



HOTEL SOLUTION™

Magnetic card reader

HMR3.1/A

Magnetic card reader for hotel room access control

- Reads access code from Track 2 of the card's magnetic strip
- Transfers access code to HRC3.. room controller
- Built-in illuminated display of messages from hotel room
- Messages indicated by LEDs behind imprinted symbols
- Membrane switch for doorbell feature

Application

The HMR3.1/A magnetic card reader is used in conjunction with the HRC3.. room controller. The magnetic card access code is on Track 2 of the magnetic strip. Guest and hotel-staff access codes are read by the HMR3.1/A magnetic card reader and transmitted to the HRC3.. room controller for access control.

Functions

The HMR3.1/A magnetic card reader communicates with the HRC3.. room controller via a serial port, performing the following functions:

- Reads access code from Track 2 of the card's magnetic strip
- Transfers the access code, after reading, to the HRC3.. room controller
- Activates the functions programmed in the HRC3.. room controller based on the access code concerned (guest code, hotel staff code, invalid code).
- Transfers the membrane switch signal for the optional doorbell feature
- Displays signals from the HRC3.. room controller with illuminated LEDs behind imprinted symbols

Types

HMR3.1/A Magnetic card reader

Ordering

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

Example

30 Magnetic card readers HMR3.1/A

Compatibility

Please refer to the assortment overview, N6301.

Mechanical design

Basic design

The HMR3.1/A magnetic card reader comprises the following:

- Component assembly (carrier, printed circuit board, four LEDs, membrane switch, magnetic card reader-unit and terminal block)
- Front-plate unit
- Operator panel

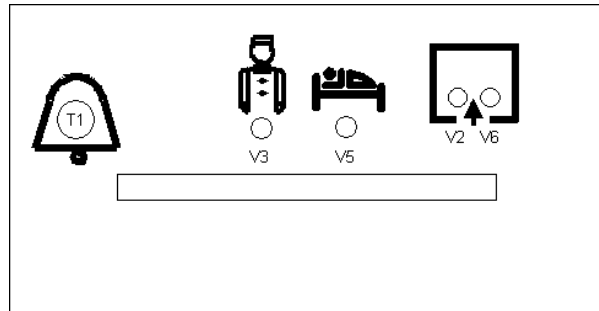
The components are snap-mounted in the front-plate unit. The operator panel label has an adhesive strip on the back. After removal of the protective backing, this label can be affixed to the front plate.

Display

Depending on the standard application configured in the HRC3.. room controller, the following room states can be displayed:

- Do not disturb
- "Make up room" or "Room service" call
- "SOS" call
- "Guest present" indicator (for hotel staff only)
- Door open
- Door closed
- Access denied

Key to symbols



The symbols are shown in white on the black background of the front plate.

| | |
|----|--------------------------------------|
| T1 | Membrane switch for doorbell feature |
| V3 | Yellow LED (room service) |
| V5 | Yellow LED (do not disturb) |
| V2 | Red LED (door closed) |
| V6 | Green LED (door open) |

Engineering notes

The magnetic card reader is designed for flush wall mounting 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 readers can be connected to the same room bus.

The address is set with 2 DIL switches on the back of the unit (see below).



Caution

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 HMR3.1/A magnetic card reader must be mounted outside 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 DIL switches on the PCB (for addressing).
- The device is designed for fixed installation in a dry, enclosed space.
- For installation in a 4-module mounting box, depth 70 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
- Local safety and installation regulations must be observed

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.

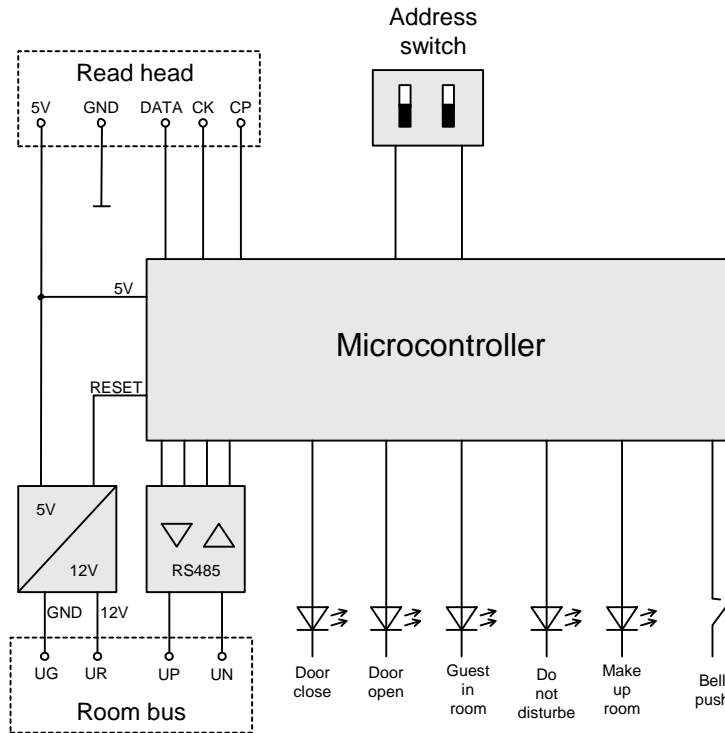
| Bus address | Switch 1 | Switch 2 |
|-------------|----------|----------|
| 0x38 | off | off |
| 0x39 | off | on |
| 0x3A | on | off |
| 0x3B | on | on |

Note In the standard application with only one reader, the HMR3.1/A magnetic card reader should be programmed with Address 0x3B. Address 0x3B (both DIL switches ON) is the factory setting for the HMR3.1/A magnetic card reader.

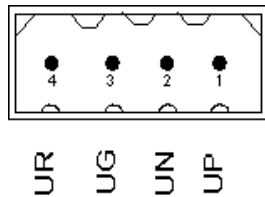
Technical data

| | | |
|----------------------------|---|--|
| Power supply (from HRC3..) | Working voltage (SELV) | DC 9..15 V |
| | Current | 25 mA max. |
| Magnetic card reader | Reading speed | 10 ... 150cm/s |
| | Service life | 500,000 read cycles |
| | Track | Track 2, ISO 7810 |
| Magnetic cards | Format | 86 x 54 x 0.76 mm |
| | | LoCo magnetic strip |
| Membrane switches | Service life | 100,000 switching operations |
| 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 |
| 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 EN61000-6-3 Interference immunity in industrial areas EN61000-6-2 |
| | Housing protection | to EN 60529 IP 20 (with mounting box) |
| | Protection class | to EN 61 140 III |
| | CE conformity | Meets the requirements of EMC Directive 89/336/EEC |
| | UL/CUL approval | UL/CUL 916 |
| Dimensions | See also dimension diagrams | 103mm x 52mm x 69mm |
| | Suitable for flush mounting in 4-module rectangular flush-mounting box or cavity-wall box | Deep flush-mounting box required, e.g. Siemens5A-002-1 |
| Color | Plastic components | Black |
| | Front-plate label | Pantone black 7U2Y |
| Weight | Excluding packaging | 70 g |
| | With packaging | 120 g |

Device connection



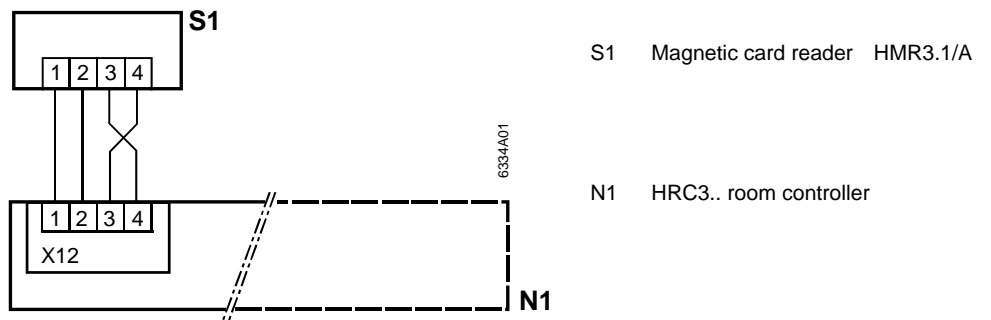
Connection to the room bus



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

Room bus connection terminal (view of pins from above)

Wiring diagram



Caution

Note the cross-over between pins 3 and 4.

Dimensions

Dimensions in mm

