

A large green geometric shape, resembling a stylized 'K' or a triangle, is positioned on the left side of the page, extending from the top to the bottom.

# KeContact P20-U

## User manual

**KEBA<sup>®</sup>**

Automation by innovation.

## General notes for this manual

At various points in this manual you will see notes and precautionary warnings regarding possible hazards. The symbols used have the following meanings:



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### DANGER!

- Indicates that death or serious bodily injury will occur if appropriate precautionary measures are not taken.
- 



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### WARNING!

- Indicates that death or serious bodily injury can occur if appropriate precautionary measures are not taken.
- 



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### CAUTION!

- Indicates that damage to property or minor physical injury can occur if appropriate precautionary measures are not taken.
- 

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### ATTENTION

- Indicates that damage to property can occur if appropriate precautionary measures are not taken.
- 



- This symbol reminds you of the possible consequences of touching electrostatically sensitive components.
- 

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### Note

*Notes on use of equipment and useful practical tips are identified by the “Note” symbol. They do not contain any information that draws attention to potentially dangerous or harmful functions.*

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- ▶ This arrow marks **working steps** that you are to perform.

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This product is UL certified (E350546). It complies with the required UL and CSA standards for North America and Canada.



This product meets the requirements of the ROHS Directive (RL 2002/95/EC). The corresponding Declaration of Conformity is located at KEBA AG.

### FCC INFORMATION

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

#### CAUTION:

Changes or modifications not expressly approved by the party responsible for compliance could avoid the user's authority to operate the equipment.

#### NOTE:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

### CANADA

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

For devices with optional BPL modem:

Complies with IC: ICES – 006; en conformité avec IC: NMB - 006 du Canada.

### Revision history

| Modification from / to | Date   | modified Pages | Description    |
|------------------------|--------|----------------|----------------|
| V1.00                  | 221012 | -              | Manual created |

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# 1 Important information

## 1.1 Safety instructions



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### WARNING!

Not observing the safety instructions can result in risk of death, injuries and damage to the device! KEBA AG assumes no liability for claims resulting from this!

- **Electrical hazard!**  
The installation, commissioning and maintenance of the charging station may only be performed by correctly trained, qualified and authorized electricians<sup>1</sup> who are fully responsible for the compliance with existing standards and installation regulations. For details, see "KeContact P20-U Installation manual (for the specialist)".
  - **Electrical hazard / fire hazard!**  
Never use damaged, worn or dirty charging plugs.
  - **The charging station does not have its own power switch! The line circuit breaker of the building installation (panel) serves as mains disconnecter.**
  - **The owner must ensure that the charging station is only ever operated in perfect condition:**
    - The charging station must be checked regularly for faulty sockets and connectors and damage to the housing (visual inspection). Ensure that the charging cable is not mechanically damaged (bent, pinched or run over) and the connection area does not come into contact with heat sources, dirt or water.
    - A damaged charging station must be switched off immediately and replaced.
    - Repair work to the charging station is not permitted and may only be performed by the manufacturer (replacement of the charging station)!
    - Do not carry out any unauthorized conversion work or modifications to the charging station!
    - Do not remove any notices on the device, such as safety symbols, warning notices, rating plates, nameplates or cable markings!
  - **No extension cables are permitted for connecting an electric vehicle to the power supply device for electric vehicles.**  
  
**Only electrical vehicles or their chargers may be connected. A connection of other loads (e.g. electric tools) is not permitted!**
  - **Read the information and instructions for your vehicle carefully before you charge the vehicle using the charging station.**
  - **Pull the charging cable only at the plug and not at the cable out of the connector.**
- 

<sup>1</sup> Persons who, due to their special training, expertise and experience as well as knowledge of current standards, are able to assess the work performed and the possible hazards.

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**CAUTION!**

- **Risk of damage!**  
**Never clean the charging station using spray water (from a hose, high-pressure cleaner etc.) to clean the charging station!**
- 

## 1.2 Intended use

KeContact P20-U is a "charging station" for the indoor and outdoor area at which electrically operated vehicles can be charged (e.g. electric vehicles).

### Additional optional features:

- Network capability
- Switch contact (for control of external additional equipment e.g. fan)
- Enable input for e.g. ripple control receivers, time switches,...  
This permits a scheduled (time-controlled) charging of the vehicle to be realized.
- BPL modem (Broadband over Power Line) according to GreenPhy standard
- Mounting column for floor installation

The intended use of the device always includes the compliance with the environmental conditions for which this device was developed.

The device was developed, manufactured, inspected and documented in compliance with the relevant safety standards. Therefore, the products do not pose any danger to the health of persons or a risk of damage to other property or equipment under normal circumstances, provided that the instructions and safety precautions relating to the intended use are properly observed.

The instructions contained in this manual must be followed precisely in all circumstances. Failure to do so could result in the creation of potential sources of danger or the disabling of safety devices. Apart from the safety instructions given in this manual, the safety precautions and accident prevention measures appropriate to the situation in question must also be observed.

## 1.3 About this manual

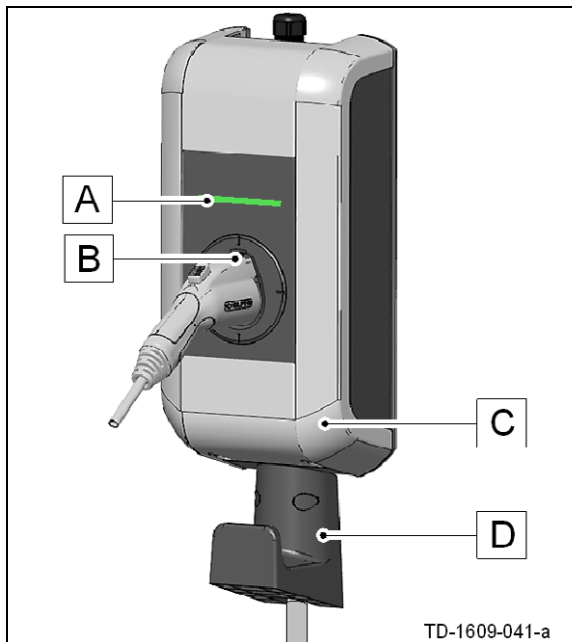
**This manual is valid for devices of the type:** KeContact P20-U

### **Use of this manual**

This manual is intended for the following groups of people:

- End-users (users of the charging station)
- Start-up technicians, service technicians (in addition to the installation manual)

## 2 Using the charging station



Charging station (application example)

### Base model with charging cable (type 1)

- [A]... Status LED
- [B]... Parking bay for charging plug
- [C]... Housing cover
- [D]... Hanger for charging cable

### Storing the charging plug/charging cable

If no charging procedure is being performed, the charging plug must be plugged into the parking bay [B] for safe storage.

The charging cable must be coiled up and placed on the hanger [D].

### Starting the charging procedure

- ▶ The charging cable is not plugged into the vehicle.
- ▶ Plug the charging cable into the vehicle.

### Status LED

The charging station must be ready for operation, the status LED flashes green slowly every 3 seconds ("Ready for operation").

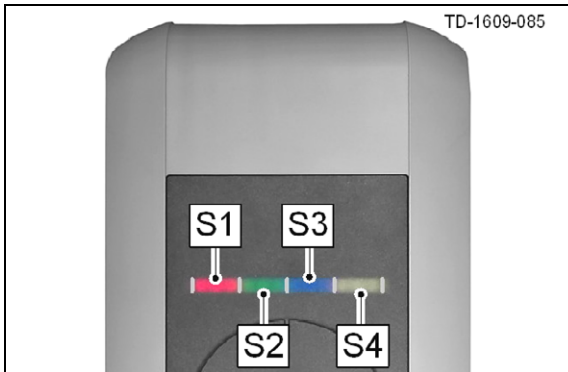
The status LED lights up orange continuously for about 7 seconds ("Self test").  
The status LED lights up green continuously ("Ready for charging"). The charging procedure can be started by the vehicle from this point of time; then the status LED flashes green ("Charging procedure").

### Ending the charging procedure

The charging procedure is ended by pressing the release button on the charging plug.

- ▶ Disconnect the charging plug from the vehicle ("Wait for unplugging").
- ▶ Store the charging cable on the provided hanger of the device.

## 2.1 Status LED



Status LED – segments

### Status LED - segments

The status LED provides information about the current operating state of the charging station and consists of 4 segments (S1 to S4) which can light up together or individually.

All segments can light up or flash in different colors.

If not otherwise specified, all 4 segments light up together.

| Status LED                            |  | Function  |
|---------------------------------------|--|---|
| Flashes slowly every 3 seconds        | green  | <b>Ready for operation</b> (charging cable is not yet plugged in. optional: The charging station was authorized correctly)  |
|                                       | blue   | <b>Authorization is required</b> (charging station has not been authorized correctly yet; authorization with external enable on the enable input still necessary) |
| Lights up continuously                | orange   | <b>Self test</b> (internal CCID for about 7 seconds).   |
|                                       | green  | <b>Ready for charging</b> (charging cable is plugged in)  |
|                                       | blue   | <b>Ready for charging with ISO15118</b> (charging cable is plugged in)  |
|                                       |  | <b>External enable still required</b> (authorization with external enable on the enable input still necessary)  |
| red                                   | <b>Hardware error</b> (disconnect the vehicle and turn off the mains of the charging station). |   |
| Flashes every second                  | green  | <b>Charging procedure</b> is carried out (applies for "SAE J1772" charging procedure)   |
|                                       | blue   | <b>Charging procedure</b> is carried out (applies for "ISO15118" charging procedure)  |
| Flashes orange slowly every 5 seconds |  | <b>Temperature limit exceeded</b> (charging procedure temporarily interrupted; charging continues after cooling down)   |
| Flashes red                           |  | <b>Malfunction</b> (for details, see "Troubleshooting")   |



### 3 Troubleshooting

| PROBLEM   | Possible cause - remedy   |
|---|---|
| Status LED does not light up                            | <ul style="list-style-type: none"> <li>No voltage supply – Check line circuit breaker and switch on if necessary.</li> <li>Defective – please contact your service partner.</li> </ul>  |
| Charging procedure is not started                       | <ul style="list-style-type: none"> <li>The vehicle does not need any power or has an error – check the vehicle.</li> <li>The vehicle is programmed to a later start time for charging.</li> <li>The plug is not inserted correctly - Pull out the plug and insert the plug again.</li> <li>The charging procedure was not performed correctly – follow the instructions in section "Starting/ending the charging procedure".</li> </ul> |
| Vehicle is not fully charged<br>Increased charging time | <ul style="list-style-type: none"> <li>Power reduction due high temperature by vehicle or charging station: <ul style="list-style-type: none"> <li>Protect the vehicle and charging station from direct sunlight during the charging process (carport, garage, ...)</li> </ul> </li> <li>Missing release by external controller (energy supplier, PV system, ...)</li> </ul>  |
| Car error after starting the charging procedure         | <ul style="list-style-type: none"> <li>Internal protective devices avoid charging (charging power for car is not available) – please contact your service partner.</li> </ul>   |
| Status LED flashes red                                  | <ul style="list-style-type: none"> <li>Malfunction – first check the possible causes of error for the malfunction (*). <ul style="list-style-type: none"> <li>switch off the supply voltage of the charging station (by installed line circuit breaker).</li> <li>switch on the voltage supply again.</li> </ul> </li> <li>Defective – please contact your service partner.</li> </ul>  |
| Status LED lights red                                   | <ul style="list-style-type: none"> <li>Hardware error: <ul style="list-style-type: none"> <li>disconnect the vehicle</li> <li>switch off the supply voltage of the charging station (by installed line circuit breaker) and switch it on again.</li> <li>contact your service partner if the status LED still lights red.</li> </ul> </li> </ul>  |

(\*) Possible causes of error for malfunction (status LED flashes red)

Malfunctions must always be acknowledged by unplugging the plug and can be triggered, for example, by the following causes:

- The plug at the charging station sends an invalid state:  
Hardware fault of the cable – unplug the plug and plug in correctly, if necessary.
- Temperature shut-off:  
The permitted temperature in the charging station was exceeded – unplug the plug and wait until the charging station has cooled down.

Reset of an error:

If an error occurs during the charging procedure, it must be acknowledged by the proper ending of the charging procedure (see section "Ending the charging procedure"). On repeated occurrence of errors without any reason, please contact customer service.

## 4 Maintenance

The charging station is essentially maintenance free but it must be checked regularly by the owner for faulty charging plug (including the charging cable) and damage to the housing.

### 4.1 Cleaning the housing

- ▶ If necessary, clean the housing of the charging station using a moist cloth. Stubborn dirt can be removed using a mild, solvent-free, non-scouring cleaning agent.  
Never clean the charging station using spray water (from a hose, high-pressure cleaner etc.) to clean the charging station!

### 4.2 Customer service

For questions or problems please contact the executive electrical installation company.

Before contacting customer service:

- Check the troubleshooting measures in the "Troubleshooting" chapter.
- Check the troubleshooting measures in the operating manual of the vehicle manufacturer.
- Make note of the model version on top of the device.

