflector (either adhesive-backed or rail-mounted)
1 Mounting Bracket (either standard or hinged)

FOR "BRIDGE-TO-WALL" APPLICATIONS,
THE CENTER OF THE SENSOR BEAM MUST BE AT
THE SAME HEIGHT AS THE CENTER OF THE TARGET.

The sensor has one form C relay used as a single stop command.

NOTE: The function of the ReFlx 45 relay contacts is similar to that of end-of-travel limit switches. Test all motions under worst case scenarios before putting the crane into operation.

ReFlx 45 Crane to Crane Collison Avoidance System
TWO SYSTEMS REQUIRED; EACH INCLUDES:
1 Sensor (detection range 3-45 ft.)
1 2 ft. x 2 ft. reflector (either adhesive-backed or rail-mounted)
1 Mounting Bracket (either standard or hinged)
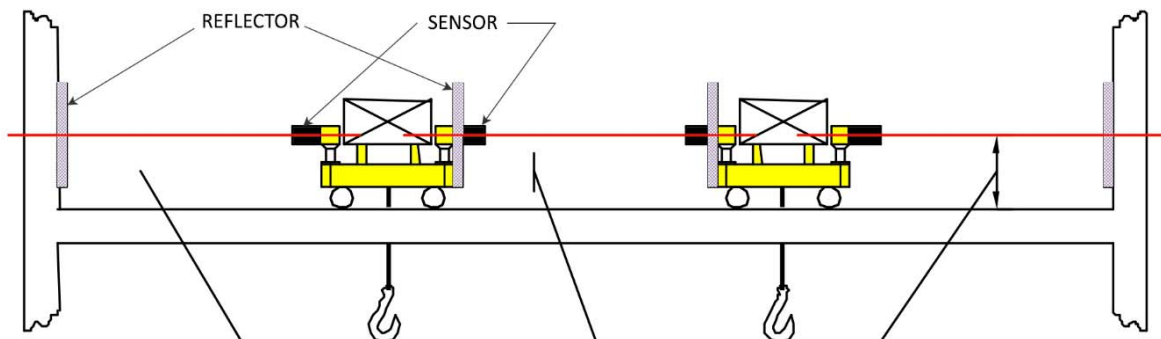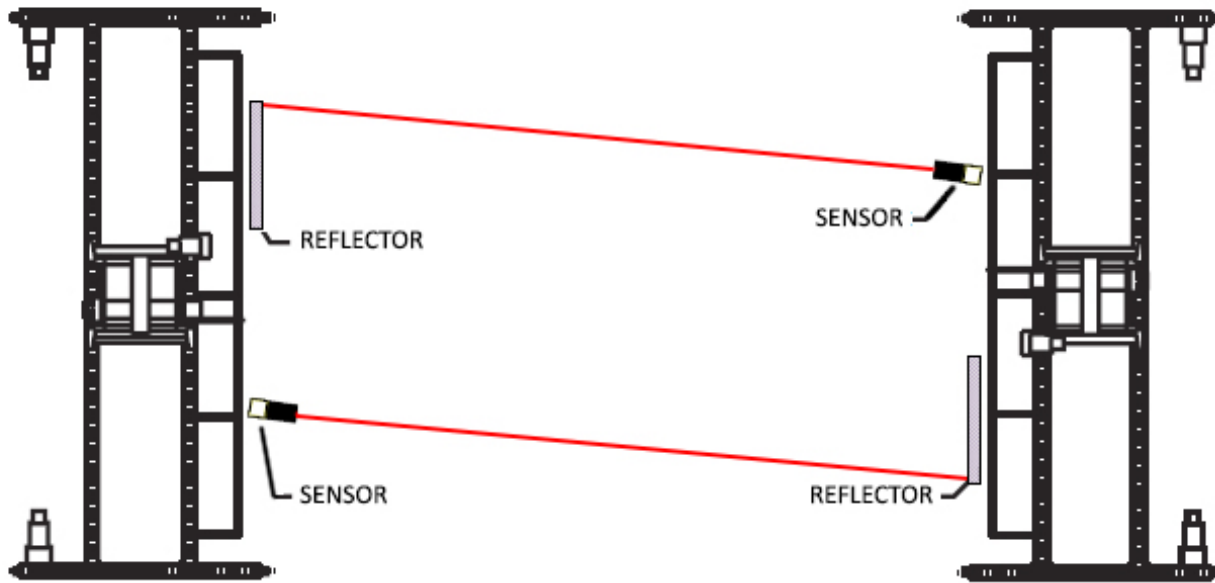
FOR BOTH BRIDGE-TO-WALL AND BRIDGE-TO-BRIDGE APPLICATIONS, THE CENTER OF THE SENSOR BEAM MUST BE AT THE SAME HEIGHT AS THE CENTER OF THE TARGET.

ReFlx 45 Application Guidelines

Contactor Control

Bridge and trolley motions using reversing contactors for control rely on the crane's mechanical brakes for stopping. Therefore, the buffer zone (minimum distance to mating crane or obstruction) should be sized to allow for future brake wear.

Adjustable Frequency Crane Control

Because adjustable frequency drives (AFDs) have various programmable stopping options, consideration should be given to these various means when setting up the ReFlx 45 system.

Using the AFD Limit Switch Inputs

Most modern AFDs include programmable limit switch input terminals for each direction of travel. When the bridge reaches the sensing distance, the drive will "decelerate at stop command" or provide "immediate stop at stop command" (see definitions below), depending on how the drive is programmed. It is important to properly set up the deceleration time to ensure expected operation. See the ReFlx 45 manual for detailed instructions.

Decelerate at Stop Command

Upon receiving a Stop command from the ReFlx 45 system, the output frequency of the AFD decreases to near zero at the programmed deceleration ramp, and the brake is commanded to set.

Immediate Stop at Stop Command

Upon receiving a Stop command from the ReFlx 45 system, the AFD base blocks the main output transistors. This electrically disconnects the motor from the AFD and, through the brake interlock, commands the brake to set. In this mode, the crane functions similar to a contactor control and relies on the crane's mechanical brakes for stopping. Therefore, the buffer zone (minimum distance to mating crane or obstruction) should be sized to allow for future brake wear.

NOTE: Test all motions under worst case scenarios before putting the crane into operation.

For proper operation, ensure that the sensor and target are in the same vertical plane throughout the range of travel.

Contact Magnetek Material Handling for applications involving other types of controls or options.