# HIQ GRMS

**Guest Room Management System**

HIQ GRMS is optimized for Hotel Guest room applications. Based on HIQ range of controllers GRMS ads functionality to Hotels and improves the guest experience. All HIQ components can be used and combined with HIQ GRMS to form complex customized solutions and it can be connected to HIQ BMS and HIQ Universe cloud. HIQ BMS can be used for other areas, like corridors, foyers, halls, SPA, restaurants, bars and others.

Attractive glass-finished panels, which can be fully customized (color, appearance, hotel logo) are an integral part of the system. Alternatively, standard push buttons can be used.



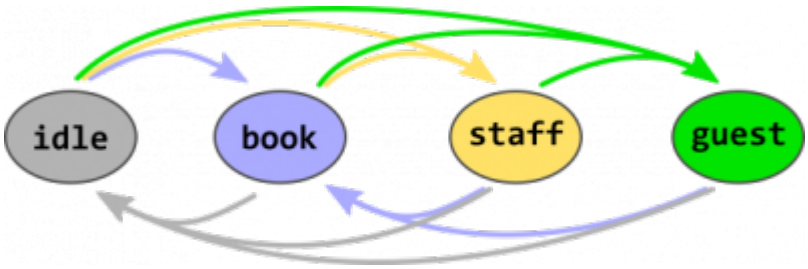
## GRMS functionalities

HIQ Hotel GRMS functionalities:

- Room state
- Access control
- Master Contactor
- Lights
- HVAC
- Ventilation fan
- Blinds / Curtains
- Room info panels
- Emergency call
- Fire alert

### Room state

Room status monitoring is important for the operation of all the devices in the hotel room.




| | | |
|---|---|---|
| | check-in | manual on GRMS management system / automatic from booking system |
| | guest entry | advanced presence detection / guest card in card holder |
| | staff entry | advanced presence detection / staff card in card holder |
| | exit | card removed from card holder |
| | check-out | manual on GRMS management system / automatic from HIS |

| | power relay | lights | HVAC | blinds |
|---|---|---|---|---|
| **IDLE** | OFF (delay) | All OFF scene (delay) | Idle set-points | All OFF scene (delay) |
| **BOOK** | OFF (delay) | All OFF scene (delay) | Book set-points | All OFF scene (delay) |
| **STAFF** | ON | Staff welcome scene | No change | Staff welcome scene |
| **GUEST** | ON | Guest welcome scene | Guest set-points | Guest welcome scene |

The devices are switched when the state of the room changes, later manual control is possible at any moment.

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| Advanced presence detection | The system automatically detects the presence and type of user in the room based on the access card, door status and room motion sensor. |
| Card holder | Key-card holder in room which reads the code from the card and allows the status to be switched only to authorized cards. |
| GRMS management system | Manually change room status, booking system integration |

### Access control

It makes it easy to manage access rights to hotel rooms. For this purpose, the door must be fitted with an electric lock and an access code reader installed in front of the door.

The access codes are stored in the local room controller. Thus, access is independent of the operation of the entire system and is therefore very reliable.

Access code management is centralized and runs over a local network. If any part of the system fails, emergency local code management is possible with master code (master card).

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| Code reader | Access code reader in corridor near room entrance door. Most often it is an RFID card reader, but it can also be a QR code reader or a keyboard to enter a PIN code. |

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| Electric lock | Entrance door unlock lock. The use of a mortise electric lock is recommended. Any type of lock that can be unlocked with an electrical signal can be used. It is important that the exit from the room is safe in all cases (even in the event of a power failure). |
| GRMS management system | Management of access codes. |

### Master Contactor

Turn off all consumers (except the refrigerator) when the room is not occupied. This significantly reduces the consumption of electricity and prevents the connected devices from causing dangerous situations (fire).

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| Contactor | Contactor (power relay) with 230 VAC coil which cuts off power to consumers. |

### Lights

Easy and user-friendly lighting management of the hotel room.

In addition to control the lights individually, it also allows group management through the scenes. Scenes can be triggered manually (dedicated push-buttons) or automatically depending on the change of room status:

- when entering the room guest or staff **welcome scene** is activated according to the type of user,
- when user leave the room, the scene **all off** is triggered with a delay.

The **welcome scene** allows the guest to enter the illuminated room which, in addition to comfort, has a great impact on safety.

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| Light | The system provides controls for virtually any kind of light, from simple ON / OFF, dimmed 230 VAC, dimmed led strips, RGB-W led strips, … |
| Push-button | Mechanical or touch push-button for individual light or scene control. |

### HVAC

Advanced temperature control allows heating or cooling to various desired values according to room conditions. This makes it possible to save energy when the room is not booked or the room is not occupied and comfortable when the guest is in the room.

The system provides three sets of heating and cooling parameters. Each set contains the desired values for the temperatures and other parameters of the heating or cooling operation, such as the convector speed limitation.

| Room state | HVAC settings |
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| IDLE | Prevent room freeze or overheating with minimal fan speed. |
| BOOK | Minimum heating or cooling to keep it comfortable enough. Prepare room for guest arrival. |

| Room state | HVAC settings |
|---|---|
| GUEST | The guest adjusts the parameters of heating or cooling within the set limits on the room thermostat. These settings apply when the guest is in the room and are reset on the assumed value of the swap guests. |

The switch on the door window prevents the room from heating and cooling with the windows and doors open.

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| Fan-coil | Is a simple device consisting of a heating and/or cooling heat exchanger or 'coil' and fan. The system provides control of two and four tube convectors and fan speed control (stage or continuous depending on type). |
| Floor heating | Usually used only for heating purposes. The regulation is done via an electric valve or by disconnecting the power supply in cases where the radiator / floor heater is electric. |
| Radiator | |
| Air conditioner | The system allows full control of the air conditioner via modbus rtu communication. |
| Room thermostat | It is used to detect room temperature and set the desired heating or cooling parameters by the guest. Display Brightness is automatically adjusted according to the day / night. |

### Ventilation fan

The ventilation fan is usually installed in the bathroom. It activates with a delay when presence in the bathroom is detected. This prevents unnecessary frequent switching on when we are in the bathroom only for a short time (washing hands or the like). The ventilation switches off with delay even after leaving the bathroom. It is sufficiently ventilated when actually needed (after showering).

Bathroom presence is most commonly detected through lights, which must be controlled. In principle, a presence sensor can also be used. A manual ventilation switch can also be installed.

To prevent frowstiness when the room is not occupied, ventilation is carried out at least once a day at a preset time.

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| Ventilation fan | Any electrical ventilation fan (single or multi-speed). |

### Blinds / Curtains

Blinds / curtains management allows the guest to adjust the condition of these to their current needs at any time: rest or privacy with the blinds closed, work with as much natural light as possible (open blinds / curtains).

The position of the blinds can be part of the scene. Thus, upon arrival, the blinds can be opened, when guest leave the room they are placed in a position that provides maximum energy efficiency, when the scene “all off” is activated, all blinds are automatically closed, …

When there is no guest in the room, the shading control enables increased energy efficiency. The blinds are automatically adjusted to the current position of the sun and outdoor temperature. Depending on the desired parameters of the room, provide for natural heating or to prevent warming or cooling due to the influence of external conditions.

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| Blinds / Curtains | Motorized blinds or curtains. It is advisable to use a motor drive with integrated limit switches and separate power supply for opening and closing. AC or DC drives can be used. |
| Push-buttons | Double switches (separate open and close keys) are usually used. The controls are intuitive, so no additional user training is required. Short press opens / closes the blind to end position. If push button is long pressed blinds moves as long as the key is pressed - like an automatic pan movement in cars. |

### Room info panels

In the past, guests communicated to the staff their wishes with the tags they hung on the outside of the room door. Although this method is still commonly used, it has several disadvantages:

- The staff is not automatically informed of the guest's preferences as he / she must inspect the door to the rooms.
- No room status records.
- Easy to abuse (anyone could move the tags to “annoy” guests).

The system allows setting “Do Not Disturb” (**DND**) and “Make Up Room” (**MUR**) statuses from panels in the room, which ensures that statuses can only be set by a guest. In addition to the status being signaled in front of the entrance to the room, it is also signaled at the reception desk and recorded in the database for later analysis.

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| Room info panel | Panel in the room that allows you to set DND and MUR status. |
| Corridor info panel | Panel in front of the entrance to the room showing DND and MUR status. It can also display the room number and enable the door bell to be activated. |

### Emergency call

For the purpose of an emergency call, at least one button or a pull switch is installed in the room to activate the call. The call is signaled at the reception desk and in front of the entrance to the room (the MUR indicator flashes). Each activation is also stored in a database for later analysis.

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| SOS button / pull switch | Dedicated push-button or pull switch for emergency call. |

### Fire alert

Dedicated fire sensors may be installed in the room to activate fire alert. In addition, the system can detect a potential fire alert from sudden abnormal rising temperatures of temperature sensors that are otherwise used to regulate heating and cooling.

The danger is signaled at the reception. All events are stored in the database for further analysis.

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| Fire sensor | Any type of fire sensor with dry contact output. |
| Temperature sensor | Temperature probe (in thermostat) used for temperature regulation. |

**The system is not certified as a fire system and cannot replace the legally required fire control panel.**