MEGA ROOM MANAGEMENT SOFTWARE

SWG

SWG25 cod. 6100-181025
Room management software from 1 to 25 rooms

SWG50 cod. 6100-181050
Room management software from 26 to 50 rooms

SWG75 cod. 6100-181075
Room management software from 51 to 75 rooms

SWG100 cod. 6100-181100
Room management software from 76 to 100 rooms

SWG150 cod. 6100-181150
Room management software from 101 to 150 rooms

SWG200 cod. 6100-181200
Room management software from 151 to 200 rooms

SWG250 cod. 6100-181250
Room management software from 201 to 250 rooms

SWG500 cod. 6100-181500
Room management software from 251 to 500 rooms

SWG1000 cod. 6100-181999
Room management software from 501 to 1000 rooms

SYSTEM OPERATION

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MEGA is a distribuited logic system used to manage hotel functions. The system uses small peripheral units with logic and memory, installed in different locations (such as rooms, common areas, techical rooms, etc.) and connected to the supervision PC by means of two-wire BUS cable.
Since all parameters are saved in the room control unit, a temporary anomaly of the PC will not cause system malfunctioning. Accesses, electricity, air-conditioning (with consequent energy saving) will continue on operating correctly. New cards cannot be enabled and alarms cannot be displayed. Data is transmitted according to RS 485 half duplex standard using a proprietary protocol developed by ITC srl to optimise transmission time and reduce equipment costs. Data is transmitted over balanced line, with suppression of most electromagnetic interference. The cable is a UTP CAT. 5 cable.
In special cases, such as outdoor installations, the use of an FTP screened cable with double protection sheath and earthed screen is recommended. The maximum length of the communication bus is one kilometer; an amplified signal splitter (PSA) can be used beyond such a distance for extra 1000 m. The room control unit (CPU) have been designed for installation in room unit with 12 modules (9 for CPU and 3 for transformer with 12Vac, 30VA power) for easy installation with DIN connection and easy maintenance.
The CPUs are provided with removable connectors and telephone plugs for easier replacement. The CPU code is set with a dip-switch for easy replacement in case of failure also by nonexpert staff (by simply copying the position of the cursors from the unit to be replaced). When power supply is restored, the new CPU shows the code set in the internal display to check that it is correct. The leds associated with inputs and outputs allow for checking the status (close/open) for easy identification of faulty switches (window, door, frigo bar, etc.) or blocked electrovalves, without using an external device (multimeter).
The communication between CPU and PC can be controlled on the internal display, as well as communication between CPU and chip card or transponder reader.

All system anomalies are informed in real time to the operator:

- defective temperature sensors,
- truncated bathroom alarm cables,
- and malfunctioning CPUs.

IMPORTANT

The fact that some relays are piloted in inverted mode (powered relay > deactivated output, not powered relay > activated output) guarantees electricity supply in the room and operation of the airconditioning system at minimum speed also in case of failure of the CPU or the power supply transformer until the hotel maintenance operator replaces the faulty part.
A PC server can be installed to physically connect the bus and multiple client PCs connected in network to the server PC, with full system operation from each PC. The 220Vac power supply line must be dedicated and provided with UPS of on-line type to guarantee system operation in case of power cut from 220Vac mains and to filter electromagnetic interference from the line.
Recommendations: an independent transformer should be used for every peripheral unit (CRU) for two reasons:

- a possible transformer fault will affect only one unit/room, and not all the units connected to it
- possible electromagnetic interference of a specific unit are localised and are not transmitted to the rest of the installation through the power supply.

SYSTEM TECHNOLOGICAL UPGRADE

Since the microprocessor in the Mega control unit is of flash type (i.e. reprogrammable), all existing installations can be upgraded with the latest firmware version to manage the new functions. Existing installations can be upgraded with minimal time and cost investment as if they were brand new.

IMPORTANT NOTICE

UGC control unit is mounted in DIN bar and takes 9 modules. It must be powered at 12Vac with 30VA transformer. An independent transformer must be used for each control unit and connected to a dedicated electrical line with on-line UPS.

Always disconnect power supply before making electrical connections.
Temperature sensors must be installed in dedicated boxes, at about 1.5 m from the floor, in a place protected from sunlight and away from air draughts or heat sources (such as doors, windows, perimeter walls, etc.). Do not install them above the thermostat panel, since it generates heat.

Connection cables of the input devices (such as temperature sensors, magnetic contacts, buttons, etc.) must not exceed 20 m in length.

Fan-coil and towel warmer valves can only be of ON/OFF type (electrothermal or motorised open/close valves). It is recommended to use valve controls at 220Vac voltage. The electrothermal model must be of NC type, i.e. with control mounted on the valve and not powered, the water flow must be blocked.

Radiator valve is alternative to the fan-coil. It is not possible to install both components in the same room installation. It can be of ON/OFF type, modulating motorised or modulating linear, piloted with continuous voltage 0-10V.

The room teleruptor must be at 220VAc. An additional transformer must be installed for components with different voltage.

Use a good-quality crimping tool to crimp PLUG connectors and check them with cable tester. The cable length must not exceed 15 metres. In case of multiple readers connected in cascade the length of each section must be added, without exceeding the said limit.

In case of strong inductive loads or led lights, use auxiliary relays to control them. Do not connect these loads directly to ITC units relays.

We recommend installing a 1.6A delayed fuse between relay output contact and load to protect the board in case of actuator failure.

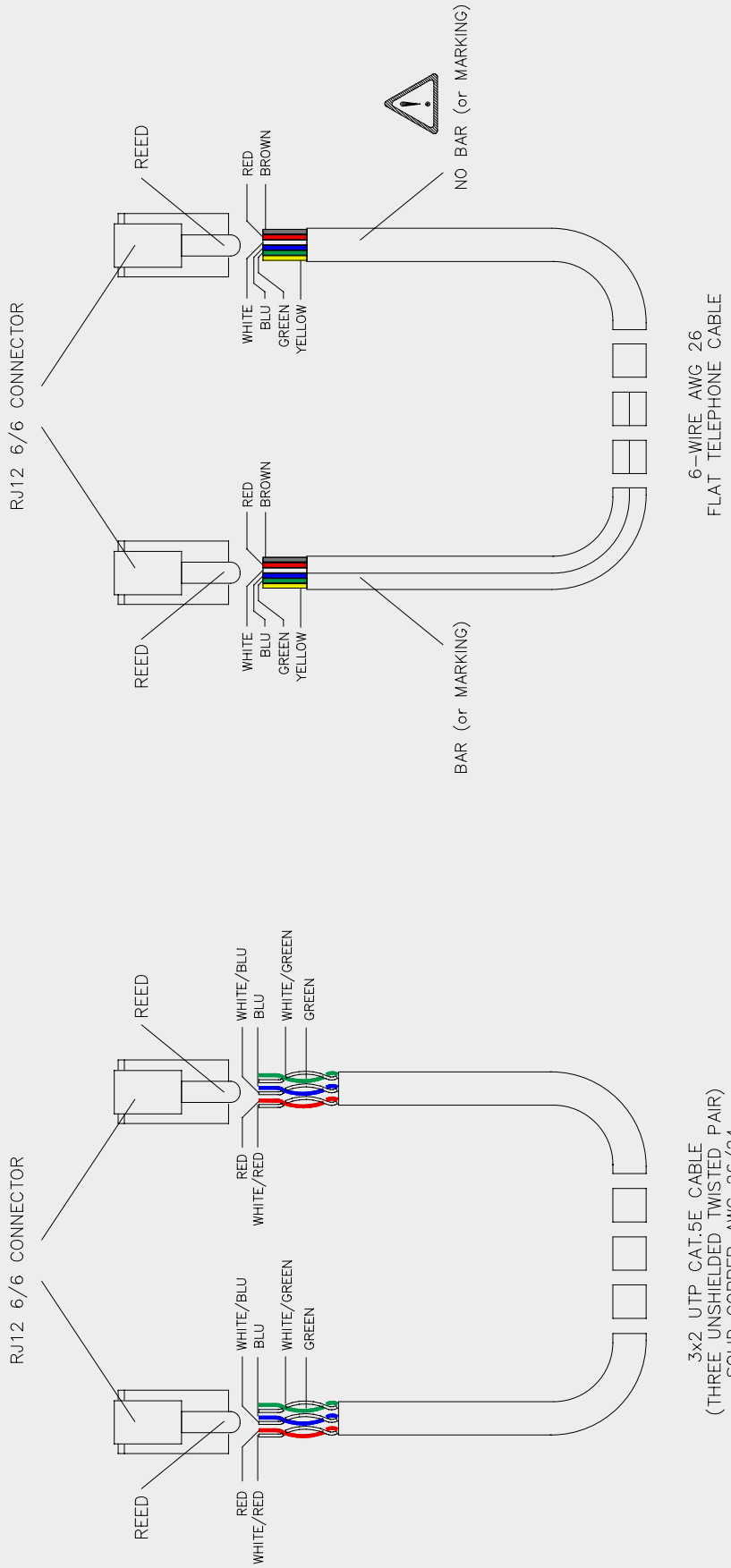
Auxiliary relays must be used to close electrical shutters, possibly in combination with suitably dimensioned protection fuses. The shutter motor must not be connected directly to the relay of the Mega control unit.

We recommend keeping signal lines (data bus, inputs, etc.) separate from power lines.
The minimum requirements of the PC used to control the installation are as follows:

- Operating system: Windows 7 professional or Windows 10 Pro.
- Intel i3 CPU
- 2500 GB hard disk
- 4 GB Ram
- S-VGA colour monitor
- 2 USB ports dedicated to MEGA system + 2 additional USB ports available
- Fast Ethernet 10/100 Mbps network board with Internet access, for potential remote assistance
- If you implement an interface with an air-conditioning system, we recommend a second dedicated Ethernet network board
- Mouse and keyboard
- Audio board and speakers

For correct operation the PC must be always on and must be dedicated to the I.T.C. technological management system.
The control software works at 800x600 pixel resolution.

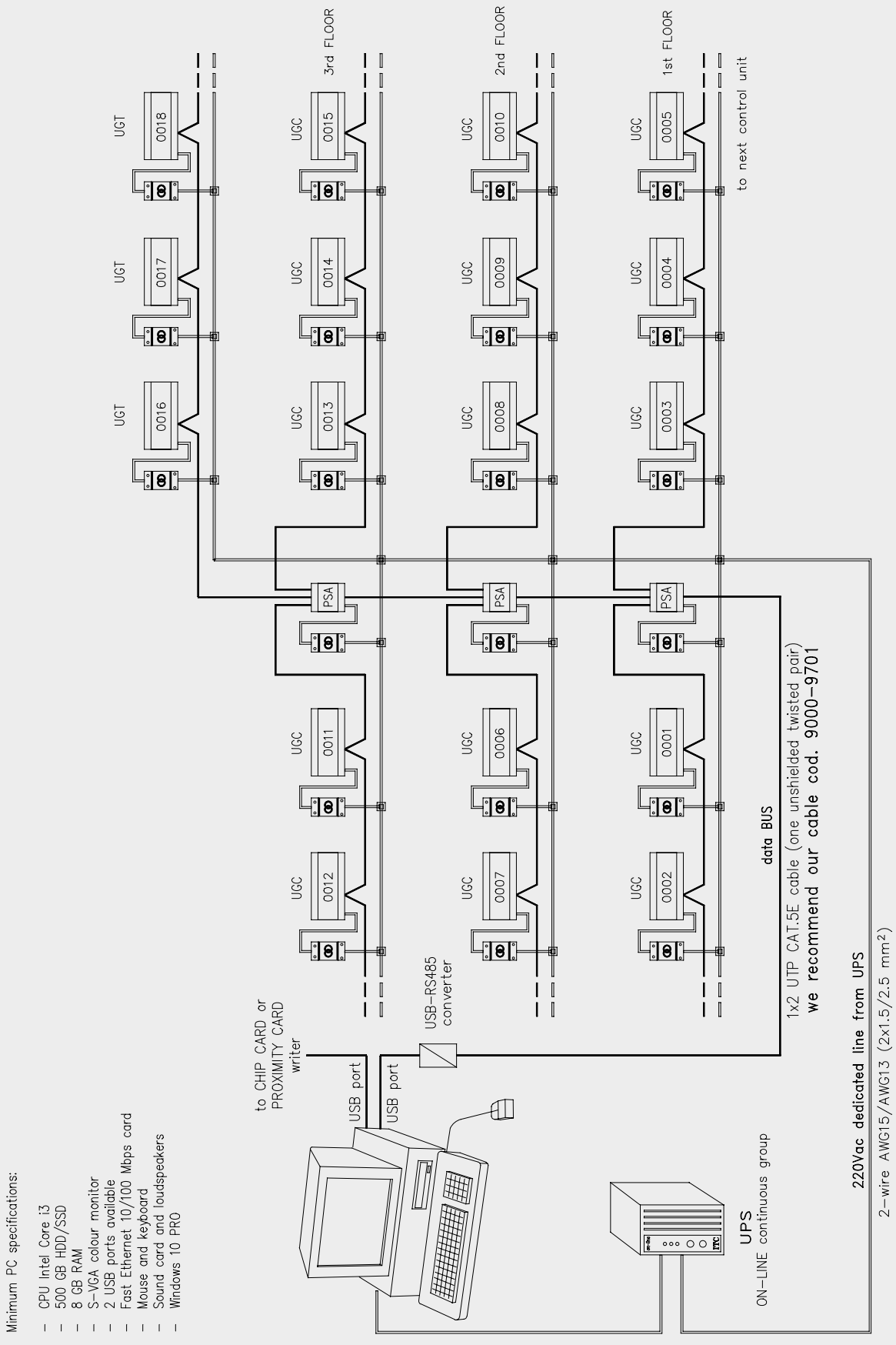
CABLE HEADING FOR RJ12 CONNECTORS OF MEGA SYSTEM



WARNING!

- ONLY USE CABLES DESCRIBED IN DIAGRAM. IF IN DOUBT CONTACT ITC TECHNICAL SUPPORT;
- ONLY USE TOP QUALITY RJ12 6/6 CONNECTORS;
- USE TOP QUALITY PLIERS FOR CRIMPING, METAL ONES ARE PREFERRED;
- CHECK CABLES USING A SPECIFIC TESTER;
- COLOURS DESCRIBED IN DIAGRAM ARE INDICATIVE.

BUS AND POWER SUPPLY CONNECTION DIAGRAM



Minimum PC specifications:

- CPU Intel Core i3
- 500 GB HDD/SSD
- 8 GB RAM
- S-VGA colour monitor
- 2 USB ports available
- Fast Ethernet 10/100 Mbps card
- Mouse and keyboard
- Sound card and loudspeakers
- Windows 10 PRO

MULTI-WIRE ROOM DIAGRAM