



HOTEL SOLUTION™

**Magnetic card holder /  
Magnetic card holder with  
doorbell speaker**

**HMH3.1/A**

**HML3.1/A**

**Magnetic card holder to detect room occupancy status**

- Optical sensor detects the presence of a card in the magnetic card holder
- Transfers "room occupied" signal to HRC3.. room controller
- Integral LEDs to guide guests or staff upon entry
- Built-in speaker for three-tone chimes for the doorbell feature (HML3.1/A only)

**Application**

The HMH3.1/A or HML3.1/A magnetic card reader is used in conjunction with a HRC3.. room controller. The HMH3.1/A and HML3.1A card holders register the presence of guests or hotel-staff and transmit this information to the HRC3.. room controller for evaluation. The HRC3.. room controller activates the pre-programmed occupancy-dependent room functions in the hotel room in accordance with the room occupancy status (guest(s) in the room, hotel staff in the room, or room empty).

## Functions

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The HMM3.1/A or HML3.1/A magnetic card holder communicates with the HRC3.. room controller via a serial port, performing the following functions:

- Indicates the location of the card holder with 3 built-in LEDs, to guide those entering the room in darkness
- Uses an optical sensor to detect the presence of a magnetic card in the card slot on the front of the holder
- Transmits the room occupancy status to the HRC3.. room controller
- Enables the predefined room functions based on room occupancy status (guest(s) in the room, hotel staff in the room, room empty)
- Controls 3 green LEDs (On/Off/Flashing at 1 Hz)
- External passive speaker (8 ohms, max. 2 W) can be connected to terminals
- Volume can be adjusted by potentiometer (card holder must be dismounted for access)
- Duration of chime can be set (1, 2 or 3 tones) via application parameters in the room controller
- Hotel-room bell feature via **built-in speaker** (8 ohms, 2 W) for three-chime function (**HML3.1/A only**)

## Types

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<b>HMH3.1/A</b>	Magnetic card holder
<b>HML3.1/A</b>	Magnetic card holder with doorbell speaker

## Ordering

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When ordering, please specify the quantity, product name and type code:

Example      **30      Magnetic card holders with doorbell speaker      HML3.1/A**

## Compatibility

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Please refer to the assortment overview, N6301.

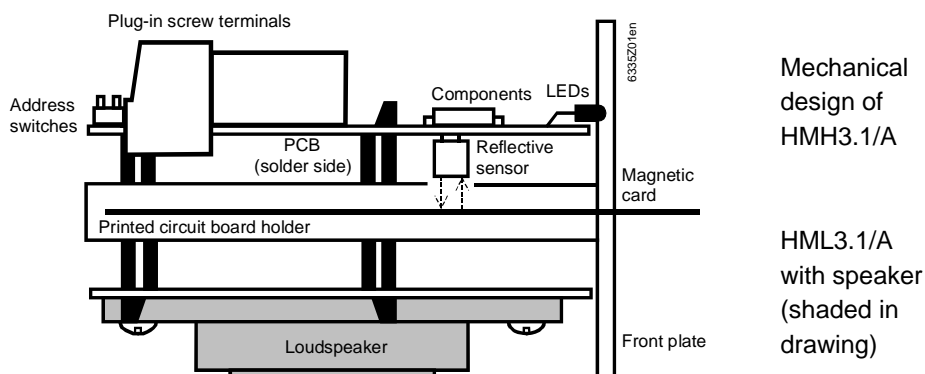
## Mechanical design

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The HMM3.1/A magnetic card holder comprises:

- Component assembly (carrier, PCB with electronic circuit, LEDs, optical sensor, terminal block and address switches)
- Front plate
- Operator panel
- The HML3.1/A has a speaker fitted to a mounting plate, which is snap-mounted on the base of the card holder, and connected by two wires to the terminal block.

The components are snap-mounted in the front-plate unit. The label for the operator panel is backed with an adhesive strip. After removal of the backing paper, this label can be affixed to the front plate.



## LED display

- All LEDs light up when someone enters the room but has not yet inserted a magnetic card. This indicates to the user the location of the card holder.
- All three LEDs are off when access has been enabled with a guest card and there is a card in the holder.
- The left LED lights up and the other two are off when access has been enabled with a staff card and there is a card in the magnetic card holder.

## Engineering notes

The magnetic card holder is designed for wall mounting (in flush or cavity-wall mounting boxes) in conjunction with base-frames and cover-frames from various manufacturers:

- SIEMENS-DELTA *futura*
- VIMAR *idea*
- Bticino *Classic*
- GEWISS *Playbus*
- AVE *Systema 45*

Up to four card holders can be connected to the same room bus.  
The address is set with 2 DIL switches on the back of the unit (see below).

The maximum permitted current associated with the supply voltage from the HRC3.. room controller must not be exceeded.  
(For further information, see data sheets N6313, N6314.)

## Mounting

- The HMH3.1/A or HML3.1/A magnetic card holder should be mounted in the entrance area or lobby of the hotel room at the same height as the light switch.
- First press the card holder into the base-frame and then attach the adhesive label to the front plate. If the front-plate label is fitted first, it is then difficult to press the card holder into the base-frame. To remove the unit, it must be unscrewed from the wall together with the base frame.
- Ensure that there is enough spare cable in the mounting box to allow operation of the address switches on the PCB.
- The device is designed for fixed installation in a dry, enclosed space.
- For installation in a 4-module mounting box, depth 50 mm.
- Mount horizontally only, with the front plate vertical.
- Do not install AC 230 V devices in the same mounting box.
- Commissioning must be carried out by trained personnel only.
- Do not open the unit.
- Observe all local safety and installation regulations.

## Commissioning

If several devices are operated by the same room controller, an address must be set for each one.

Only one device will operate with the factory-set default.

Bus address	Switch 1	Switch 2
0x3C	off	off
0x3D	off	on
0x3E	on	off
0x3F	on	on

**Note** In the standard application with only one card holder, Address 0x3F is intended for the HMH3.1/A magnetic card holder. Address 0x3F (both DIL switches ON) is the factory-set address for the HMH3.1/A.

**Three-tone chimes** The volume for the three-tone chimes can only be set by dismounting the unit, and must be set by qualified personnel only. The chime sequence (melody) is determined by a parameter in the room controller.

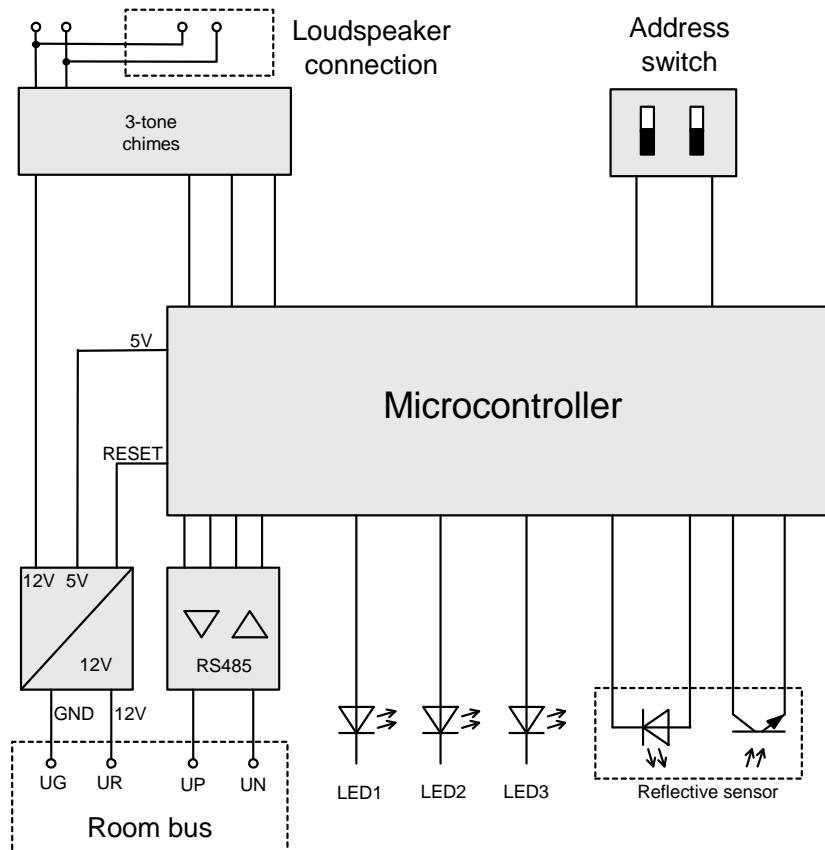
## Technical data

Power supply (from HRC3..)	Working voltage (SELV)	DC 9..15 V
	Current	200 mA max.
Bus interface	Type	RS485
	Transmission speed	4800 baud
	Bus voltage	SELV DC 12 V
Display	Luminous intensity of LEDs:	1.8 mcd
Reflective sensor	Range	4mm
	Wavelength of light beam:	940 nm
3-tone chime	Power	Max. 600 mW
	Tone 1:	660Hz
	Tone 2:	550Hz
	Tone 3:	440Hz
Environmental conditions	Operating temperature:	-10...50°C
	Transport temperature:	-30...70°C
	Humidity:	Max. 90%, non-condensing
	Air pressure during operation:	Min. 700hPa (3000m above sea level)
	Air pressure during transportation:	Min. 700hPa (10,000m above sea level)
Standards	Safety of IT equipment	EN 60950
	Electromagnetic compatibility	Emitted interference in residential areas Interference immunity in industrial areas
	Housing protection	EN61000-6-3 EN61000-6-2
	Protection class	to EN 60529 to EN 61 140
		IP 20 (with mounting box) III
Environmental compatibility	Meets the requirements of EMC Directive	89/336/EEC
	Environmental product declaration CK1E6335 provides data on environmentally compatible product design and assessment (material composition, packaging, disposal)	ISO 14001 (environment) ISO 9001 (quality)
UL/CUL approval		UL/CUL 916
Dimensions	See also dimension diagrams	103mm x 52mm x 53mm
	Suitable for flush mounting in 4-module rectangular flush-mounting box or wall-cavity box	
Color	Plastic components	Black
	Front-plate label	Pantone black 7U2Y

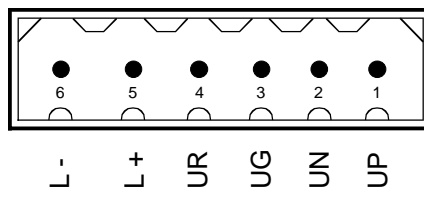
Weight excluding packaging	HMH3.1/A	70 g
	HML3.1/A	100 g
Weight including packaging	HMH3.1/A	120 g
	HML3.1/A	150 g

## Connection diagrams

### Device connection



### Connection terminals

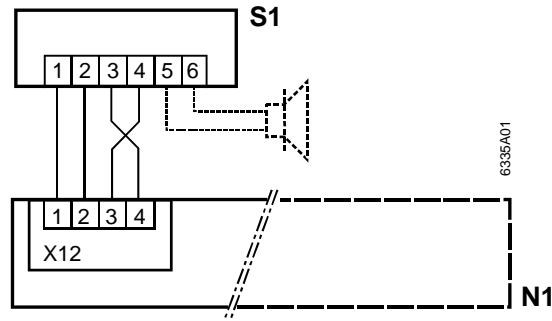


Pin	Signal
1	UP Data signal +
2	UN Data signal -
3	UG System neutral (GND)
4	UR Supply voltage DC +12 V
5	L+ External speaker
6	L- External speaker

Ext. speaker                      Room bus

Pin 6 is marked with a 2 mm-high number on the copper plating.  
Pin 1 is on the outer edge of the device.  
Pin 1 is also marked on the connector.

## Wiring diagram



S1 Magnetic card holder  
HMH3.1/A  
HML3.1/A

N1 HRC3.. room controller



**Caution**

**Note the cross-over between pins 3 and 4.**

## Dimensions

Dimensions in mm

