

## KeContact Integration of external meters

The charging station can read out the measured values from external meters via Modbus TCP. This allows an intelligent calculation of the charging current provided to the vehicle, and the charging process is optimized. The measured values that are read out are included in the charging current specification. The following graphic shows the schematic structure of the system.

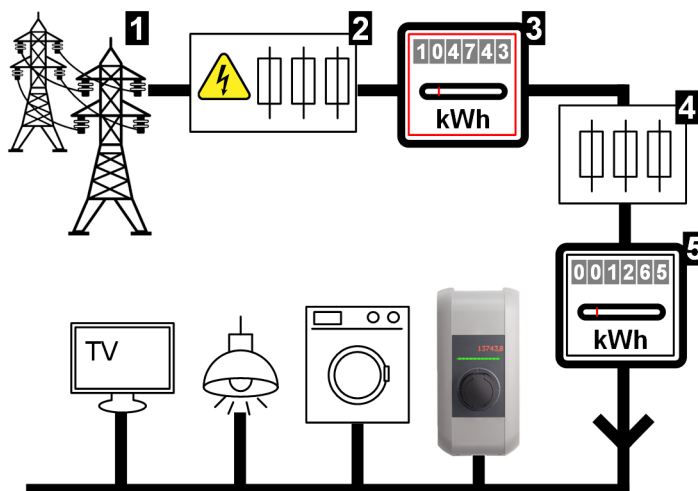


Fig. 1-1: Modbus TCP system overview

<b>1</b> ... Public power grid	<b>2</b> ... Pre-meter circuit breaker (high-capacity fuse, line circuit breaker, etc.)
<b>3</b> ... Electricity meter of the network operator	<b>4</b> ... Post-meter circuit breaker
<b>5</b> ... External meter (house connection meter)	

### Information

*The illustration provides an exemplary system overview and does not include all the necessary auxiliary devices required for safe operation of the system (e.g. line circuit breaker, residual-current device, etc.).*

## Domestic connection monitoring (Domestic Connection TCP Monitoring)

By means of the domestic connection monitoring, the charging vehicle can be dynamically provided with the available charging current, depending on the remaining consumers on the house connection. This ensures that the domestic connection safety device is not overloaded, and that it is not always necessary to select a lower charging capacity than would be possible with the vehicle and the installation.

The charging station can read out the current total energy supply from the power grid via meter **5**.

The charging station can use this information to regulate the maximum charging current for a charging network such that the maximum current and power defined in the web interface is not exceeded (for details, see [1.3 Settings](#)).

## Connection

When connecting external meters please note the following:

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- The connection is made via the Ethernet1 connection X4 (LSA+®). For this, the meter must be in the same network as the charging station.
- The meter must be connected with the same phase sequence as the charging station, so that the house load calculation and the charging optimization are carried out correctly. If it is necessary to connect the charging station beginning with phase 2 in order to better distribute the phase loads, the meter must also be connected beginning with phase 2.

### Supported meters

The following counters can be read out from the charging station with the help of a **Janitza ProData 2 datalogger**.

Manufacturer	Model
ABB	B23 312-100
B-control	EM300
Herholdt	ECSEM113
Janitza	B23 312-10J
Janitza	ECSEM114MID
Siemens	7KT1260

The following meters can be read out directly from the charging stations using Modbus TCP.

Manufacturer	Model
KEBA	KeContact-E10
ABB	M2M
ABB	M4M
Carlo Gavazzi	EM 24
Fronius	Smart Meter TS 65A via Symo GEN24
Gossen Metrawatt	EM228X
Gossen Metrawatt	EM238X
KOSTAL	Smart Energy Meter
Siemens	7KM2200
TQ Systems	EM420
TQ Systems (B-control)	EM300 LR (EM420 compatible)
TQ Systems (B-control)	EM300 LRW (EM420 compatible)

### Information

*Detailed information about the meter installation can be found in the installation instructions of the meter manufacturer.*

### Settings

The Modbus TCP feature is disabled by default. If an external meter with a Modbus TCP network interface has been installed in the system, it must be configured in the web interface in advance.

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The maximum permitted charging current per phase and the maximum permitted charging capacity for the entire charging network can be configured in the web interface (under Configuration > External TCP Meter).

If the connection to the external meter gets interrupted, you can use the web interface to configure the charging capacity at which charging is to continue. If "0" is entered or if the field remains empty, the charging processes are interrupted in the event that the connection to the external meter is interrupted.