SOLAR TRAFFIC CONTROLS
"Wireless" Traffic Control Solutions

Warehouse / Industrial Traffic Controller

Model 80ITSWHTC-SO40121
with Distributed Approach/Recede Sensors
Rev. 1.0, 09/14/04

General

This system is designed to increase safety for users in single lane traffic control situations where basic traffic control is required and may require a modified response to vehicles using the pathway. The response is modified in that a receding sensor is used to determine the status of exiting vehicles rather than an approach sensor. In some cases this is a preferred response due to longer vehicles in the path. Typical applications are trucking facilities, warehouses or similar industrial facilities, mining facilities, golf cart tunnels, and/or baggage/package processing facilities. The system consists of 4 directional microwave detectors, the control unit and 2 red/green traffic indicators located at each end of single lane path. Figure 1 shows a diagram of the system set up on a single lane path.
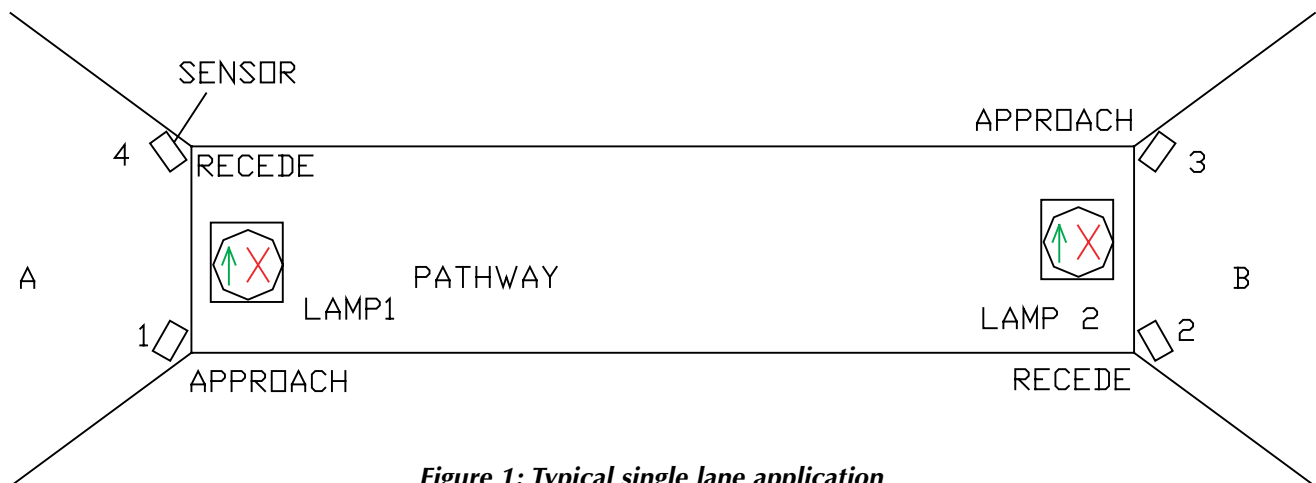

Figure 1: Typical single lane application

Theory of Operation

This system is sensor activated. The sensors are configured as directional sensing devices at each end of the single lane path. Sensors 1 and 4 are at one end of the tunnel (A side) and arranged as an approach and recede detector, respectively. Sensors 2 and 3 are located at the other end of the tunnel (B side) and are configured as recede and approach detectors, respectively.

As vehicles travel from side A to B, a Reset Time is counting up (field adjustable value). During this time, vehicles in the path must clear at point B. If the Reset Time value reaches its maximum, the system will reset and return to the red flash state with both approach sensors inputs available. The logic behind travel from A to B is that the vehicles in the pathway will not stop or slow down since they were given the right of way by the controller. Upon exiting at B sensor 2 will detect the vehicle moving away from the end of the pathway. Both lamps remain in a red solid state but a Red Clear Timer is started. This timer holds the system in solid red until it times out when it resets the

system thereby returning it to red flash. As a back up, there is a Maximum Transit timer which is set based on the actual time it takes the vehicles to travel from side A to B under slowest possible conditions. If a vehicle is not detected leaving the pathway at B before this value is reached, the timer resets the system to red flash and all sensors are active again.

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Vehicles traveling from side B to side A will cause the system to function as described above except that the lamp at B will go green and sensors 3 and 4 will drive the controller.