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Requirements



Num	Requirement
1	3 Light-curtains detect if a person enters or leaves the room (direction-tracking) (only one person at a time)
2	Track the number of people in the room
3	Maximum number of people in the room can be specified, must be at least 1
4	Minimum number of people in the room must be 0
5	Green LED ("GO-LED") must be on, when the specified maximum number of people is not reached
6	Green LED ("GO-LED") must be off, when the specified maximum number of people is reached
7	Red LED ("STOP-LED") must be on, when the specified maximum number of people is reached
8	Red LED ("STOP-LED") must be off, when the specified maximum number of people is not reached
9	Number of people increases immediately after a person entered the room
10	Number of people decreases immediately after a person left the room
11	Unique acoustic sound for "Arrival" must be played immediately after a person entered the room
12	Unique acoustic sound for "Departure" must be played immediately after a person left the room
13	Unique acoustic sound for "STOP" must be played immediately, when the specified maximum number of people in the room is reached
14	A notification is sent to a PC via a serial transmission, immediately after a person entered the room
15	A notification is sent to a PC via a serial transmission, immediately after a person left the room
16	A notification is sent to a PC via a serial transmission, immediately when the specified maximum number of people in the room is reached
17	Every notification sent to a PC contains a unique time-stamp and the event
18	Transmission rate to the PC must be 9600 baud, 8 bit, no parity, 1 stop bit
19	A programm on the pc must receive the notification and display the information. The programming language must be C++