

Multi-storey car park with time switch

Task definition

easy is required to control the entrance and exit barriers of a multi-storey car park. It is also required to monitor the maximum number of vehicles parked.

Note!

The barrier systems only require one pulse to open and close them automatically.

In Automatic mode, a time switch controls the daily opening times of the car park, such as for the customers of a department store. However, the time switch only prevents the opening of the entrance barrier so that cars cannot enter the car park after the store is closed. Cars can be driven out of the car park at any time.

Time setting of the time switch:

Time switch H01 = Channel A: Mo – Fr 08:00 - 20:30
Channel B: Sa 08:00 - 16:00

During garage opening times the customer must obtain a car park ticket (S2) in front of the entrance barrier so that this can open. A detection loop (S4) is located below and behind the barrier on the road surface and controls the opening time of the barrier.

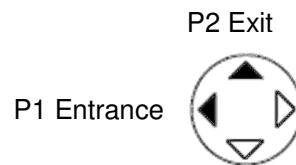
The number of vehicles in the car park is also determined by means of detection loops at the entrance and exit. The actual value determined is compared with the set reference value (maximum permissible number of parked vehicles). As soon as the setpoint is reached, the FULL display lights up. The entrance barrier furthermore stays closed until a vehicle leaves the car park.

The exit barrier can only be opened with a validated parking ticket and only closes when the vehicle has completely passed the detection loop behind the barrier.

Outside of the the opening hours the FULL message flashes at the car park entrance and the Car Park Opening Times board is illuminated.

In Manual mode, you open and close both barriers via the P buttons on the easy. Once the associated P button is pressed, the barrier stays open until this P button is pressed once more. The barrier then closes.

Arrangement of the P buttons on the easy



Device class used

easy500

Wiring

Inputs

I01 = S1 Main switch S1
(System: MANUAL/AUTOMATIC)
I02 = S2 Car park ticket request button
I03 = S3 Contact for car park ticket exit
I04 = S4 ENTRANCE detection loop
I05 = S5 EXIT detection loop

Outputs

Q01 = K1 ENTRANCE barrier
Q02 = K2 EXIT barrier
Q03 = H1 FULL light
Q04 = H2 Light for opening times board

Parameters

T01 = Flash frequency for FULL message
C01 = Permissible number of vehicles in car park
H01 = Opening times time switch