KEBA M20 Large Scale Load Management Controller User Guide

Contents

KEBA M20 Large Scale Load Management Controller

Introduction

- These brief instructions describe the basic steps and information for installa-tion of the KeContact M20 and are addressed to electrically skilled persons.
- For complete commissioning, it is mandatory that the KeContact M20 operat-ing manual be observed.
- Manuals and additional information are available on our website: **www.keba.com/emobility-downloads**

WARNING!
Risk of electric shock to persons!
In addition to this document, all information in the description of the power adapter, which is in the power adapter packaging, must be observed.

Information
If the description included with the power adapter cannot be read and un-derstood due to the available languages, then use the description in the re-quired language from the homepage of the manufacturer.

Representation of safety instructions

At various points in this manual, you will see notes and precautionary warn-ings regarding possible hazards. The symbols used have the following meaning:

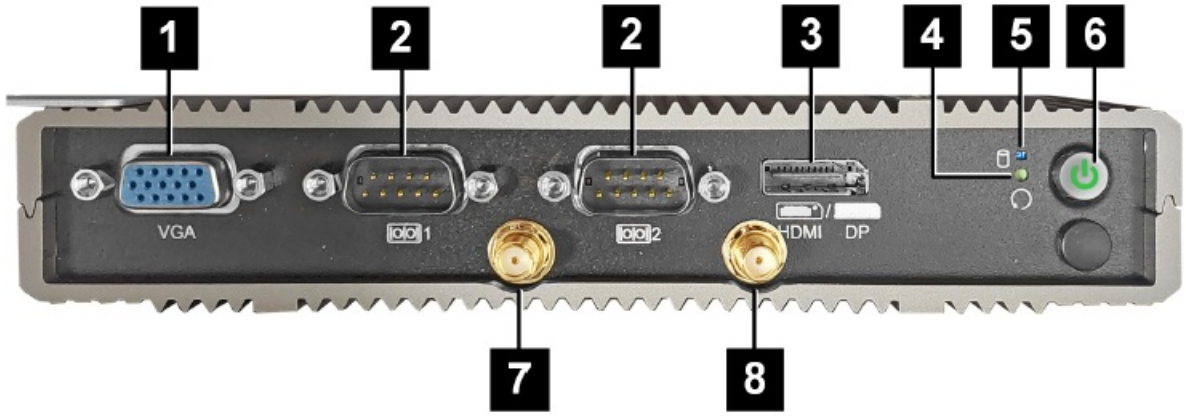
- **DANGER!**
  indicates an imminently hazardous situation, which will result in death or se-rious bodily injury if the corresponding precautions are not taken.
- **WARNING!**
  indicates a potentially hazardous situation, which can result in death or seri-ous bodily injury if the corresponding precautions are not taken.
- **CAUTION!**
  means that if the corresponding safety measures are not taken, a potentially hazardous situation can occur that may result in slight bodily injury.
- **Caution**
  means that damage to property can occur if the corresponding safety mea-sures are not taken.
- **ESD**

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

Information
Identifies practical tips and useful information. No information that warns about potentially dangerous or harmful functions is contained.

Description

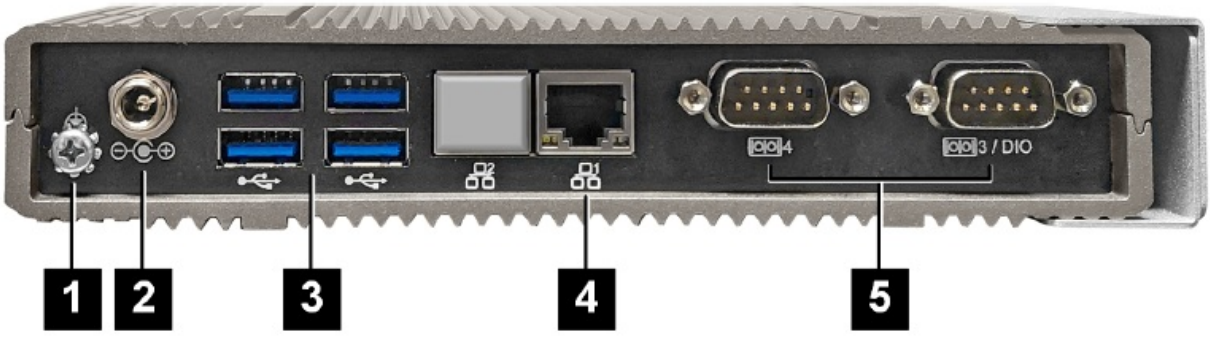
Front view



1	… VGA*	2	… COM*
3	… HDMI/DP*	4	… Reset button
5	… Status LED	6	… Power button
7 … LTE diversity antenna		8	… LTE main antenna

Connection nonfunctional

Rear view



1	… Ground (GND)	2	… DC-In
3	… USB	4	… Ethernet (LAN)
5	… COM*		

Connection nonfunctional

Mounting and installation instructions

General instructions

WARNING! Risk of electric shock to persons!

- The Embedded PC must always be installed safely isolated from electric circuits with hazardous voltage.
- The power adapter must not be made user accessible.

ESD information

Electronic component are generally put at risk by electro-static discharges (Electro Static Discharge). An electro-static charge can occur during any ac-tivity involving movement. ESD can occur with any touch.
Most discharges are so low that they are not noticeable. However, they can nevertheless put unprotected electronic components at risk or even destroy them. Therefore, any handling with open electronics is only permissible with the application of effective ESD protection.

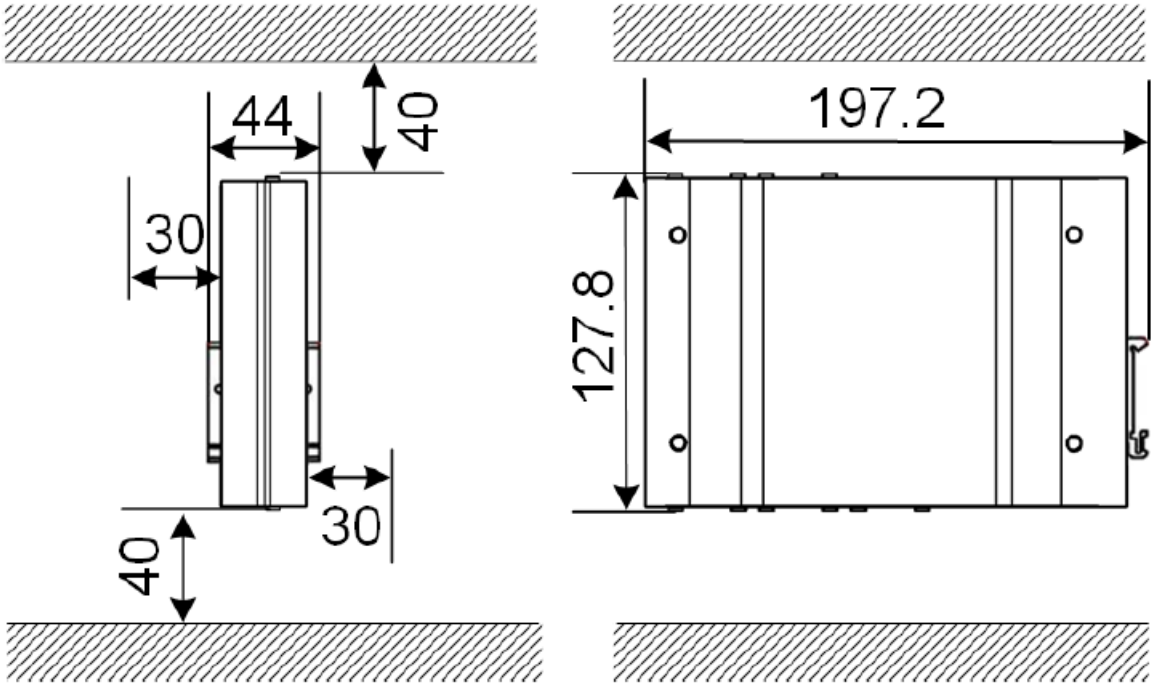
When handling open electronics, please follow the following ESD measures:

- Only touch open electronics if this is absolutely necessary.
- Wear a conductive ESD wristband.
- Use conductive mats.
- Establish a conductive connection between device/system, mat, wrist-band, and grounding connection.
- Cotton work clothes are preferred over synthetic fiber materials.
- Keep work area free of highly isolating materials (e.g. Styrofoam, plas-tics, nylon, …).
- Use ESD protection even for defective modules.

Always keep the devices in their original packaging and only remove the packaging immediately before installation.
Avoid, for modules which are mounted in an enclosure, direct contact with any accessible electronic components, such as non-equipped terminals.

Space requirement

Embedded PC



The specifications are minimum distances. If a USB stick is used in opera-tion, more space may need to be taken into account.

Installation in the control cabinet

Information

- When positioning the KeContact M20, you must make sure that it does not block access to existing control cabinet components.
- The SIM card may need to be installed before the mounting is done. Otherwise, installation is no longer possible.

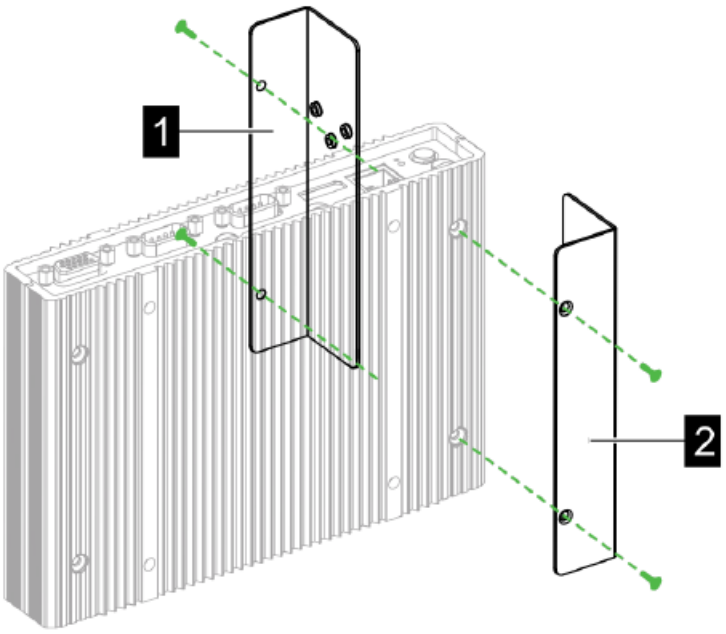
The KeContact M20 can be mounted on a top hat rail. The mounting pack-age includes two brackets (one has a shorter depth) and a mounting clip.

Information
The screw holes in the KeContact M20 for the mounting package are sym-metrical. The mounting package can be mounted on any side of the Ke-Contact M20.

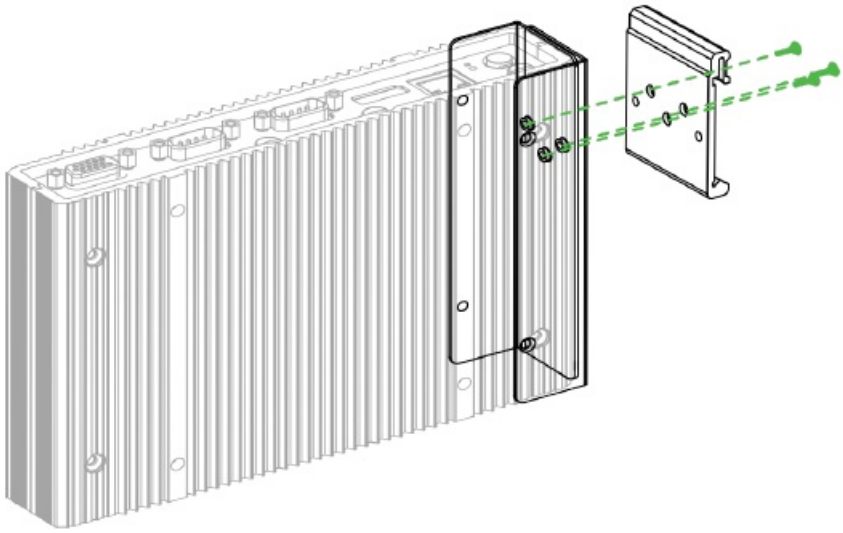
Required materials and tools:

- 3x M3 screws, 5 mm length (included in the scope of delivery)
- Phillips screwdriver PH1 (not included in the scope of delivery) Proceed as follows to mount the KeContact M20 on the top hat rail:

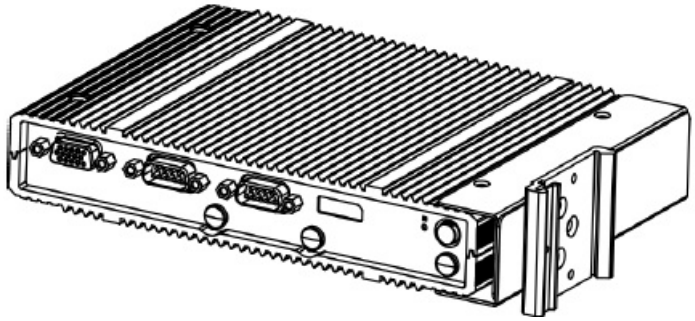
1. Unscrew the M3 screws on the side of the housing.
2. Secure the short bracket (2) on the KeContact M20 with two M3 screws (max. torque of 0.59 Nm, tolerance ±0.05 Nm).



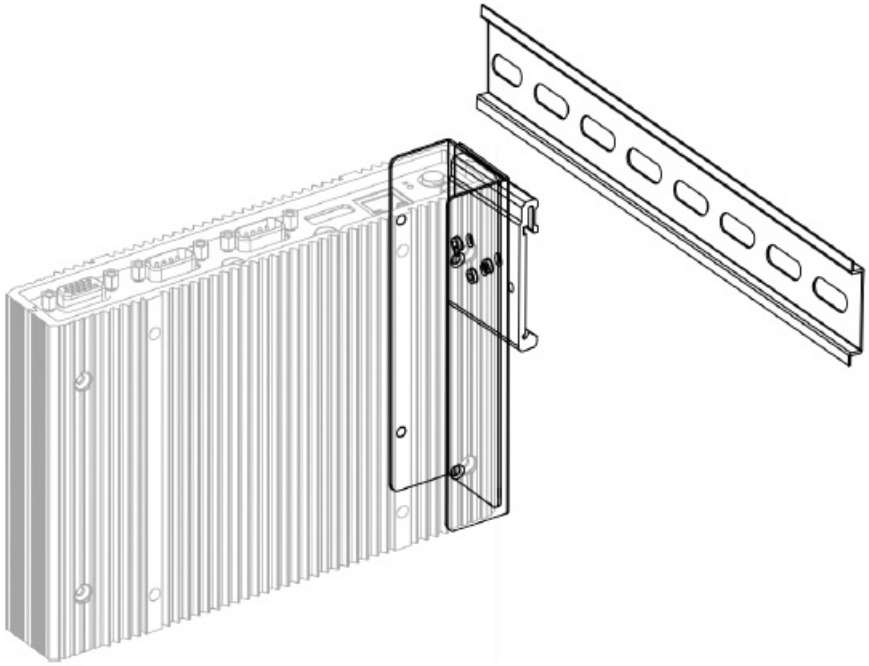
3. Secure the long bracket (1) on the KeContact M20 with two M3 screws (on the opposite side of the short bracket). The long bracket must be above the short bracket.
4. Secure the mounting clip on the brackets with three M3 screws.



5. Check whether the mounting package is mounted as follows:



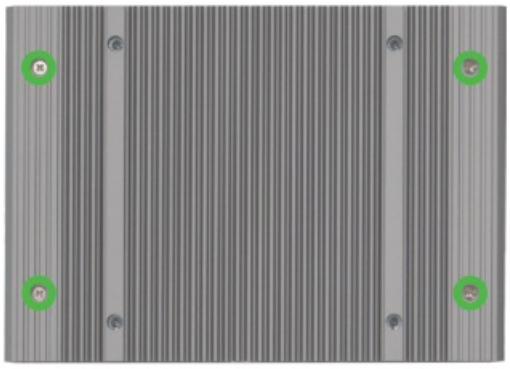
6. Mount the KeContact M20 on the top hat rail.



7. If necessary, establish protective grounding for the mounting package. The KeContact M20 is installed on the top hat rail.

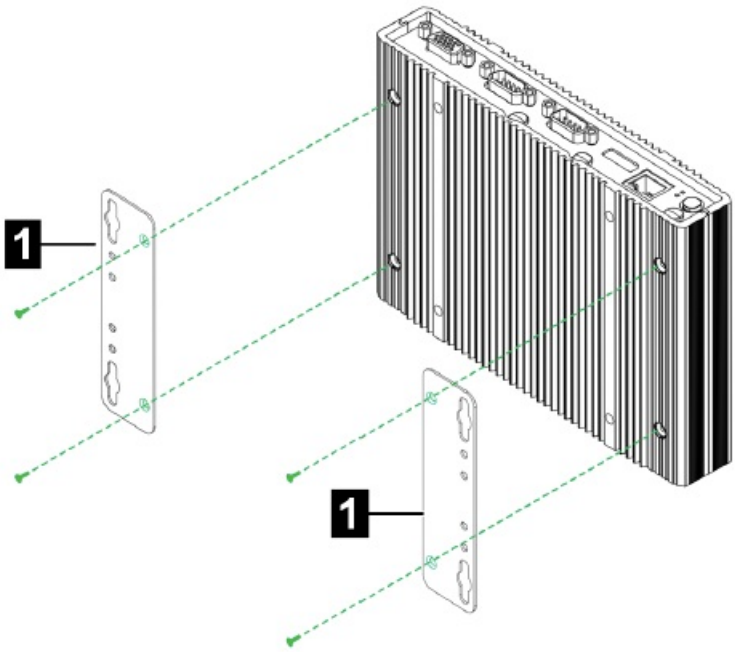
Wall installation

The KeContact M20 can optionally be installed on a wall. Wall brackets are needed to do this. These are not included in the scope of delivery and can be ordered as accessories.
The four screw holes are located on the underside of the KeContact M20.



To install the KeContact M20 on the wall, proceed as follows:

1. Unscrew the M3 screws on the underside of the housing.
2. Secure the two wall brackets (1) on the KeContact M20 with four M3 screws.



3. The KeContact M20 can be installed at various distances from the wall using the predrilled screw holes.
4. Install the KeContact M20 on the wall.
   The KeContact M20 is installed on the wall.

Air conditioning and ventilation.

CAUTION! High temperatures may irreparably damage the device!

- The operating temperature inside the control cabinet must not exceed the permissible ambient temperature of the KeContact M20. If this can-not be guaranteed through natural heat dissipation, an air conditioning of the control cabinet must be provided.

Connections and wiring

CAUTION!
Fire hazard from transient currents
The shield of the Ethernet interface is not galvanically isolated. If there are connections to a device outside the building installation or to another equipotential bonding system, there may be high transient currents. In this case, use suitable optical transmission of the Ethernet interface.

Power supply

- The KeContact M20 may only be supplied using the power adapter included in the scope of delivery (in the control cabinet) using the DC-In jack.
- The primary supply of the power adapter is the responsibility of the respec-tive electrician (power connection line not included in the scope of delivery).
- The power adapter is to be used in environments with contamination no greater than contamination level 2 (as per EN 61010-1). All safety notes and specifications of the power adapter manufacturer must be observed.

Information
Contamination level 2, description according to standard EN 61010-1: Usually only non-conductive contamination appears; however, temporary conductivity caused by condensation must be expected on occasion.

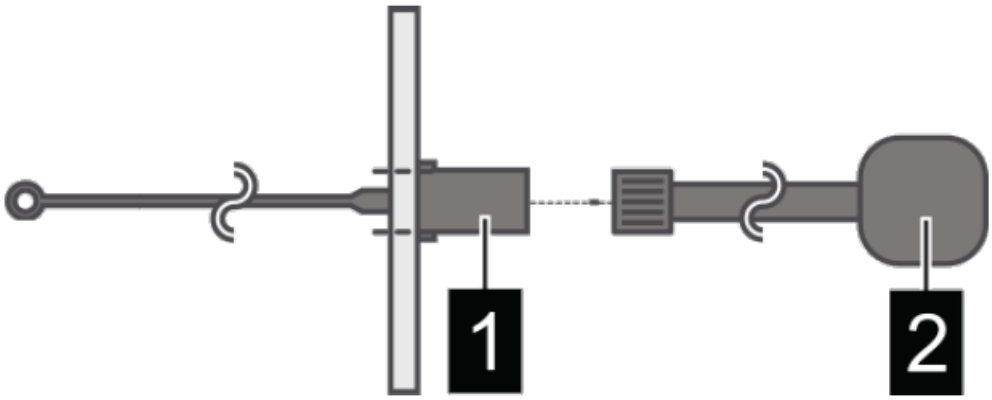
Mounting the antenna

CAUTION! Danger to life from electromagnetic fields
To adhere to the limit values for people's exposure to electromagnetic fields, it is necessary to mount the antenna at least 25 cm away from people.

Mounting the antenna directly on the device

To mount the antenna, proceed as follows:

1. Switch off devices connected to the KeContact M20 and disconnect their power cables.
2. Tighten the antenna (2) at the antenna connection (1).



The antenna has been installed.

Mounting the antenna on the control cabinet

To mount the antenna, proceed as follows:

1. Switch off devices connected to the KeContact M20 and disconnect their power cables.
2. Unscrew the locknut and remove it and the washer from the antenna.
3. Feed the antenna cable into the control cabinet through a predrilled hole (for M10 screw).
4. Pull the adhesive film off the antenna, align the antenna and press it on the outside of the control cabinet.
5. Use the washer and locknut (included in the scope of delivery) to fasten the antenna on the inside of the control cabinet (max. 5 Nm).
6. Tighten the antenna cable at the two antenna connections.
   The antenna has been installed.

Technical data

Power supply

Embedded PC

Supply voltage:	9 - 36 VDC
Power:	Max. 30 W

Power adapter

Supply voltage:	100 - 240 VAC (50/60 Hz)
Output voltage:	24 VDC
Power output:	Max. 60 W
Overvoltage category:	II in accordance with EN 60664
Protection class:	II

Ambient conditions

Use:	Indoor
Access limitations at set-up location:	Limited access (control cabinet)
Installation (stationary):	Embedded PC: On the wall or on a top hat rail Power adapter: Only on a top hat rail
Operating temperature:	-20 °C to +55 °C
Storage temperature:	-40 °C to +85 °C
Relative humidity:	5% to 95% (non condensing)
Altitude:	max. 3.000 m above sea level

LTE antenna

Type:	LTE dual antenna
Cable:	2 m LL 100 mit SMA male connector
IP code:	IP67

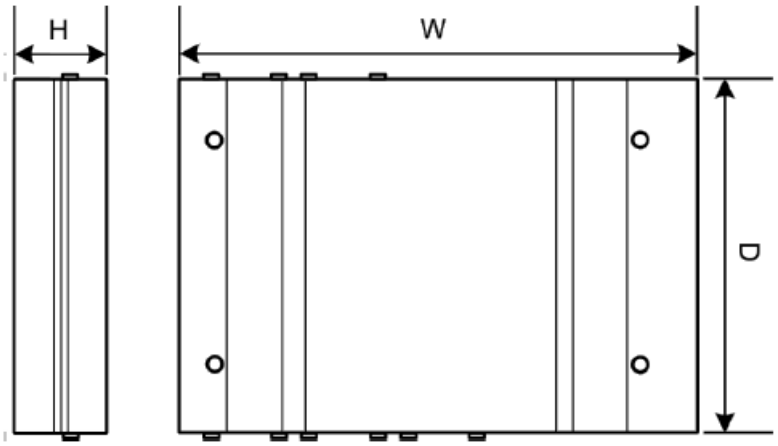
Dimensions, weight

LTE antenna

Width (W):	80 mm
Height (H):	14,7 mm
Depth (D):	74 mm
Installation:	Screw mounting M10x1

Embedded PC

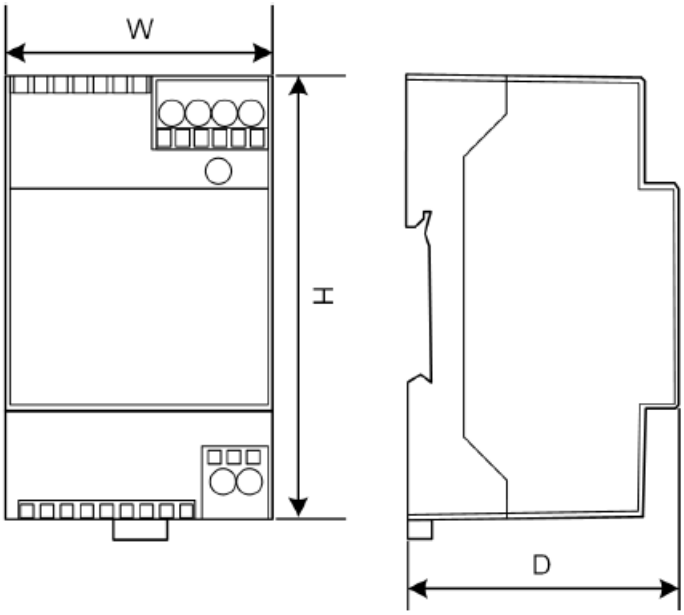
Width (W):	188,5 mm
Height (H):	33 mm
Depth (D):	127,8 mm
Weight:	700 g



Power adapter

Power adapter

Width (W):	54,1 mm
Height (H):	90,9 mm
Depth (D):	55,6 mm
Weight:	200 g



EC Declaration of Conformity

SIMPLIFIED EU DECLARATION OF CONFORMITY
KEBA Energy Automation GmbH Reindlstraße 51 4040 Linz AUSTRIA
Hereby, KEBA declares that the radio equipment type model (*1) is in compliance with Directive 2014/53/ EU. The full text of the EU declaration of conformity is available at the following internet Address: (*2)

Variants						
Example:	**KC-M20-** *I*	**E** *II*	**0L** *III*	**E02-** *IV*	**040-** *V*	**xxxxxx** *VI*

I	Product and series	**KC-M20**	…Device generation (Ke - Contact-M20)
II	Country-specific version	**E**	…Europe
III	Interface – wireless	**0L**	…4G
IV	Interface – wired	**E02**	…Ethernet
V	No. of supported charging points	**020**	…Small – Support of 20 KeContact P30 c-series charging points
		040	…Medium – Support of 4 0 KeContact P30 c-serie s charging points
		200	…Large – Support of 20 0 KeContact P30 c-serie s charging points
VI	Customer options	**xxxxxx**	…Options for individual c ustomer versions, not relevant for EU Decla - ration of Conformity

www.keba.com/emobility-downloads

Information
The CE marking of KEBA Energy Automation GmbH refers exclusively to the installation of the LTE modem and the SSD as well as the composition of the system components.

KEBA Energy Automation GmbH Reindlstraße 51 4040 Linz / Austria
www.keba.com

Document: V 1.01
Document No.: 124500
Pages: 294

KEBA Energy Automation GmbH Reindlstraße 51, 4040 Linz, Austria, **www.keba.com/emobility**
+43 732 7090-0, +43 732 7309-10, **kecontact@keba.com**
For information about KEBA and our subsidiaries please look at **www.keba.com**.

Brief instructions V1.01

Documents / Resources

	KEBA M20 Large Scale Load Management Controller [pdf] User Guide M20 Large Scale Load Management Controller, Large Scale Load Management Controller, Scale Load Management Controller, Load Management Controller, Management Controller, Controller

References

- eMobility | Charging the future | KEBA
- Downloads | KEBA