

# Charging Rack for Handset

INSTALLATION GUIDE



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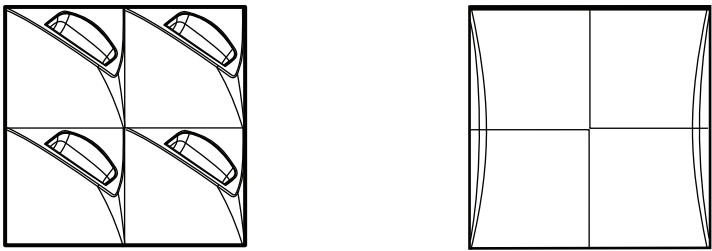
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GENERAL



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**Figure 1: CR2 Charging Rack for Handsets and Power Supply for CR24**

The CR2 Charging Rack for Handsets module is part of the Voice over Wireless Fidelity (VoWiFi) Systems. It charges the WiFi412 handset. Spare batteries for WiFi412 handsets require the Battery Pack Charger (BPC) module.

The CR2 Charging Rack module is used together with the Power Supply for CR24. Each CR2 Charging Rack Handset module charges four handsets or DT4x2 batteries simultaneously, and each Power Supply for CR24 can supply three CR2 Charging Rack Handset modules with altogether 12 handsets.

**Caution!** The Power Supply for CR24 is the only power supply that can be used together with a CR2 Charging Rack.

	Charging Rack for Handsets	Power Supply for CR24
Supply voltage:	+5 V DC	85 – 286 V AC (47-63Hz)
Max current consumption when charging:	3.2 A permodule	2 A
Max output current when shortcut:	5 A per module	12 A
	1.25 A per slot	

**Note:** Attach a label of the power rating, rated voltage, and rated current on the metal shield cover of the power supply.

## 2

## SAFETY RULES

The Power Supply module connects to 85 – 286 V AC. Therefore, take extra caution during operation.

- For safety reasons, the covers must always be mounted during operation.
- The voltage safety cover has to be mounted on top of the voltage connector in the Power Supply module to prevent hazardous situations, like electric shock.
- Ensure that the Power Supply is grounded after installation, by measuring between the Power Supply's metal shield cover and an extraneous ground. The Power Supply unit can otherwise be live.
- When working with the units, the mains power supply cable must always be disconnected. Note the following:
  - For PERMANENTLY CONNECTED EQUIPMENT, a readily accessible disconnect device must be incorporated in the building installation wiring.
  - For PLUGGABLE EQUIPMENT, the socket-outlet must be installed near the equipment and must be easily accessible.

The disconnect device will disconnect both poles simultaneously.

- For continued protection against risk of fire, replace only the fuse in the Charging Rack with the same type and rating of fuse (5A ATAB Art. No. 210289).
- If the ambient temperature is 25° C (77° F) or lower, the Power Supply CR24 can supply up to three charging racks (CR2 Charging Rack or BPC).
- If the ambient temperature is higher than 25° C (77° F), the Power Supply CR24 can supply up to three CR2 Charging Racks or two BPCs.
- Suomi: Laite on liitettävä suojamaadoituskoskettimilla varustettuun pistorasiaan.
- Norge: Apparatet må tilkoples jordet stikkontakt.
- Sverige: Apparaten skall anslutas till jordat uttag.

### 3 INSTALLATION

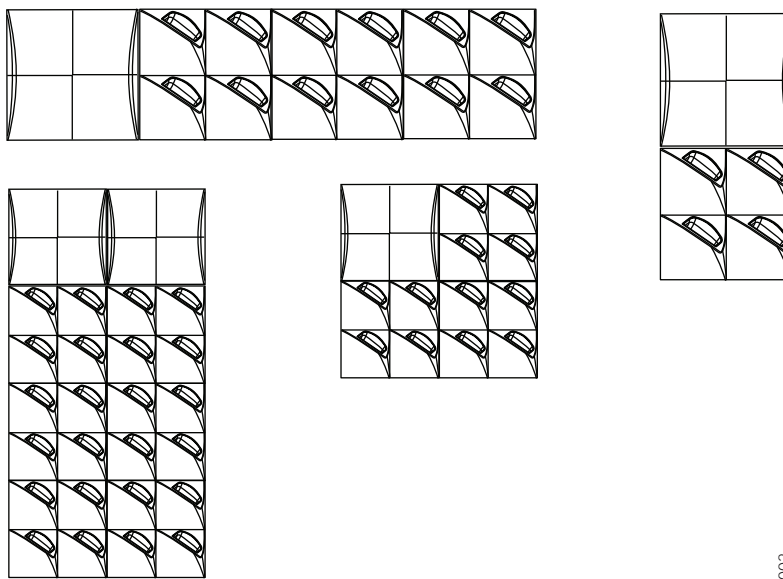
- Place the units in a dry environment with a temperature range over 0° up to + 40° C.
- If the ambient temperature is 25° C (77° F) or lower, the Power Supply CR24 can supply up to three charging racks (CR2 Charging Rack or BPC).
- If the ambient temperature is higher than 25° C (77° F), the Power Supply CR24 can supply up to three CR2 Charging Racks or two BPCs.
- Mount the units vertically.
- Avoid mounting the CR2 Charging Rack module in a sunlit place. This can affect the charging capacity.
- Avoid mounting the CR2 Charging Rack module where the coverage is not sufficient. This can reduce the messaging capacity.
- Mount the unit on concrete or plaster walls only.
- Mount the Power Supply CR24 above or beside the charging modules (see on page 6 Figure 2) due to the heat generation.

**Delivery includes the following:**

- One Inlet accessory kit, including the following:
  - Cable supports and screws
  - Rectangular assembly parts
  - Clips
- Tools, and so on, required:
  - A three-wired cable for the mains power with diameter 4 – 8.5 mm. Make sure that the cable used is grounded and approved for the current and voltage in question.
  - Screwdrivers
  - Cutting pliers
  - A multimeter
  - Screws and wall plugs for wall mounting. Make sure the screws and wall plugs are correct for the type of wall used. See the example below.

Wall material	Wall plug	Screw diameter
Single plasterboard	Thorsman TP1	3.5-5 mm
Double plasterboard	Thorsman TP2	3.5-5 mm
Concrete	Thorsman TP2	3.5-5 mm

**Examples of the Way to Assemble the Modules**



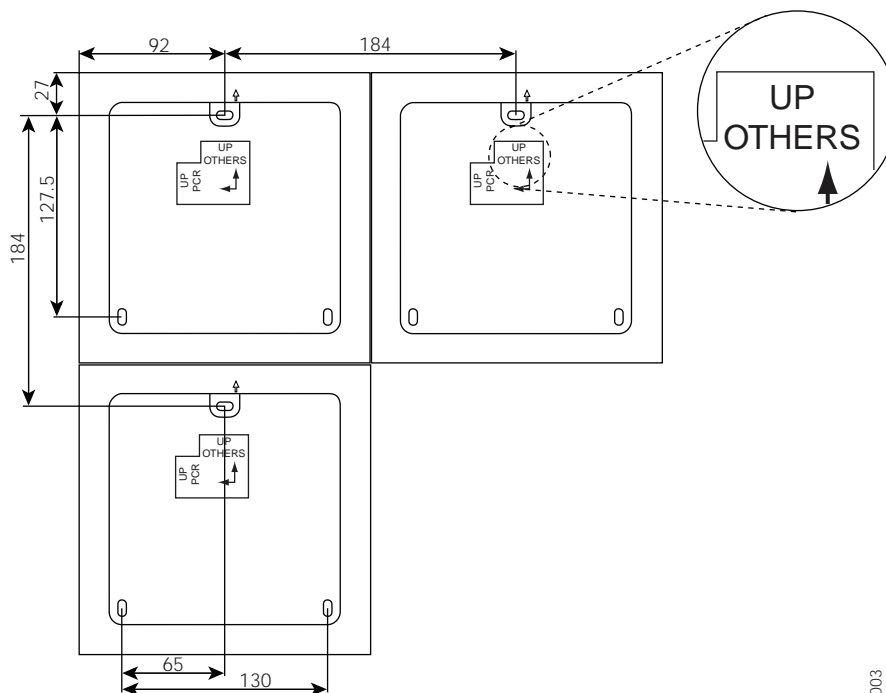
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**Figure 2: Four Different Ways to Assemble the CR2 Charging Rack Modules**

The Power Supply module can also be placed apart from the Charging Rack modules.

### 3.1

## MOUNTING



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**Figure 3: Mounting**

**Note:** Mounting dimensions are in millimeters. The modules must be mounted with the marking text, “UP OTHERS”, upwards.

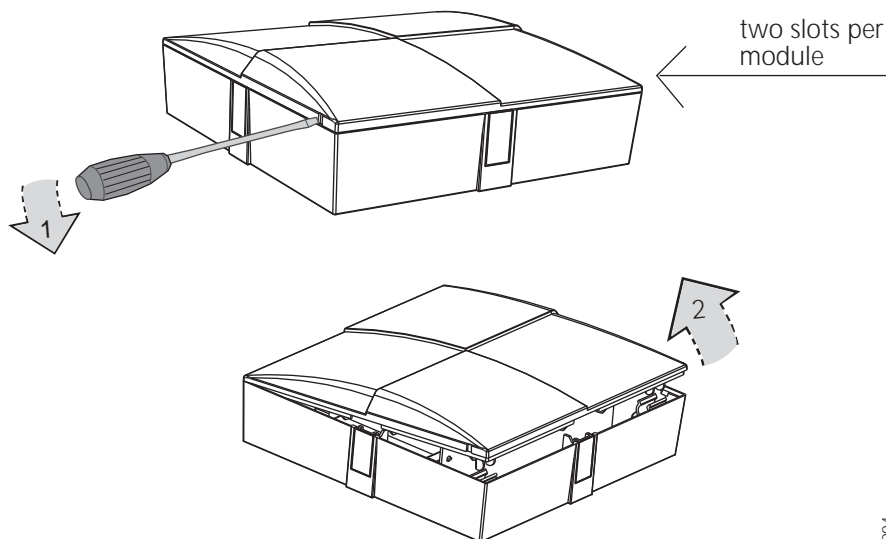
You can do the wall fitting preparation in the following two ways:

- Measure and mark out the drill holes by using the dimensions in on page 6 Figure 3. Drill and fasten the modules on the wall with three screws.
- Remove the covers, see 3.2 Removing Covers on page 7, and mount together some of the modules, see 3.3 Mounting Units Together on page 8. Hold the mounted modules up against the wall and mark the location of the drill holes. Drill and fasten the modules on the wall with three screws.

**Note:** When you are planning the location of the modules, start to mount them at a height that makes it easy to reach the cordless handsets and to read the cordless handset's display.

## 3.2 REMOVING COVERS

### 3.2.1 POWER SUPPLY MODULE

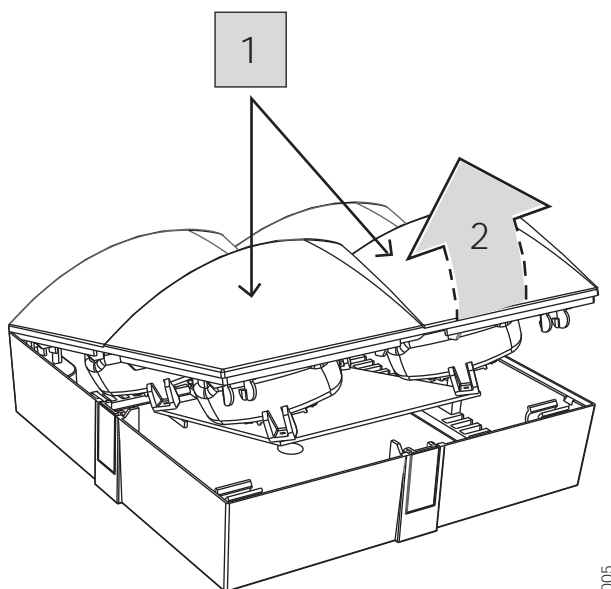


**Figure 4: Removing the Cover from the Power Supply Module**

1. Put a screwdriver into the slots and slightly bend the cover upwards (1).
2. Lift up the cover in the direction of the arrow (2).

## 3.2.2

## CR2 CHARGING RACK MODULE



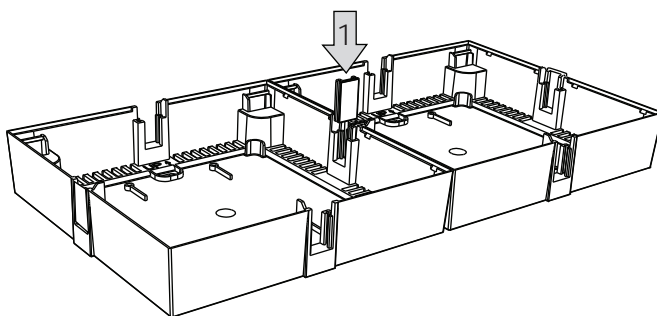
**Figure 5: Removing the Cover from the Charging Rack Module**

**Note:** Use the charging slots to open the cover.

1. Grasp one of the two lower charging slots (1).
2. Remove the cover by pulling it up in the direction of the arrow (2).

## 3.3

## MOUNTING UNITS TOGETHER

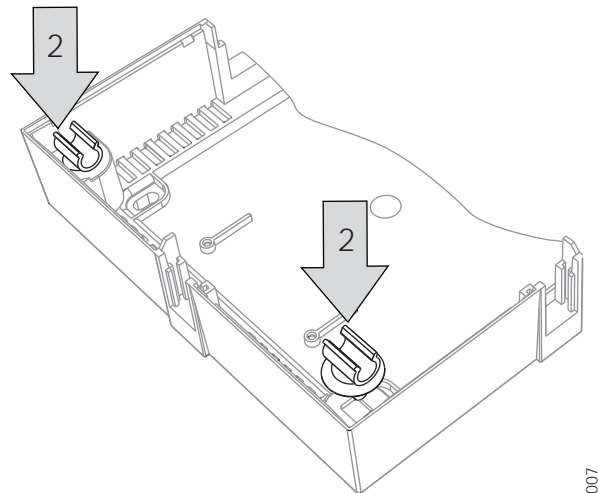


**Figure 6: Mounting Units Together**

1. Fasten the two adjacent modules together with two rectangular assembly parts, which are provided in the parts bag. Place two covers in the adjoining slot (1).

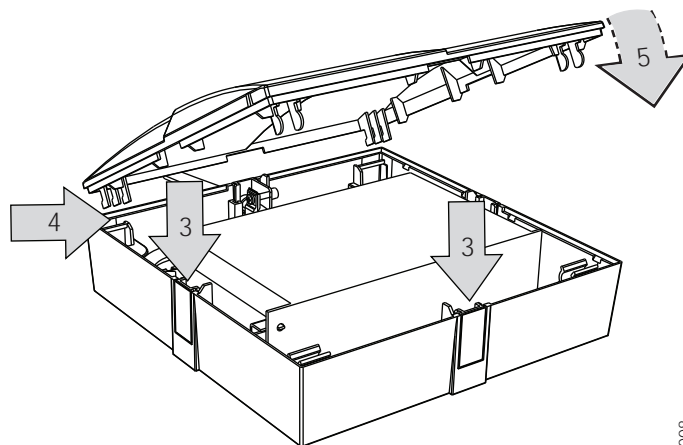
**Note:** The modules must be placed with the marking text, “UP”, upwards. See on page 6 Figure 3.

2. Fasten each module on the wall with three screws, see on page 6 Figure 3.
3. Mount two clips, which are provided in the parts bag, in each module (2).



**Figure 7: Mounting of Clips**

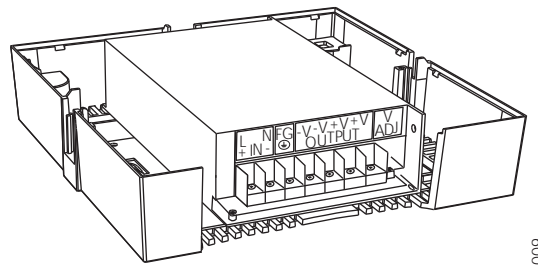
4. Mount the rectangular covers, which are provided in the parts bag, at the openings where there are no adjacent modules (3), see on page 9 Figure 8.
5. Fasten the cover's angled hooks on the holders (4).
6. Snap on the cover (5).



**Figure 8: Mounting of Rectangular Covers and Replacing the Covers**

## 4

## CONNECTION OF THE POWER SUPPLY



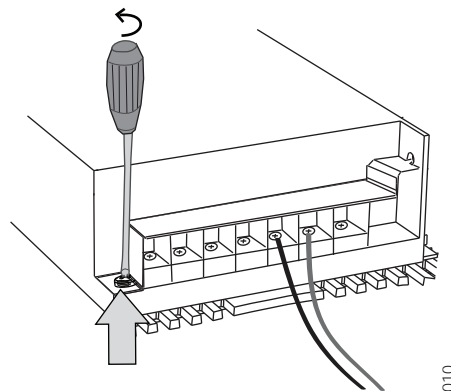
**Figure 9: Power Supply Module**

**Caution!** The Power Supply module connects to 100 - 250 V AC. When working with the units, the mains power supply cable must always be disconnected. For safety reasons, the covers must always be mounted after an installation. The voltage safety cover must be mounted on top of the voltage connector in the Power Supply module to prevent hazardous situations, like electric shock, see on page 11 Figure 13.

## 4.1

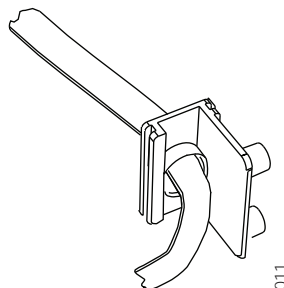
## CONNECTION OF THE MAINS POWER SUPPLY CABLE (AC)

1. Unscrew the voltage safety cover.



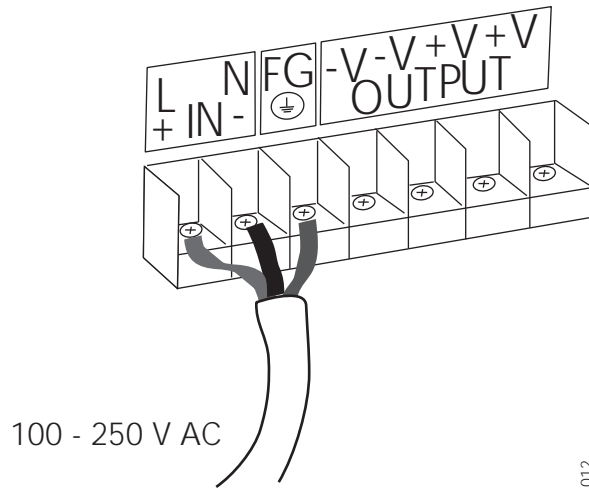
**Figure 10: Removing the Voltage Safety Cover**

2. Run the mains power supply cable through the cable support holder, which is provided in the parts bag.



**Figure 11: Mains Power Supply Cable with Cable Support Holder**

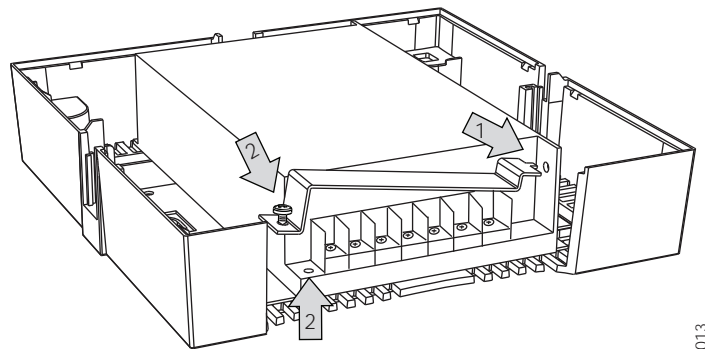
3. Cut and strip the mains power supply cable.
4. Connect the mains power supply cable onto the indicated positions on the connector.



**Figure 12: Mains Power Supply Connection**

**Caution!** To prevent hazardous situations, like an electric shock, the voltage safety cover must always be mounted.

5. Mount the voltage safety cover on its position (1) and fasten it with one screw (2).



**Figure 13: Mounting the Voltage Safety Cover**

## 4.2

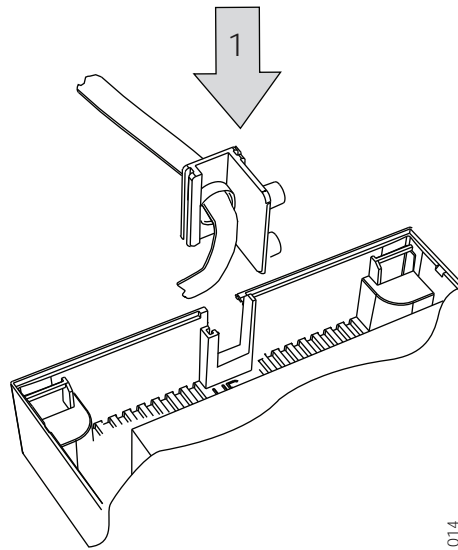
## WIRING RUN

### 4.2.1

### MAINS POWER SUPPLY CABLE (AC)

**Note:** To avoid cable breaks, make sure that the cable is not tight around the sharp edge of the Power Supply.

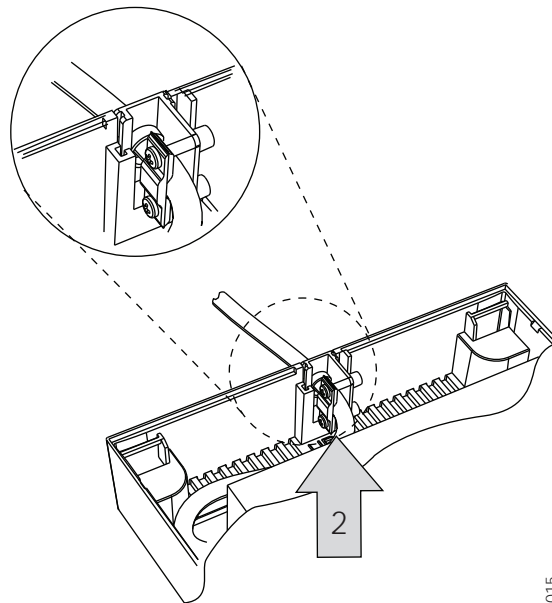
1. Mount the cable support holder at the opening marked "UP" on the Power Supply module or at the opposite side depending on where the wall socket is placed and how the modules are fitted together (1).



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**Figure 14: Mounting the Cable Support Holder**

2. Secure the mains power supply cable with two screws (2), which are provided in the parts bag.



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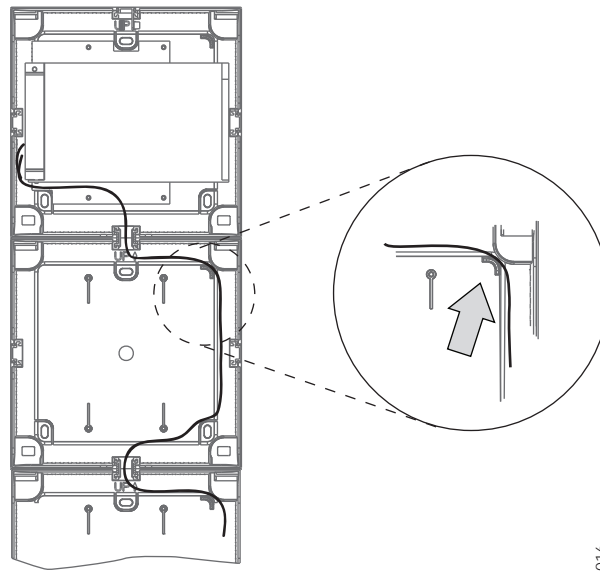
**Figure 15: Securing the Mains Power Supply Cable**

#### 4.2.2

#### SUPPLY VOLTAGE CABLE (DC)

The +5 V DC supply voltage cable is pre-assembled.

1. If possible, run the +5 V DC supply voltage cable around the cable support to avoid cable breaks.



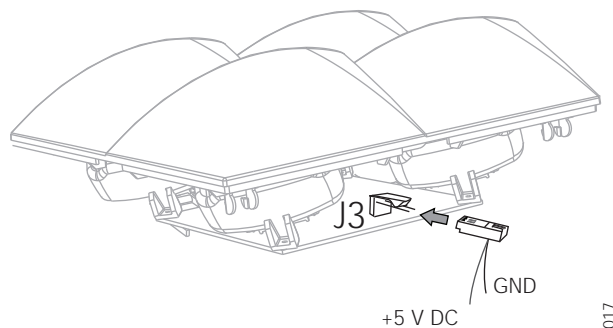
**Figure 16: +5 V DC Supply Voltage Cable Support**

### 4.3

## CONNECTION OF THE SUPPLY VOLTAGE CONNECTOR

**Caution!** The Power Supply for CR24 is the only power supply that can be used together with a CR2 Charging Rack for Handsets module.

1. Connect the +5 V DC supply voltage connector to J3.



**Figure 17: Position of Connector J3**

2. Mount the covers, see on page 9 Figure 8.

## 5

# INSTALLATION TEST

**Caution!** To ensure that the Power Supply is grounded after installation, measure between the power supply's metal shield cover and an extraneous ground. The Power Supply unit can otherwise be live.

1. Connect the mains power supply cable to the wall socket.
2. Check that each charging slot starts charging, by putting a cordless handset in each charging slot. A beep indicates when the charging starts and the battery icon in the display of the cordless handset will show when it is fully charged.

6

BOARD DESCRIPTION

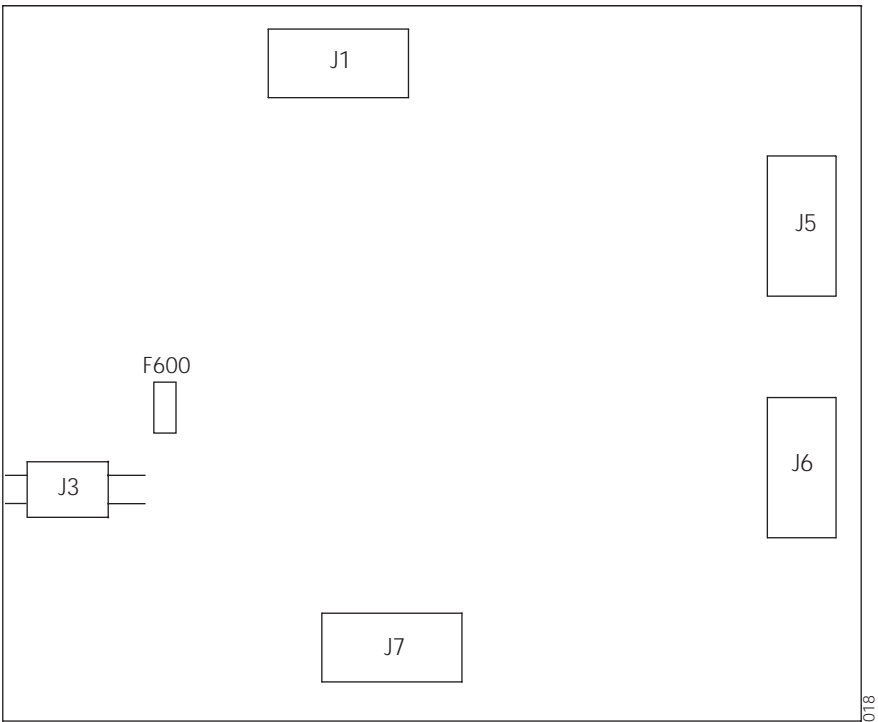


Figure 18: CR2 Circuit Board

Connectors	
1	Connection between the charging slot and the charging channel 0
3	+5 V DC supply voltage
5	Connection between the charging slot and the charging channel 1
6	Connection between the charging slot and the charging channel 2
7	Connection between the charging slot and the charging channel 3

Fuse	
F600	5 A fuse for protection against the risk of fire