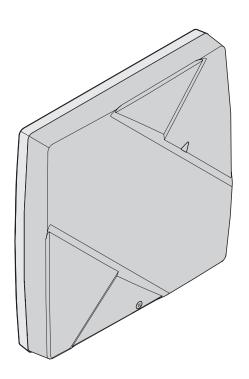# SMART**LIBERTY**

—— MORE TIME FOR CARE ——

# RF reader
## User documentation

## 1. Description

### Intended use

The SmartLiberty RF reader is a bi-directional radio frequency antenna (RFID) which transmits the information from wireless SmartLiberty badges and localisation markers via a TCP/IP interface to a server.

### Reference documents

| Document | Description / Document no. |
|---|---|
| Data sheet | Technical features of the RF reader |
| Project contract | Client specifications and installation plan |
| User documentation IP65 dust and waterproof kit | User documentation with instructions for installation and use |

### Overview



*Fig. 2    Universal mounting plate*

6    Universal mounting plate



*Fig. 3    Buttons on the RF reader*

7    Mode button
8    Reset button

### Power options

• PoE 802.3af (Power over Ethernet)
• 24 VDC



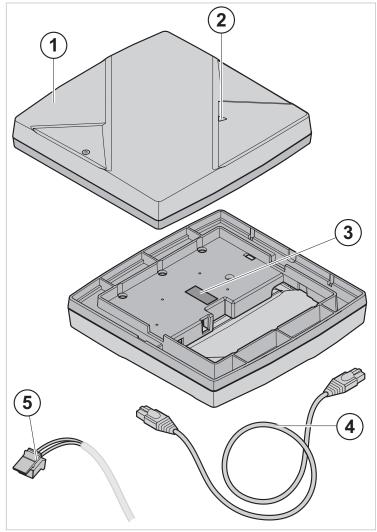*Fig. 1    RF reader*

1    RF reader housing
2    Indicator light (LED)
3    Self-adhesive tag indicating installation point (optional)
4    Ethernet RJ45 patch cable (provided separately)
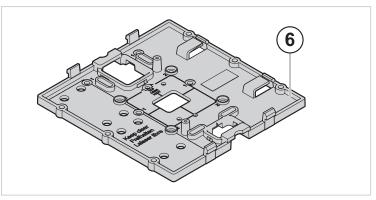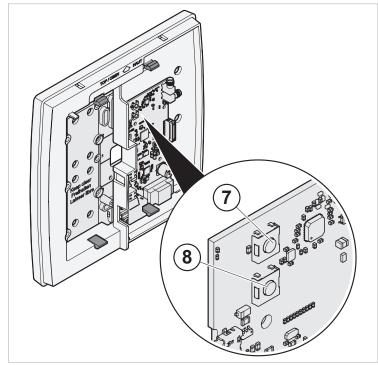5    24 VDC connector (sold separately, optional)

## 2. Installation

### Position of the mounting plate

The position of the devices is specified by the installation plan depending on the construction and configuration of the building and the rooms to be equipped.

▶ Consult the installation plan.

The universal mounting plate is adapted for all types of installation:
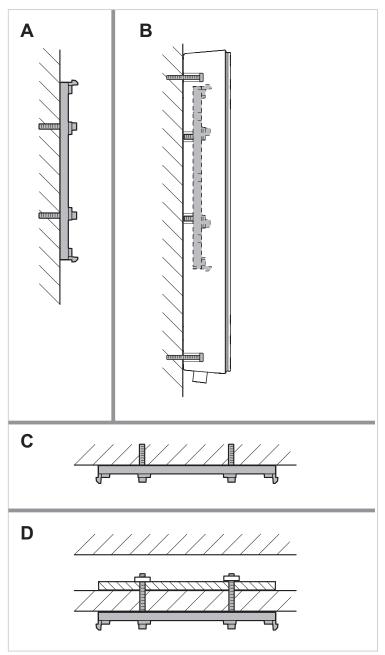


*Fig. 4    Types of installation*

A   Mounting on the wall
B   Installing with IP65 dust and waterproof kit (see separate user documentation)
C   Mounting on the ceiling
D   Mounting on drop ceiling with counterplate or 2 universal mounting plates, one on top of the other

| i | ▶ For better radio coverage, choose wall mounting. |
|---|---|

The universal mounting plate can be mounted on the wall or on different types of recessed boxes.



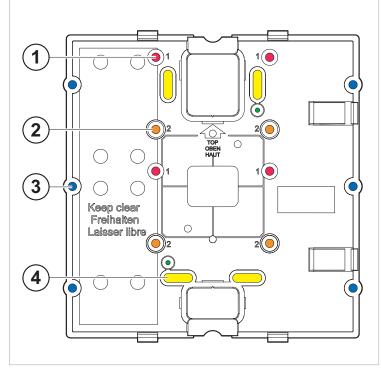*Fig. 5    Screw holes for the mounting plate*

1   Offset on recessed box CH
2   Centred on recessed box CH
3   On generic recessed box
4   Free-standing

| ⚠ CAUTION | Risk of malfunction from interference! ▶ Do not install the RF reader on metal (e.g. metal doors) or near electrical devices (e.g. lamps). |
|---|---|

1. Mount the universal mounting plate at least 50 cm from any other electrical device or metal element.

SmartLiberty SA | Route de Neuchâtel 46 | 2525 Le Landeron | Switzerland | +41 32 752 48 11 | info@smartliberty.ch | www.smartliberty.ch

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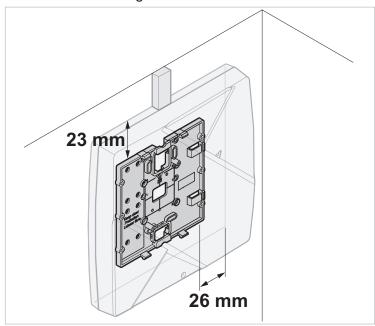2. Provide enough space around the mounting plate to attach the housing.



*Fig. 6    Free space around the mounting plate.*

3. Place the plate in the direction of the cable feed axis.
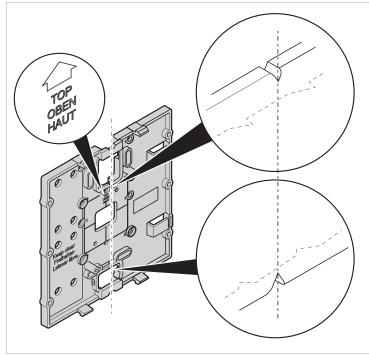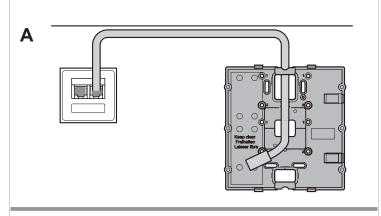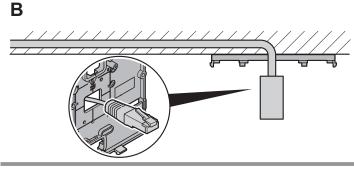4. Align the universal mounting plate vertically using the two notch marks.



*Fig. 7    Notch marks for vertical alignment*

## Mounting the mounting plate

1. Route the Ethernet cable through the mounting plate:
   – from an RJ45 socket (A and C, Fig. 8)
   – Connect LAN cable with RJ45 plug or Ethernet cable directly to the RF reader (B, Fig. 8).

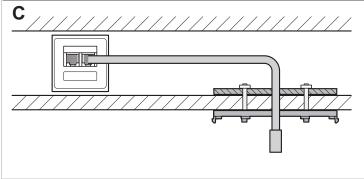| i | ▶ Provide a length of about 30 cm of cable for the installation of the RF reader. |



*Fig. 8    Installing and routing the RJ45 cable*

A  Wall mounting from an RJ45 socket
B  Wall or ceiling mounting directly on a LAN cable with RJ45 plug or Ethernet cable
C  Drop ceiling mounting

2. Attach the universal mounting plate with at least 4 screws depending on the type of installation selected (see «Fig. 5 Screw holes for the mounting plate»).

| i | ▶ Use all 4 screws for mounting the universal mounting plate to ensure the security of the installation. |
|---|---|



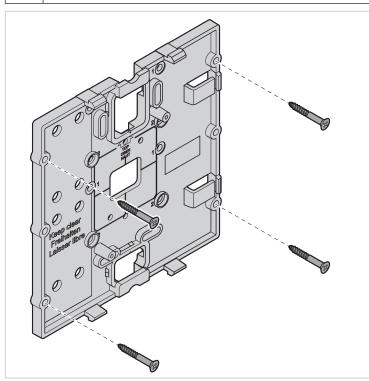*Fig. 9    Mounting the universal mounting plate*

3. To screw the universal mounting plate on a drop ceiling (C, Fig. 8):

   – Use a mounting bracket.

   or

   – Mount two mounting plates one on top of the other with the false ceiling sandwiched between them.

## Installing the housing

1. Connect the Ethernet cable to the Ethernet port inside the RF reader.
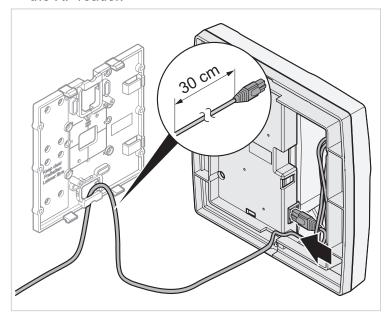


*Fig. 10    Connection for Ethernet cable*

2. When operating with 24 VDC power supply (without PoE): Connect the 24 VDC power supply cable to the 24 VDC connector using the optional 2-pin plug.
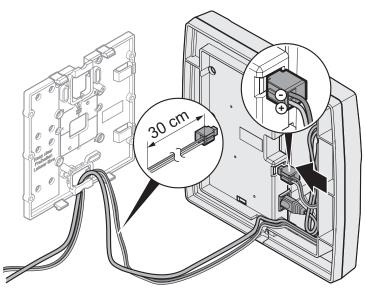


*Fig. 11    Connecting power supply cable to 24 VDC*

3. Stow excess cable(s) in the free space of the RF reader.

| i | • The screw visible on the lid must be situated at the bottom once the housing is mounted on the wall.<br>• The "top" markings on the base of the RF reader and on the universal mounting plate must be facing each other. |
|---|---|

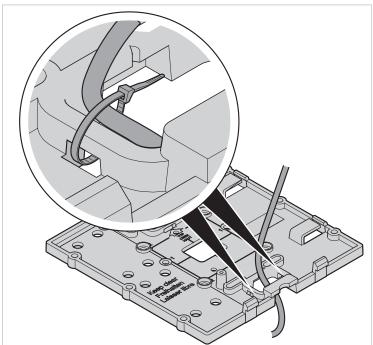4. Use the cable ties to attach the cable(s) to the mounting plate.



*Fig. 12    Attaching the cable(s) to the mounting plate.*

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5. When mounting on a wall, break the cut-out on the top and/or the bottom of the housing using a pliers to pass the cable through.
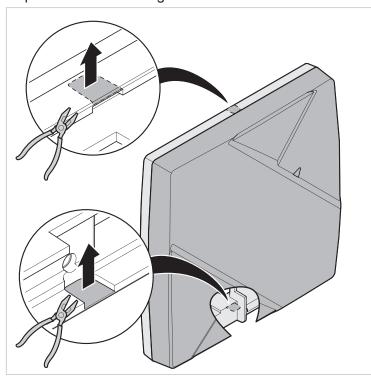


*Fig. 13  Cable entry*

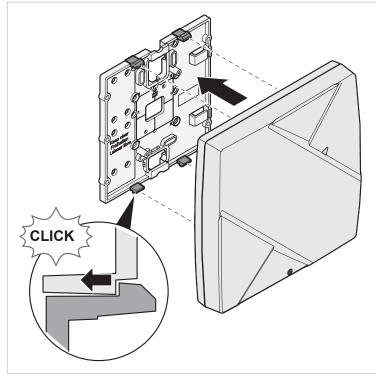6. Press the RF reader onto the mounting plate so that it snaps.



**CLICK**

*Fig. 14  Attaching the RF reader on to the mounting plate.*

| i | The 4 latching tabs of the mounting plate must all be present and in a good condition to ensure that the RF reader has a proper hold. |
|---|---|

## 3. Putting into service

The RF reader is ready for operation when the power supply (PoE or 24 VDC) and the LAN connection are established.

## 4. Uninstalling

- The RF reader must be opened:
  - to enter the test mode (7, Fig. 3)
  - to press the reset button (8, Fig. 3)

| i | An anti-vandalism alarm is transmitted on the software when the housing is opened. |
|---|---|

1. Unscrew the cover with a T10 Torx screwdriver.
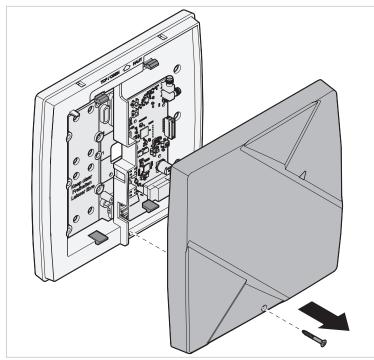


*Fig. 15  Opening the housing*

2. To detach the base of the RF reader from the mounting plate, use a screwdriver to lever open the latching tabs.
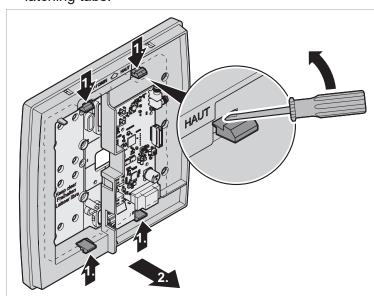


*Fig. 16  Detaching the RF reader from the mounting plate*

## 5. Maintenance

### Alarms

The indicator light (LED) is OFF by default.

| Problem<br>*Display* | Possible cause<br>▶ Resolution of problem |
|---|---|
| Server unreachable<br>*LED lights up red* | Communication with the server is impossible.<br>▶ Call the support service. |
| Radio transmission error<br>*LED lights up blue* | The radio transmission is impossible.<br>▶ Call the support service. |
| Vandalism<br>*LED lights up blue* | The cover/device has been pulled off or not shut properly.<br>▶ Close the cover. |

### Cleaning

▶ Use a conventional cleaning product without acetone.

## 6. Disposal

Directive DEEE 2012/19/CE on electrical and electronic equipment waste

▶ Dispose of the package and the end-of-life product in an appropriate recycling facility.
▶ Do not discard the product with household waste.
▶ Do not burn the product.

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