GCH3-31

EN **Glass card holder**

Characteristics

- Glass card holder GCH3-31 is part of a comprehensive range of glass iNELS control units for guest room management system (GRMS).
- GCH3-31 serves for inserting the RFID card into the holder, whereby the system acquires the information about whether the hotel guest is present in the room. With this information it is possible to ensure for example Exit function with relation to energy savings in the absence of a guest in the room.
- Glass card holder is a design component of the iNELS system and is available in elegant black (GCH3-31/B) and white (GCH3-31/W) version.
- The GCH3-31 component is equipped with an RFID reader and is thus able to identify the specific hotel card inserted. Power saving function in the absence of a guest cannot be bypassed by simply inserting business cards into the holder.
- GCH3-31 supports RFID media with a carrier frequency of 13.56 MHz.Supported card types are MIFARE Ultralight, DESFire 2K, Plus S 4K.
- The unit is also equipped with three touch buttons that can be used for example to set room status "Do Not Disturb" or "Make Up Room". This condition is then signalled to the glass card reader GCR3-11 or glass info panel GDB3-10 which are placed before the entrance to the room. Information may be sent directly to the hotel reception.
- Card holder printing is possible to customize to the investor requirements. The logo of the hotel can be shown for example. Likewise, it is also possible to adapt the card printing.
- The GCH3-31 unit is equipped with an 8A relay output and an $AgSnO_2$ contact.
- Individual symbols can be illuminated in one of three colours - red, green and blue.
- GCH3-31 are designed for mounting into an installation box.

General instrucions

CONNECTION TO THE SYSTEM, INSTALLATION BUS

iNELS3 peripheral units are connected to the system through the BUS installation. Installation BUS conductors are connected to the terminal units to BUS+ and BUS- terminals, wires cannot be interchanged. For installation of BUS it is necessary to use a cable with a twisted pair of wires with a diameter of at least 0.8 mm, the recommended cable is iNELS BUS Cable, whose features best meet the requirements of the BUS installation. Bearing in mind that in terms of all the properties iit is it is possible in most cases also use the cable JYSTY 1x2x0.8 or JYSTY 2x2x0.8, however it is not recommended as the best option. In the case of a cable with two pairs of twisted wires it is not possible to use the second pair of the other for modulated signal due to the speed of communications; it is not possible within one cable to use one pair for one segment BUS and the second pair for the second segment BUS. For installation of BUS it is vital to ensure that it is kept at a distance from the power lines of at least 30 cm and must be installed in accordance with its mechanical properties. To increase mechanical resistance of cables we recommend installation into a conduit of suitable diameter. Topology installation of BUS is free except for a circle, each end of the BUS must terminate at terminals BUS+ and BUS-. While maintaining all the above requirements, the maximum length of one segment of the installation BUS can reach up to 550 m. Due to the data communication and supply of units in one pair of wires, it is necessary to keep in mind the diameter of wires with regards to voltage loss on the lead and the maximum current drawn. The maximum length of the BUS applies provided that they comply with the tolerance of the supply voltage.

CAPACITY AND CENTRAL UNIT

It is possible to connect to the central unit CU3-01M or CU3-02M two independent BUSes by means of terminals BUS1+, BUS1- and BUS2+, BUS2-. It is possible to connect to each BUS up to 32 units, so it is possible to connect directly to the central unit a total of 64 units. It is necessary to comply with the requirement of a maximum load of one BUS line - maximum up to 1000 mA current. It is the sum of the rated currents of the units connected to the BUS line, other units can be connected using the units MI3-02M, which generate further BUSes. These are connected to the CU3 unit via the system BUS EBM and you can connect a total of 8 units via EBM BUS to the central unit MI3-02M.

SUPPLYING THE SYSTEM

For supplying power to system units, it is recommended to use the power source of ELKO EP titled PS3-100/iNELS. We recommend backing up the system with backup batteries connected to the source of PS3-100/iNELS (see sample diagram of connecting the control system).

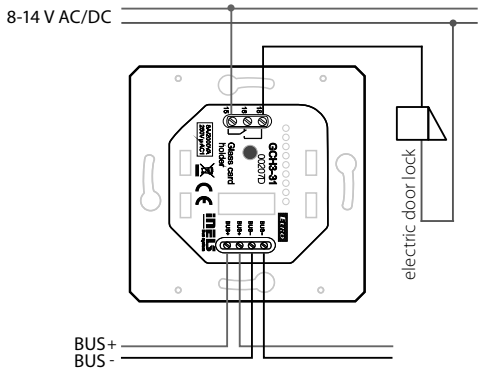
GENERAL INFORMATION

To operate the unit, it is necessary that the unit is connected to a central unit CU3 series, connected to the central unit of the system CU3, or to a system that already contains this unit as its expansion to include further system.

All unit parameters are set through the central unit CU3-01M in the software iDM3.

There is LED diode on the PCB for indication of supply voltage and communication with the central unit series CU3. In case that the RUN diode flashes at regular intervals, so there is standard communication between the unit and BUS. If the RUN diode lights permanently, so the unit is supplied from BUS, but there is no communication between BUS and unit. In case that RUN diode is OFF, so there is no supply voltage on the terminals BUS+ and BUS-.

Connection



Technical parameters

GCH3-31	
Input	
Illuminance sensor:	1 ... 100 000 Lx
Buttons	
Number of control buttons:	3
Typ:	capacitive
Indication:	coloured illuminated symbol
RFID readers	
Supported frequencies:	13.56 MHz
Card Type:	MIFARE Ultralight, DESFire 2K, Plus S 4K
Outputs	
Signalling:	Do Not Disturb, Make Up Room
Output:	1x changeover 8 A / $AgSnO_2$
Acustic output:	piezo-changer
Tactile output:	vibration motor
Switching voltage:	230V AC/ 30V DC
Switching output:	2000 VA/AC1; 240 W/DC
Peak current:	20 A / < 3 s
Insulation voltage between relay outputs and internal circuits:	3.75 kV, SELV according to EN 60950
Minimal switched current:	10 mA / 10 V
Switching frequency without load:	300 min^{-1}
Switching frequency with rated load:	10 min^{-1}
Mechanical life:	1x 10^7
Electrical life AC1:	1x 10^5
Communication	
Installation BUS:	BUS
Power supply	
Supply voltage / tolerance:	27 V DC, -20 / +10 %
Rated current:	100-120 mA (at 27 V DC), from BUS
Connection	
Data:	terminals, 0.5 - 1 mm^2
Network:	max. 2.5 mm^2 / 1.5 mm^2 with sleeve
Operating conditions	
Relative humidity:	max. 80 %
Operating temperature:	-20 .. +55 °C
Storing temperature:	-30 .. +70 °C
Protection degree:	IP20
Overvoltage category:	II.
Pollution degree:	2
Operation position:	any
Installation:	into installation box
Dimensions and weight	
Dimensions:	142 x 94 x 36 mm
Weight:	210 g

Warning

Before the device is installed and operated, read this instruction manual carefully and with full understanding and Installation Guide System iNELS3. The instruction manual is designated for mounting the device and for the user of such device. It has to be attached to electro-installation documentation. The instruction manual can be also found on a web site www.inels.com. Attention, danger of injury by electrical current! Mounting and connection can be done only by a professional with an adequate electrical qualification, and all has to be done while observing valid regulations. Do not touch parts of the device that are energized. Danger of life-threat! While mounting, servicing, executing any changes, and repairing it is essential to observe safety regulations, norms, directives and special regulations for working with electrical equipment. Before you start working with the device, it is essential to have all wires, connected parts, and terminals de-energized. This instruction manual contains only general directions which need to be applied in a particular installation. In the course of inspections and maintenance, always check (while de-energized) if terminals are tightened.