HOTEL SOLUTION™

Chipcard reader

HCR3.2/..

Chipcard reader for hotel room access control

- Reads access code on chipcard
- Transfers access code to room controller
- Built-in optical display of messages from hotel room
- Messages indicated by LEDs above imprinted symbols
- Membrane switch for doorbell feature
- Illuminated card slot

Application

The HCR3.2 chipcard reader is used in conjunction with the HRC3.1 and HRC3.2 room controllers. Guest and hotel-staff access codes are read by the HCR3.2 chipcard reader and transmitted to the HRC3.1/HRC3.2 room controller for access control.
**Function**

The HCR3.2 chipcard reader communicates with the HRC3.1/HRC3.2 room controller via a serial port, performing the following functions:
- Reads the access code on a chipcard
- After reading it, transfers the access code to the HRC3.1/HRC3.2 room controller
- Activates the functions programmed in the HRC3.1/HRC3.2 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 HRC3.1/HRC3.2 room controller with illuminated LEDs above imprinted symbols
- Control of the illumination of the slot via the HRC3.1/HRC3.2 room controller

**Types**

- **HCR3.2/BB** Chipcard reader for Bticino Living cover-plate range
- **HCR3.2/BW** Chipcard reader for Bticino Light cover-plate range
- **HCR3.2/VB** Chipcard reader for Vimar Idea cover-plate range
- **HCR3.2/VW** Chipcard reader for Vimar Plana or Ikon cover-plate range

**Ordering**

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

<table>
<thead>
<tr>
<th>Quantity</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>30</td>
<td>Chipcard readers</td>
</tr>
<tr>
<td></td>
<td>HCR3.2/BB</td>
</tr>
</tbody>
</table>

Example

The following items depend on the desired overall program and installation type and must be ordered separately from the corresponding frame supplier:
- Flush-mounted or cavity wall box for integration.
- Cover frame of the corresponding supplier with desired surface.

**Compatibility**

<table>
<thead>
<tr>
<th>Device</th>
<th>Type</th>
<th>Data sheet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Room controller</td>
<td>HRC3.1</td>
<td>N6313</td>
</tr>
<tr>
<td>Room controller</td>
<td>HRC3.2</td>
<td>N6314</td>
</tr>
<tr>
<td>Chipcard reader on same room bus</td>
<td>HCR3.2</td>
<td>N6332</td>
</tr>
<tr>
<td>Chipcard holder on same room bus</td>
<td>HCH3.2</td>
<td>N6333</td>
</tr>
<tr>
<td>Chipcard encoder</td>
<td>HCW3.2</td>
<td>N6340</td>
</tr>
<tr>
<td>Room operating unit on same room bus</td>
<td>HTC3.2</td>
<td>N6320</td>
</tr>
</tbody>
</table>
Mechanical design

Construction

The chipcard reader consists of:
- Component assembly (carrier, printed circuit board, four LEDs, membrane switch, chipcard reader-unit, terminal block and DIP switch)
- Base frame:
  - Bticino Living/Type L4703 for HCR3.2/BB
  - Bticino Light/Type N4703 for HCR3.2/BW
  - Vimar Idea/Type 16713 for HCR3.2/VB
  - Vimar Plana or Ikon/Type 20613 for HCR3.2/VW

The component assembly is permanently glued into the base frame and cannot, therefore, be replaced.

Display

Depending on the standard application configured in the HRC3.1/HRC3.2 room controller, the following room states can be displayed:
- Do not disturb
- "Make up room" or "Room service" call
- SOS call for assistance
- "Guest present" indicator (for hotel staff only)
- Door open
- Door closed
- Access denied

Operator controls, connections and display elements

Front view

Key

1  Base frame with fixing screws
   - Bticino Living/Type L4703 for HCR3.2/BB
   - Bticino Light/Type N4703 for HCR3.2/BW
   - Vimar Idea/Type 16713 for HCR3.2/VB
   - Vimar Plana or Ikon/Type 16713 for HCR3.2/VW

2  Card slot backlit with 3 green LEDs
   V1 Red LED  Door closed
   V2 Green LED  Door open
   V3 Yellow LED  Room service call
   V4 Yellow LED  Do not disturb
   T1 Membrane switch  Doorbell function
### Key

| 3 | DIP switches | - Bus address setting (ADR0, ADR1)  
- Protocol setting  
  - PROT = 0, for HRC3.1/HRC3.2 room controller  
  - PROT = 1, for HRC3.8 room controller  
- Control of RS485 bus termination resistance  
  - TERM = 0, bus termination resistance disabled  
  - TERM = 1, bus termination resistance enabled |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Terminal block</td>
<td>- Connection to room controller</td>
</tr>
</tbody>
</table>

**Important note**
The bus termination resistance must be enabled on the last bus device only.

### Engineering notes

**Base frame**
The room unit is designed for flush wall mounting in conjunction with base frames and cover plates from various manufacturers:
- Bticino Living for HCR3.2/BB  
- Bticino Light for HCR3.2/BW  
- Vimar Idea for HCR3.2/VB  
- Vimar Plana or Ikon for HCR3.2/VW

Up to four chipcard readers may be connected to the same room bus. The address is set with DIP switches on the back of the unit (see below).

**Important note**
The maximum permitted current associated with the supply voltage from the HRC3.1/HRC3.2 room controller must not be exceeded.  
(For further information, see data sheets CM2N6313 and CM2N6314.)
Mounting instructions

- The HCR3.2 chipcard reader must be mounted outside the hotel room at the same height as the light switch.
- Ensure that there is enough spare cable in the mounting box to allow operation of the address switches on the PCB.
- The device is intended for fixed installation in a dry, enclosed space.
- For installation in a 3-module mounting box, depth 50 mm.
- Must be mounted horizontally 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.
- Local safety and installation regulations must be observed.

Commissioning

To operate several devices connected to the same room controller, an address must be set for each one. Only one device will operate with the factory-set default. The addresses of the room operator units are set by DIP switch on the back of these units.

<table>
<thead>
<tr>
<th>Bus address</th>
<th>ADR0</th>
<th>ADR1</th>
</tr>
</thead>
<tbody>
<tr>
<td>0x38</td>
<td>OFF</td>
<td>OFF</td>
</tr>
<tr>
<td>0x39</td>
<td>ON</td>
<td>OFF</td>
</tr>
<tr>
<td>0x3A</td>
<td>OFF</td>
<td>ON</td>
</tr>
<tr>
<td>0x3B</td>
<td>ON</td>
<td>ON</td>
</tr>
</tbody>
</table>

Note

In the standard application with only one reader, Address 0x38 is intended for the HCR3.2 chipcard reader. This address is the factory-set default (both ADR switches to OFF).

Operating notes

<table>
<thead>
<tr>
<th>Alarm messages</th>
<th>Pattern</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>All symbols OFF</td>
<td>No supply voltage to the HCR3.2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Possible causes:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Room controller off or faulty</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Bus cable not correctly connected, or connection broken</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Faulty HCR3.2</td>
</tr>
<tr>
<td></td>
<td>All symbols</td>
<td>No communication with the room controller</td>
</tr>
<tr>
<td></td>
<td>flashing (2 Hz)</td>
<td>Possible causes:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Wrong bus address set on HCR3.2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Wrong bus address set in room controller</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Bus cable not correctly connected, or connection broken</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Room controller in &quot;Stop&quot; mode</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Faulty RS485 interface</td>
</tr>
</tbody>
</table>
## Technical data

<table>
<thead>
<tr>
<th>Power supply (from HRC3..)</th>
<th>Operating voltage (SELV, PELV)</th>
<th>DC 9..0.15 V</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Current</td>
<td>Max. 50 mA</td>
</tr>
<tr>
<td>Chipcards</td>
<td>Type</td>
<td>Siemens SLE5542, SLE4442</td>
</tr>
<tr>
<td></td>
<td>Format</td>
<td>86 mm x 54 mm x 0.76 mm</td>
</tr>
<tr>
<td>Membrane switch</td>
<td>Service life</td>
<td>100,000 switching operations</td>
</tr>
<tr>
<td>Bus interface</td>
<td>Type</td>
<td>RS485</td>
</tr>
<tr>
<td></td>
<td>Transmission speed</td>
<td>4800 baud</td>
</tr>
<tr>
<td></td>
<td>Bus voltage</td>
<td>SELV DC 12 V</td>
</tr>
<tr>
<td>Display</td>
<td>Luminous intensity of LEDs</td>
<td>1.8 mcd</td>
</tr>
</tbody>
</table>

### Ambient conditions
- **Normal operation**
  - Temperature: 0...+50 °C
  - Humidity: < 85 % rh
  - Air pressure: Min. 700 hPa, equivalent to max. 3,000 m above sea level
- **Transport**
  - Temperature: -25...+65 °C
  - Humidity: < 95 % rh
  - Air pressure: Min. 260 hPa, equivalent to max. 10,000 m above sea level

### Industry standards
- **Product safety**
  - Automatic electrical controls for household and similar use: EN 60 730
- **Electromagnetic compatibility**
  - Emitted interference in accordance with EN 61000-6-3
  - Interference immunity in accordance with EN 61000-6-2
- **Housing protection standard**
  - To EN 60 529: IP20
- **Protection class**
  - To EN 60 730: III
  - Meets the requirements of:
- **Environmental compatibility**
  - Environmental product declaration: ISO 14001 (environment), ISO 9001 (quality)
  - CM2E6332en provides data on environmentally compatible product design and assessment (material composition, packaging, disposal)

### UL/CUL approval
- UL/CUL 916

### Installation
- Suitable for flush mounting in rectangular flush-mounting box or rounded hollow wall box
- 3 modules

### Color
- Front-plate label: RAL 9005 deep black

### Dimensions
- **HCR3.2/BB**
  - Bticino frame L4703: 115 mm x 72 mm x 47 mm
  - Bticino frame N4703: 115 mm x 72 mm x 47 mm
- **HCR3.2/BW**
  - Bticino frame 16713: 118 mm x 75 mm x 48 mm
- **HCR3.2/VB**
  - Vimar V71613 (round), V71304 (angular)
  - Vimar frame 20613: 118 mm x 75 mm x 48 mm
- **HCR3.2/VW**
  - (without cover; & see dimension diagrams)

### Weight
- Excluding packaging: 0.069 kg
- With packaging: 0.087 kg
Connection diagrams

Connection terminals

1 Serial port, RS485 +
2 Serial port, RS-485 –
3 DC 12 V operating voltage
4 DC 0 V operating voltage

HCR3.2 connection diagram

S2 HCR3.2 chipcard reader
N1 HRC3.1 room controller

HCR3.2 connection diagram

S2 HCR3.2 chipcard reader
N1 HRC3.2 room controller
### Dimensions

**HCR3.2/BB**
Dimensions in mm

Diagram and dimensions of Bticino frame L4703.

**HCR3.2/VB**
Dimensions in mm

Diagram and dimensions of Vimar frame 16713.

**Note**
See the frame supplier documentation for dimensions of other frames and hole spacing (Bticino, Vimar).