PRODUCT INFO

Compatible devices and their configuration for Luqas, the smart energy management module (LQS06SA)



LQS06SA

1. Modbus kWh meter configuration

If the digital meter is difficult to reach or not present, a Modbus kWh meter can be installed on the main supply cable of the installation.
In the wizard you can choose a kWh meter instead of a digital meter. The compatible kWh meters are listed in Annex 5. For TCP/IP, you must enter the IP address of the meter. For meters connected via RTU, you must enter the slave address.

2. Smart Grid ready heat pump configuration

Heat pumps can be controlled more energy-efficiently thanks to Smart Grid contacts. These contacts allow energy to be buffered thermally (in domestic hot water or space heating) or household energy consumption to be spread by temporarily switching off the heat pump. By using an air/water heat pump more optimally during the day, it can operate on average 20% more efficiently and therefore consume less, while also increasing your self-consumption.

The switching of the two relay contacts depends on the type of heat pump, the energy currently generated or consumed, and the setting of the end customer's energy slider (spreading of energy consumption). Not every regime is available for every type or brand of heat pump.

Switched regime	**Switches the heat pump…**
'Off'	off for a maximum of 2 hours. After this, the normal state will be activated for at least 1 hour.
'Normal'	not at all. The normal control of the heat pump is followed.
'Comfort'	to a higher comfort temperature so that energy can be buffered in domestic hot water, space heating or buffer tanks. The heat pump switches to this state when the current injection is higher than the value entered in the comfort – normal state configuration.
'Boost'	to a maximum temperature so that energy can be buffered as much as possible in domestic hot water or buffer tanks. The heat pump switches to this state when the current injection is higher than the value entered in the boost – comfort state configuration.

In the configuration wizard, the power of each regime must be entered.

When switching up per mode, for example from 'OFF' → 'Normal', 'Normal' → 'Comfort' or 'Comfort' → 'Boost', the module remains 5 minutes in normal and boost mode and 10 minutes in comfort mode. When switching down, each state remains active for at least 1 minute.

When there is no home battery, the system switches back from boost to comfort or from comfort to normal as soon as the net consumption exceeds 50% of the power entered for the respective step. When a battery is present, switching back will occur as soon as there is net energy consumption from the grid.

3. Configuration of relay contacts for devices without Smart Grid

Luqas has 2 **relay** outputs. You can use these to control a heat pump with Smart Grid contacts, or use the relays separately, for example to control a water heater.

If you want to use the two relays to switch a water heater, storage heater, PV contact, socket or other device, select "no" in the Luqas wizard when asked whether you want to use the relays as Smart Grid contacts.

Each relay has an optional timer function. This is a virtual clock connected in parallel that forces the contact on within the defined time. For example, if there is no injection during the day, you can use this clock to force the relay contact on between certain hours to switch on the water heater.

4. Charging station configuration

! Charging stations with a "Phoenix contact" controller have the following reserved TCP/IP addresses. Always avoid this IP range when addressing the charging station concerned.
- 192.168.4.x
- 192.168.5.x

In case of an IP conflict, change the IP address and restart the charging station.

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Mennekes Amtron Professional

By default, the Mennekes Amtron Professional can be reached via the network at IP address **192.168.124.123 .** The IP address can also be found using the 'charge point manager'. This is software from Mennekes: https://www.mennekes.be/emobility/service/charge-point-manager/

To allow the charging station to be controlled by the energy management module, it must be configured as follows:

- Go to the web interface of the charging station via the browser at the aforementioned IP address
- Log in with username: 'operator' and the password given on the commissioning document supplied with the charging station.
- Go to 'Load management'
- Switch 'Modbus TCP server for energy management systems' ON.
- No other settings need to be changed for the energy management module to function correctly. If desired, settings such as the maximum current per phase, authorisation or network can be configured in the web interface of the charging station.

Mennekes Amtron Compact 2.0s and Amtron 4You 310

! The factory default slave ID of the Amtron charging station is "50"

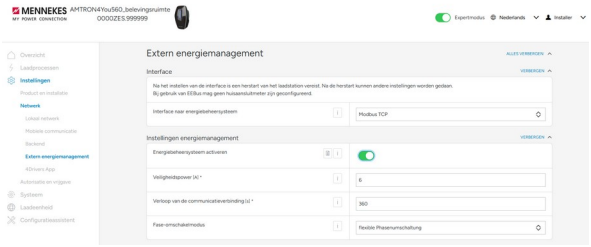
The Mennekes Amtron Compact and 4You 310 charge points must be connected to Luqas via Modbus RS485.
Set DIP switches 4 and 5 of S1 in the charging station as shown in the figure below to allow the charging station to be controlled by Luqas.



Mennekes Amtron 4You 510/560 / 4Business

To allow the charging station to be controlled by the energy management module, it must be configured as follows:

- With the charging station powered, press the top and third buttons simultaneously until the front panel lights up green for a few seconds.
- Once this is done, the Wi-Fi network of the charging station can be found on a PC or mobile phone
- Connect to the charging station via Wi-Fi. The SSID and code can be found on the sticker sheet supplied with the charging station.
- Browse to 192.168.170.10
- Log in with the installer login supplied with the charging station.
- You can also log in via the 4Installers App.
- In the menu, go to 'Settings' – 'Network' – 'External energy management' and activate 'Energy management system'.

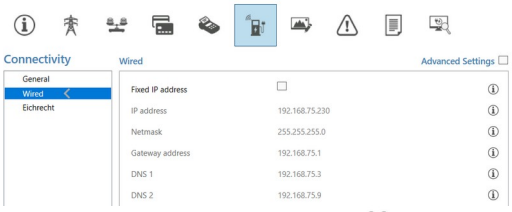


- Set the parameter 'Safety power' to 6 amperes.
- A static IP address can be set via the menu 'Settings' – 'Network' – 'Local network'
- Save and restart the charging station via the interface

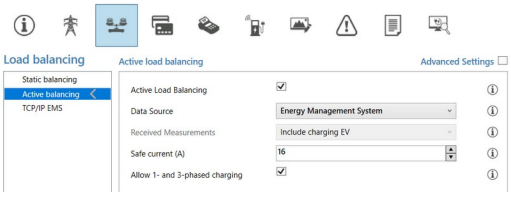
Alfen

To allow the charging station to be controlled by the energy management module, the charging station must also be configured as follows:

- Install the ACE service installer (alfen.com)
- Enter the username ("Post") and password ("prEze8")
- The application opens and will ask for the 'user level' and password. Select 'owner' and enter the password found on the inside of the charging station cover plate.
- Always make sure the charging station has the latest firmware version. Under the "General" tab you will find the "Upload firmware" button. The Alfen firmware files can be downloaded from the Alfen website: Release notes - Firmware updates NG-Platform (NG-910 / NG-920) - Installation - Alfen Knowledge Base. Switching between 1-phase and 3-phase charging is supported from firmware "NG9xx 4.5.0".
- On the left-hand side, the charging station is detected automatically and its IP address is displayed. This IP address must be entered in SMIII or the configuration wizard.
  !Preferably change this!: A fixed IP address, outside the DHCP range, can be set in the 'wired' tab.



- Select the 'Smart Charging' tab
- Select the 'Active Load balancing' checkbox



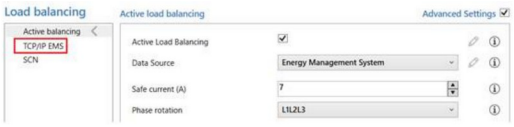
- Set 'Data Source' to 'Energy Management System'
- The 'Safe Current' is the current allowed if the charging station loses its network connection. Alfen advises setting this to a minimum of 6A.

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- Check that the checkbox next to “Allow single-/multiphase charging is ticked. This allows Luqas to dynamically switch the phase from 1-phase to 3-phase or vice versa.
- In the additional TCP/IP EMS tab, you can also specify whether 1 charging station is controlled individually (‘Socket’) or multiple charging stations via 1 master charging station (‘SCN’)
-



-
- Save the settings and restart the charging station so that it can apply its settings. To do so, click the indicated symbol:



Veton

The Veton charging station can be reached on the network via the IP address ev3000.local . No further configuration is required on the charging station itself.

Blitzpower

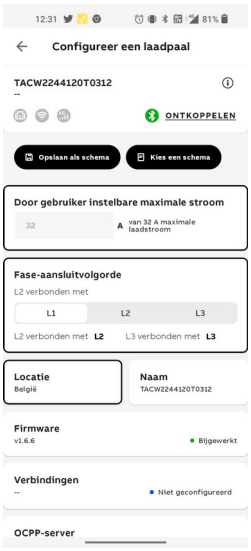
The Blitzpower charging station can be reached on the network via the IP address ev3000.local. No further configuration is required on the charging station itself.

ABB

Follow the steps below to configure an ABB charging station. The charging station must be connected to the local network via the primary Ethernet port (for devices with MID display) or via the Modbus RS485 connection (for devices without MID display).

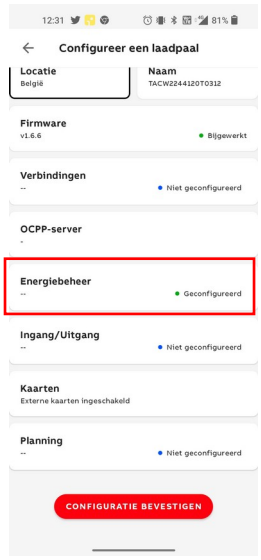


- Download the ‘Terra Config 2.0’ app from the Google Play Store or Apple App Store.
- Log in to the app and connect to the charging station via Bluetooth or Wi-Fi (the smartphone must be connected to the same Wi-Fi network as the charging station).
- Then enter the PIN code supplied with the charging station. You should now be connected to the charging station and be able to change settings.
- Go to the configuration page of the connected charging station and check that the firmware version is at least v1.6.6. You can update it via the app.



- Click ‘Energy management’ at the bottom to configure the control (**1**). Set the installation parameters and select ‘Modbus’ (**2**).

1



2

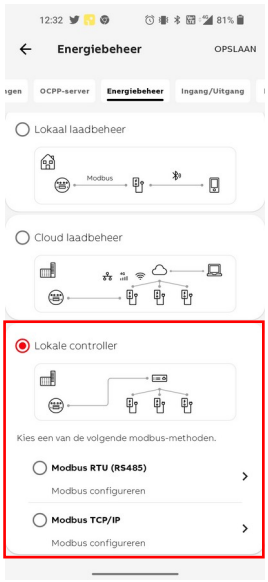


- Select ‘Local controller’ and choose Modbus RTU or Modbus TCP/IP depending on the selected connection.

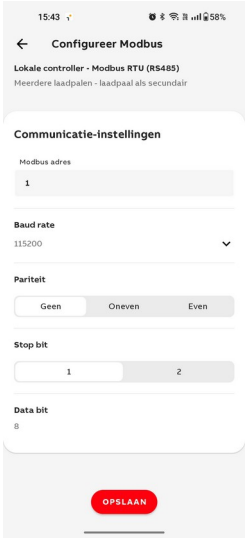
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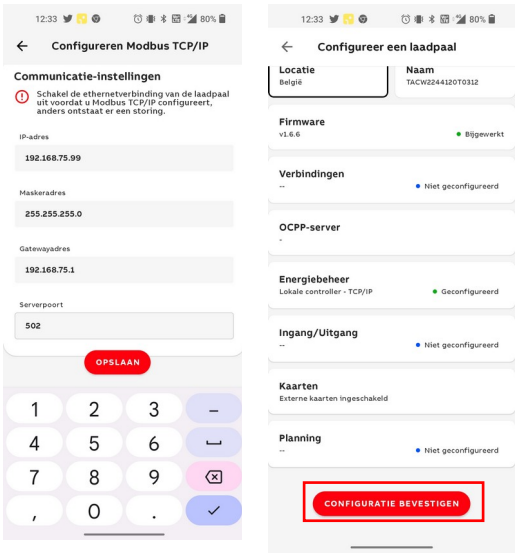
Compatible devices and their configuration for Luqas, the smart energy management module (LQS06SA)



- If you choose Modbus RTU, you must adjust the settings on the next page: baud rate 115200, no parity, stop bit 1. If two ABB charge points are connected via Modbus RTU, use Modbus address ‘1’ for the first charge point and Modbus address ‘2’ for the second charge point.



- If you choose Modbus TCP/IP’, you must enter a fixed IP address for the charging station on the next page (1). Make sure that ‘LAN’ is deactivated. Choose an available IP address within the local network, enter the ‘Mask address’ (255.255.255.0), enter the ‘Gateway address according to the specified IP address (same first 3 numbers, last number ‘1) and enter ‘Server Port’ 502. Click save and then ‘confirm configuration’ (2).



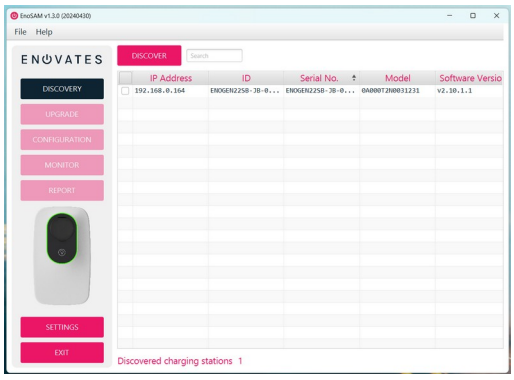
1 2

- Restart (power restart) the charging station. The charging station is now correctly configured.
- Use the entered IP address in the configuration wizard of the Luqas module if Modbus TCP/IP was chosen.

Enovates

Follow the steps below to configure the Enovates charging station. The charging station must be connected to the local network via the primary Ethernet port.

- Open the Enovates Enosam Configuration tool on a PC connected to the same network as the charging station.
- Click “Discover” to find the charging station.

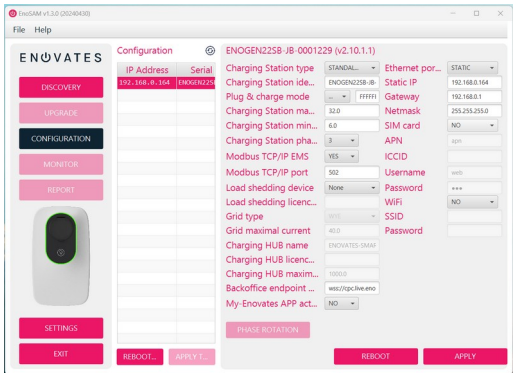


- Select the charging station and click ‘Configuration’.
- Under ‘Modbus TCP/IP EMS select ‘YES’, check that the Modbus TCP/IP port is ‘502’ and set a static IP address. This address must then be entered in the Luqas configuration wizard.
- Click ‘Apply’ and restart the charging station via the ‘Reboot’ button.

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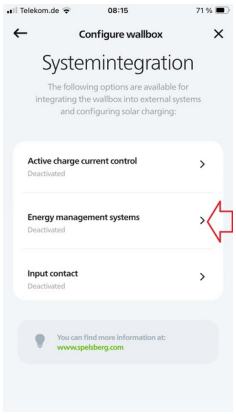
Compatible devices and their configuration for Luqas, the smart energy management module (LQS06SA)



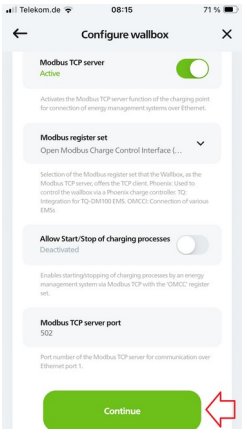
Spelsberg

The Spelsberg charging station must be connected to the local network via the LAN connection socket LAN-1. The charging station can be configured via the Spelsberg Wallbox app.

- Open the app and, for the initial installation, select ‘I am an electrician’ and activate service mode. Then select ‘Configure wallbox’
- Scan the QR code on the inside of the quick start guide and follow the instructions in the app for further configuration.
- Go to ‘Advanced Settings’.
- Go to ‘Network’ and activate expert settings.
- Set a fixed IP address after activating ‘Static IP address’ and confirm.
- Return to the configuration menu after configuring the IP address and click ‘Next’.
- Configure ‘system integration’ and go to ‘Energy management systems’



- Click Modbus TCP and activate the Modbus-TCP server, select Modbus register set ‘Open Charge Control Interface” and set Modbus TCP server port 502.



- Finally, set a safe charging current in case of connection loss: e.g. 6-8A

emosS

By default, the emosS charging station can be reached via 192.168.5.1. Browse to this address and configure the Phoenix Contact controller. This can be done by importing a configuration file or manually:

- Log in with ID: ‘Operator’, password ‘Operator’
- Select the charge point under ‘Charging Park’, ‘Charging Stations’ and create a configuration.
- Under ‘Energy Meter Type’, select the type ‘Phoenix Contact EEM-EM357’.
- Under ‘Load management’, do not set a measuring device and do not select a charge point.
- Under ‘System Control’, ‘Network’, configure a static IP address. Restart the charge point at the end of the configuration.

Snigg

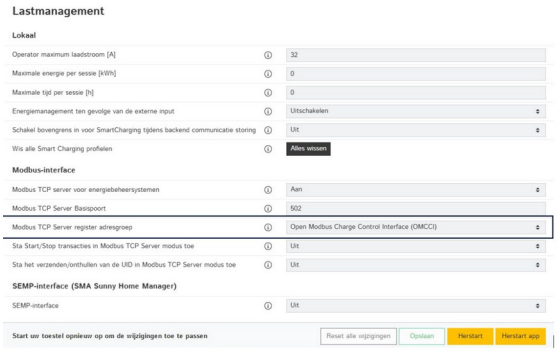
By default, Snigg charge points can be reached at IP address 192.168.123.123.
Follow these steps to configure the charge point:

- Browse to the IP address of the charging station and log in with the manufacturer's credentials
- Go to ‘Load management’
- Set the parameter ‘Modbus TCP Server register address group to ‘Open Modbus Charge Control Interface (OMCCI)’
- Click save and restart the charging station

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e-RS

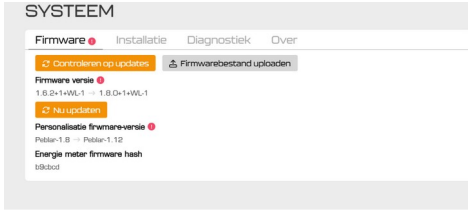
- Browse to the IP address of the charging station
- Log in with ID “operator” and password “Operator”
- Go to “load management”
- Set the setting “Modbus TCP server for energy management systems to “on”.
- Set the parameter “Modbus TCP Server register address group” to “Open modbus charge control interface” (OMCCI).
- Click save
- Restart the charging station

Peblar

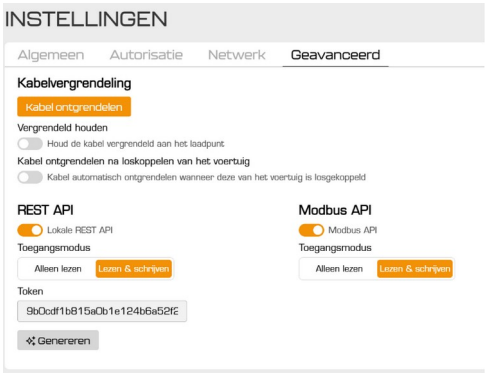
- Connect via Wi-Fi (SSID of the Peblar hotspot). The SSID and default password are on the flyer/label of the charging station



- Log in via the browser and go to “settings”
- Go to ‘Network’ and expand ‘Ethernet’ to change the IP mode to ‘Manual’.
- Choose an IP address outside the DHCP range. This address is required in the Luqas configuration wizard.
- Go to System – Firmware and check for updates



- Then go to “Advanced” and check that “Modbus API” is active and the “access mode” is set to “Read & write”.



- Go to the Luqas wizard to add the charging station to Luqas using the IP address of the charging station.

Easee Charge UP/Max

!Firmware updates are performed fully automatically in the background via the cloud. There is no manual “update button” available in the Easee App.

By default, the charger is set to phase mode “Automatic” (found in the app under “charger settings”).
This setting must not be changed, as it enables dynamic switching between 1-phase and 3-phase charging.

- This charging station communicates via REST API.
- Download the Easee Installer App

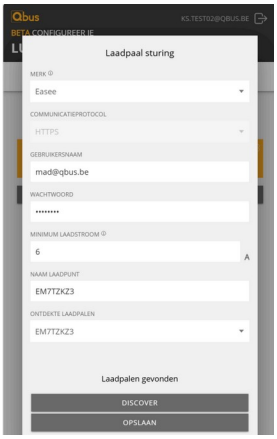


- Log in or create an account
- After logging in, tap the round Bluetooth icon to connect to your phone.
- Connect the charging station to your Wi-Fi network or mobile network.
- Once the charging station is on the network, go to the Luqas configuration wizard.
- Enter the details you used to log in to the Easee app: username, password and minimum charging current.

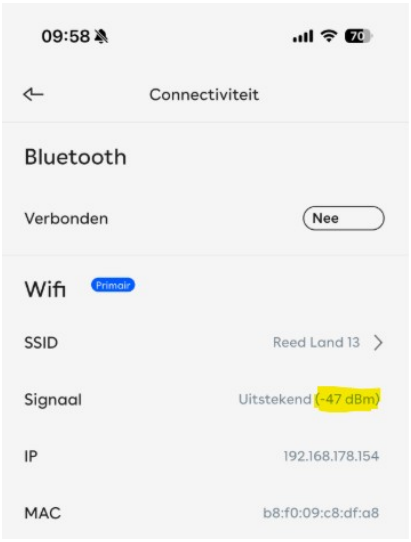
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- Click “Discover”
- The charging station is now found
- Click “Save”. The charging station is now available in Qbus Control.
- ! This charging station works via Wi-Fi or 4G; a stable Wi-Fi or 4G signal is required for correct operation. If in doubt, open the Easee Installer App or the Easee user app and check that the signal strength is better than –60 dBm. (-30 to –50 dBm = Excellent; -50 to –60 = good)

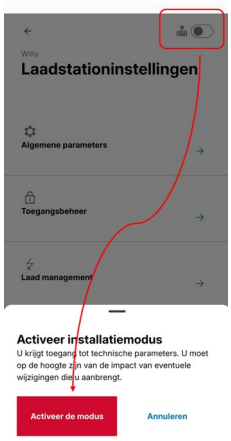


Hager Witty Plus

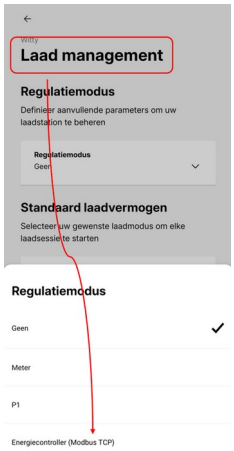
- This charging station communicates with LQS via Modbus TCP/IP. The charging station uses a fixed IP address for the connection with Luqas/Luqas Charging Hub.
- Make sure Bluetooth is switched on on your mobile phone and that you are within range of the charging station. Bluetooth is required for the initial setup and configuration.
- Download the Hager Charge App



- Make sure the network connection method is set correctly (WI-FI). In the app under “charging station settings” -> general parameters -> network settings.
- Put the charging station in pairing mode by holding a charging card (the black one supplied with the charging station or another) in front of the RFID reader for 7 seconds. Follow the instructions in the app.
- In the app, go to “charging station settings” and activate “installation mode”.



- Go to load management and under Regulation mode choose ‘Energy controller (Modbus TCP)’



- In the charging station settings menu, go to “general parameters” and then to IP settings to check the IP address and change it to a fixed IP address.

Zaptec Go2

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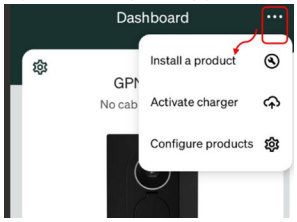
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- This charging station communicates via REST API.
- You need the username and your password to connect the charging station to Luqas/Luqas Charging Hub.
- Make sure Bluetooth is switched on on your mobile phone and that you are within range of the charging station. Bluetooth is required for the initial setup and configuration.
- By default, the Zaptec Go2 is set to a 4G connection.
- Download the Zaptec app



- Open the Zaptec app and tap the three-dot icon.



- Select “Install a product” in the menu that opens
- Select “Zaptec Go”.
- Scan the QR code on the front of the charger.
- Enter the PIN code
- Select “add charger”
- Select “new installation”
- Enter the requested details: name, location, connectivity, electrical grid, charging circuit phase, current limit.
- Check that the Zaptec is online and has a good connection. To do so, select “Configure products”.
- If the charger is offline, you do not have a good 4G connection. Click “Switch to WI-FI” to connect your charger to your Wi-Fi network.

Firmware upgrade. Always make sure the charging station has the latest firmware version.

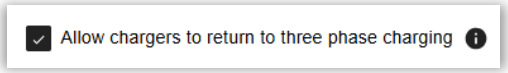
- Via the Zaptec App: Go to “advanced settings” and click “update charger”. The Zaptec app will send the new firmware to the charging station.
- Via the Zaptec Portal: Navigate to “installations” and select the charging station. Go to “firmware” and click “update” if new firmware is available.

Activating dynamic switching between 1-phase and 3-phase charging;

- This setting is only available via the Zaptec Portal
- In the portal, go to “Installations”
- Select the charging station
- On the charging station page, go to the tab “settings
- Select “Power management”
- Set “3 to 1 phase switch current” to “6” so that the charging station only switches back to single-phase at the minimum charging current for the vehicle.

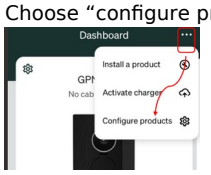


- Tick the checkbox next to “Allow chargers to return to three phase charging”



Zaptec Pro

- This charging station communicates via REST API.
- You need the username and your password to connect the charging station to Luqas/Luqas Charging Hub.
- For detailed instructions, go to: Zaptec Help Centre
- A Zaptec Pro charging station is added via the Zaptec Portal.
- Once the charging station has been added in the portal, you can configure it via the Zaptec app.
- Choose “configure products”



- Connect the charging station to the network
- Confirm the electrical grid and settings
- Check that the Zaptec is online and has a good connection. To do so, select “Configure products”.
- If the charger is offline, you do not have a good 4G connection. Click “Switch to WI-FI” to connect your charger to your Wi-Fi network.
- Assign the installation owner in the Zaptec portal

Firmware upgrade. Always make sure the charging station has the latest firmware version.

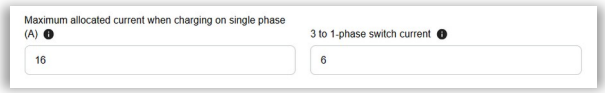
- Via the Zaptec App: Go to “advanced settings” and click “update charger”. The Zaptec app will send the new firmware to the charging station.
- Via the Zaptec Portal: Navigate to “installations” and select the charging station. Go to “firmware” and click “update” if new firmware is available.

Activating dynamic switching between 1-phase and 3-phase charging;

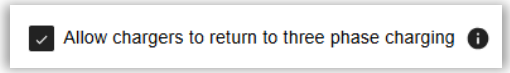
- This setting is only available via the Zaptec Portal
- In the portal, go to “Installations”
- Select the charging station
- On the charging station page, go to the tab “settings
- Select “Power management”
- Set “3 to 1 phase switch current” to “6” so that the charging station only switches back to single-phase at the minimum charging current for the vehicle.

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Compatible devices and their configuration for Luqas, the smart energy management module (LQS06SA)



- Tick the checkbox next to “Allow chargers to return to three phase charging”



5. Inverter configuration

Huawei

! When controlled by Luqas, the Huawei cannot be used in combination with Huawei SmartGuard.

Before starting the configuration, make sure the latest firmware is installed (see also Annex 4 for more info). A Wi-Fi dongle (type SDongleA-05) is always required.

For detailed instructions, go to:
https://support.huawei.com/enterprise/en/doc/EDOC1100387520?section=k004

- Install the Huawei Fusion app (via Huawei App Gallery) and log in with your Fusion account
- Connect to the device via ‘Device’, ‘Device commissioning’, by scanning the QR code and pairing with the WLAN of the device.
- Log in as ‘installer’ and enter the password. (default: 00000a)
- Then update the inverter via ‘Maintenance’ and ‘Upgrade’. Check for upgrades several times.
- Go to ‘Settings’, ‘Communication configuration’, ‘Parameter settings, ‘Modbus TCP’, click ‘Connect’ and enable it.
- Go to ‘Settings’, ‘Communication configuration’ and ‘Inverter-connected router settings’. Here you can disable DHCP for the WLAN connection and set a fixed IP address. This IP address is required in the Luqas configuration wizard.
- Restart the inverter.

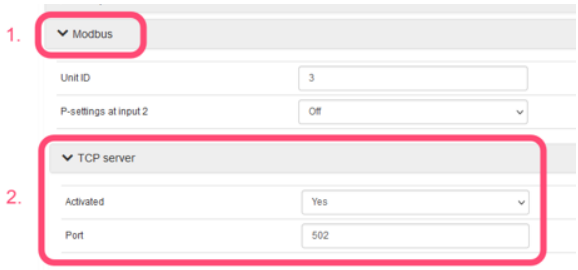
SMA

! For intelligent control, the SMA energy meter or SMA Sunny Home Manager is required. Verify that it is present.

! Communication between Luqas and the SMA inverter takes place via Modbus TCP. Modbus TCP is NOT enabled by default on SMA Tripower Smart Energy inverters.

Here are the steps to activate Modbus TCP;

- Stand next to the inverter and search for Wi-Fi networks with your smart device.
- Select the SSID of the SMA product in the list of networks found and connect using the password shown on the label.
- Alternatively, you can also connect via an Ethernet cable. Make sure your PC is in the same network as the IP of the inverter (IP shown on the label).
- Open the web browser of your smart device and enter “https://smalogin.net” in the address bar.
- Log in with the “installer” user rights
- Go to “device parameters” -> “external communication” –> “Modbus” -> “TCP Server”.
- Set “Activated/Enabled” to “Yes”
- Check that the port is set to “502”.



- Change the IP settings to a static IP for connection to the local network.
- Click “Save/Save all”.

As a final step, check that the inverter firmware is up to date.

Solax

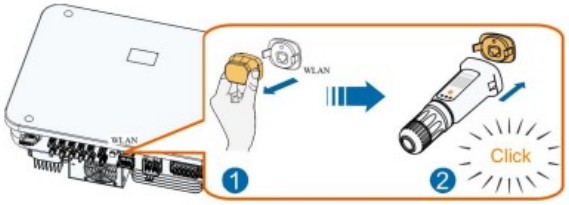
For the Wi-Fi or LAN connection, use the Pocket Wifi+LAN dongle (product 1040060001)

- Connect to the Wi-Fi network of the inverter and browse to 192.168.10.10
- Log in with user ID ‘admin’ and the password stated on the QR code of the dongle
- Go to the static tab and complete the SSID information. Set the IP address to a fixed address
- Use the fixed IP address in the Luqas configuration wizard.

Sungrow

! For intelligent control, the Sungrow smart energy meter is required. Verify that it is present.

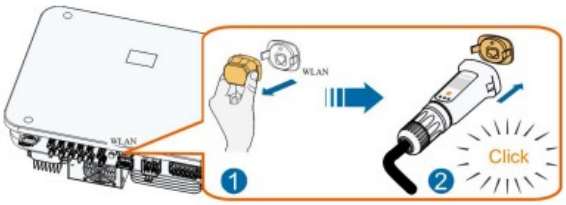
! The inverter is supplied with a communication module called “WiNet-S2” for direct Ethernet communication or Wi-Fi communication.



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PRODUCT INFO

Compatible devices and their configuration for Luqas, the smart energy management module (LQS06SA)



Connect via Wi-Fi (hold the red button on the WiFi dongle for a few seconds to activate the Wi-Fi connection), or via LAN (IP address on the inverter sticker. Default IP: http://11.11.11.1 or 102.10.100.254)

- Browse to the local web server and make sure you have access as installer/administrator.
- Go to “settings” -> “Communication parameters” -> choose the protocol: Modbus/Modbus-TCP.
- Choose port: 502
- Go to IP settings and set a static IP, gateway and subnet for connection to the local network.
- Confirm the settings.
- Check that the firmware is up to date.

Sigenergy

! The Sigen Power Sensor / meter (or Gateway) is required for control. Verify that it is present.

! Communication between Luqas and the Sigenergy inverter takes place via Modbus TCP. Modbus TCP is disabled by default. Make sure the inverter and the Luqas are on the same network and that port 502 is open.

Commissioning:

- Complete the commissioning via the ‘Add New System’ wizard (Basic – Devices – Parameters – Check – Confirm).
- Update the firmware in step 2 (‘Download and Install’).
- In step 3, choose the grid code for Belgium: C10C11 (Synergrid C10/11).

Activating Modbus TCP:

- Open the mySigen app and go to ‘System’ → the three dots next to the installation name → ‘System Settings’.
- Enable ‘Remote EMS Scheduling Enable’.
- Go to the ‘Device’ tab → ‘SigenStor Settings’, switch ‘Modbus TCP Server Enable’ on and save (top right). Port = 502.
- Alternative path: ‘System’ → ‘Devices’ → ‘SigenStor’ → ‘Operation’ → ‘Parameter Settings’ → ‘Modbus Settings’.

Network and IP address:

- Preferably connect the inverter via Ethernet to the same network as the Luqas.
- Look up the IP address in the mySigen app via the device settings → ‘Connectivity’ → ‘Ethernet’.
- Set a static (fixed) IP address (DHCP off). Otherwise, the Luqas will lose the connection after a restart.
- Use this IP address in the Luqas configuration wizard.

Verification:

- Check that the firmware is up to date.
- Check that the meter is connected (no ‘Power Sensor Connection’ error message).
- Check that the IP address is reachable on port 502.

Solis

! The link with Luqas runs via Modbus TCP over the local network, through a compatible Solis datalogger stick. The S2-WL-ST (WiFi/LAN) supports Modbus TCP and is recommended. The S3-WIFI-ST has no local Modbus (SolisCloud only) and cannot be used.

! Only one Modbus master can be active at a time. Local reading may interrupt reporting to SolisCloud.

The inverter/stick and the Luqas must be on the same network. The default Modbus address (slave ID) is 1.

- Insert the compatible stick (preferably S2-WL-ST) into the COM port of the inverter.
- Connect the stick to the network (preferably via LAN/Ethernet).
- Look up the IP address of the stick in the router’s DHCP client list (search by the stick’s serial number, ‘Solis’ or ‘IGEN’).
- Configure a permanent, static DHCP lease in the router so that the IP address does not change.
- Use this IP address in the Luqas configuration wizard.
- Check that the inverter firmware is up to date.

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PRODUCT INFO

Compatible devices and their configuration for Luqas, the smart energy management module (LQS06SA)

Annex 1: Heat pumps or heat pump water heaters with dual Smart Grid contact

Brand	Type	Relay connection 1	Relay connection 2
Alpha Innotec	SW H3 • SWC(V) H1/H3 • WZS(V) H3 • PWZS(V) H1/H2/H3	IN5	IN6
	LWCV • LWDV • LW(A)V • LW(A)HV • LWAV+ • Paros • LWP	IN3	IN4
Atlantic	Alféa Extensa A.I.	EX1 on X11 via LQS relay, loop through to L-5	EX2 on X11 via LQS relay, loop through to L-5
	Alféa Excellia A.I.	EX1 on X11 via LQS relay, loop through to L-5	EX2 on X11 via LQS relay, loop through to L-5
Bosch	All heat pumps	I1	I4
Buderus	All heat pumps	I1	I4
Bulex	GeniaAir Tek HA x-7.2	S21	X41/FB + 0(⊥)
	GeniaAir Mono HA x-6	S21	X41/FB + 0(⊥)
	GeniaAir Split HA x-5	S21	X41/FB + 0(⊥)
CTC	All heat pumps	G33 and G34 (relay K24 – Smart A)	G73 and G74 (relay K25 – Smart B)
Daikin	Altherma 2 CB series[1]	LAN adapter: X1A/1+2	LAN adapter: X1A/3+4
	Altherma 3 D-series [1]	LAN adapter: X1A/1+2	LAN adapter: X1A/3+4
	Altherma 3 E-series	X5M/9+10	X5M/5+6
	Altherma 3 RF – EHVH04S18E	X5M/9+10	X5M/5+6
	Altherma 3 RF - EHFH03S18DJ3V [1]	X5M/9+10	X5M/5+6
Ecoforest	ecoAir with hydrokit indoor unit All ecoGeo devices	SG signal2: DI2 (configure as NO)	SG signal1: DI1 (configure as NO)
Hitachi	Yutaki, Yutampo and Hisense Hi-Therma models	SG ready Input 1	SG ready Input 2
Itho Daalderop	HP-S	K2	ES
LG	Therma V Air/Water	TB_SG1	TB_SG2
Midea	M Thermal Arctic	SG contact	EVU contact
	Swan 2	SG contact	EVU contact
Mitsubishi	Ecodan C-series generation R2 (e.g. EH5C-E**CR2**)	TBI.3 IN11	TBI.3 IN12
	Ecodan D-series (e.g. EHSE-YM9E**D**)	TBI.3 IN11	TBI.3 IN12
	Ecodan E-series (e.g. ERST20D-VM6**E)**	TBI.3 IN11	TBI.3 IN12
Nibe	All heat pumps	Connect and assign to AUX contact	Connect and assign to AUX contact
Panasonic	All A2W	DI1 via optional board CZ-NSxP (x=4, 5, 6 or 7)	DI2 via optional board CZ-NSxP (x=4, 5, 6 or 7)
Stiebel Eltron	HPG-I (D/C), HMS, WPL IKCS, HSBC 180, HSBC 200 S, HSBC 300 Cool Required: WPM system manager and ISG module	X1.13.3 on Stiebel WPM system manager	X1.13.1 on Stiebel WPM system manager
Thermastage	Thermastage Compact 05-11	EX1	EX2
	Thermastage Compact 13-16	EX1	EX2
Thermia	Atlas	BM board: D21 (408) or EM3 board D95 (408)	BM board D22 (409) or EM3 board D96 (409)
	Calibra	BM board: D21 (408) or EM3 board D95 (408)	BM board D22 (409) or EM3 board D96 (409)
	Mega	BM board: D21 (408) or EM3 board D95 (408)	BM board D22 (409) or EM3 board D96 (409)
	Athena	BM board: D21 (408) or EM3 board D95 (408)	BM board D22 (409) or EM3 board D96 (409)

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Compatible devices and their configuration for Luqas, the smart energy management module (LQS06SA)

Vaillant	aroTHERM pure /7.2 (uniTOWER /7.2)	S21	X41/FB + 0(⊥)
	aroTHERM plus /6 (uniTOWER VIH /6 / VWZ MEH 97)	S21	X41/FB + 0(⊥)
	aroTHERM /5	S21	X41/FB + 0(⊥)
	flexoCOMPACT /4	S21	X41/FB + 0(⊥)
	flexoTHERM /4	S21	X41/FB + 0(⊥)
	aroTHERM VWL /2	EVU	ME
Viessmann	All Vitocal heat pumps (from 08/2018)	W01C controller: 216.1 One Base controller: 143.4	W01C controller: 216.4 One Base controller: 143.5
Weishaupt	WWP WEM / WWP T300A / WWP WPM	SGR1 – input H1	SGR2 – input H2

(1) LAN adapter module required (version BRP069A61)

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PRODUCT INFO

Compatible devices and their configuration for Luqas, the smart energy management module (LQS06SA)

Annex 2: Heat pumps and heat pump water heaters with single PV contact

Brand	Type	Relay connection
Atlantic	Explorer V4	Relay on A1 and B2, bridge between A2 and B1
	Calypso VM	Black screw terminal I1
	Calypso Split inverter	Connection 11 & 12
Ariston	Nuos Plus Wifi	SIG2 (switch 230V with Luqas relay)
	Nuos Split Inverter Wifi	SIG2 (switch 230V with Luqas relay)
Bosch	Compress 5000DW	‘GND’ and ‘KEIN’
Bulex	MagnaAqua /3 (C)	PV ECO via HP contact (1: heures creuses, heat pump only) or PV MAX via HP contact (2: hygrostat heat pump + heating element)
DC Innova	Aircoheater 2.0	CP contact
Itho Daalderop	WPU	I2 on the control board
Stiebel Eltron	SHP-A 220 series (from 2018)	X3/1 and X0/1, see Stiebel Eltron manual for full diagram
	SHP-F 300 series (from 2018)	X3/1 and X0/1, see Stiebel Eltron manual for full diagram
Thermor	Aeromax Premium Version 4	Relay on A1 and B2, bridge between A2 and B1
Vaillant	aroSTOR VWL B(M)	PV ECO via HP contact (1: heures creuses, heat pump only) or PV MAX via HP contact (2: hygrostat heat pump + heating element)
Viessmann	Vitocal 262-A type T2W	FV/PV contact
	Vitocal 060-A	Multifunctional relay
Wolf	All models	SG/PV contact

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PRODUCT INFO

Compatible devices and their configuration for Luqas, the smart energy management module (LQS06SA)

Annex 3: Compatible charging stations via Modbus TCP/IP, Modbus RS485 or REST API

Charging stations supporting dynamic phase switching 1-phase <-> 3-phase

Brand	Type
Alfen	Eve Single Plus-line
	Eve Double Plus-line
	Eve Single Pro-line
	Eve Double Pro-line
Easee	Charge Up
	Charge Max
Peblar	Peblar Home
	Peblar Business
Zaptec	Go2
	Pro

Alfen: switching between 1-phase and 3-phase charging is supported from firmware NG9xx 4.5.0 onwards.

All compatible charging stations

Brand	Type
ABB	Terra AC Wallbox (Via Modbus RS485 for models without MID display, via Modbus TCP/IP or RS485 for models with MID display.)
Alfen	Eve Single S-line (1)
	Eve Single Plus-line (1)
	Eve Double Plus-line (1)
	Eve Single Pro-line (1)
	Eve Double Pro-line (1)
Blitzpower	Wall Single
	Tower Single
	Push Single
	Wall Double
	Tower Double
	Push Double
Easee	Charge Up
	Charge Max
	Charge Pro
Enovates	ENO one (from firmware v2.10.1.1)
emosS	EVAII and Omni
e-RS	Single & Double
Hager	Witty Plus
Mennekes	AMTRON® PROFESSIONAL Single & Twincharge
	AMEDIO Professional
	Amtron Compact 2.0s
	Amtron 4You 310, 510 and 560
	Amtron 4Business 710 and 730

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Compatible devices and their configuration for Luqas, the smart energy management module (LQS06SA)

Brand	Type
Peblar	Peblar Home
	Peblar Business
Snigg	One Wall
	One Stand-Alone
Spelsberg	Wallbox Smart Pro
Veton	One
	Two
	Wall
	Wall Plus
Zaptec	Go2
	Pro

(1) Load Balancing Active option (905661011) required.
(2) Devices highlighted in green are compatible since January 2026.

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PRODUCT INFO

Compatible devices and their configuration for Luqas, the smart energy management module (LQS06SA)

Annex 4: Compatible inverters via Modbus TCP/IP

Brand	Type	Remark
Huawei	SUN2000 (optionally with Luna battery)	A WLAN/FE (SDongleA-05) dongle is always required. The following products require a minimum firmware version: • SDongleA-05: V100R001C00SPC124 • SUN2000L: V200R001C00SPC115 • SUN2000-M1/M2: V100R001C00SPC139 When controlled by Luqas, the Huawei cannot be used in combination with Huawei SmartGuard.
SMA	Sunny Tripower Smart Energy: STP5.0-3SE-40 STP6.0-3SE-40 STP8.0-3SE-40 STP10.0-3SE-40	For intelligent control, the SMA energy meter or SMA Sunny Home Manager is required. Modbus TCP is NOT enabled by default on SMA Tripower Smart Energy inverters and must be activated (port 502).
Solax	X1-Hybrid G4 (optionally with Solax battery): X1-HYBRID-3.0-D / 3.7-D / 5.0-D / 6.0-D / 7.5-D X3-Hybrid G4 (optionally with Solax battery): X3-HYBRID-5.0-D / 6.0-D / 8.0-D / 10.0-D / 12.0-D / 15.0-D	Use the Pocket Wifi+LAN dongle (1040060001) for communication via Modbus TCP/IP.
Sungrow	1-phase: SH3.0RS, SH3.6RS, SH4.0RS, SH5.0RS, SH6.0RS 3-phase: SH5.0RT, SH6.0RT, SH8.0RT, SH10RT 3-phase: SH15T, SH20T, SH25T	For intelligent control, the Sungrow smart energy meter is required. Communication via the supplied WiNet-S2 communication module (Modbus TCP, port 502).
Sigenergy	Sigenstor … SP – 1-phase hybrid (incl. EC 3.0-6.0 SP) Sigenstor … TP – 3-phase hybrid (incl. EC 5.0-250 TP)	The Sigen Power Sensor / meter (or Gateway) is required for control. Communication via Modbus TCP – disabled by default.
Solis	S5 / S5G – 1-phase hybrid (incl. 1LB, 1AC) S6 – 1-phase hybrid (incl. 1LB 3–18 kW, 1LB AC-coupled) S5G / S6 – 3-phase hybrid (incl. 3HB 5–12 / 12–20 / 50 kW)	Connection via Modbus TCP over the local network, using a Solis datalogger stick: • S2-WL-ST (WiFi/LAN): supports Modbus TCP – recommended • S3-WIFI-ST: no local Modbus (SolisCloud only) – not usable Only one Modbus master at a time.

Devices highlighted in green are compatible since September 2026.

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PRODUCT INFO

Compatible devices and their configuration for Luqas, the smart energy management module (LQS06SA)

Annex 5: Compatible kWh meters via MODBUS TCP/IP or MODBUS RS485

Brand	Type	Settings
Siemens	MODBUS RTU: 7KM PAC2200	Slave ID: 126; Baud rate: 19200; Parity: NO; Stop bit: 2
	MODBUS TCP: 7KM PAC2200	IP address
Socomec	MODBUS RTU: Countis Ex3; Countis Ex4	Slave ID: 5; Baud rate: 38400; Parity: NO; Stop bit: 1
	MODBUS TCP/IP: Countis Ex7; Countis Ex8	IP address
	MODBUS RTU: Countis P04; Countis P34; Countis P44	Slave ID: 5; Baud rate: 38400; Parity: NO; Stop bit: 1
	MODBUS RTU: Countis P14	Slave ID: 5; Baud rate: 19200; Parity: NO; Stop bit: 1
Inepro	MODBUS RTU: Modbus kWh meters	Slave ID: 1; Baud rate: 9600; Parity: EVEN; Stop bit: 1
	MODBUS TCP/IP: Modbus kWh meters	IP address
Phoenix Contact	MODBUS RTU: EEM-MA700 series	Slave ID: 1; Baud rate: 9600; Parity: NO; Stop bit: 1
	MODBUS TCP/IP: EEM-MA700 series	IP address
	MODBUS RTU: EEM-XM series	Slave ID: 1; Baud rate: 9600; Parity: NO; Stop bit: 1
Schneider Electric	MODBUS RTU: iEM3000 series	Slave ID: 1; Baud rate: 19200; Parity: EVEN; Stop bit: 1
Shelly	MODBUS TCP/IP: Pro 3EM	IP address

Devices highlighted in green are compatible since September 2026.

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