

Light crossing request system with shift register

Task definition

easy is required to control a pedestrian light crossing. These lights should only change to red for drivers when one of the two request buttons is actuated.

As soon as easy is in RUN status, the lights should switch to green for vehicles and red for pedestrians. The crossing light cycle runs with a 2 second pulse when pushbutton I3 or I4 (pedestrian request button) is actuated. The GREEN phase of the pedestrian crossing light is required to last 4 seconds. Only when the crossing light cycle is completed, does actuating the pedestrian request button start up a new cycle.

Design the shift register in such a way that only when the light crossing cycles are started, is a "1" shifted to the 1st memory location. All other shift pulses shift a "0" in the memory locations. At the end all memory locations and the request marker are cleared once more.

Device class used

easy700

Wiring

Inputs

I03 Crossing request button

I04 Crossing request button

Outputs

Q01 DRIVER GREEN

Q02 DRIVER AMBER

Q03 DRIVER RED

Q04 PEDESTRIAN RED

Q05 PEDESTRIAN GREEN

Parameters

T01 Shift pulse 2s

