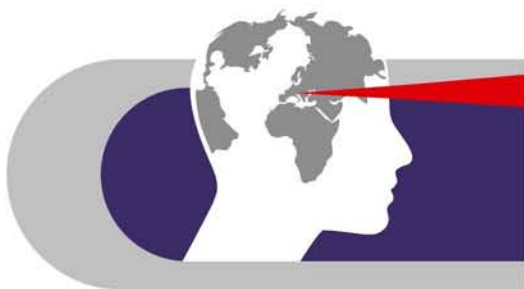




DESCRIPTION

— Solutions for hotel room automation

Info !



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I. SOLUTION WITH LONGO LPC-2 CONTROLLER

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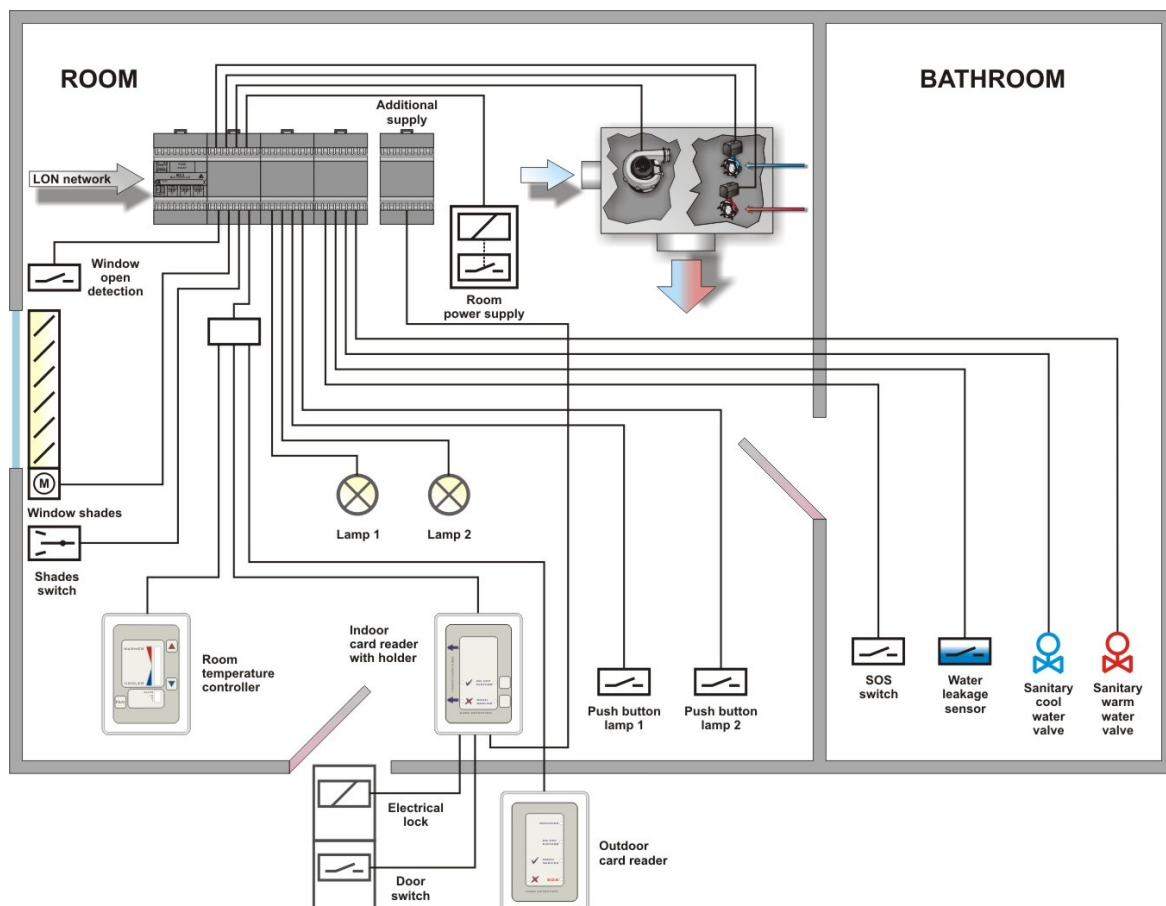
I. SOLUTION WITH LONGO LPC-2 CONTROLLER

With this solution, hotel manager has the possibility of setting the parameters, alarm and data monitoring or historical trend recording over central supervision system. This gives him the possibility to influence the most important factor of the hotel - the comfort and satisfaction of the guest and energy saving.

We attain guest satisfaction with access rights at different passages inside the hotel (rooms, casinos, recreational spaces...). More than this, the administrator or the hotel staff can take steps to eliminate the cause of a problem before the guest complains. For example: timely notice of deviate room temperature (if it is out of the desired limits). The comfort of the guest in the hotel room is also increased, because of the comfortable air-condition and other practical solutions like room occupied signalization, do not disturb...

Hotel room automation contributes the biggest part of energy saving. The room is warmed or cooled only when the guest is inside, in the case of booking or guest absence the room is not air-conditioned at all or basic temperature is maintained only (not too warm or too cold). All energy consumers can be switched off and all sanitary water pipes can be closed too. We can save energy with corridor and other public spaces air-conditioning and lighting too; it can be arranged with a timer or remote control.

1. Example of intelligent room solution by using LPC-2 controller





2. Description

The intelligent room system enables management and supervision over LON or ethernet network communication for the following subsystems of hotel room:

- ◆ access and presence control
- ◆ room air-conditioning
- ◆ lighting and other energy consumers
- ◆ SOS alarming
- ◆ prevention of water leakage
- ◆ blinds control
- ◆ sanitar water blocking
- ◆ cleaning request or request for the staff of the hotel
- ◆ other particular requests in the room

Each guest receives an electronic card (electronic key) which opens the room door. On entrance the guest must approach electronic card near card reader which is placed near the outside room door. When a card is detected, green light blinks once and short beep is produced. If the key code on the card is correct, electronic door lock is unlocked. If the card signature is not valid, red light blinks and longer beep is produced.

When the door is opened the welcome light is lit for a short time. The guest has to insert card into the card holder. When the valid card is detected the lighting turns on, the valves of sanitar water opens and air-condition and other systems like blind control start working. The “occupied” signal turns „ON“ on the card reader in the corridor.

The guest can set the temperature, inlet air velocity, or turn off the air-conditioning system on the room temperature controller. He/She can also activate signals “room service” or “do not disturb” on the card holder in the room. In the bathroom, the system is connected to the “SOS” switch. All mentioned signals are displayed on the card reader on the corridor too.

When the guest leaves the room and the card is removed from the holder, the room returns to stand-by position after some time; room lighting turns off, sanitar water valves turns off, air-conditioning changes to saving mode and other systems like blinds control turns to desired mode.

The intelligent room system is connected with the hotel information system over the LON or ethernet network, through which statuses, commands and parameters are transmitted. In case of network problems, the system works locally by it's internal program and settings until the network connection is restored. The system also remembers last valid cards for the room access.

Room entrance for the hotel staff (maid, servis...) is also controlled with electronic card (electronic key). The entrance rights are given from the central computer. When the maid removes the card from the card holder, the central computer is informed that the room is cleaned.

The intelligent room system is modular and open programmable. This allows adding or removing separate modules and modifying the program on customer requests and desires.

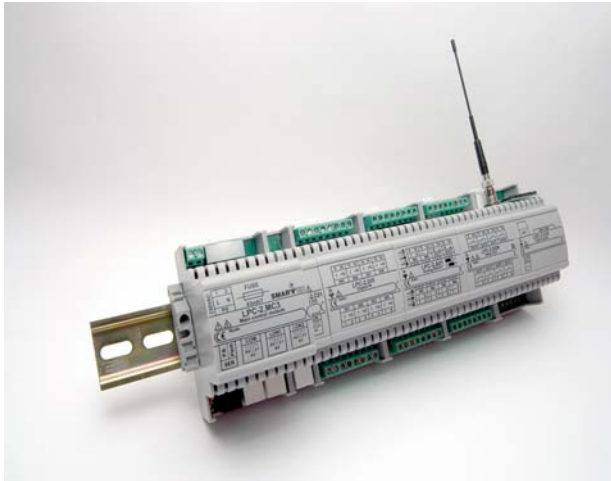
All functions can be connected with TV system (NET-MEDIA solution)

The network type depends on project requirements and allows communication with intelligent room controller, central computer and with other LON/ethernet devices.



3. Description of separate units:

3.1. Main control unit



Main control unit LPC-2.MC7 or LPC-2.MC8 with LON /Ethernet modbus network interface is the base unit in the system of intelligent installations. This is an open programmable controller (ladder work programmable) on which the application program is running for each room separately. Main control unit is used for communication with other controllers and for communication with the main computer. The unit is supplied from 230V AC network voltage. Input/output units (switches, lights, valves...) and communication modules like room temperature controller and access control are added directly to the controller's bus.

Build in

Main control unit and input/output units are build in directly on DIN rail inside junction box (min. 24) modules example Gewiss GW40606).

3.2 External card reader with signalization



External card (electronic key) reader LPC-2.CA1 is a unit designed for access control into the hotel room and signaling.

When entering the room, the key card needs to be approached to the reader. When the card is detected, light blinks once and short beep is produced. If the card signature is correct, the door lock is released. If the card signature is not valid, red light blinks and longer beep is produced.

The card reader has build in lights to display information “occupied”, “room service”, “do not disturb” and “SOS”.

Build in

External card reader has to be mounted to the flush (example: TEM ES-Soft). The standard $\varnothing 16\text{mm}$ installation tube must be provided through which the communication cable is connected.



3.3. Internal card reader with card holder and commands:



Description

Internal card holder (electronic key) LPC-2.CH1 is the unit intended for access control, to lay down the cards and forwarding guest requests.

While entering the room, the key card needs to be inserted into the card holder which is at the same time card reader, too. When the card is detected the lighting turns on, the valves of sanitary water are activated, air-conditioning is set to the comfort mode and other systems like blind controls are activated. "Occupied" signal appears on the external card reader. "Do not disturb" or "room service" signals can be activated with the command buttons too.

While leaving the room, the key card needs to be removed from the holder.

The room returns to the stand-by position after some time; lighting turns off, sanitary water valves closes, air-conditioning switches to saving mode and all other room systems are switched OFF . The "occupied" signal turns off on the card reader in the corridor. The signal „Room Service“ stays ON if pressed even after the guest leaves the room.

Build in

Internal card reader has to be mounted on to the flush (example TEM ES-Soft). The standard Ø16mm installation tube must be provided through which the communication cable is connected.

3.4. Room temperature regulator



Description

Room temperature regulator or LPC-2.DP1 is the unit designed for temperature regulation. The unit has a temperature sensor, lighting sensor and four buttons. Temperature »up«, »down« and Fan speed mode selection »up«, »down«. Bar graph shows current status.

With up and down button, we can select the desired room temperature; the setting is displayed with the position of the light and displayed temperature on the display. The maximum and minimum temperature limits can be changed over the network.

We can also switch on/off the displayed actual temperature, time or operation mode.

The fan can be regulated with the constant speed I, II, III, automatic (AUTO) or switched OFF.

The state of the fan is displayed with the position of the light on the display. The light sensor controls the intensity of the display, so that the brightness of the display doesn't disturb the guest during rest.



Build in “Flush” version for control panels and access control

On the pictures below are some samples of build in “flush” control panels and access control equipment. The panel fits into frames of different producers such as TEM, Bticino, Gewiss, Vimar, ...

LCD panels can be combined with different color frames. We can also deliver custom design solution for light dimer, brightness control etc.... This version can be used for LRC-2 program too.

The room temperature regulator must be placed to the optimal position in the room regarding height from floor, the distance from windows and doors. All control panels must be at least 35cm apart.



*Interconnection cable and frames are not included in package.



II. OTHER CONDITIONS

Prices:	in EUR
Parity:	EXW Tolmin
Payment conditions:	based on the agreement
Delivery:	6-7 weeks after order confirmation
Warranty:	24 months
Service:	7 years from date of delivery
Technical support :	Basic training for integrators is in Tolmin. Basic communication equipment is not included in the offer.

If you need any further information do not hesitate to contact us.

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