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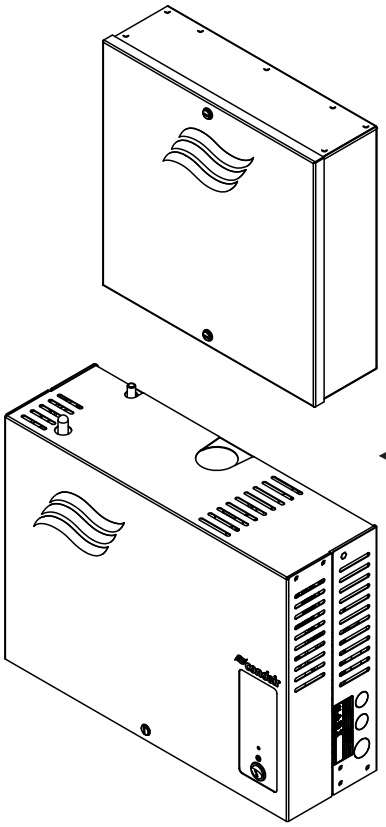
CONTROLS SERIES



***Modbus***
***KNX***
***Amazon Echo***

**READ AND SAVE THESE INSTRUCTIONS**

# SPA CONTROL INTERFACES

Addendum manual for installation and operation
for use with Modbus, KNX & Amazon Echo
(Alexa) interfaces

Humidification and Evaporative Cooling

condair

# Thank you for choosing Condair

| |
|---|
| Installation date (MM/DD/YYYY): |
| Commissioning date (MM/DD/YYYY): |
| Site: |
| Model: |
| Serial number: |

# Contents

# 1 Introduction

## 1.1 Notes on this addendum manual

Subject of this addendum manual is the operation of the Control Delta SPA Control Box or the Condair Omega via the Modbus or KNX interface.

This addendum manual is intended for use by engineers and properly trained technical personnel. Please read this manual thoroughly before installing and configuring the corresponding interfaces.

If you have questions after reading this documentation, please contact your Condair representative. They will be glad to assist you.

**Symbols used in this manual**

**CAUTION!**

The catchword "CAUTION" used in conjunction with the caution symbol in the circle designates notes in this addendum manual that, if neglected, may cause **damage and/or malfunction of the unit or other material assets**.

**WARNING!**

The catchword "WARNING" used in conjunction with the general caution symbol designates safety and danger notes in this addendum manual that, if neglected, may cause to **injury to persons**.

**DANGER!**

The catchword "DANGER" used in conjunction with the general caution symbol designates safety and danger notes in this addendum manual that, if neglected, may lead to **severe injury or even death of persons**.

**Safekeeping**

Please safeguard this addendum manual in a safe place, where they can be immediately accessed. If the equipment changes hands, the documentation must be passed on to the new operator.

If the documentation gets mislaid, please contact your Condair representative.

**Language versions**

This operation manual is available in various languages. Please contact your Condair representative for information.

# 2 For your safety

### General

Every person who has been assigned to install and operate the Modbus or KNX interface of the Condair Delta SPA Control Box or the Condair Omega must have read and understood this operating manual. Knowing and understanding the contents of this addendum manual is a basic requirement for protecting the personnel against any kind of danger, to prevent faulty installation, operation and configuration, and to operate the Condair Delta SPA Control Box or the Condair Omega safely and correctly.

### Qualification of personnel

All work described in this addendum manual **may only be carried out by persons who are well trained and adequately qualified and are authorised by the customer**.
For safety and warranty reasons any action beyond the scope of this manual must be carried out only by qualified personnel authorised by Condair Group AG.

It is assumed that all persons working on the Modbus or KNX interface of the Condair Delta SPA Control Box or the Condair Omega are familiar and comply with the appropriate regulations on work safety and the prevention of accidents.

The Modbus or KNX interface of the Condair Delta SPA Control Box or the Condair Omega may not be used by persons (including children) with reduced physical, sensory or mental abilities or persons with lacking experience and/or knowledge.
Children must be supervised to make sure that they do not play with the Modbus or KNX interface and the Condair Delta SPA Control Box or the Condair Omega.

### Intended use

**The Modbus or KNX interface of the Condair Delta SPA Control Box or the Condair Omega is intended exclusively for controlling and querying of operating values of the SPA control software of the Condair Delta SPA Control Box or the Condair Omega according to the instructions in this manual**. Any other type of application, without the written consent of Condair Group AG, is considered as not conforming with the intended purpose and may lead to the Condair Delta SPA Control Box or Condair Omega becoming dangerous and will void any warranty.
Operation of the equipment in the intended manner requires **that all the information contained in this addendum manual, in the additional manuals to the Condair Delta SPA Control Box or the Condair Omega as well as in the separate documentations of the components used together with the Condair Delta SPA Control Box are observed (in particular all safety instructions)**.

**Danger that may arise from the Condair Delta SPA Control Box or the Condair Omega**

**DANGER!**
**Danger of electric hazard!**

**The Condair Omega is mains powered. Live parts may be exposed when the unit is open. Touching live parts may cause severe injury or danger to life**.

**Prevention**: Before carrying out any work switch off the Condair Delta SPA Control Box or the Condair Omega, disconnect it from the mains via the external electrical isolator(s) and secure electrical isolator(s) in "Off" position against inadvertent switching on.

**Preventing unsafe operation**

If it is suspected that **safe operation of the SPA systems is no longer possible**, the Condair Delta SPA Control Box or the Condair Omega should immediately **be shut down and secured against accidental power-up**. This can be the case under the following circumstances:

– if the Condair Delta SPA Control Box and/or the SPA Display and/or the Condair Omega is/are damaged
– if the electrical installations are damaged
– if the Condair Delta SPA Control Box and/or the SPA Display and/or the Condair Omega is/are no longer operating correctly
– if connections and/or piping are not sealed

All persons working with the Condair Delta SPA Control Box or the Condair Omega must report any alterations to the unit that may affect safety to the owner without delay.

**Prohibited modifications to the unit**

**No modifications must be undertaken** on the Modbus or KNX interface of the Condair Delta SPA Control Box or the Condair Omega without the express written consent of Condair.

# 3 Modbus interface

## 3.1 Technical data

| | |
|---|---|
| Protocol | Modbus RTU |
| Interface | EIA-485 (RS485) (2-wire / GND) |
| Galvanic isolated | No |
| Connection | Plug-in screw terminal 4-pole:<br>24 VDC / Data + / Data - / GND |
| Telegram format | 1 Start bit / 8 data bit / 1 Parity bit / 1-2 Stop bit(s) |
| Data check | CRC according to Modbus RTU specification |
| Modbus address | 1 – 247<br>**Factory setting: 1** |
| Parity/Stop bits | None / 1 Stop bit<br>None / 2 Stop bits<br>odd / 1 Stop bit<br>even / 1 Stop bit<br>**Factory setting: even / 1 Stop bit** |
| Baud rate | 4800, 9600, **19200**, 38400, 57600, 115200 |
| Data format | ABCD: big endian<br>BADC: big endian, swapped<br>CDAB: little endian, swapped<br>DCBA: little endian<br>**Factory setting: ABCD: big endian** |
| Max. number of devices | 32 (according to RS485 specification) |
| Supported Modbus functions | 3 Read Holding Registers<br>4 Read Input Registers<br>16 Write Holding Registers<br>23 Read/Write Multiple Registers |
| Register format | 32-Bit UInt and 32-Bit Float Register |
| Max. cable lengths/ type | 600 m<br>Twisted symmetrical cable with shield, 100-120 Ohm impedance |
| Topology | Line (Daisy Chain) |

## 3.2 Network structure Modbus RTU

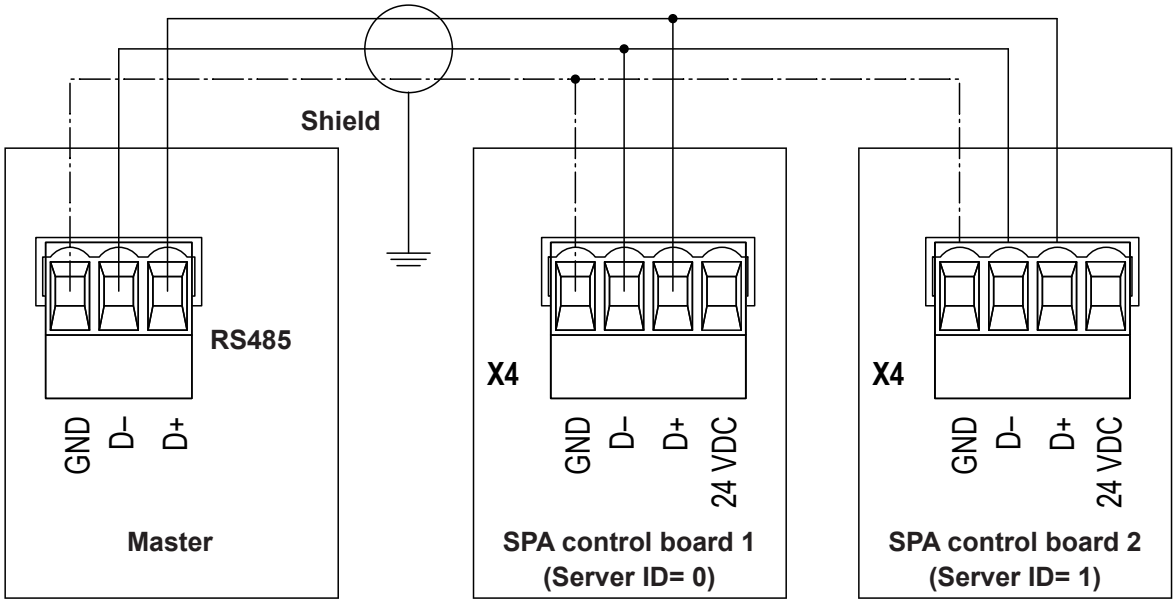



*Fig. 1: Example Modbus RTU Network*

All SPA control boards that are to be controlled must be connected to the master via the Modbus interface according to the wiring diagram above.

– Connect the cable shield on one side with the functional earth
– Connect all GND together
– Install bus line separate from supply voltage
– Topology: Daisy chain
– All devices of the same network need the same settings concerning baud rate and parity
– Every Modbus device address can only be allocated once within the same network.

The Condair Omega or the Condair Delta SPA Control box always acts as a slave. In the master-slave principle, only the master (e.g., control computer) can initiate data transmission. The affected slave (Condair Omega or Condair Delta SPA Control box) responds to this and delivers the queried data to the master or performs the action requested by the master.

## 3.3 Connection and configuration of the Modbus interface

To connect the Modbus interface, proceed as follows:

1. Switch off the Condair Delta SPA Control Box or the Condair Omega via the unit switch. Set the external electrical isolator(s) in the mains supply/supplies to "Off" and secure the electrical isolator(s) in the off position against unintentional switching on.
2. For the Condair Delta SPA Control Box: Loosen the two screws of the housing cover and remove the housing cover.

   For the Condair Omega: Loosen the screw of the housing cover and remove the housing cover.
3. Break out one of the pre-punched feedthroughs in the bottom of the housing of the Condair Delta SPA Control Box or the Condair Omega for the insertion of the interface cable and install a cable gland.
4. Insert the interface cable via the cable gland into the control compartment of the Condair Omega or into the Condair Delta SPA Control Box.

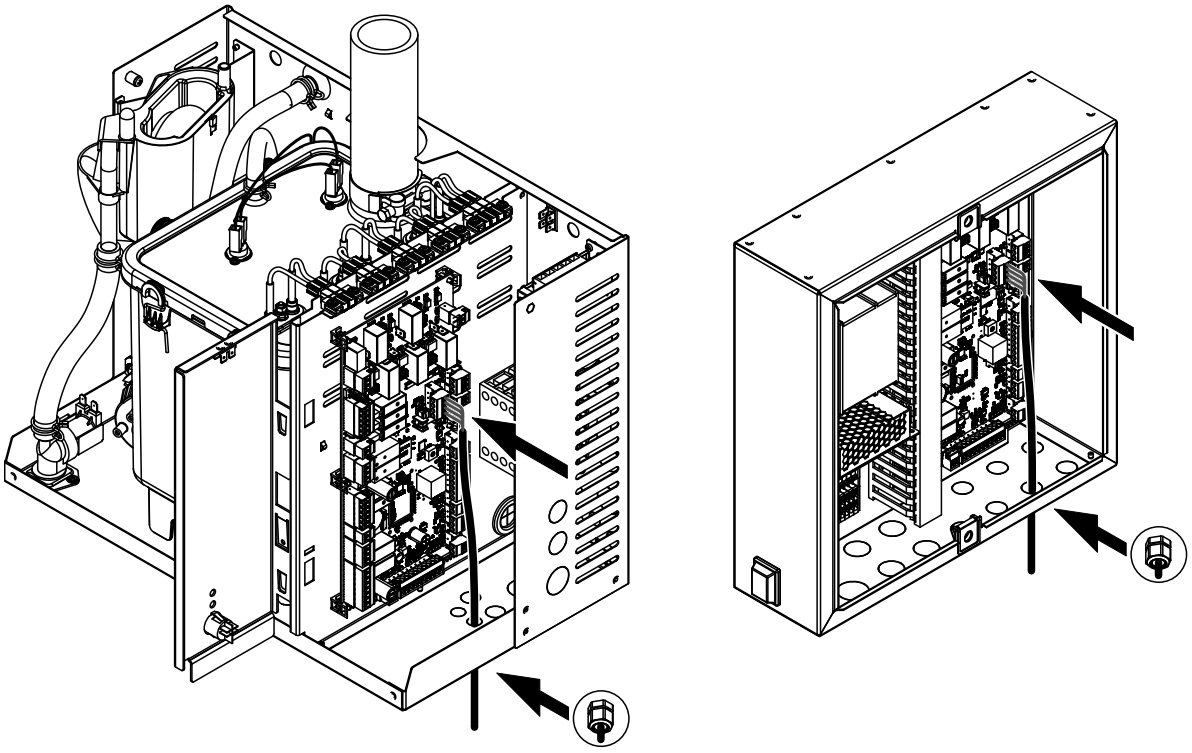


*Fig. 2: Inserting the interface cable into the unit*

5. Connect the cable (3 x 0.34mm$^2$) to the RS485 terminal block "X4" on the control board of the Condair Delta SPA Control Box or the Condair Omega.

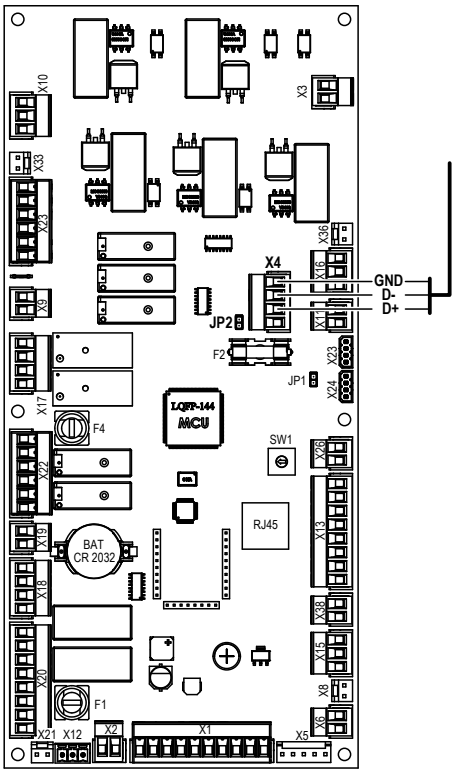
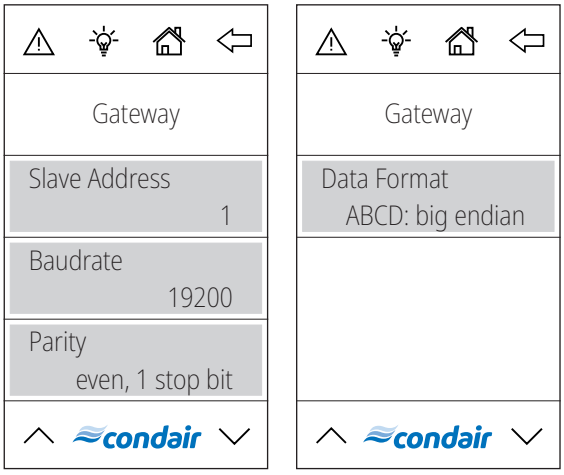



*Fig. 3: Connecting the interface cable*

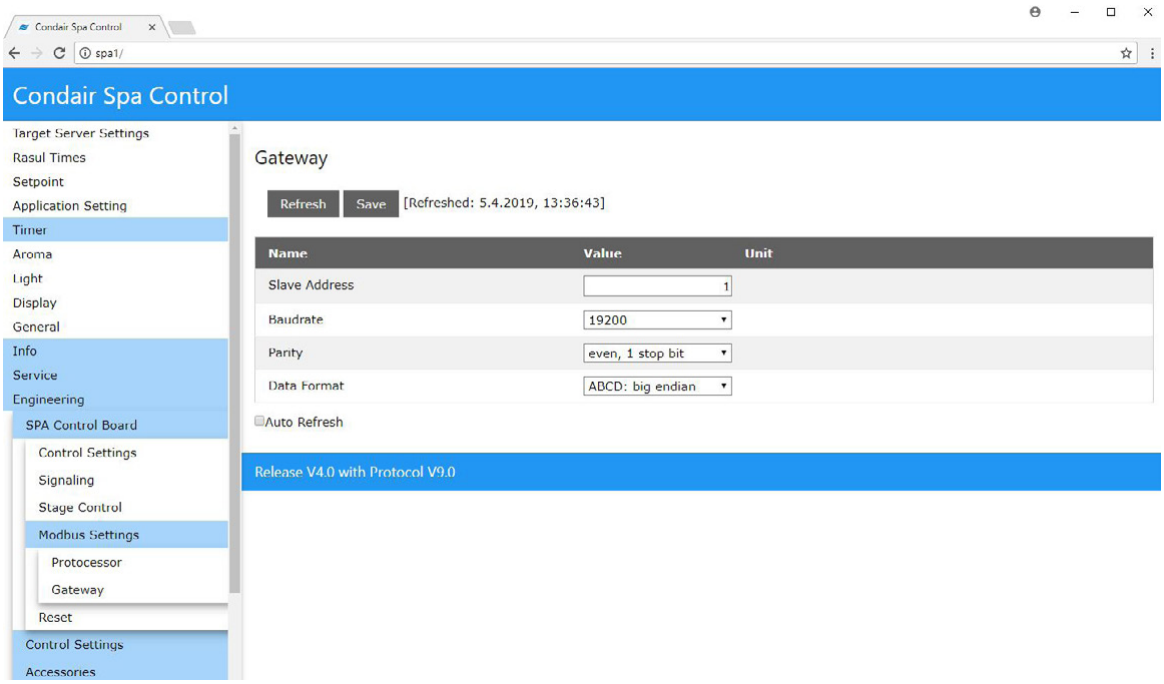
6. On the last unit in the network jumper "JP2" must be set (terminating resistor at the beginning and end of the network). Jumper JP2 set = termination active.

7. Set the desired Modbus parameters via the SPA display or the integrated web interface under "Engineering > SPA Control Board > Modbus Settings > Gateway".

Setting via SPA display




Setting via web interface



## 3.4 Modbus Parameters

If a SPA control board is operated in system mode "Wellness Dual", 2 cabins can be controlled (dual cabin application for small cabins). In all other cases, only the parameters for cabin 1 are relevant and all parameters for the cabin 2 can be neglected.
Note: For dual cabin application for medium size cabins, two SPA control boards are required, both of them must be connected to the Modbus network. Cabin 1 is controlled via the SPA control board 1 and cabin 2 via the SPA control board 2.

| Description | Range | Input/Holding Register 1-based | Format |
|---|---|---|---|
| ***Read with function 03*** | | | |
| System status | 0: No fault<br>>0: Fault | 512 | Uint32Bit |
| Current system date + time in seconds based on reference date/time (reference date: 01.01.2010) | 0 - x s | 4136 | |
| Time at which the next SPA session for cabin 1 begins | 0 – 86400 s | 4472 | |
| Remaining time until the next SPA session for cabin 1 begins | 0 - 86400 min | 4476 | |
| Remaining time of a running SPA session cabin 1 | 1 - 480 min | 4480 | |
| Actual Warning | 0 - 256 | 4872 | |
| Actual Fault | 0 - 256 | 4876 | |
| Time at which the next SPA session for cabin 2 begins | 0 - 86400 s | 6520 | |
| Remaining time until the next SPA session for cabin 2 begins | 0 - 86400 min | 6524 | |
| Remaining time of a running SPA session cabin 2 | 1 - 480 min | 6528 | |
| Door open/closed cabin 1 | 0: Open<br>1: Closed | 8244 | |
| Timer activated for cabin 1 | 0: None<br>1: Day timer time<br>2: Day timer countdown<br>3: Week timer | 8596 | |
| Timer activated for cabin 2 | 0: None<br>1: Day timer time<br>2: Day timer countdown<br>3: Week timer | 10644 | |
| Actual measured temperature in cabin 1 | 0 – 120 °C | 4324 | 32-Bit Float |
| Actual measured humidity in cabin 1 | 0 – 100 %rH | 4328 | |
| Actual measured temperature in cabin 2 | 0 – 120 °C | 6372 | |

| Description | Range | Input/Holding Register 1-based | Format |
|---|---|---|---|
| | ***Read with function 03***<br>***Write with function 16*** | | |
| Current time of day since midnight in seconds, e.g.: 10:00 = 10*3600 | 0 – 86400 s | 4128 | Uint32Bit |
| Current date in seconds based on reference date/time (reference date: 01.01.2010). Note that leap years must be taken into account, e.g .: 01.05.2017 = (2*366+5*365+31+28+31+30)*86400 | 0 – x s | 4132 | |
| Start time day timer cabin 1 | 1 – 86400 s | 4452 | |
| Dauer Tagestimer Kabine 1 | 1 - 480 min | 4456 | |
| Duration SPA session cabin 1 | 1 - 480 min | 4460 | |
| Start time day timer cabin 2 | 1 – 86400 s | 6500 | |
| Duration day timer cabin 2 | 1 - 480 min | 6504 | |
| Duration SPA session cabin 2 | 1 - 480 min | 6508 | |
| Start/Stop SPA session cabin 1 | 0: Stop<br>1: Start | 8572 | |
| Day timer mode cabin 1 | 0: Off<br>1: Time<br>2: Countdown | 8592 | |
| On/Off light 1 of cabin 1 | 0: Off<br>1: On | 8632 | |
| On/Off light 2 of cabin 1 | 0: Off<br>1: On | 8636 | |
| Start/Stop SPA session cabin 2 | 0: Stop<br>1: Start | 10620 | |
| Day timer mode cabin 2 | 0: Off<br>1: Time<br>2: Countdown | 10640 | |
| On/Off light 2 of cabin 2 | 0: Off<br>1: On | 10684 | |
| | | | |
| Temperature setpoint cabin 1 | 20 - 110 °C | 4360 | 32-Bit Float |
| Humidity setpoint cabin 1 | 5 - 80 %rH | 4400 | |
| Temperature setpoint cabin 2 | 20 - 110 °C | 6408 | |

# 4 KNX & Amazon Echo (Alexa) interface

To control the Condair Delta SPA Control Box or the Condair Omega with KNX or Alexa, an optional gateway (LogicMachine5 Lite from embedded systems) is available, which must be mounted outside the corresponding device.

## 4.1 Connection of the SPA control board to the KNX gateway

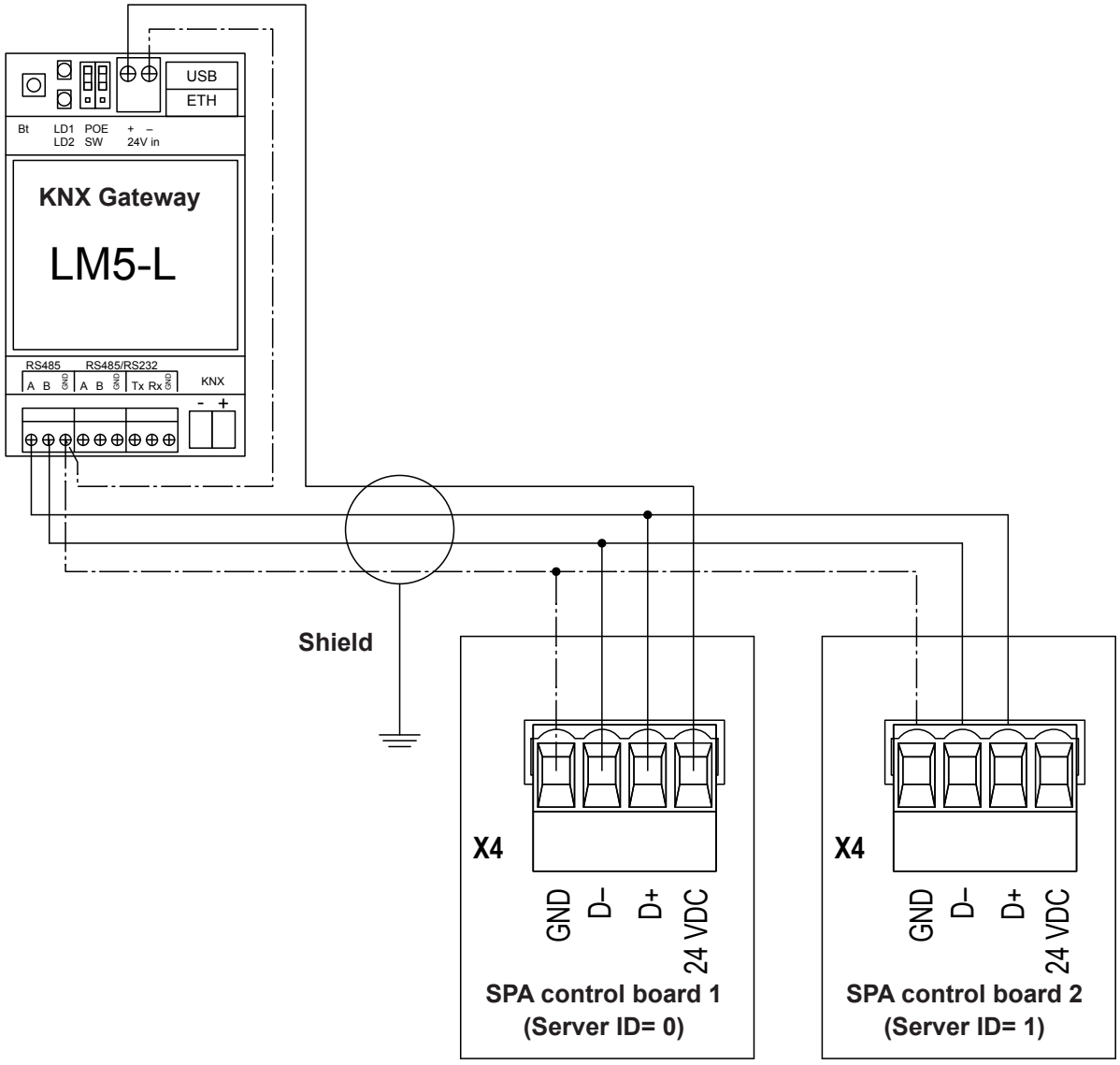



*Fig. 4: Connection of the SPA control board to the KNX gateway*

All SPA control boards that are to be controlled must be connected to the KNX Gateway via the Modbus interface according to the wiring diagram above.

– Connect the cable shield on one side with the functional earth
– Connect all GND together
– Install bus line separate from supply voltage
– Topology: Daisy chain
– All devices of the same network need the same settings concerning baud rate and parity
– Every Modbus device address can only be allocated once within the same network.

Note: If a second SPA control board is connected to the gateway, it must be connected via a 3-core cable (3 x 0.25mm$^2$). **The 24 V from the second SPA control board must not be connected to the gateway**.

## 4.2 Connection of the KNX gateway to a KNX network

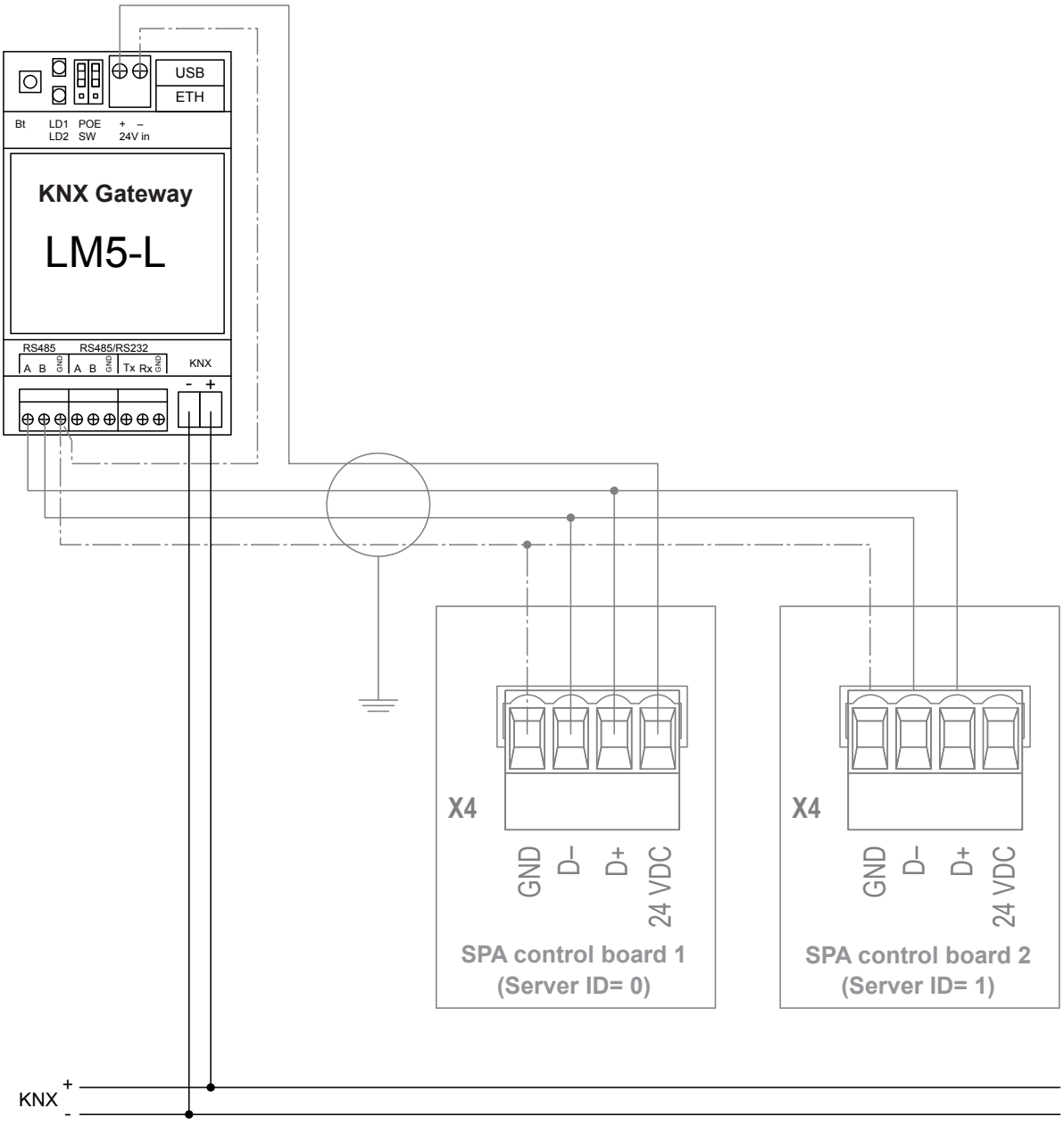



*Fig. 5: Connecting the KNX gateway to a KNX network*

The KNX Gateway is connected to the KNX network according to the wiring diagram above.

## 4.3 Connection and configuration of the Modbus interface

To connect the gateway, proceed as follows:

1. Switch off the Condair Delta SPA Control Box or the Condair Omega via the unit switch. Set the external electrical isolator(s) in the mains supply/supplies to "Off" and secure the electrical isolator(s) in the off position against unintentional switching on.
2. For the Condair Delta SPA Control Box: Loosen the two screws of the housing cover and remove the housing cover.

   For the Condair Omega: Loosen the screw of the housing cover and remove the housing cover.
3. Break out one of the pre-punched feedthroughs in the bottom of the housing of the Condair Delta SPA Control Box or the Condair Omega for the insertion of the interface cable and install a cable gland.
4. Insert the interface cable via the cable gland into the control compartment of the Condair Omega or into the Condair Delta SPA Control Box.

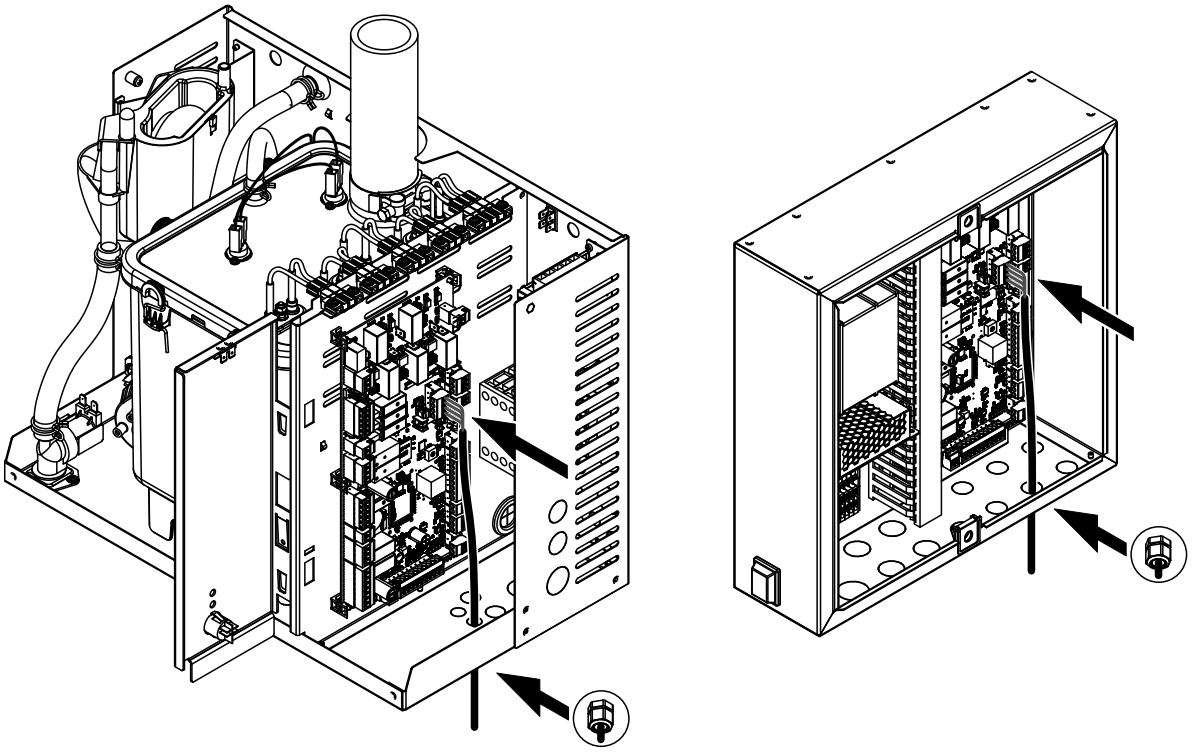
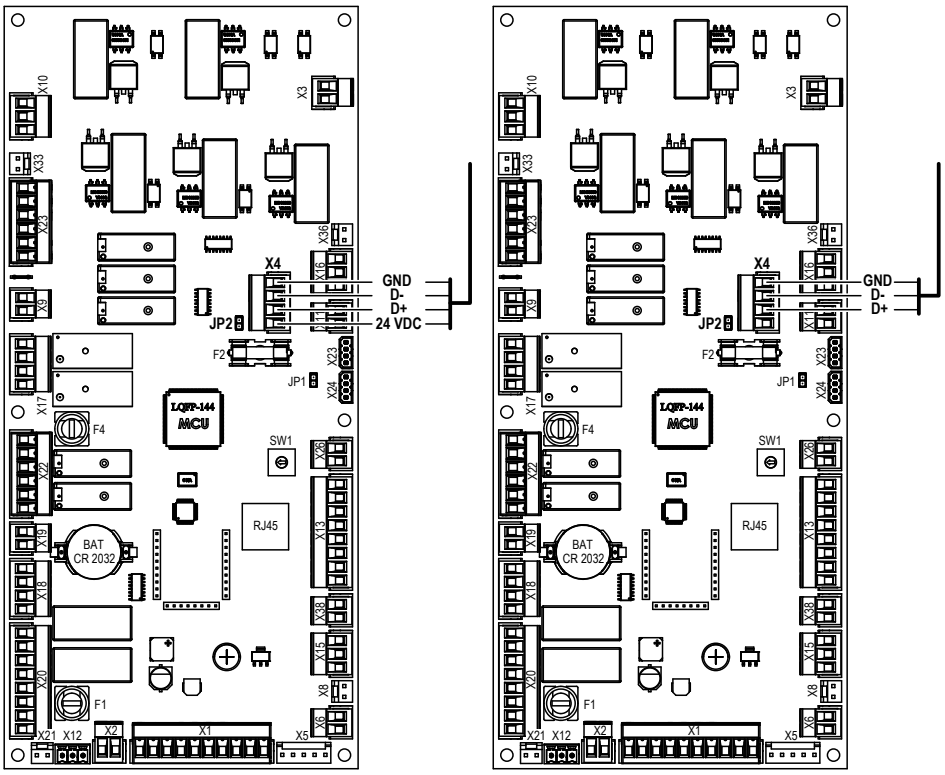


*Fig. 6: Inserting the interface cable into the unit*

5. Connect the cable (4 x 0.25mm$^2$, SPA control board 1 or 3 x 0.25mm$^2$, SPA control board 2) to the RS485 terminal block "X4" on the control board of the Condair Delta SPA Control Box or the Condair Omega.




SPA control board 1 SPA control board 2

*Fig. 7: Connecting the interface cable*

6. On the last units in the network jumper "JP2" must be set (terminating resistor at the beginning and end of the network). Jumper JP2 set = termination active. If only one point-to-point connection to the gateway is to be wired, jumper "JP2" must be set.

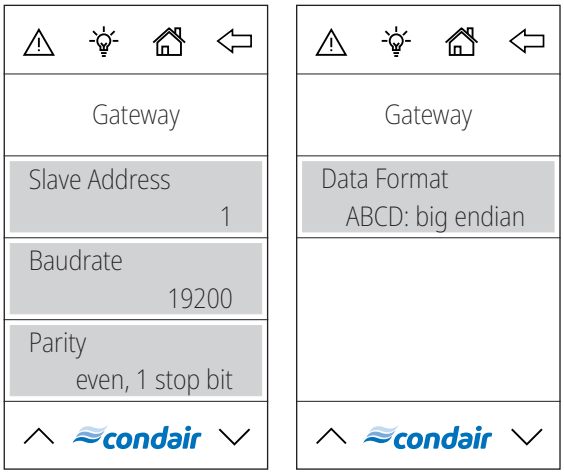
7. Set the following Modbus parameters via the SPA display or the integrated web interface under "Engineering > SPA Control Board > Modbus Settings > Gateway":

| **Parameter** | **Value** |
|---|---|
| Slave Address | 1 |
| Baud rate | 19200 |
| Parität | Even, 1 stop bit |
| Data Format | ABCD: big endian |

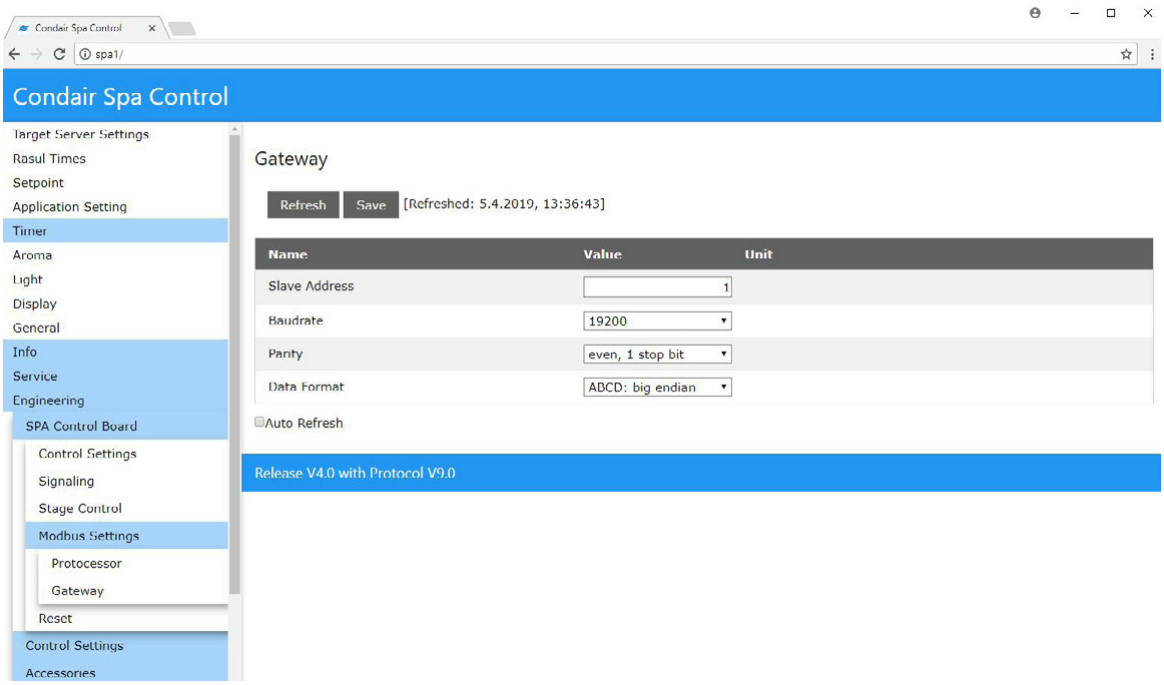
For dual cabin application for medium size cabins, 2 SPA control boards must be connected to the gateway. For the second SPA control board (Server ID 1), the Modbus slave address must be set to 2:

| **Parameter** | **Value** |
|---|---|
| Slave Address | 2 |
| Baud rate | 19200 |
| Parity | Even, 1 stop bit |
| Data Format | ABCD: big endian |

Setting via SPA display



Setting via web interface



## 4.4 KNX Addresses

The physical KNX address is set ex factory to 15.15.255.

KNX group addresses (marked "Write to bus" in the table) are written to the KNX bus as soon as the data value changes. The current data value of each KNX group address can be read with "GroupRead".

Partitioning of the group address:

Part_1/Part_2/Part_3

Part_1: SPA Control unit

10: Condair Omega steam generator or Condair Delta SPA Control Box

Part_2: System range

10/0: Basic system settings
10/1: Cabin 1
10/2: Cabin 2 (only relevant if a system with dual cabin application is used).

Part 3: Parameter

For dual cabin applications, **2 cabins can be controlled** (dual cabin application for small or medium size cabins). In all other cases, only the parameters for cabin 1 is relevant and all parameters for cabin 2 can be neglected

Note: For a dual cabin application for medium size cabins, two SPA control boards are required, both of them must be connected to the Modbus network and to the KNX Gateway.

| KNX Group Address | Description | Object name | Data type | Write to Bus | Scaling factor of the source value | Default value | Min | Max | Measuring unit | R/W |
|---|---|---|---|---|---|---|---|---|---|---|
| 10/0/1 | System status<br>(0: no fault, >0: fault) | Exception | Uint 32Bit | ✓ | 1 | 0 | 0 | 0 | n/a | R |
| 10/0/2 | System time<br>(current day time since midnight in seconds, e.g.: 10:00 = 10 *3600) | SysTime | Uint 32Bit | | 60 | 0 | 0 | 86400 | n/a | R/W |
| 10/0/3 | System date<br>(current date in seconds since refrence date/time. Please note that leap years must be taken into account, e.g.: 2017.05.01 = (2*366 + 5*365 + 31 + 28 + 31 + 30) * 86400 ) | SysDate | Uint 32Bit | | 1 | 0 | 0 | 0 | n/a | R/W |
| 10/0/4 | System date+time<br>(current date and time in seconds since refrence date/ time). | SysDateTime | Uint 32Bit | | 1 | 0 | 0 | 0 | n/a | R |
| 10/1/1 | Actual measured temperature in cabin 1 | SpaTemp_1 | Float 16Bit | ✓ | 0.1 | 0 | 0 | 0 | °C | R |
| 10/1/2 | Actual measured humidity in cabin 1 | SpaHum_1 | Float 16Bit | ✓ | 0.1 | 0 | 0 | 0 | % rH | R |
| 10/1/3 | Temperature setpoint value cabin 1 | SpaTempSetpoint_1 | Float 16Bit | | 1 | 40 | 20 | 110 | °C | R/W |
| 10/1/4 | Humidity setpoint value cabin 1 | SpaHumSetpoint_1 | Float 16Bit | | 1 | 40 | 5 | 80 | % rH | R/W |
| 10/1/5 | Day timer starting time cabin 1 | SpaDayTimerStartTime_1 | Uint 32Bit | | 60 | 36000 | 0 | 86400 | n/a | R/W |
| 10/1/6 | Day timer duration cabin 1 | SpaDayTimerDuration_1 | Uint 32Bit | | 1 | 60 | 1 | 480 | min | R/W |
| 10/1/7 | SPA session duration cabin 1 | SpaSessionDuration_1 | Uint 32Bit | | 1 | 60 | 1 | 480 | min | R/W |
| 10/1/8 | Time when the next SPA session starts for cabin 2 (day timer or week timer) | SpaStatusNextStartTime_1 | Uint 32Bit | | 60 | 36000 | 0 | 86400 | n/a | R |
| 10/1/9 | Remaining time until the next SPA session starts for cabin 1 (day timer or week timer) | SpaStatusRemainTime_1 | Uint 32Bit | | 60 | 36000 | 0 | 86400 | min | R |
| 10/1/10 | Remaining time of a running SPA session cabin 1 | SpaStatusDuration_1 | Uint 32Bit | | 1 | 60 | 1 | 480 | min | R |
| | | | | | | | | | | |
| 10/2/1 | Actual measured temperature in cabin 2 | SpaTemp_2 | Float 16Bit | ✓ | 0.1 | 0 | 0 | 0 | °C | R |
| 10/2/2 | Actual measured humidity in cabin 2 | SpaHum_2 | Float 16Bit | ✓ | 0.1 | 0 | 0 | 0 | % rH | R |
| 10/2/3 | Temperature setpoint value cabin 2 | SpaTempSetpoint_2 | Float 16Bit | | 1 | 40 | 20 | 110 | °C | R/W |
| 10/2/4 | Humidity setpoint value cabin 2 | SpaHumSetpoint_2 | Float 16Bit | | 1 | 40 | 5 | 80 | % rH | R/W |

| KNX Group Address | Description | Object name | Data type | Write to Bus | Scaling factor of the source value | Default value | Min | Max | Measuring unit | R/W |
|---|---|---|---|---|---|---|---|---|---|---|
| 10/2/5 | Day timer starting time cabin 2 | SpaDayTimerStartTime_2 | Uint 32Bit | | 60 | 36000 | 0 | 86400 | n/a | R/W |
| 10/2/6 | Day timer duration cabin 2 | SpaDayTimerDuration_2 | Uint 32Bit | | 1 | 60 | 1 | 480 | min | R/W |
| 10/2/7 | SPA session duration cabin 2 | SpaSessionDuration_2 | Uint 32Bit | | 1 | 60 | 1 | 480 | min | R/W |
| 10/2/8 | Time when the next SPA session starts for cabin 2 (day timer or week timer) | SpaStatusNextStartTime_2 | Uint 32Bit | | 60 | 36000 | 0 | 86400 | n/a | R |
| 10/2/9 | Remaining time until the next SPA session starts for cabin 2 (day timer or week timer) | SpaStatusRemainTime_2 | Uint 32Bit | | 60 | 36000 | 0 | 86400 | min | R |
| 10/2/10 | Remaining time of a running SPA session cabin 2 | SpaStatusDuration_2 | Uint 32Bit | | 1 | 60 | 1 | 480 | min | R |
| | | | | | | | | | | |
| 10/1/20 | Door open/closed cabin 1<br>(0: Open, 1: Closed) | IoInDoor_1 | Bool | ✓ | 1 | 0 | 0 | 0 | n/a | R |
| 10/1/21 | Starting/Stopping SPA session for cabin 1<br>(0: Stopping, 1: Starting) | SpaStart_1 | Bool | | 1 | 0 | 0 | 1 | n/a | R/W |
| 10/1/22 | Day timer mode cabin 1<br>(0: Off, 1: Time, 2: Countdown) | SpaDayTimerMode_1 | Uint 32Bit | | 1 | 0 | 0 | 2 | n/a | R/W |
| 10/1/23 | Timer activated for cabin 1<br>(0: None, 1: Day timer time, 2: Day timer countdown, 3: Week timer) | SpaStatusTimerActive_1 | Uint 32Bit | | 1 | 0 | 0 | 3 | n/a | R |
| 10/1/24 | On/Off light 1 for cabin 1<br>(0: Off, 1: On) | SpaLight1_1 | Bool | | 1 | 0 | 0 | 1 | n/a | R/W |
| 10/1/25 | On/Off light 2 for cabin 1<br>(0: Off, 1: On) | SpaLight2_1 | Bool | | 1 | 0 | 0 | 1 | n/a | R/W |
| | | | | | | | | | | |
| 10/2/20 | Door open/closed cabin 2<br>(0: Open, 1: Closed) | IoInDoor_2 | Bool | ✓ | 1 | 0 | 0 | 0 | n/a | R |
| 10/2/21 | Starting/Stopping SPA session for cabin 2<br>(0: Stopping, 1: Starting) | SpaStart_2 | Bool | | 1 | 0 | 0 | 1 | n/a | R/W |
| 10/2/22 | Day timer mode cabin 2<br>(0: Off, 1: Time, 2: Countdown) | SpaDayTimerMode_2 | Uint 32Bit | | 1 | 0 | 0 | 2 | n/a | R/W |

| KNX Group Address | Description | Object name | Data type | Write to Bus | Scaling factor of the source value | Default value | Min | Max | Measuring unit | R/W |
|---|---|---|---|---|---|---|---|---|---|---|
| 10/2/23 | Timer activated for cabin 2<br>(0: None, 1: Day timer time, 2: Day timer countdown, 3: Week timer) | SpaStatusTimerActive_2 | Uint 32Bit | | 1 | 0 | 0 | 3 | n/a | R |
| 10/2/24 | On/Off light 1 for cabin 2<br>(0: Off, 1: On) | SpaLight1_2 | Bool | | 1 | 0 | 0 | 1 | n/a | R/W |
| 10/2/25 | On/Off light 2 for cabin 2<br>(0: Off, 1: On) | SpaLight2_2 | Bool | | 1 | 0 | 0 | 1 | n/a | R/W |

## 4.5 Control with Amazon Echo (Alexa)

In order to control a device with Alexa, a valid Amazon Echo account must be set up. The following link provides step-by-step instructions on how to integrate Alexa voice control into the gateway:

*http://openrb.com/amazon-echo-alexa-integration/*

The following steps show an example of how Alexa speech commands can be defined:

1. Connect the KNX Gateway with the connected SPA control boards via an Ethernet cable to your PC/ Laptop.

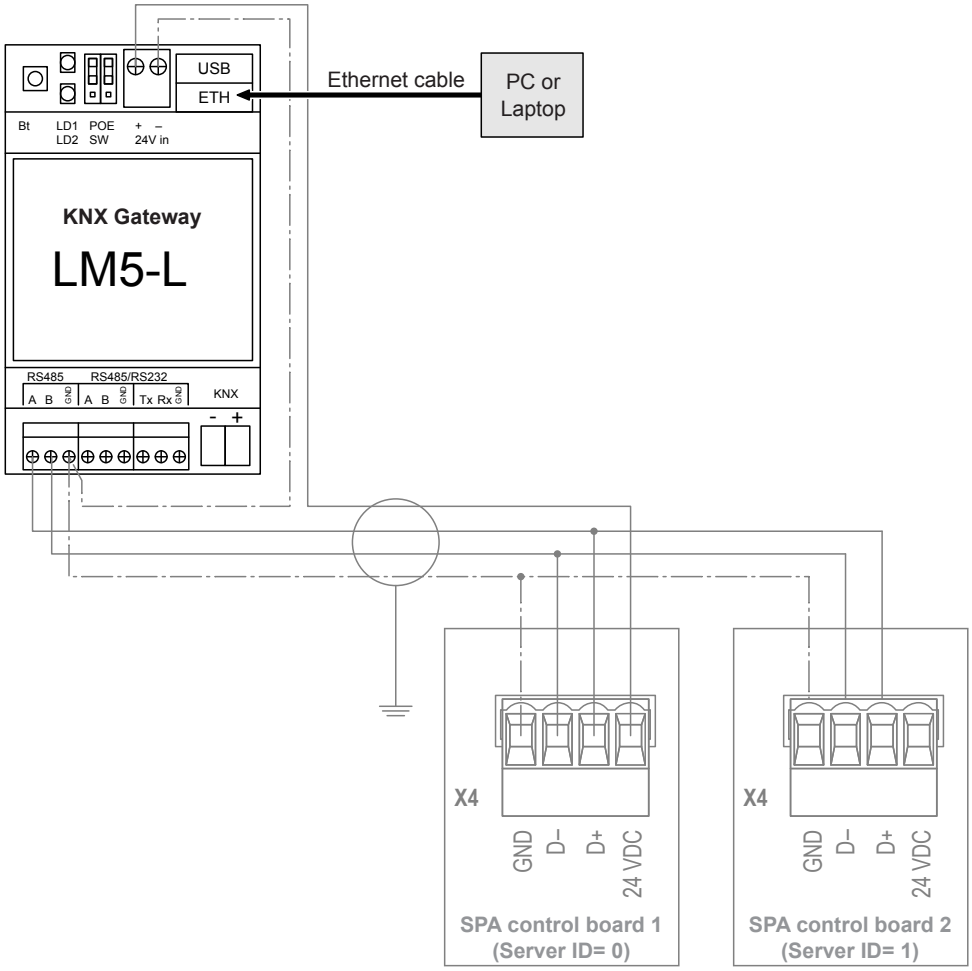


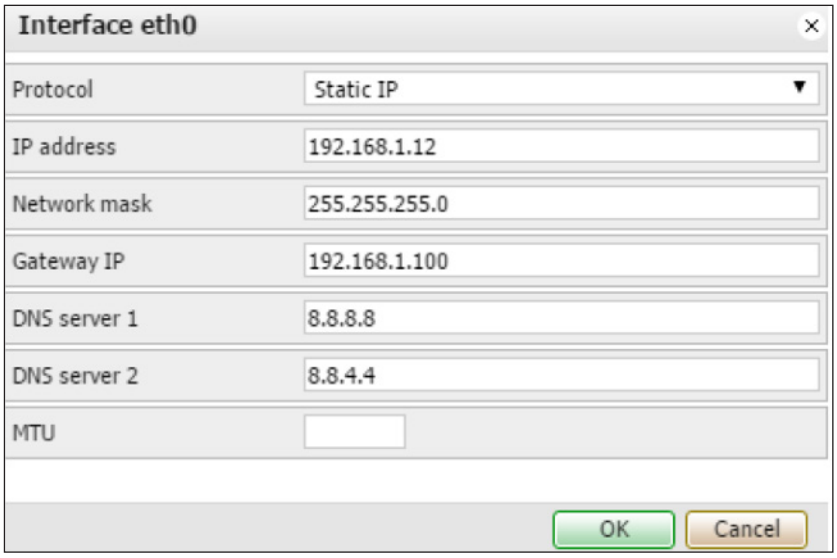

*Fig. 8: Connect the KNX Gateway with a PC/Laptop*

2. The KNX Gateway can be addressed via a web browser (Chrome, Firefox, Safari are supported) by typing "HTTP: // IP" in the address bar. Ex factory the following settings are configured:

| | |
|---|---|
| Login name | admin |
| Password | admin |
| IP address | 192.168.0.10 |
| Network mask | 255.255.255.0 |

Note: A secure connection can be established via "HTTPS://IP:Port".

3. Now set the desired network settings (IP, Gateway, DNS, etc.) under "System config > Network > Interfaces"




| Parameter | Description |
|---|---|
| Protocol | Select whether to use a static IP address (Factory setting: 192.168.0.10) or an IP address assignment from a DHCP server.<br>If the protocol is set to DHCP, an additional window will appear showing the assigned IP address. |
| Network mask | Network mask (Factory setting: 255.255.255.0). |
| Gateway IP | Gateway IP Address. |
| DNS server 1 | IP Address DNS Server 1. |
| DNS server 2 | IP Address DNS Server 2. |
| MTU | Maximum Transmission Unit, the largest package size that can be specified in a communication protocol (Factory setting: 1500). |

Note: For more information regarding network settings, see the LogicMachine Product Manual under: "http://openrb.com/wp-content/uploads/2016/11/lm5_lite_manual_11.2016.pdf"

4. Connect KNX Gateway to the Internet.

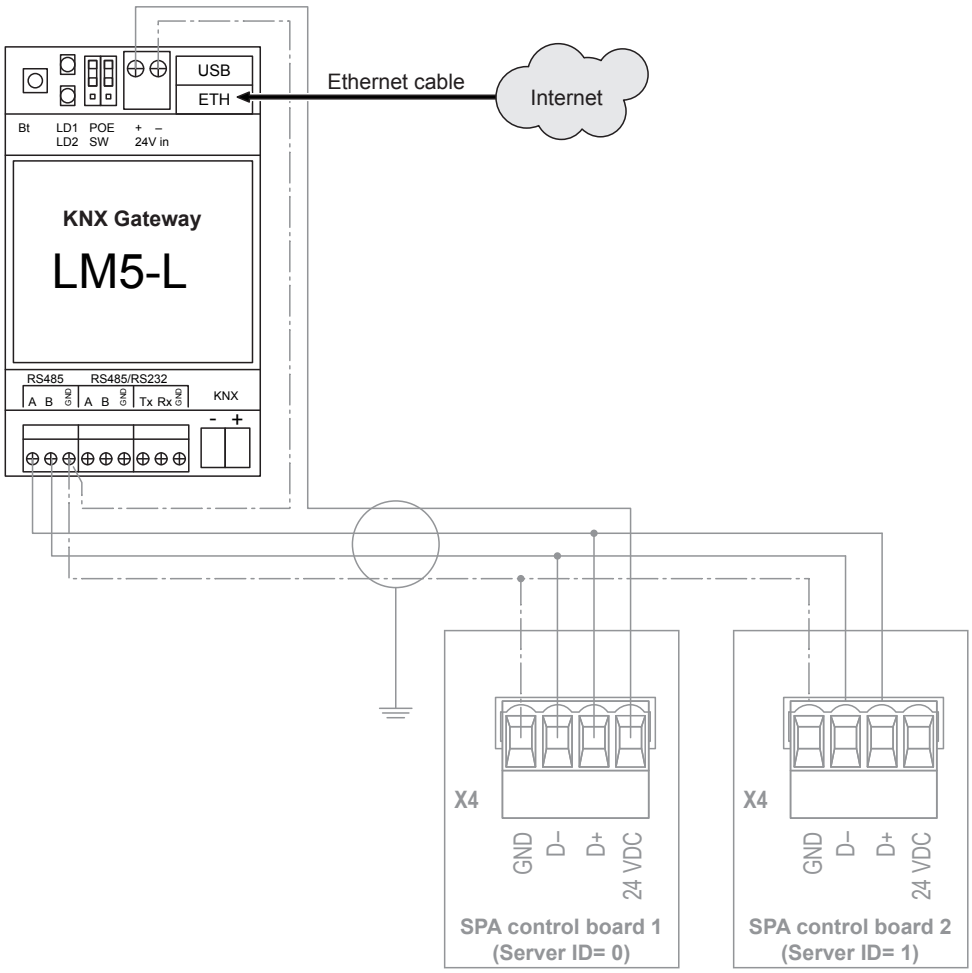
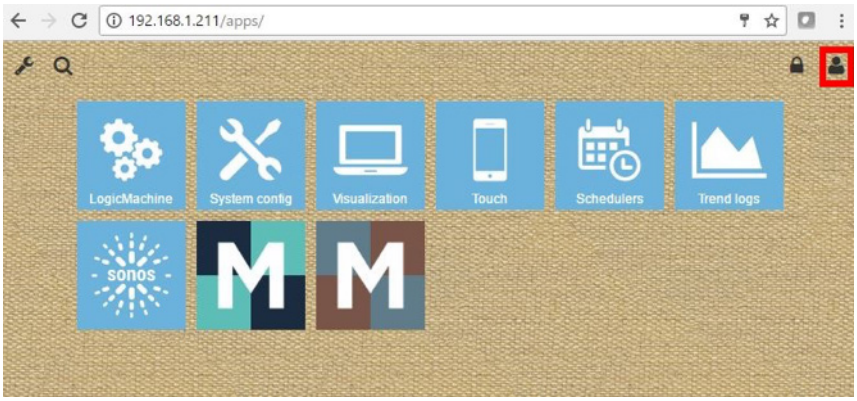


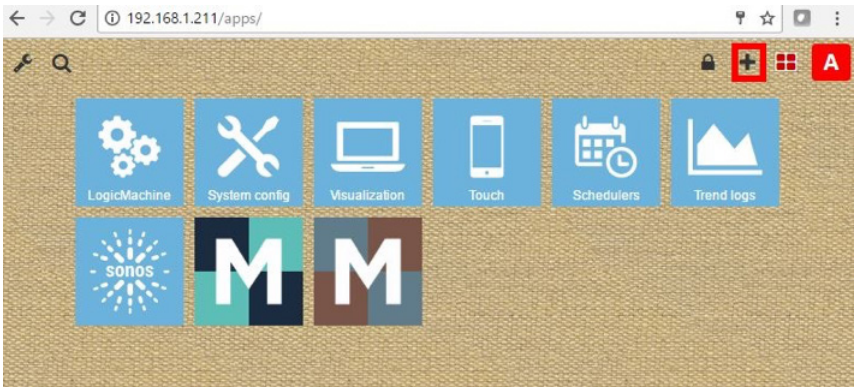

*Fig. 9: Connecting the KNX Gateway to the Internet*

Make sure that all network settings (IP, Gateway, DNS) under "System config > Network > Interfaces" are set correctly, so that there is a connection to the Internet.

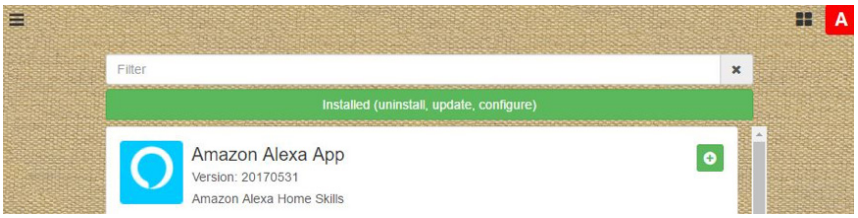
5. Create a LogicMachine Cloud Account under: "https://cloud.logicmachine.net/user-management/auth/login".
6. Go to the LogicMachine main screen, click on the admin icon and enter your "admin" password.



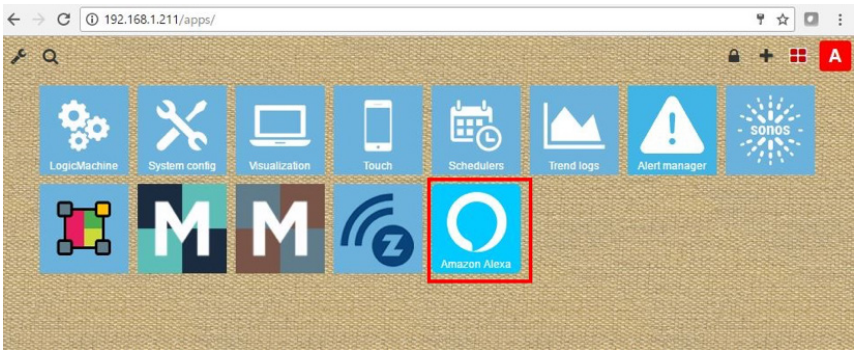
7. Go to the App Store by clicking the + icon.



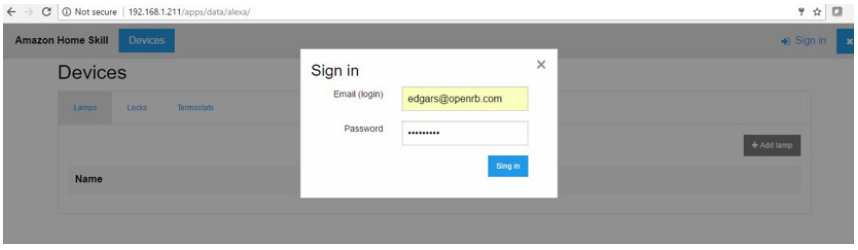

8. Choose "Alexa" and install this app.



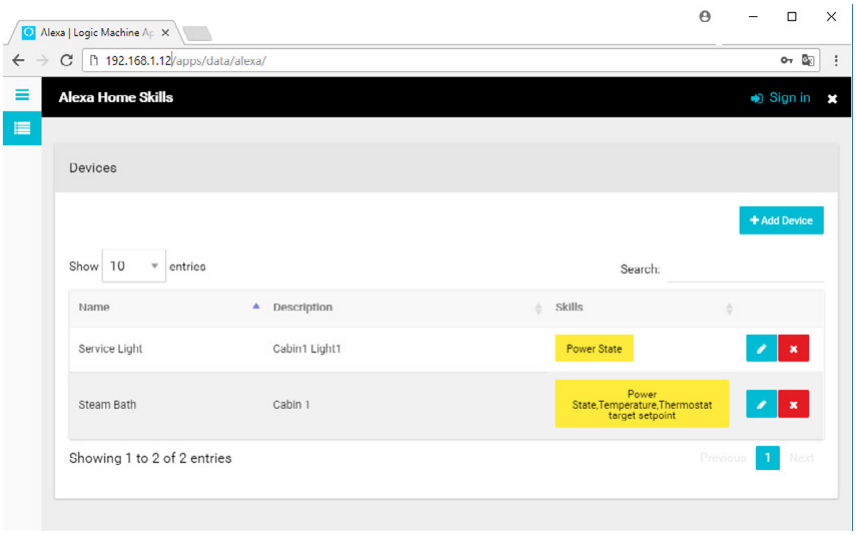

9. On the main screen the Amazon App now appears which must be selected.




10. Log in with the LogicMachine Cloud Account, which was set up in step 4.



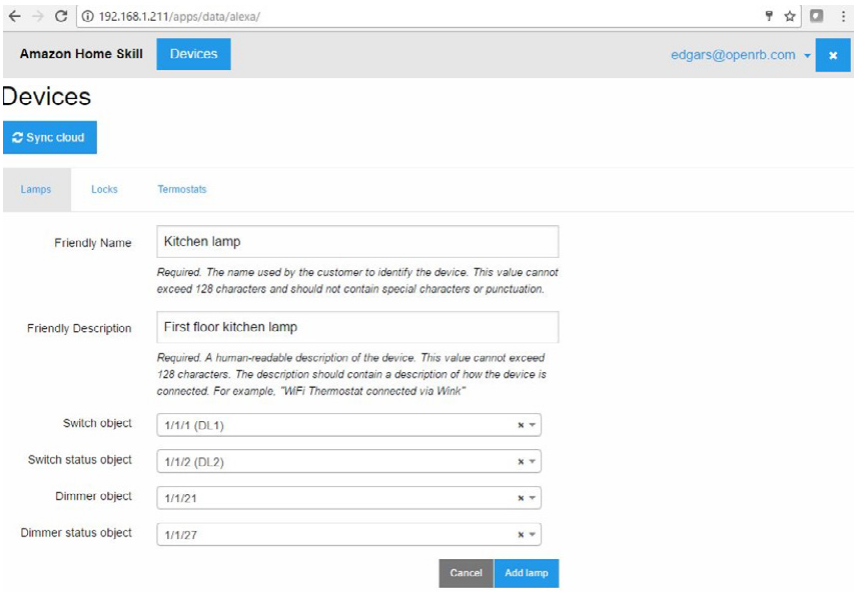
11. Ex factory there are already some examples that make it easier for you to set voice commands.



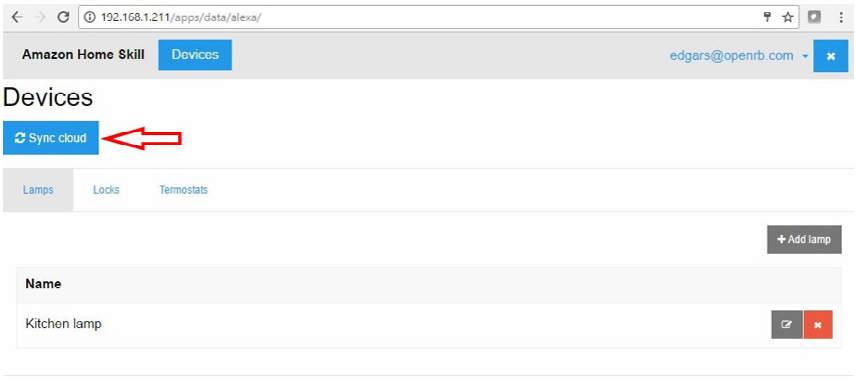

The following commands are available:

| **Action** | **Voice command** |
|---|---|
| Start steam bath session | "Alexa, turn on steam bath” |
| Stop steam bath session | "Alexa, turn off steam bath" |
| Switch on service light | "Alexa, turn on service light" |
| Switch off service light | "Alexa, turn off service light” |
| Set steam bath temperature setpoint | "Alexa, set the steam bath temperature to ** degrees" |

The list can be extended according to requirements.




12. Synchronize with the cloud when you have made modifications.

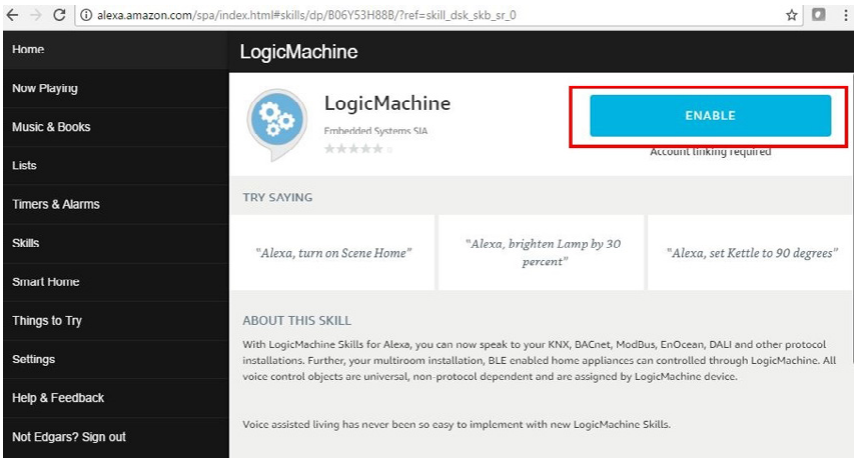



After successful synchronization, the sync button will show the time of the last synchronization:

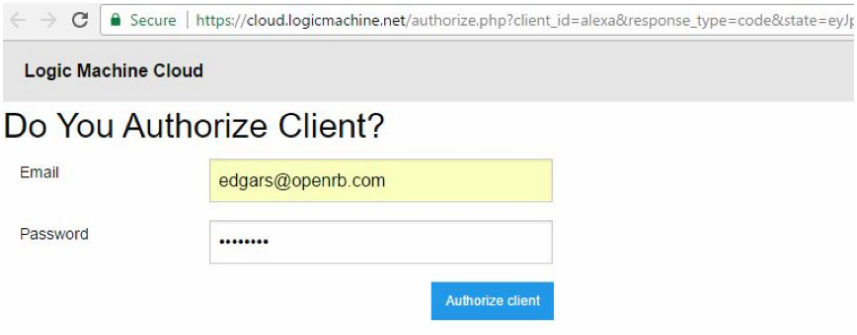

Note: Following each modification on the LogicMachine (adding/removing/editing devices), the following steps must be done:

– Synchronization with the cloud
– Device search through Amazon Alexa either via the Alexa account or via the voice command.

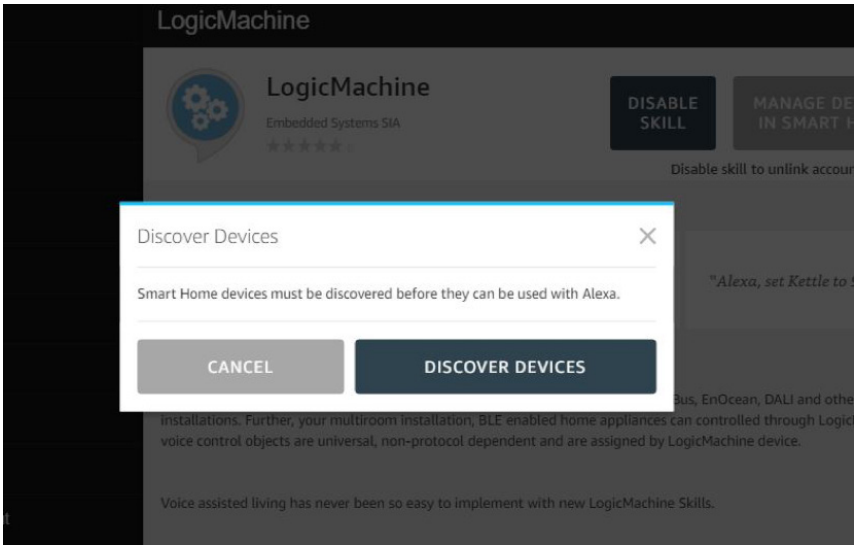
13. Log in to "http://alexa.amazon.com" with your Amazon account. Under the heading "Skills", look for LogicMachine.

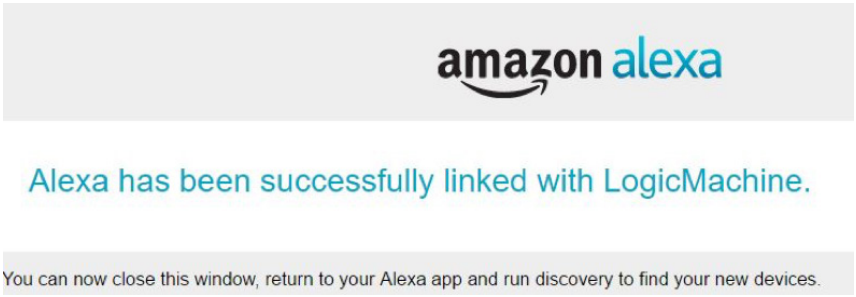



14. Log in with the LogicMachine Cloud Account (which was set up in step 4).

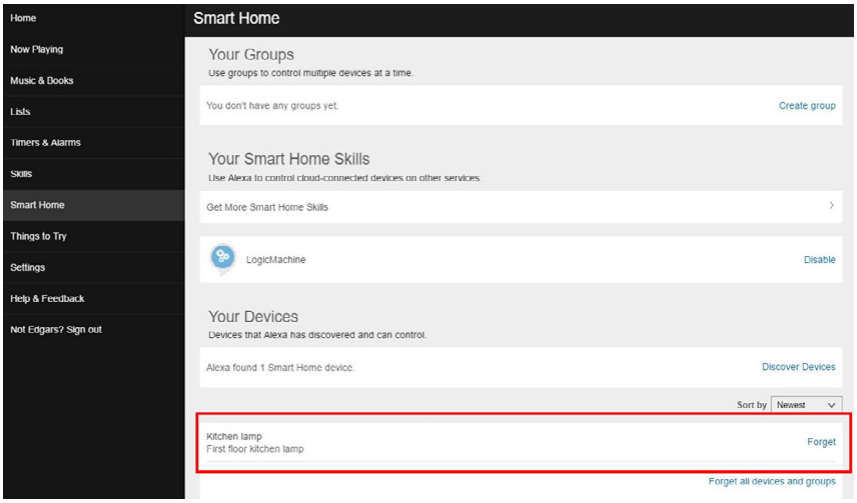



15. Search for devices in the Alexa account or via the voice command "Alexa, discover devices".






Alexa now finds the devices, which are listed under point 11.




Further example commands for Alexa voice control can be found under "http://openrb.com/amazon-echo-alexa-integration/".

Notes

Notes

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