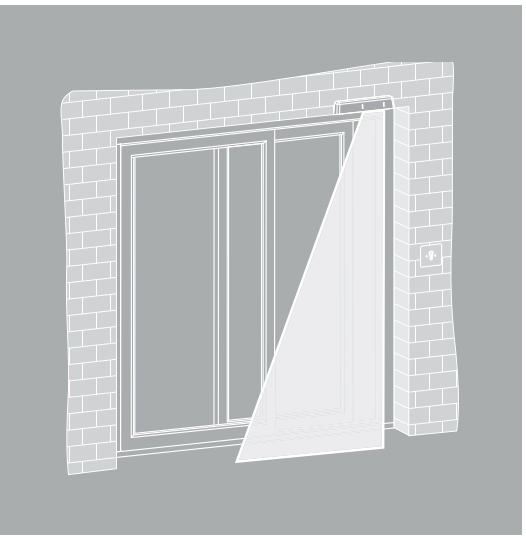
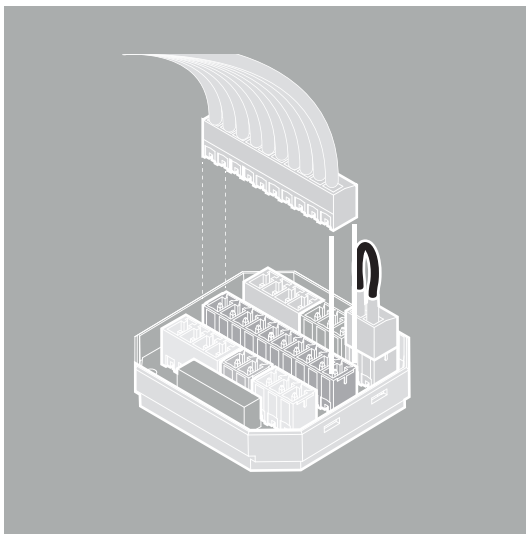
HAUTAU
A MACO Group Company

Move HS Comfort Drive

LIFT AND SLIDE FITTINGS/WINDOW AUTOMATION





INSTALLATION INSTRUCTIONS FOR ACCESSORIES

Move HS Comfort Drive Scheme A/C and for other actuators/devices

WOOD
PVC
ALUMINIUM

Used exclusively for specialist companies.

Copy of the original instructions

Contents

Important safety instructions

It is important to observe the following instructions to ensure safety for everyone. Incorrect installation can cause **serious injuries**.

Manufacturer's declaration/technical standard
The accessories contained in this document have been tested and manufactured in line with the applicable European directives. The applicable declaration of incorporation for the Move HS Comfort Drive is available for inspection. You may only operate the devices if there is a declaration of conformity for the overall system.
The actuator meets the latest technical standards and only qualified technical staff may install, service and carry out any other tasks.

Personnel
Only a **qualified electrician** (certified to DIN VDE 1000-10, for example) may connect the system to the mains. The actuator must be installed by personnel trained to current standards and based on the recognised code of practice.

Also observe the important safety instructions in the manual for the Move HS Comfort Drive.

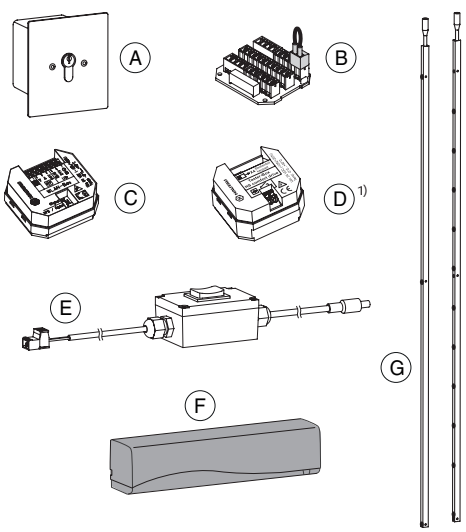
Warranty

HAUTAU's General Terms and Conditions of Business apply to the accessories (online: www.hautau.de/en/).

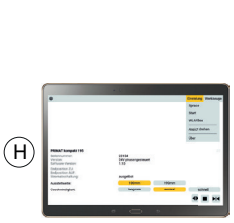
Disposal

The crossed-out wheeled bin symbol indicates that you must not dispose of this electrical appliance or electronic device in the household waste at the end of its service life.
You can return it to free collection points for old electrical appliances in your area or to other centres where they accept old appliances for recycling.
Contact your local council for addresses of collection points and centres. If the electrical appliance or electronic device contains personal data, you yourself are responsible for erasing data before you return it.
You will find more information online at www.weeelogic.com or other websites on the WEEE Directive.

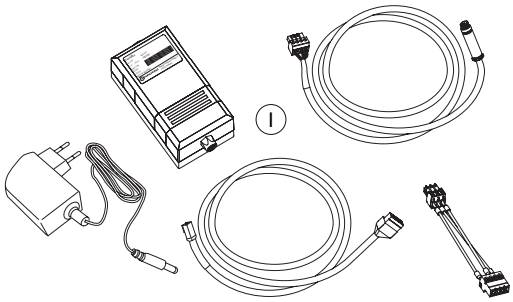
Optional components

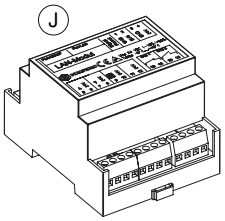


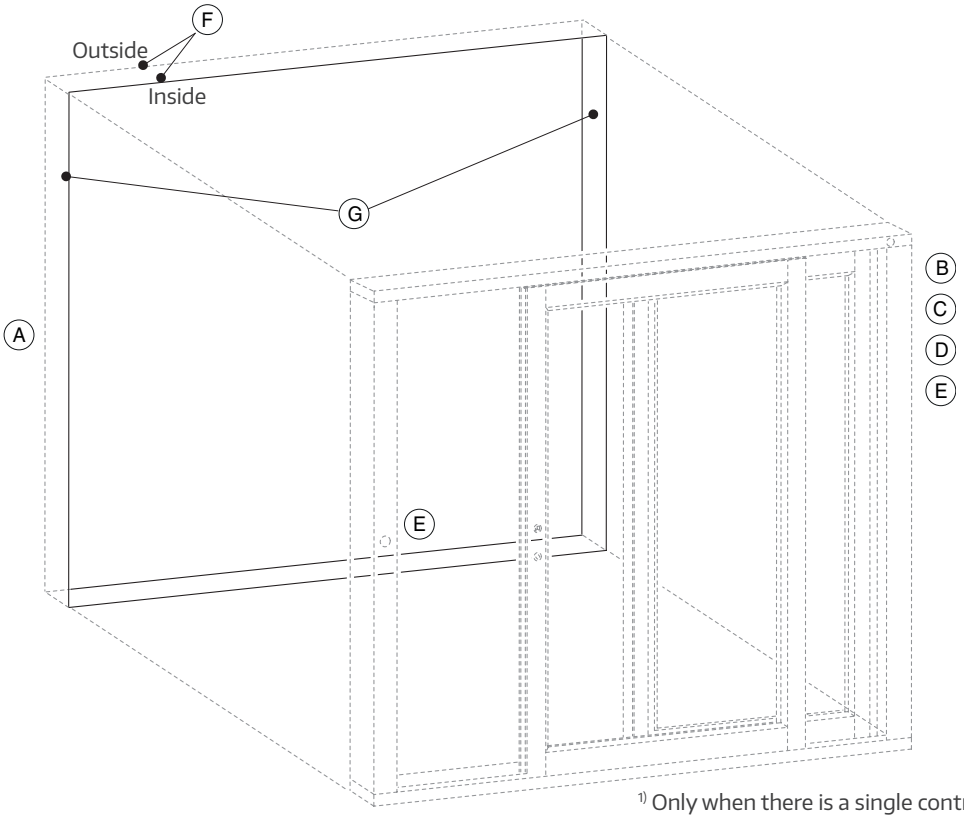
- (A) Key-operated switch
- (B) Connection box
- (C) WiFi Box
- (D) Button box
- (E) Service/initial operation switch
- (F) IR presence detector
- (G) IR light curtain
- (H) ConfigTool app
- (I) ConfigBox and accessories
- (J) LAN module



(without tablet)







[1] Only when there is a single control button.

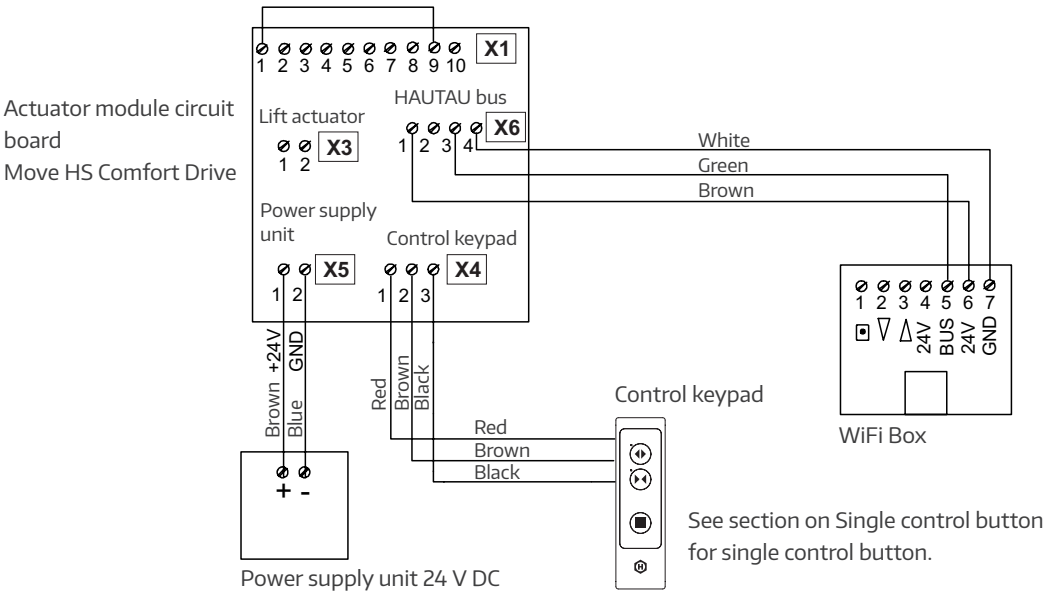
Electrical connection for Move HS Comfort Drive, Scheme A

WARNING
Disconnect the power supply to the actuator while carrying out connection work.
Failure to do so could result in loss of life due to electric shock.

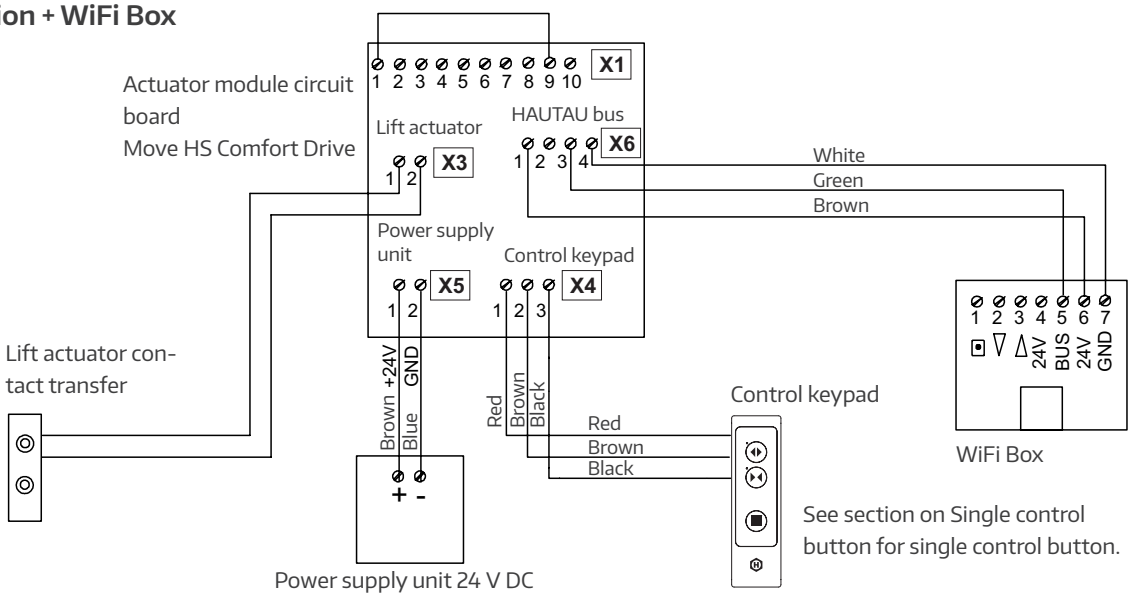
Circuit diagram (examples)

The address for HS/S Comfort Drive is 103 (when delivered). Also see WiFi Box installation and operating instructions and Integrating the WiFi Box into a router, HAUTAU item codes 500384 and 500623.

Slide version + WiFi Box



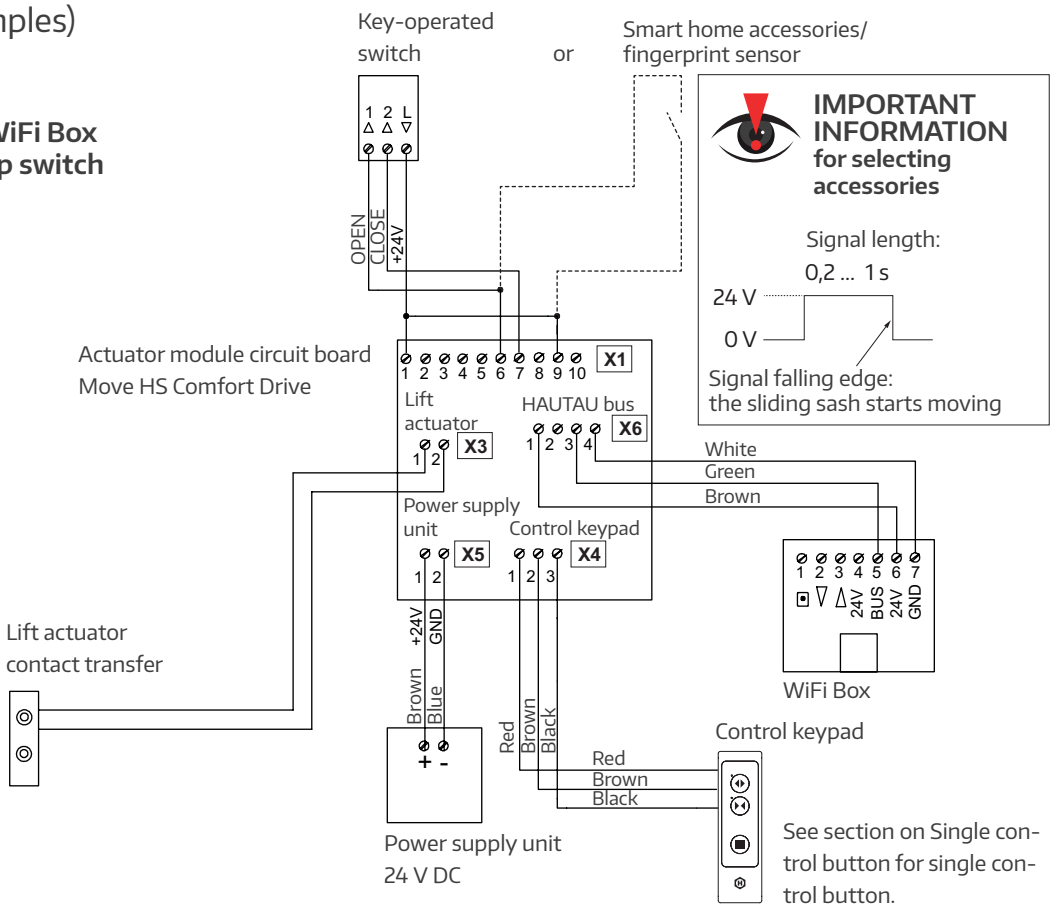
Lift and slide version + WiFi Box



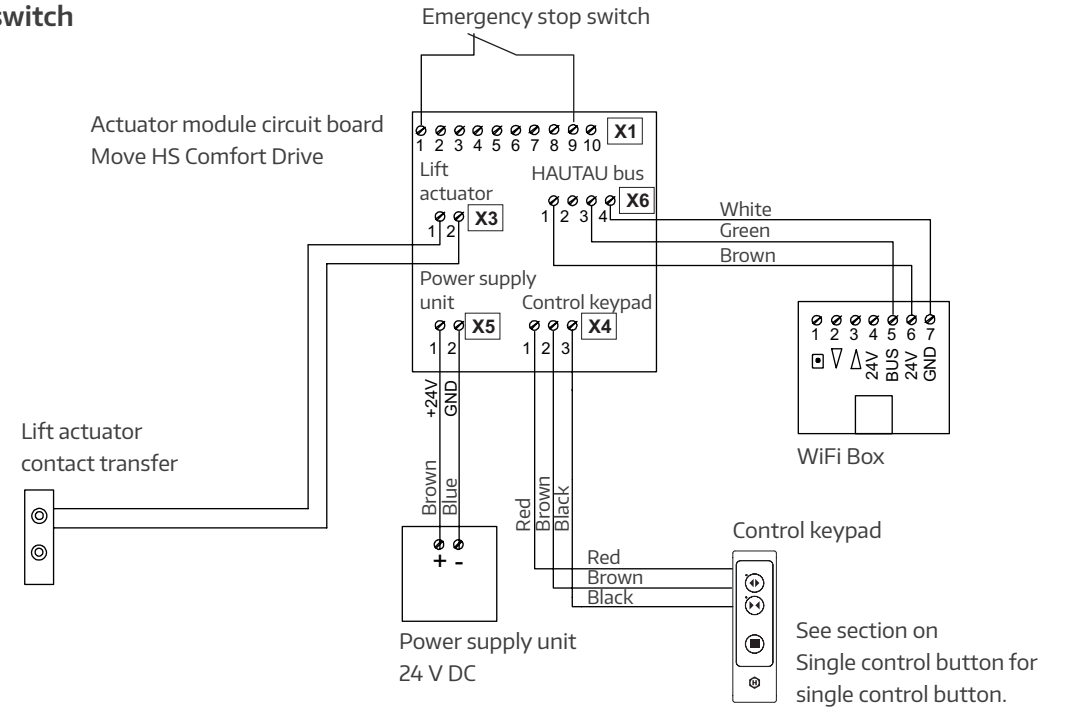
Electrical connection for Move HS Comfort Drive, Scheme A (continued)

Circuit diagram (examples)

Lift and slide version + WiFi Box
Without emergency stop switch



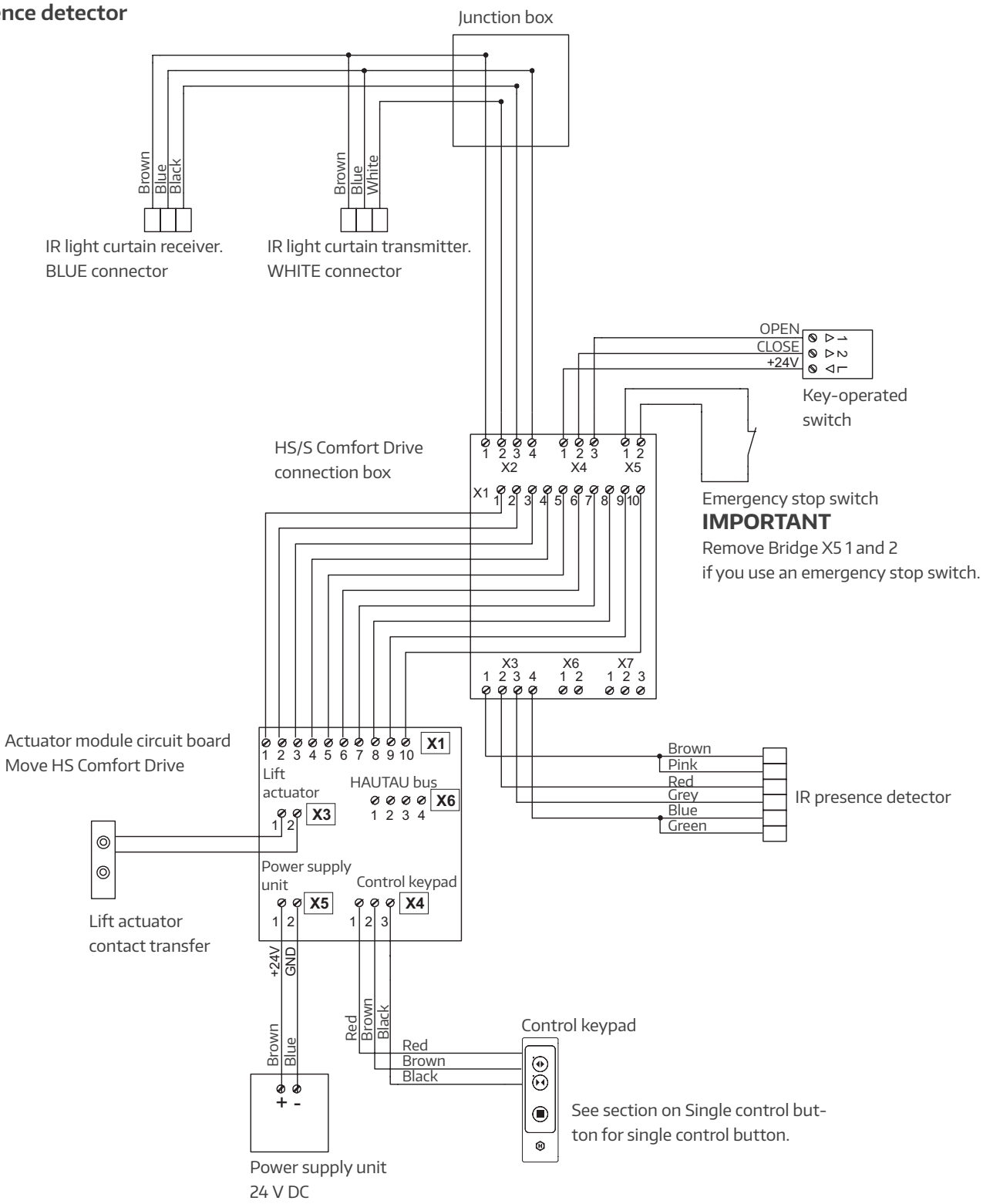
Lift and slide version + WiFi Box
With emergency stop switch



Electrical connection for Move HS Comfort Drive, Scheme A (continued)

Circuit diagram (examples)

Lift and slide version with IR light curtain and IR presence detector

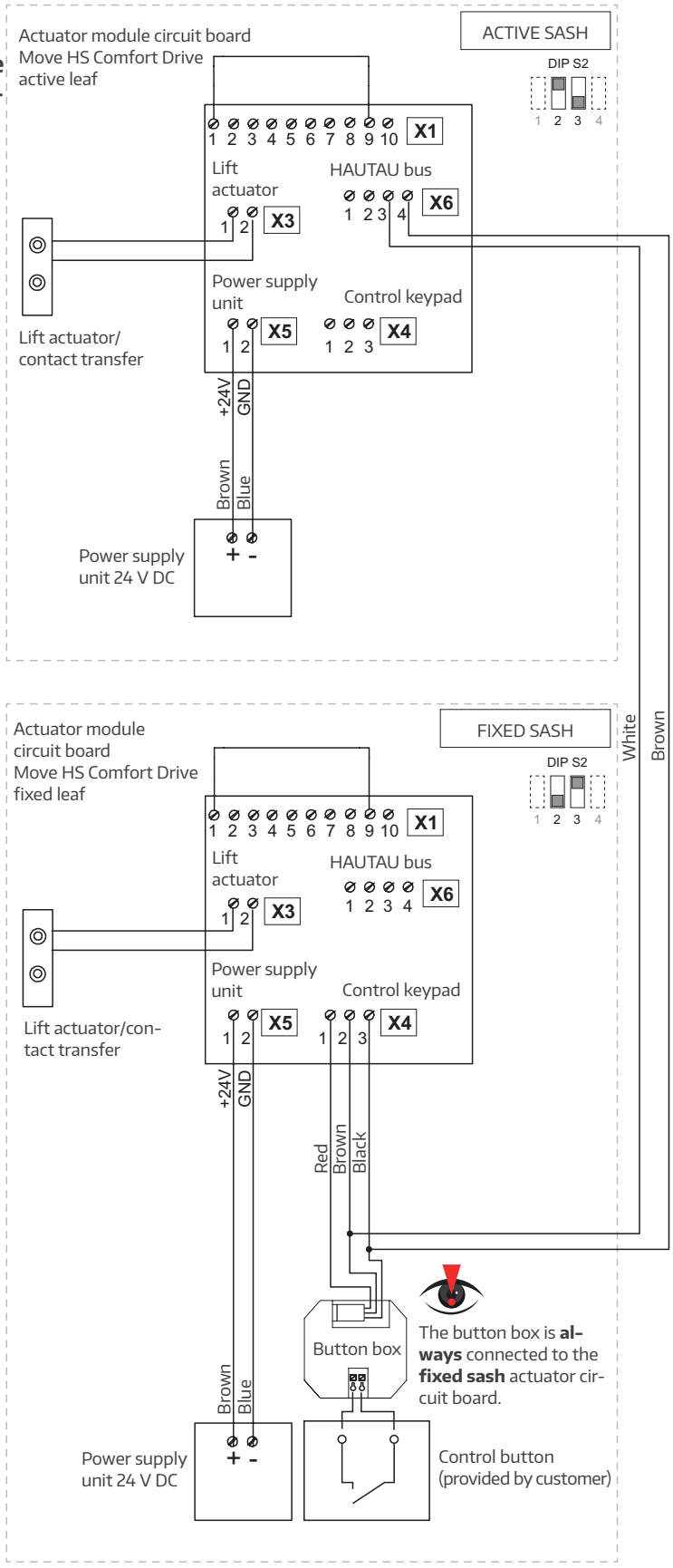


Electrical connection for Move HS Comfort Drive, Scheme C

WARNING
Disconnect the power supply to the actuator while carrying out connection work.
Failure to do so could result in loss of life due to electric shock.

Circuit diagram (examples)

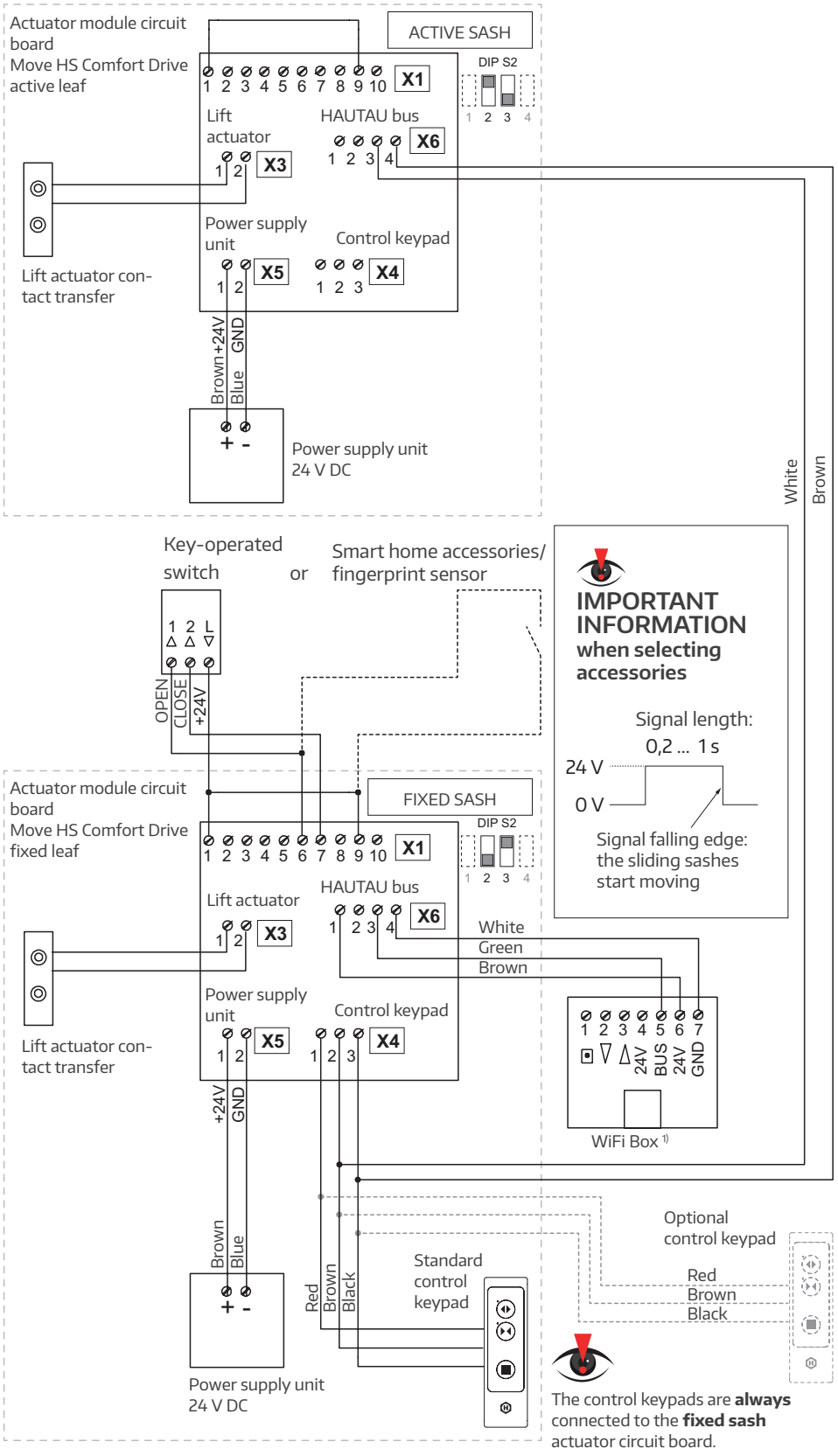
Lift and slide version with single control button



Electrical connection for Move HS Comfort Drive, Scheme C (continued)

Circuit diagram (examples)

Lift and slide version with control unit + WiFi Box (without emergency stop switch)

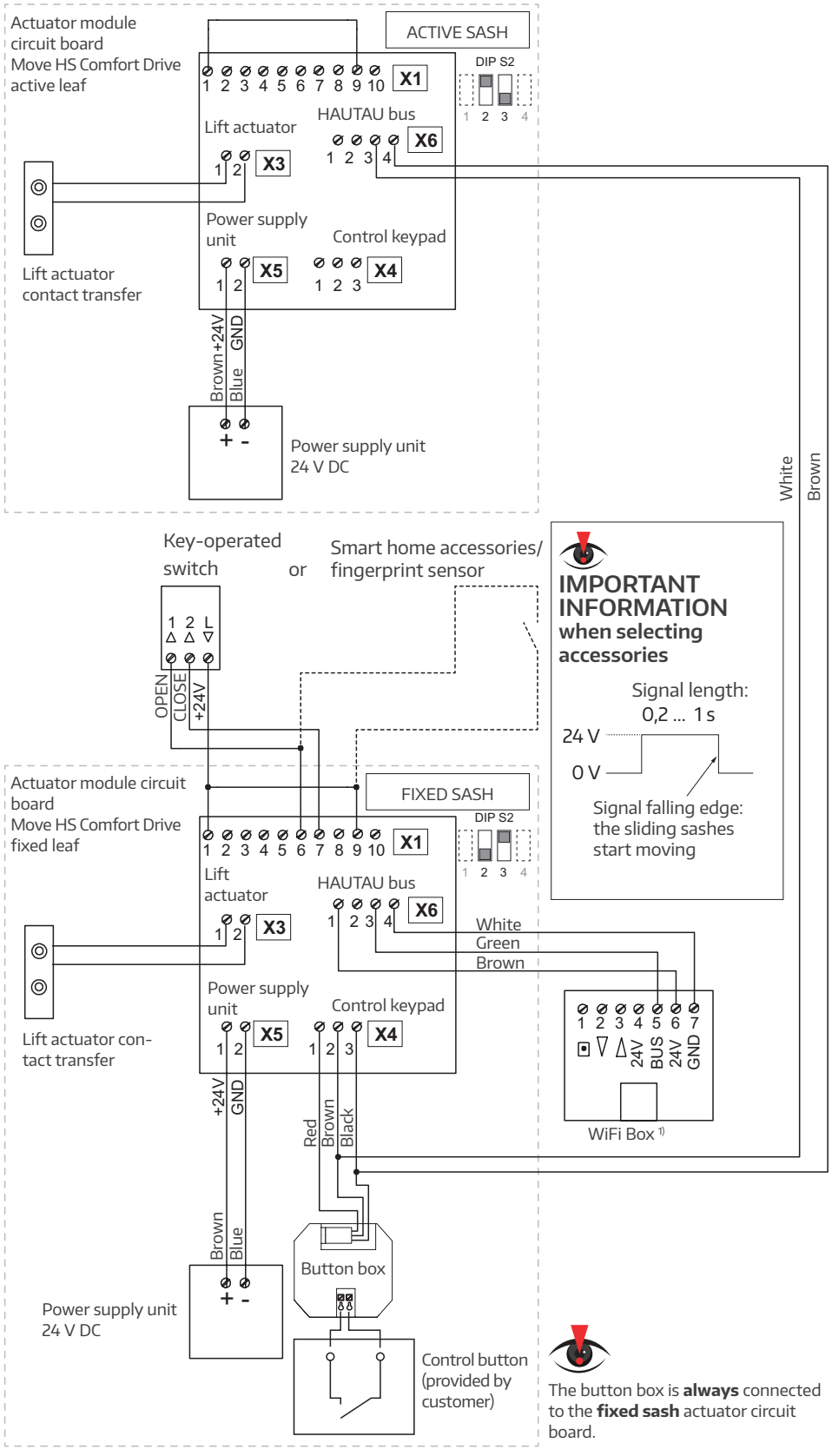


1) The address for Move HS Comfort Drive is 103 (when delivered). Also see WiFi Box installation and operating instructions and Integrating the WiFi Box into a router.

Electrical connection for Move HS Comfort Drive, Scheme C (continued)

Circuit diagram (examples)

Lift and slide version with single control button + WiFi Box (without emergency stop switch)

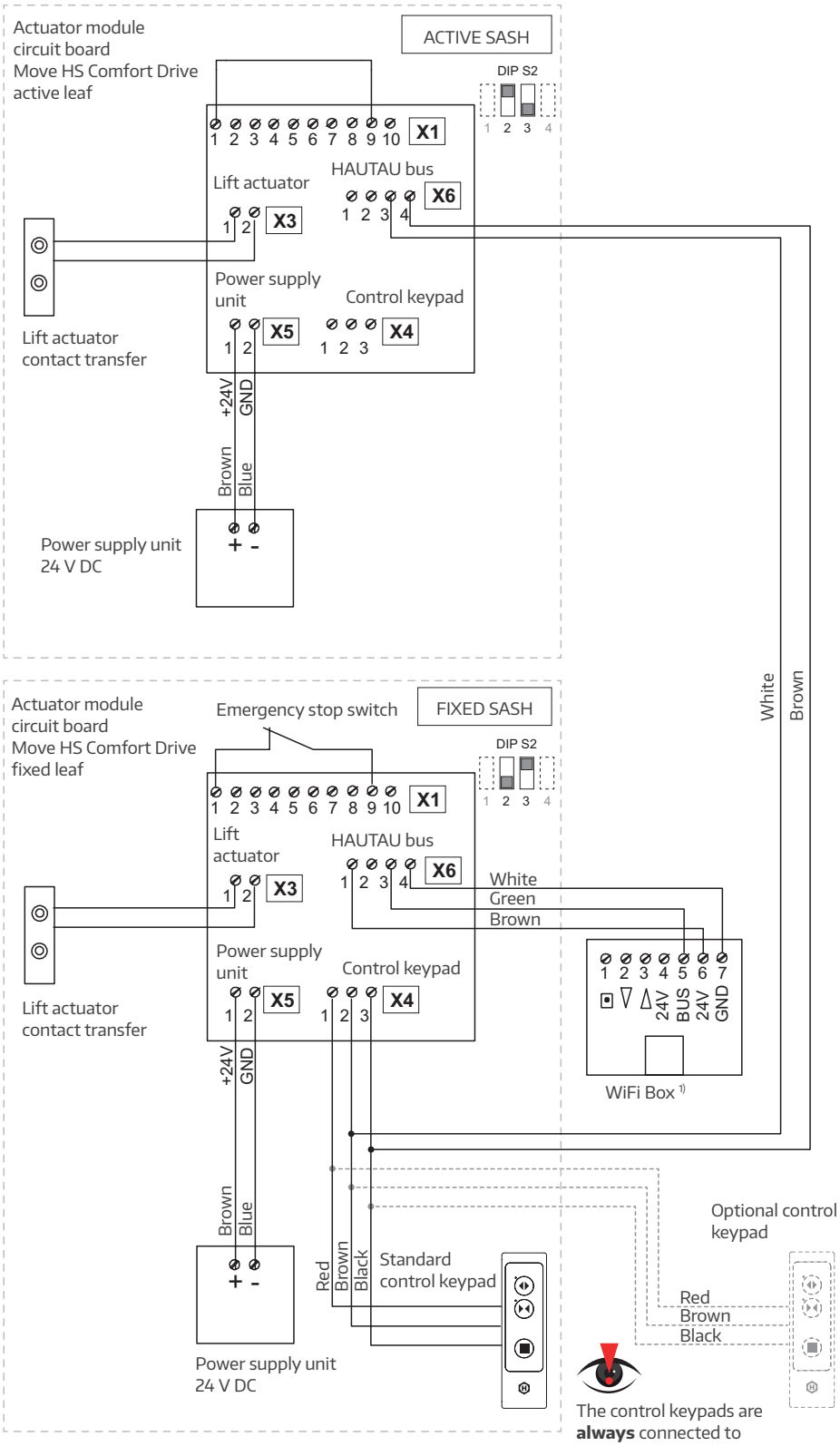


1) The address for Move HS Comfort Drive is 103 (when delivered). Also see WiFi Box installation and operating instructions and Integrating the WiFi Box into a router.

Electrical connection for Move HS Comfort Drive, Scheme C (continued)

Circuit diagram (examples)

Lift and slide version with control keypad + WiFi Box (with emergency stop switch)



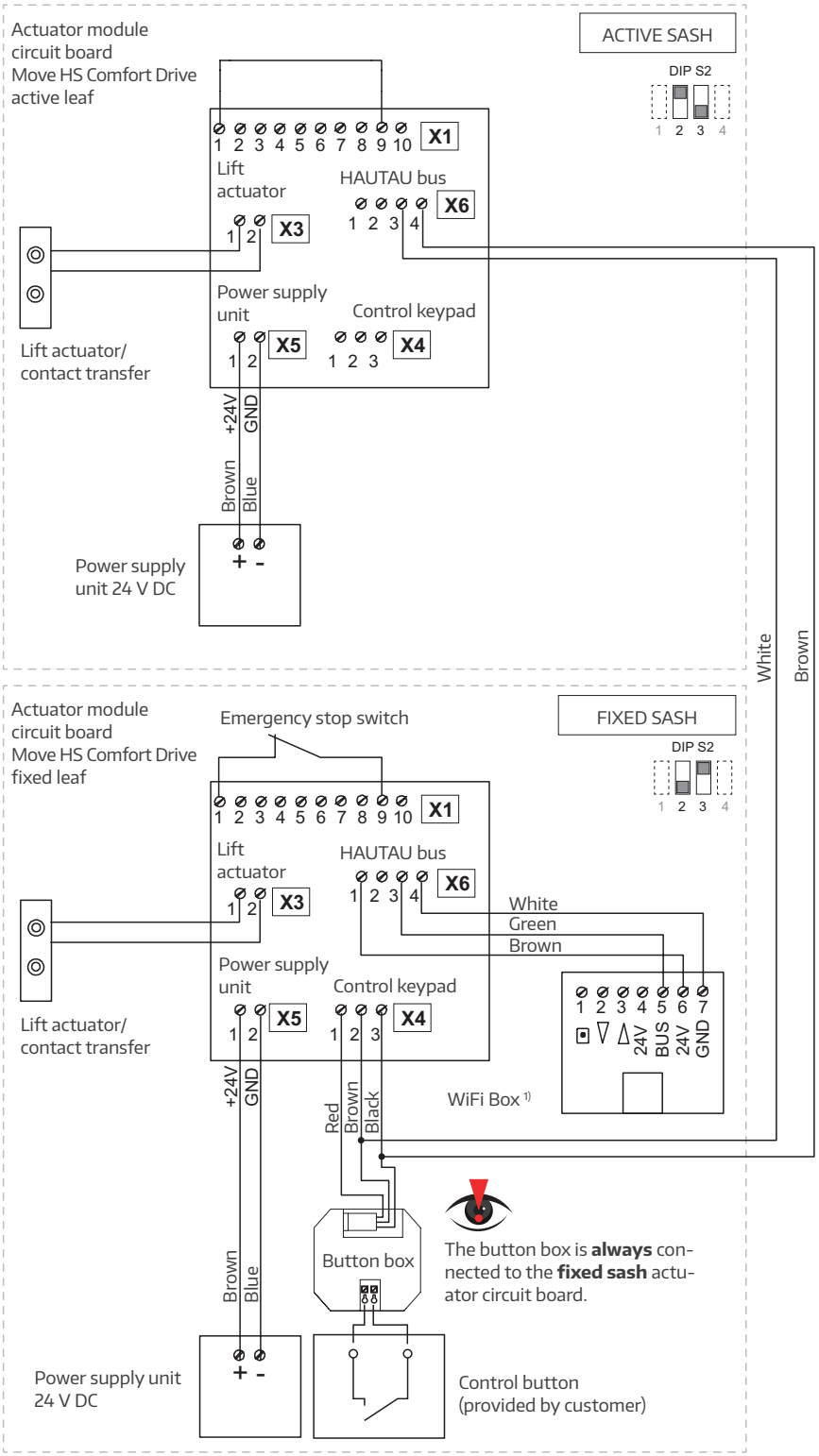
The control keypads are **always** connected to the **fixed sash** actuator circuit board.

1) The address for Move HS Comfort Drive is 103 (when delivered). Also see WiFi Box installation and operating instructions and Integrating the WiFi Box into a router.

Electrical connection for Move HS Comfort Drive, Scheme C (continued)

Circuit diagram (examples)

Lift and slide version with single control button + WiFi Box (with emergency stop switch)

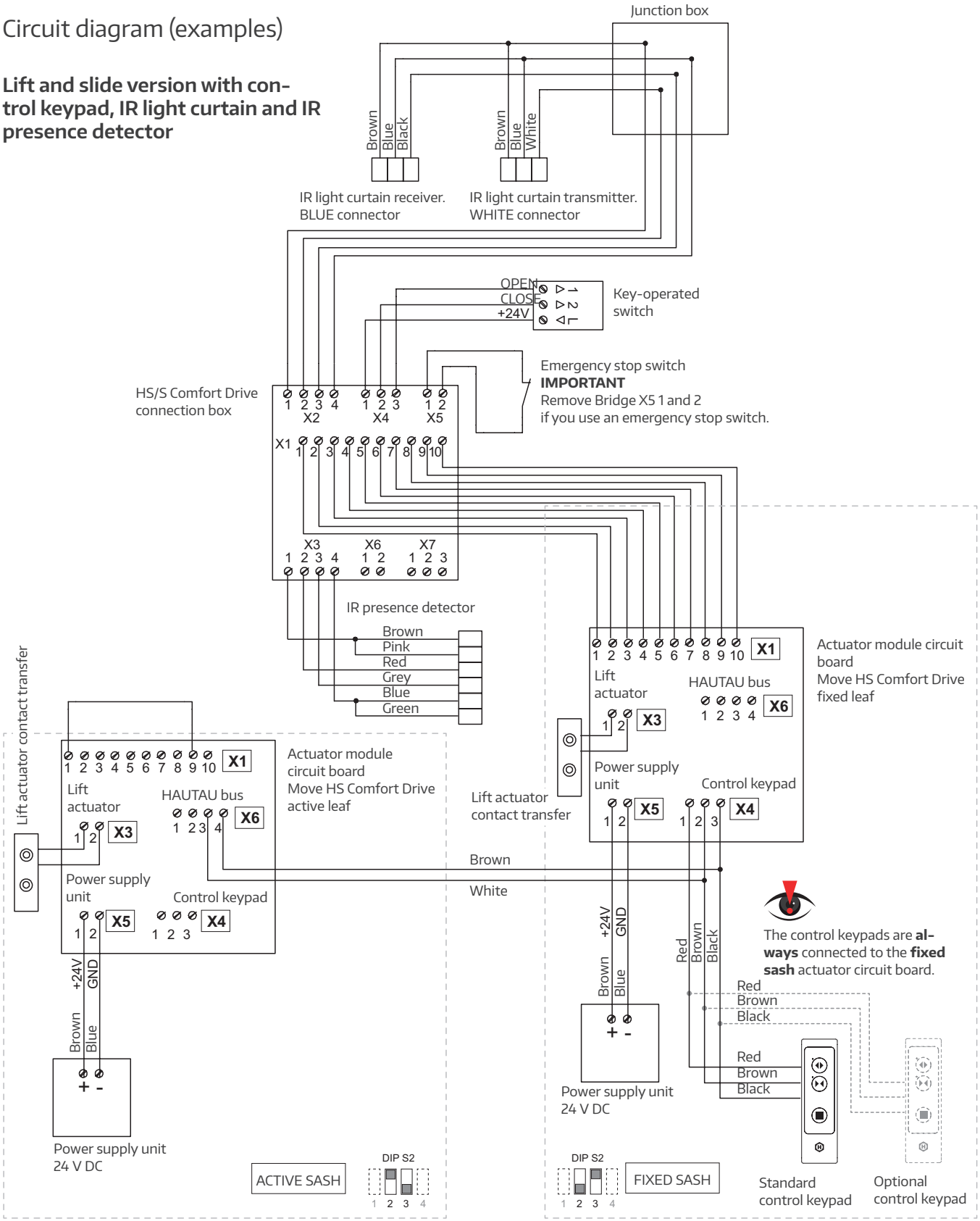


1) The address for Move HS Comfort Drive is 103 (when delivered). Also see WiFi Box installation and operating instructions and Integrating the WiFi Box into a router.

Electrical connection for Move HS Comfort Drive, Scheme C (continued)

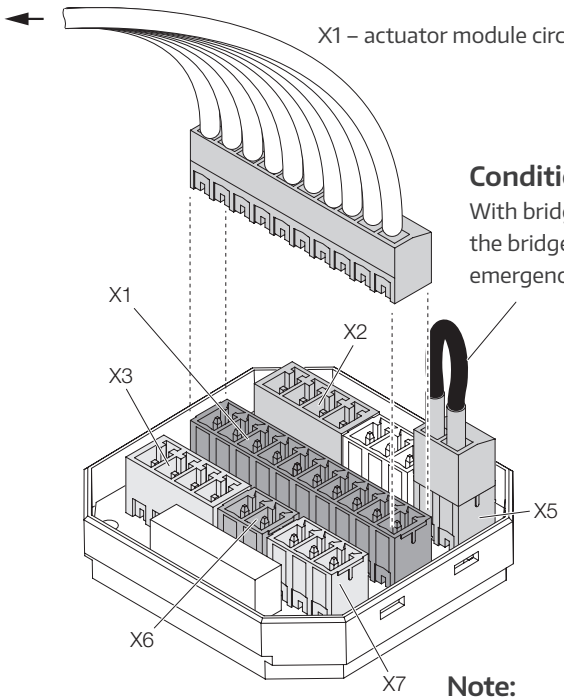
Circuit diagram (examples)

Lift and slide version with control keypad, IR light curtain and IR presence detector



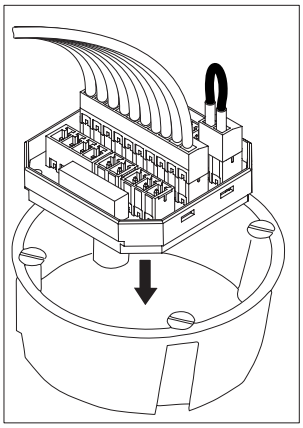
Connection box

The connection box must be fitted close to the installation if it features external safety systems (e.g. IR light curtain, IR presence detector – see relevant section).



Condition on delivery:
With bridge; if an emergency stop switch is used, the bridge must be removed and the emergency stop switch connected to Terminal X5.

Installation:
In a flush box, max. distance of 4 m from actuator.



Note:
The cable must be fitted in such a way that unauthorised persons are unable to reach in from the outside.

X2

Connection to IR light curtain

1 Brown (transmitter and receiver)
2 White (transmitter)
3 Black (receiver)
4 Blue (transmitter and receiver)

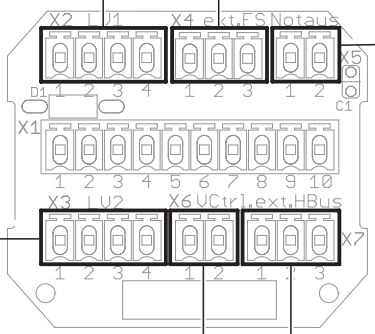
X4

Connection for key-operated switch	1 +24 V 2 CLOSE 3 OPEN
or	
Fingerprint sensor connection	1 +24 V 2 - 3 Switching pulse

X5

Emergency stop switch connection (or bridge between 1 and 2)

1 +24 V
2 Emergency stop input



X3

Connection to IR presence detector

1 Brown and pink
2 Red
3 Grey
4 Blue and green

X6

Available (not in use)

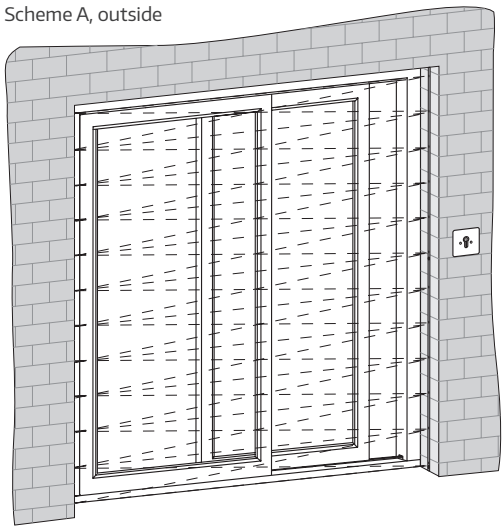
X7

HAUTAU bus service connection, connection for WiFi Box

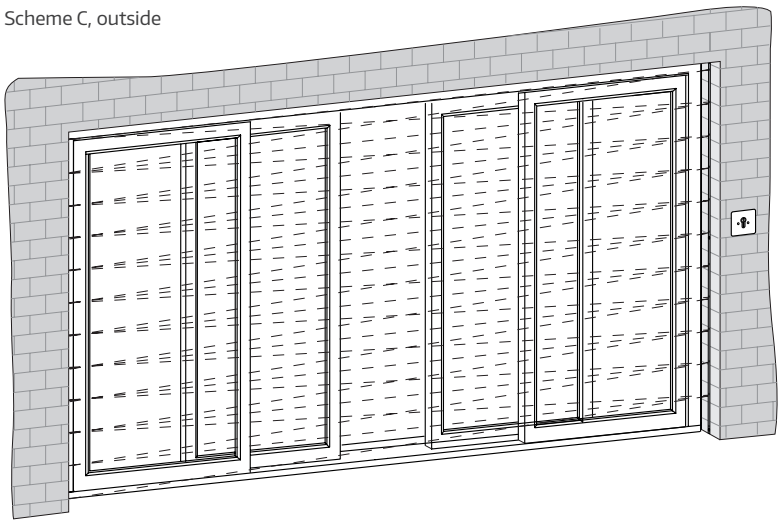
1 +24 V
2 HAUTAU bus
3 GND

IR light curtain

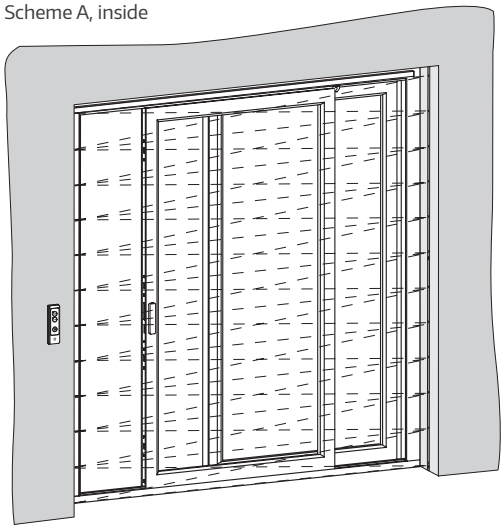
Scheme A, outside



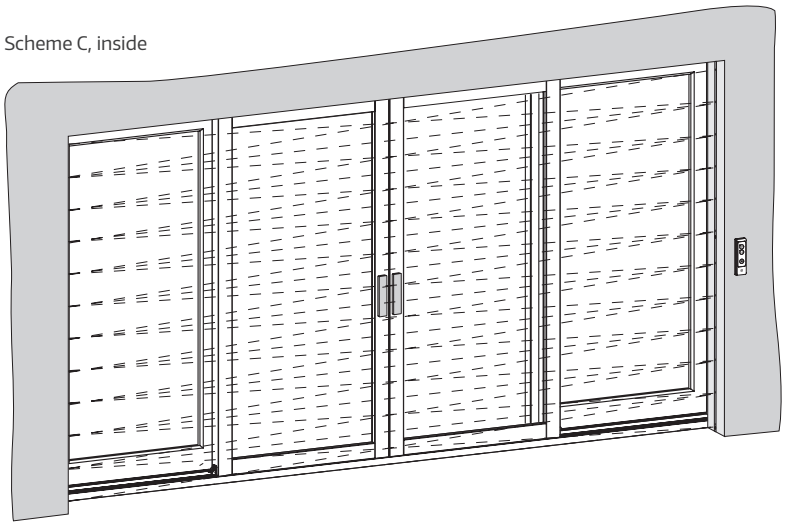
Scheme C, outside



Scheme A, inside

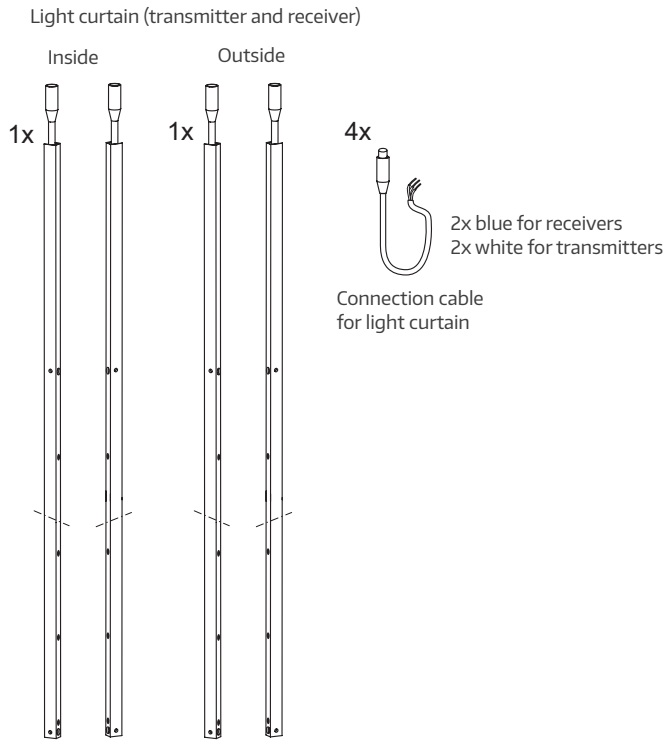


Scheme C, inside



IR light curtain (continued)

Parts overview



IR light curtain technical specifications

Supply voltage	14 to 30 V DC
Current draw	60 mA at 24 V DC
Max. inrush current	< 2 A per strip
Ripple	10%
Output	Max. 120 mA
Response time	25 to 100 ms
Wavelength	Infrared 925 nm
Number of sensors per light curtain	16
Number of beams per sensor	46
Operating range	0.8 to 6 m
Max. ambient light	75,000 lux
Profile dimensions	2000 mm (l) x 12 mm (w) x 16 mm (d)
Cable length	2 x 5 metre connection cable
Ambient temperature	-20 °C to +65 °C
Vibration	IEC 60068-2-29, EN 50155, EN 50121
Shock	IEC 60068-2-6, EN 50155, EN 50121
EMC emissions	EN61000-6-3, EN 50155, EN 50121
EM compatibility	EN61000-6-2, EN 50155, EN 50121
Housing protection class	IP 65
Material	Aluminium
Profile colour	Anodised aluminium

IR light curtain (continued)

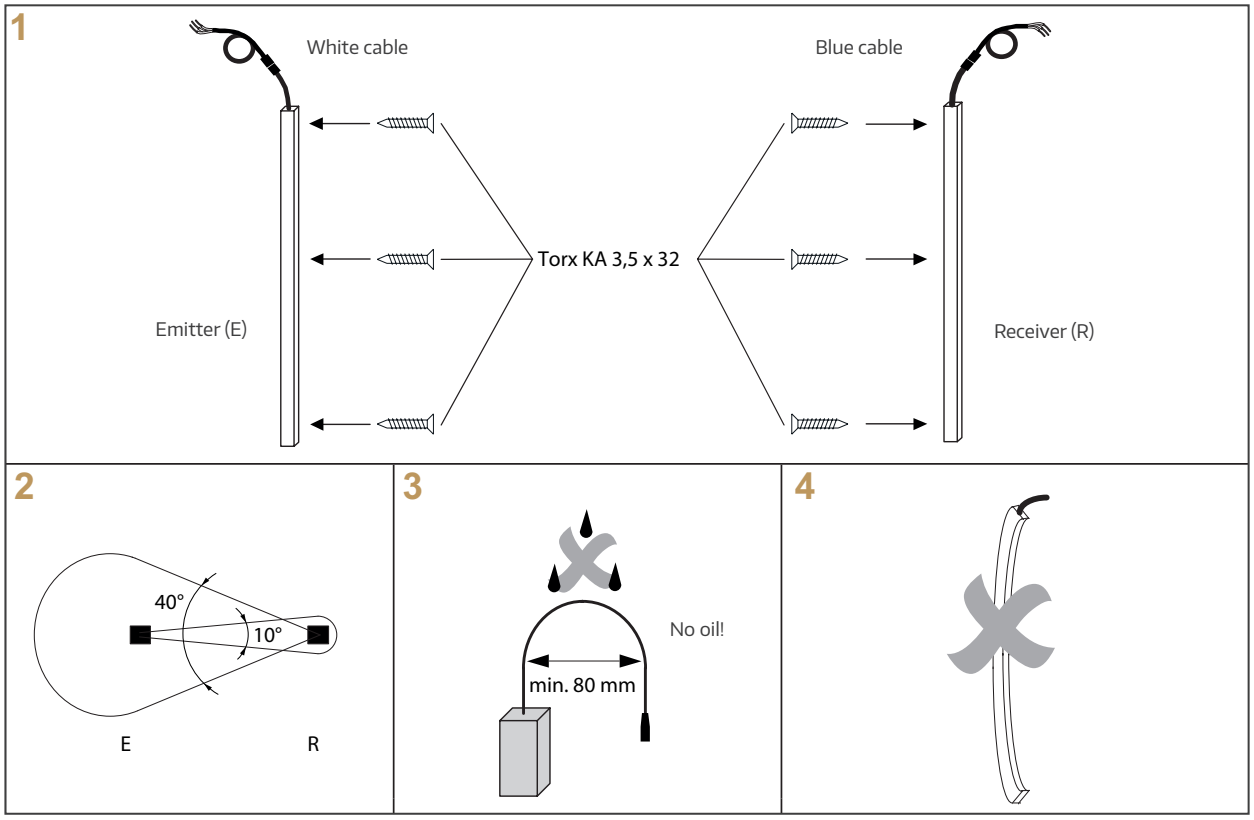
Features

› Self-calibrating, error-tolerant
› Easy installation without calibration
› Dense protection field
› Robust and reliable
› Integrated diagnosis
› Disconnection time adjustable

Functional description

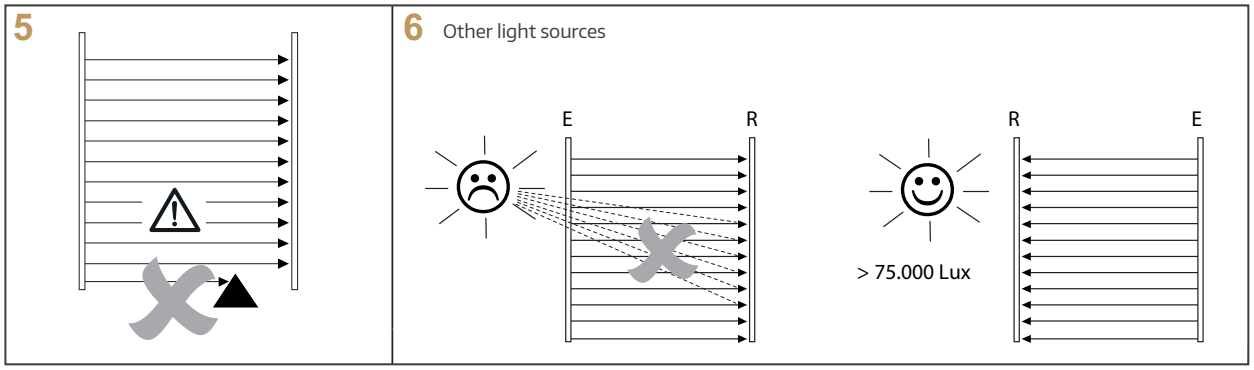
A dense monitoring field with straight and crossed beams exists between the emitter E and the receiver R. An integrated calibration function adjusts the power for each individual beam, eliminating the need for external adjustments and ensuring that dirt and ambient light do not affect operation. These characteristics ensure exceptional functional reliability. Every interruption by an object or person in the monitoring field is detected and triggers switching of the output signal.

Installation instructions



IR light curtain (continued)

Installation instructions (continued)



Thanks to the wide optical opening angle and automatic calibration, there is no need to align the system, provided that the specified opening angle is observed (Fig. 2).

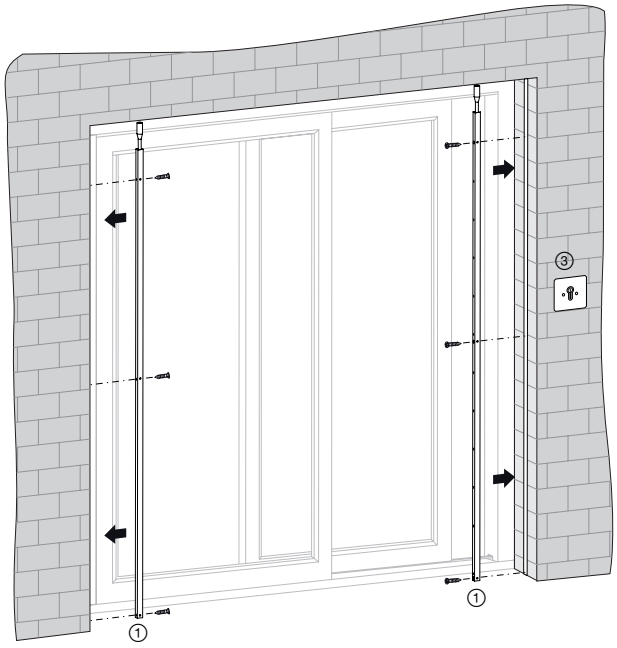
When installing the light curtain, ensure that:

› The optical strips are not rotated 180° when fitted so that both cables point in the same direction (Fig. 1).
› The optical strips are not bent or twisted, or exposed to torsional forces (Fig. 4).
› The mounting surface is sufficiently flat.
› No tensile or shear forces act on the connection cable.
› The cable is fixed, secure and routed with a wide bending radius (Fig. 3).
› Dirt is avoided on the optical strips.
› The cable does not come into contact with liquids containing any oil.
› System parts such as sashes or cables do not extend into the monitored area during operation (Fig. 5).
› No external infrared light sources, such as other light curtains, energy-saving bulbs, or direct sunlight, do not shine directly onto the receiver strip R (Fig. 6).
› Light curtain parts should be cleaned with soapy water as solvents can damage the optical strips.
› The operational range complies with the light curtain's specifications.

IMPORTANT SAFETY NOTICE:
This product is not a safety sensor to protect people against injury caused by dangerous machinery.

IR light curtain (continued)

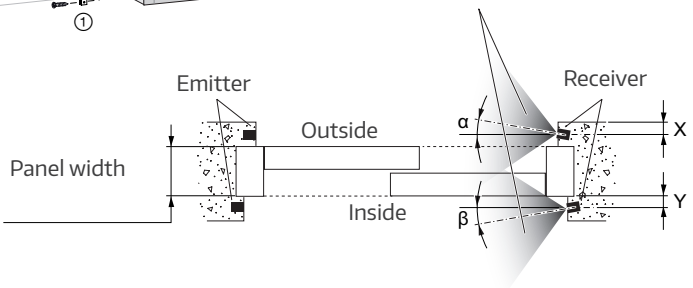
Installation of IR light curtain

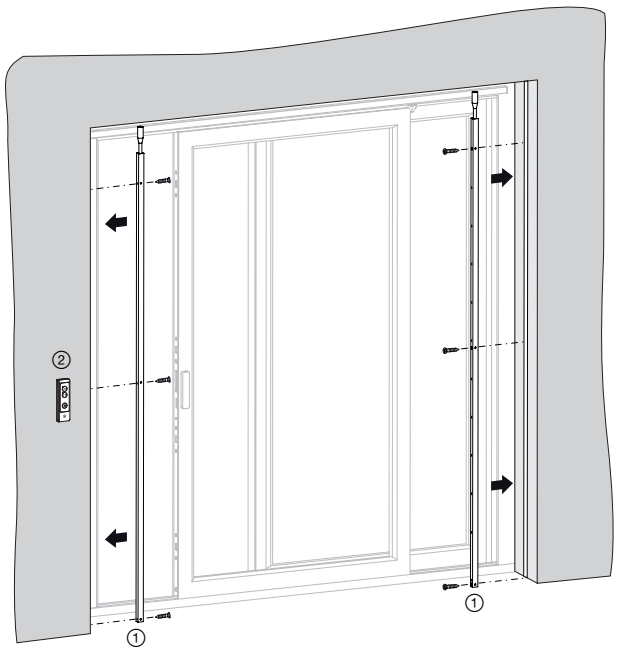


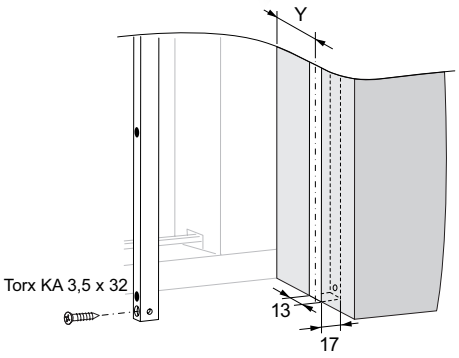
① IR light curtain
② Control keypad
③ Key-operated switch

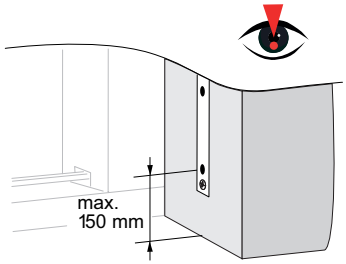
The detection area should be configured in such a way that it performs its required function.

The detection area is determined by α and X or β and Y and the panel width.









IR light curtain (continued)

Installation

Connect the light curtain as per the circuit diagram. Each strip features an LED at the top, which indicates the status of the light curtain:

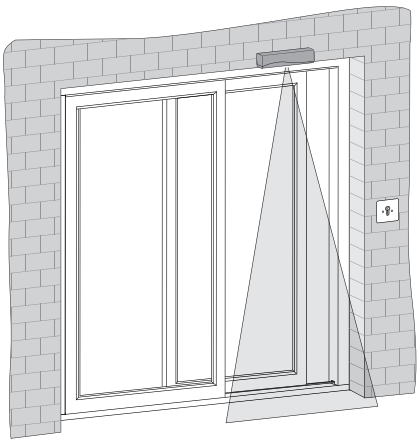
	LED colour	**LED on**	**LED off**	**LED flashes**
Receiver	Orange	Ready for operation and object detected	No operating voltage or no object detected	Optical element defective
Emitter	Green	Ready for operation	No operating voltage	

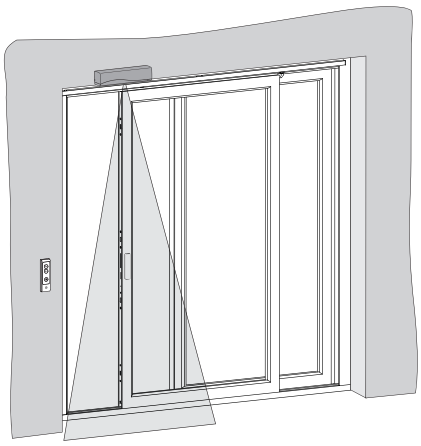
Troubleshooting

If the IR light curtain does not function as expected, then follow the instructions step by step:

1. Switch on the light curtain (receiver and transmitter strip).
2. Check the supply voltage on the receiver and transmitter strip. Does the green LED light up on the transmitter strip and the orange LED light up on the receiver strip if there is an obstacle between the transmitter and receiver strip? Is the supply voltage between 14 and 30 volts DC? The DC voltage ripple should not be more than 10% of the mean voltage in the upper and lower range.
3. If the output signal is not stable when the sash is closing, ensure that:
   a. The light curtain cables are installed far enough away from sources of electromagnetic interference.
   b. There are no obstacles between the transmitter and receiver strip. Ensure that no obstacles protrude into the light beam area.
   c. The strips are connected correctly and are positioned in such a way that they do not swing or vibrate and the light beams are able to align correctly.
   d. The optical components in the strips are clean and free of dust and dirt. The light curtain will respond despite a certain level of dirt, but performance is greatly improved when the components are clean.
4. If the sash closes even though there is an obstacle, there are two possible causes:
   a. The initial selection switch is not properly connected (see steps 2 and 3).
   b. Faulty or defective wiring system or faulty receiver strip.

IR presence detector

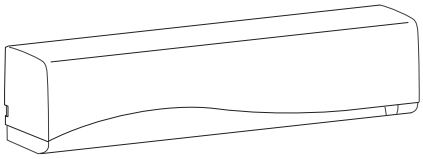




Please refer to the separate manual for the supplied presence detector (security sensor) IXIO-ST for installation and further accessories.

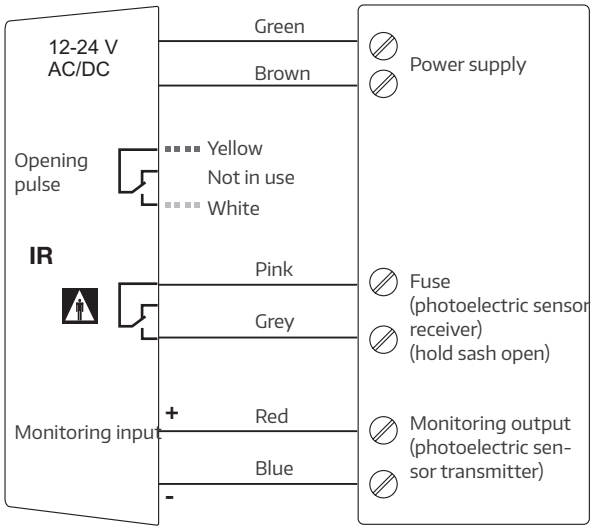
Parts overview

IR presence detector
(security sensor)

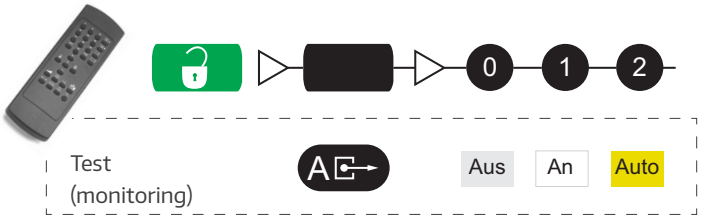


BEA remote control

Electrical connection



IMPORTANT:
Before putting the IR presence detector into operation for the first time, you need to programme the automatic test to ON as follows using the BEA remote control:



Single control button

Features

› For installation in a deep flush box

› The HS/S Comfort Drive control electronics automatically detect whether a 3-button keypad or a button box with a control button is connected

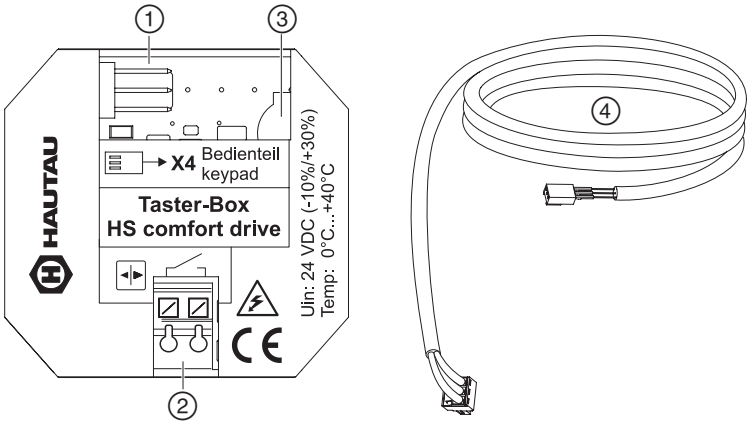
› Power is supplied via the HAUTAU bus

› For operation using just one button for OPEN, STOP and CLOSE

› A buzzer on the circuit board is used to signal errors and statuses

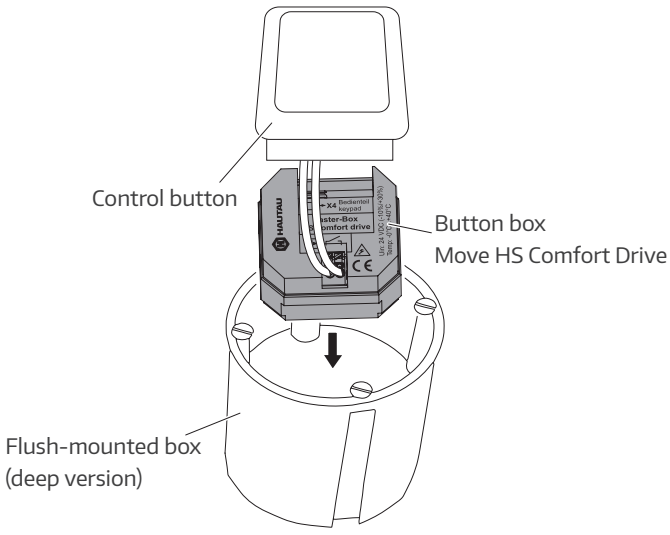
Device overview

① Power supply and connection to the HS Comfort Drive circuit board,Terminal X4
② Connection for buttons
③ Buzzer for feedback signals (in the housing)
④ Connection cable (length: 10 m)



Installing the button box

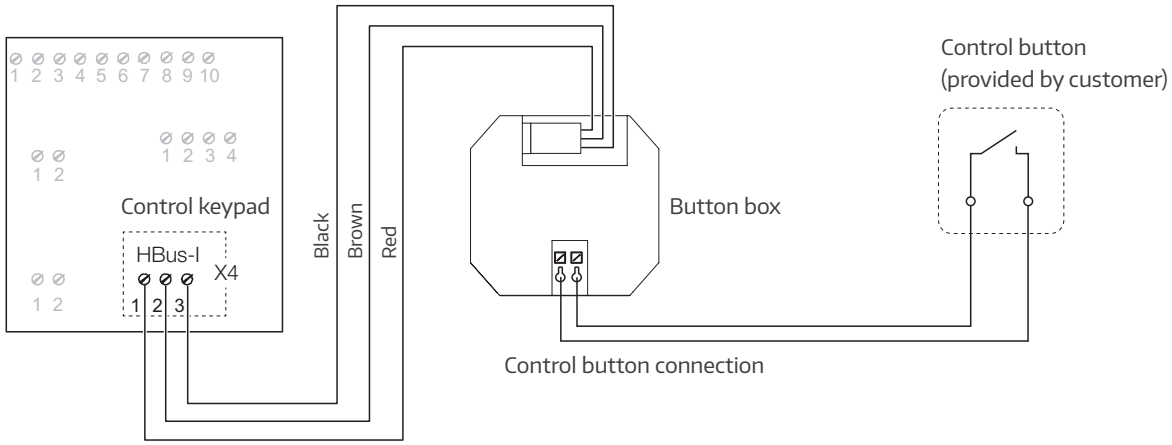
The button box is designed for installation in a deep flush-mounted box provided by the customer. The installation location must be dry and easy to access.
It is recommended to fit an inspection flap or similar.
There is no need to fasten the button box in the flush-mounted box.
A flush-mounted electronics box is recommended for an extended terminal box.



Single control button (continued)

Circuit diagram

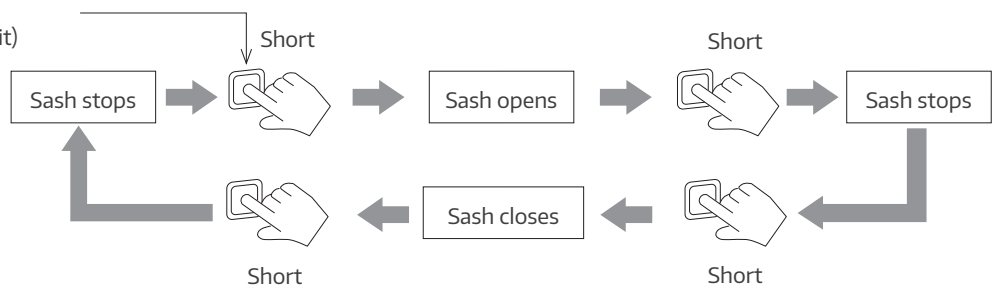
HS/S Comfort Drive actuator module circuit board (in the case of Scheme C: fixed sash actuator circuit board)
(appearance may vary)



Operation

The control keypad remembers the sash's last movement. Randomly pressing the button in quick succession will mean the commands are ignored to protect the actuator system.
HS/S Comfort Drive in automatic mode: pressing the button continuously for about 20 seconds will reset the software (Home Init) while pressing the button continuously for about 30 seconds will reset to factory settings (Full Init).
HS/S Comfort Drive in dead man mode: a double-click is required here to enter the special mode. Only then will pressing the button continuously for about 20 seconds reset the software (Home Init) while pressing the button continuously for 30 seconds will reset to factory settings (Full Init). To exit the special mode, the operator must press the control button twice again or wait for about 1 minute.
An audible signal will confirm the software reset and the factory reset.

Access after initial operation
(Full Init) or calibration run (Home Init)



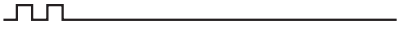
Single control button (continued)

Activating Full Init and Home Init

Mode	Type of initialisation	Action	Feedback signal
Automatic mode (DIP switch 4 at ON)	Software reset (Home Init)	Press button for about 20 sec.	Audible signal (see below)
	Factory reset (Full Init)	Press button for about 30 sec.	
Dead man mode (DIP switch 4 to OFF)	Software reset (Home Init)	Double-click + press button for about 20 sec.	
	Factory reset (Full Init)	Double-click + press button for about 30 sec.	
	End initialisation	Wait about 1 min. or double-click again	-

Feedback signals

The buzzer signalling errors and statuses cannot be switched off. As a result, it is only activated when absolutely necessary to alert the actuator system user/operator.
The buzzer is not intended to indicate different causes of error, which only service personnel can eliminate. The buzzer is meant to assist the user/operator.

Event	Audible signal sequence	Activation and duration
For all errors which cause a safety stop for the HS/S Comfort Drive		Only if button is pressed
During opening/closing in the course of initialisation ⚠ **CAUTION: All safety systems are deactivated during initialisation.**		Until initialisation is complete
Audible confirmation signal for software reset (Home Init) after about 20 seconds. The control button must be pressed for at least 20 seconds for a software reset.		One-time
Audible confirmation signal for factory reset (Full Init) after about 30 seconds. The control button must be pressed for at least 30 seconds for a factory reset.		One-time
After double-click on control button (triggering a reset in DEAD MAN mode)		1 minute or until a button is next pressed

Single control button (continued)

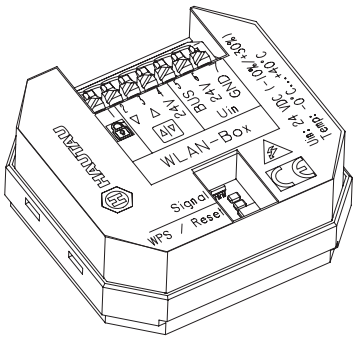
Technical specifications

Operational power supply	
Supply voltage 24 V DC (–10%/+30%)	
Ripple	≤ 20% in relation to the nominal voltage
Current draw	max. about 14 mA
	Standby about 4 mA
Wattage	max. about 0.4 W
	Standby about 100 mW
Material and mechanical properties	
Dimensions: w x h x d (mm)	50 x 47 x 28
Plastic housing	
Colour	Grey
Halogen-free	Yes
Silicone-free	Yes
RoHS-compliant	Yes
Audible feedback signal	
for errors and statuses	Yes, audible signal sequences
HAUTAU bus	
Cable length	Max. 10 m
Cable cross-section	≥ 0.8 mm²
Cable type	not shielded
Number of actuators	1 per button box
Installation and environmental conditions	
Nominal temperature	20 °C
Ambient temp. range	0 °C to +40 °C
Installation conditions	Dry
Suitable for outdoor installation	No
Protection rating	IP20 (as per EN 60529)
Approvals and certificates	
CE-compliant	Yes, with EMC Directive 2004/108/EC and
	Low Voltage Directive 2006/95/EC
RoHS-compliant	Yes, with Directive 2011/65/EC
Protection class	Class III
Connection option	Any 1-pole button with normally open contact for flush/surface mount on wall
Use for HS/S Comfort Drive	Software version 5.0 and higher for the main actuator circuit board

WiFi Box

Product description

The WiFi Box is used to control products wirelessly with a HAUTAU bus interface using a WLAN radio signal. The system is controlled by mobile devices using a direct link to the WiFi Box or a WLAN router supplied by the client. The optional HAUTAU ConfigTool is required to control and configure the products.



WARNING:
Important safety instructions

IMPORTANT

It is important to observe the following instructions to ensure safety for everyone. Incorrect installation may lead to serious injury or even death.

The WiFi Box meets the latest technical standards. This refers to performance, materials, mode of operation and safe operation.

Life-threatening hazard posed by electric shock

The WiFi Box is suitable for actuating 230 V products with a HAUTAU bus interface. There is a risk of fatal injury from touching live parts. During maintenance work on systems with 230 V, disconnect them completely from the power supply using a cut-off device and ensure they cannot be unintentionally switched back on. The cut-off device must be clearly labelled.

Risk of crushing and pinching

Secure crushing and shearing points between window sashes and frames, light domes, and upstands up to a height of 2.5 m with devices that halt movement when touched or interrupted by a person.

Expert, safety-conscious electrical specialists must carry out the installation as specified in these installation and operating instructions. This includes electricians or specialist fitters trained in the field of electrical installation. Only a qualified professional with completed training in electrical installation should carry out any work on live components.

WiFi Box (continued)

Installation instructions

Connection of all components only as indicated on circuit diagrams, which are included with the products.
You must comply with DIN and VDE standards, German Employers' Liability Insurance Association and state building regulations (selection: VDE 0100, VDE 0833, VDE 0800, BGV).
All cables, except the mains cable, carry 24 V DC. Avoid installing these alongside high-voltage lines (observe VDE regulations). When installing the actuators, take the active stress forces into account.
On completing work, verify all functions, functional and operational indicators and the actuators' swivel range. Complete the installation certificate in the inspection book and send the specification form along with the supplied envelope to the operator.
Keep the drawings and the installation and operating instructions for future reference.

Features

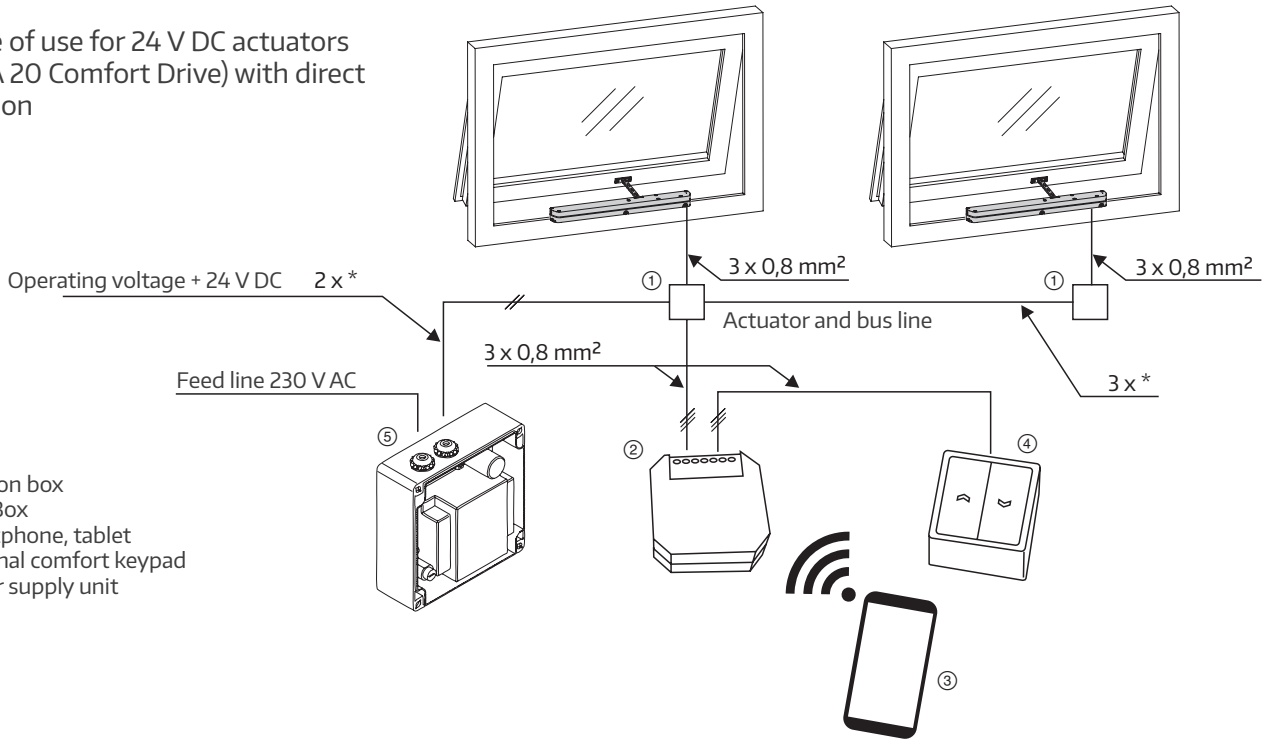
- For installation in a flush box
- To control a max. of 31 peripherals with HAUTAU bus interface
- Control and configuration via WLAN (wireless local area network)
- Safe data exchange using WPA encryption (WiFi protected access)
- Log-in to routers supplied by client via WPS (WiFi protected setup)
- Optical signal for feedback signals for operation and configuration
- Connection possible for a wired comfort keypad
- Primary input for locking

IMPORTANT NOTE:
A factory reset and software reset of the Move HS Comfort Drive are not possible with the WiFi Box. Such resets can only be performed with the standard control keypad or a control button/button box.

WiFi Box (continued)

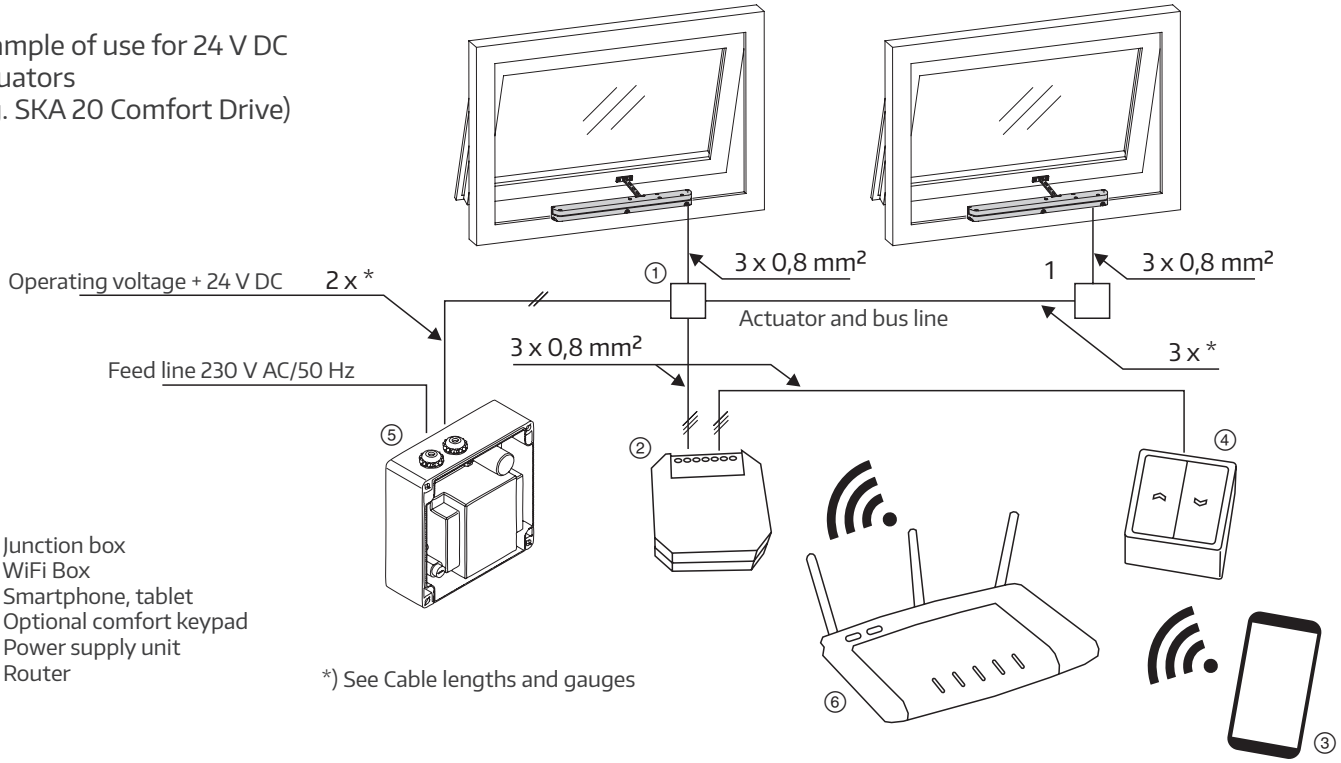
Examples of use and wiring plan

Example of use for 24 V DC actuators (e.g. SKA 20 Comfort Drive) with direct connection



*) See Cable lengths and gauges

Example of use for 24 V DC actuators (e.g. SKA 20 Comfort Drive)

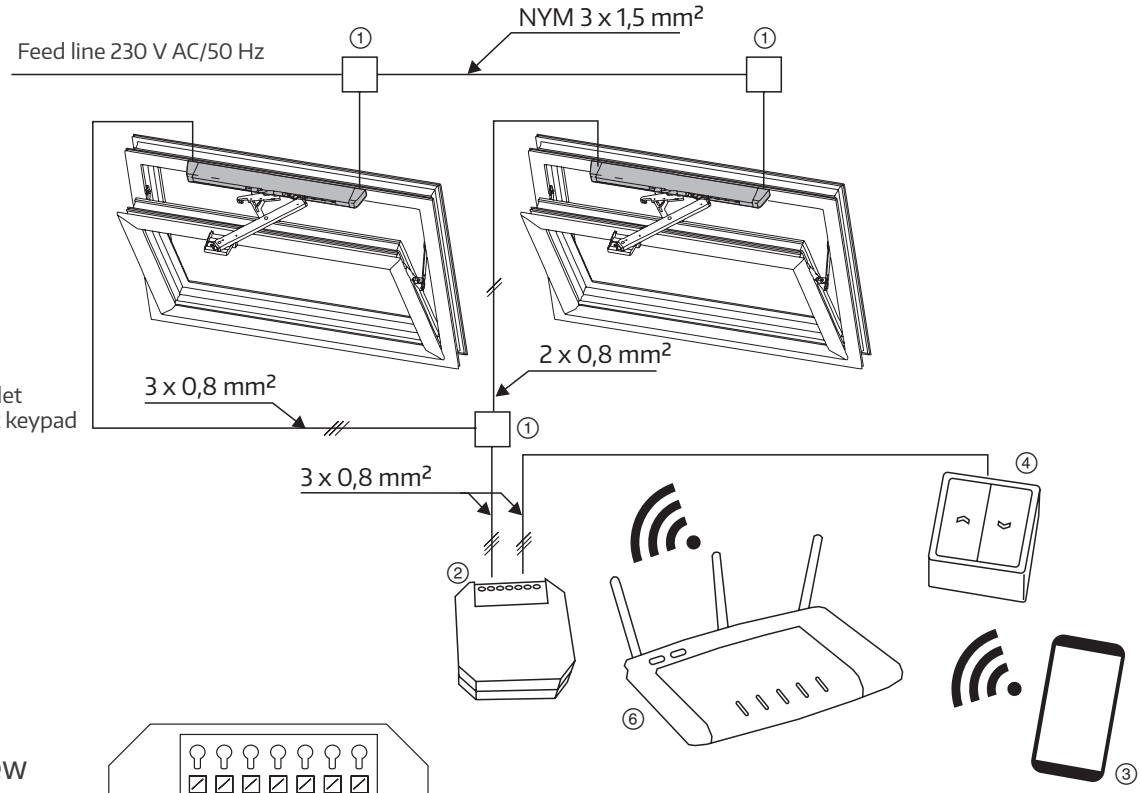


*) See Cable lengths and gauges

WiFi Box (continued)

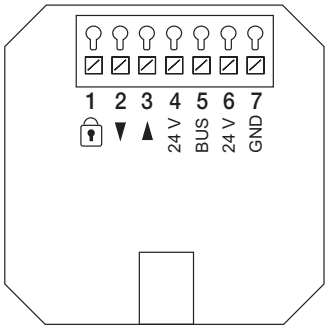
Examples of use and wiring plan (continued)

Example of use for 230 V AC actuators (e.g. PRIMAT-E kompakt 195)
with connection to WLAN router



① - Junction box
② - WiFi Box
③ - Smartphone, tablet
④ - Optional comfort keypad
⑥ - Router

Device overview



Connection for ...
1 - Locking device
2 - Comfort keypad CLOSE
3 - Comfort keypad OPEN
4 - Output 24 V DC
5 - HAUTAU bus
6 - Input 24 V DC
7 - GND (operating voltage)

Switches/buttons can be connected. The inputs operate with normally open contacts:
One input each for the OPEN and CLOSE commands.

Button/switch operation

If the command is active for less than 1.5 seconds, the panel will open or close until the next command is received.
A STOP is initiated by simultaneously closing both inputs within 0.5 seconds during operation. This allows operation both with two buttons (e.g. dual button) and the HAUTAU ventilation switch, where the third, separate button (STOP) triggers pressing of the other two buttons at the same time.

Dead man mode

If the command is active for less than 1.5 seconds, the panel will open or close as long as the contact is closed. A STOP is implemented by opening the contact (releasing/resetting the operating control/switch).
When the input is activated with the lock symbol, the CLOSE command is transmitted to all configured devices (dead man mode: master command). The OPEN/STOP/CLOSE commands are blocked as long as the input remains activated (dead man mode: by the button and WiFi input). A rain sensor can be connected here, for example.

WiFi Box (continued)

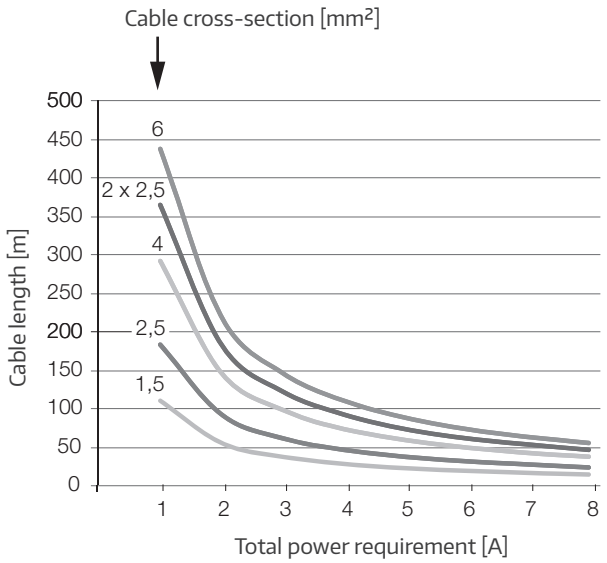
Cable lengths and gauges

Important information for 24 V actuators

You must comply with the maximum cable lengths from the power source to the last junction box, based on the wire cross section used and the maximum current draw per actuator group.

Calculation formula:

$$\text{Wire cross section [mm}^2\text{]} = \frac{\text{Total current draw [A] x max. cable length [m]}}{73}$$

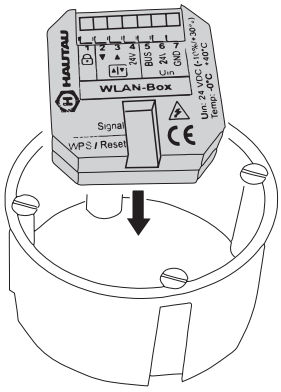


WARNING:

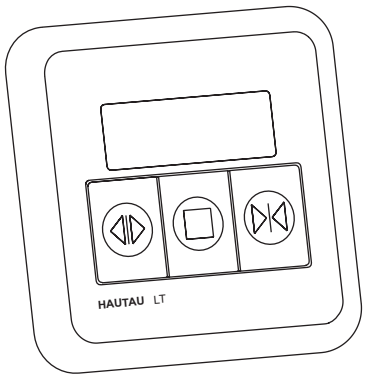
VDE regulations must be observed.

Installation of the WiFi Box

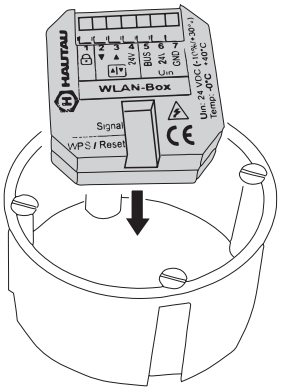
The WiFi Box is designed for installation in a flush-mounted box provided by the customer. The installation location must be dry and easy to access. It is recommended to fit an inspection flap or similar. There is no need to fasten the WiFi Box in the flush-mounted box.
A flush-mounted electronics box is recommended for an extended terminal box.



Optional



Ventilation switch LT

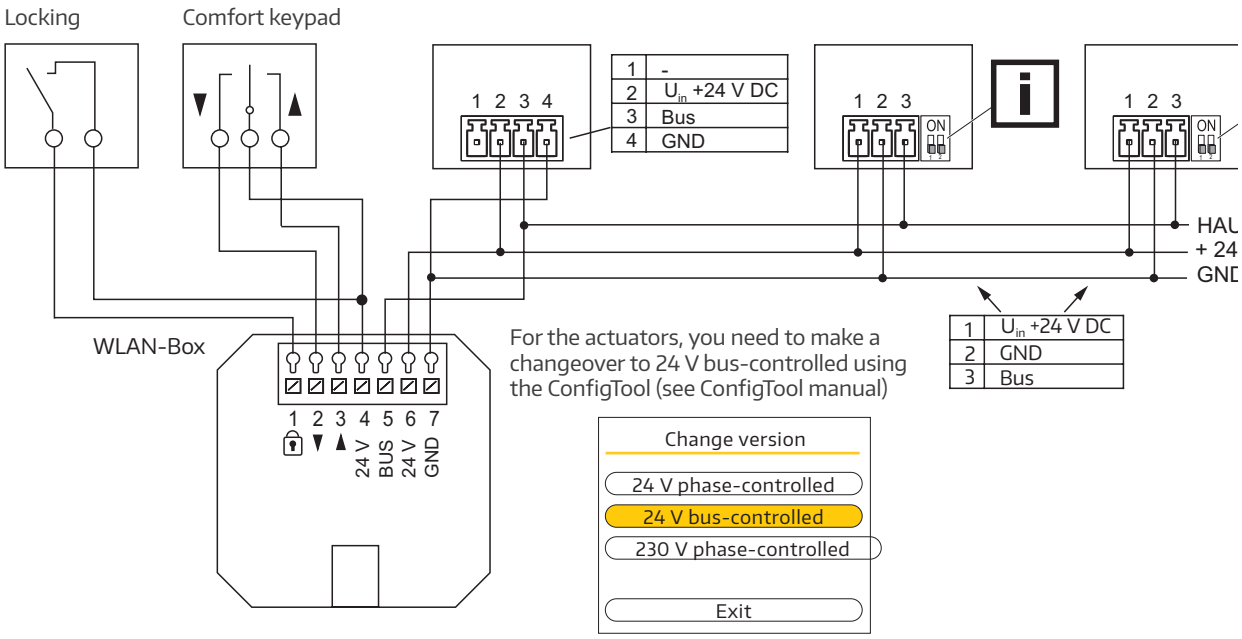


WiFi Box (continued)

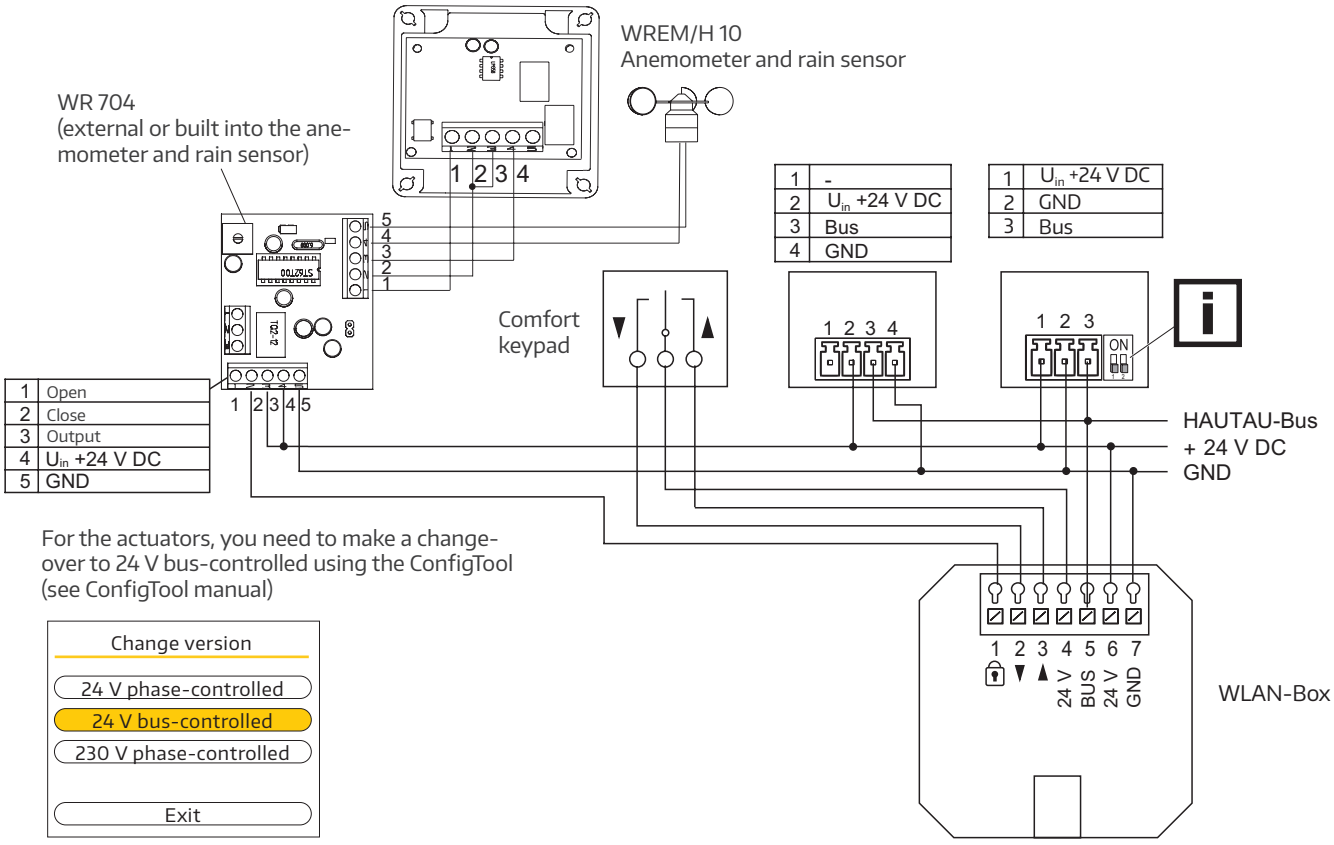
Circuit diagram

See separate section on Electrical connection for Move HS Comfort Drive, Scheme A/C **to connect the Move HS Comfort Drive**

Circuit diagram for 24 V DC actuators, model SKA 20 Comfort Drive and PRIMAT kompakt 195 Comfort Drive



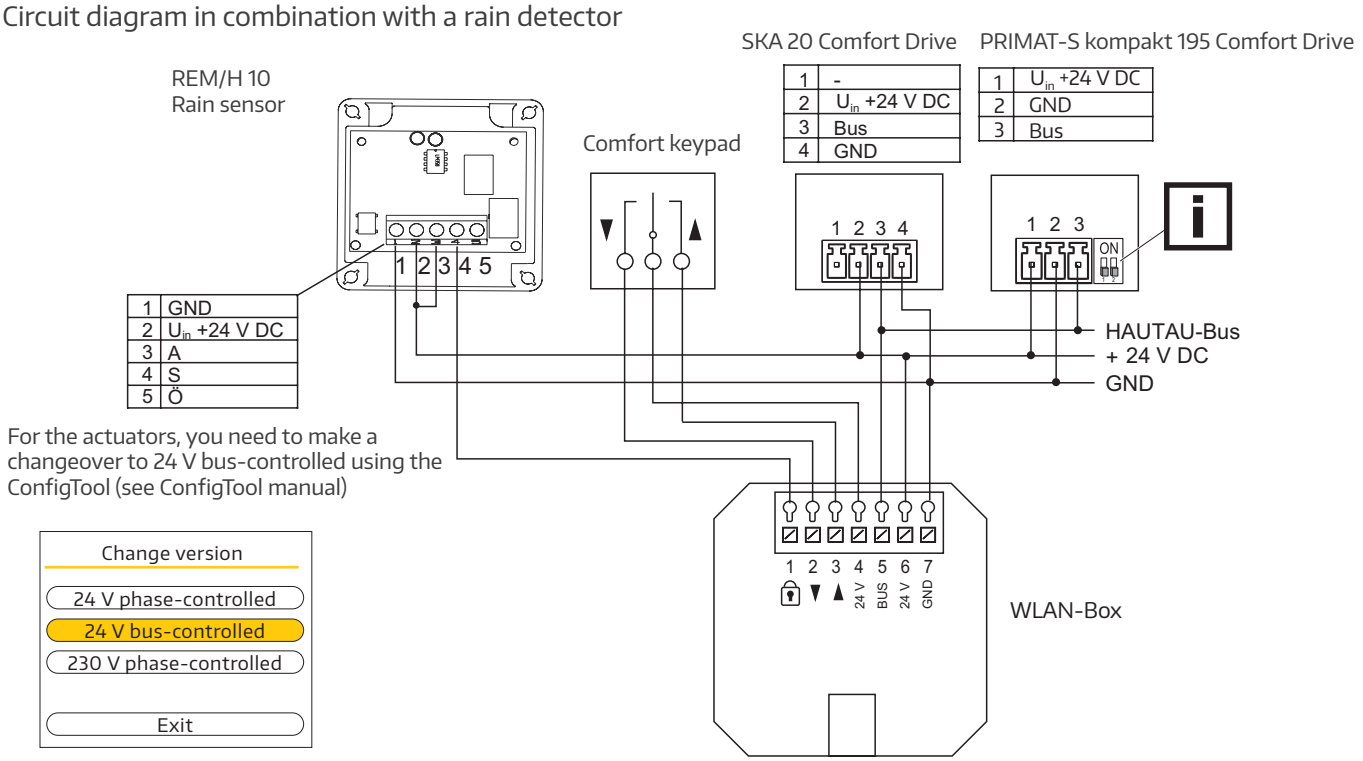
Circuit diagram in combination with an anemometer and a rain detector



WiFi Box (continued)

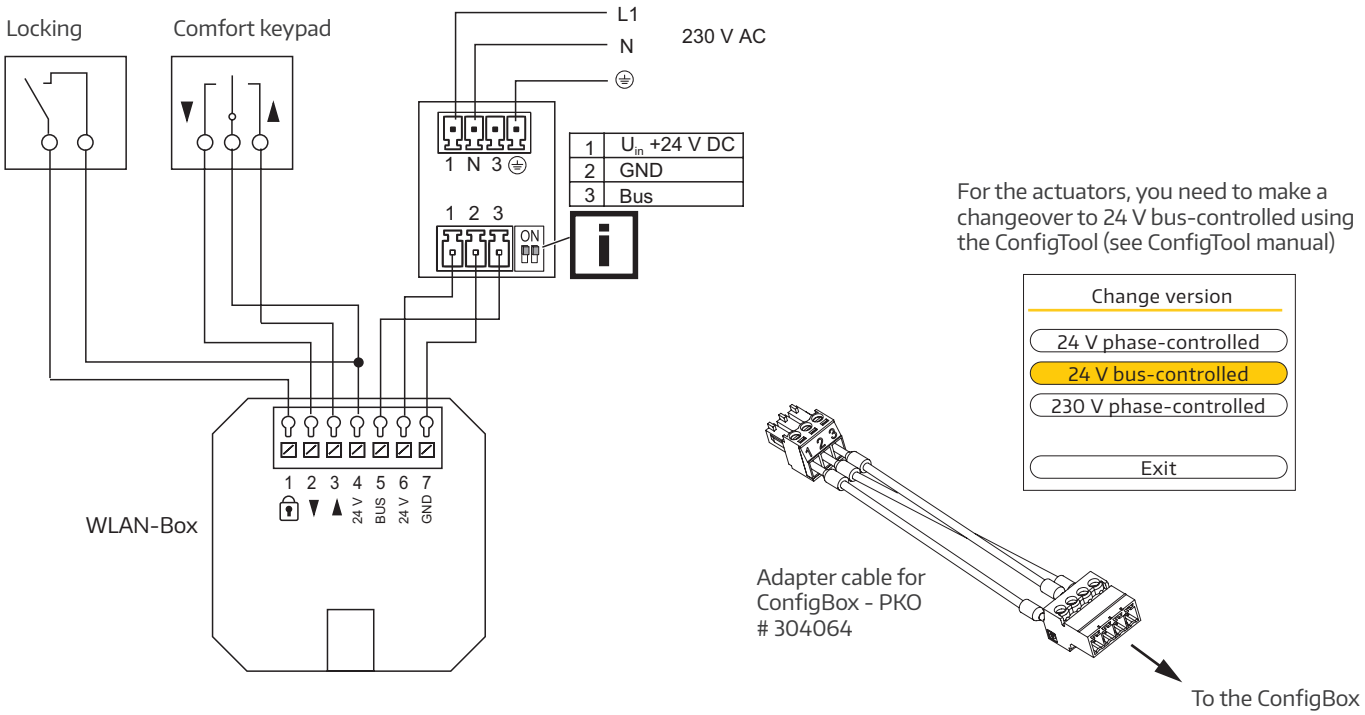
Circuit diagram (continued)

Circuit diagram in combination with a rain detector



Circuit diagram for 230 V AC actuator, model: PRIMAT-E kompakt 195 Comfort Drive

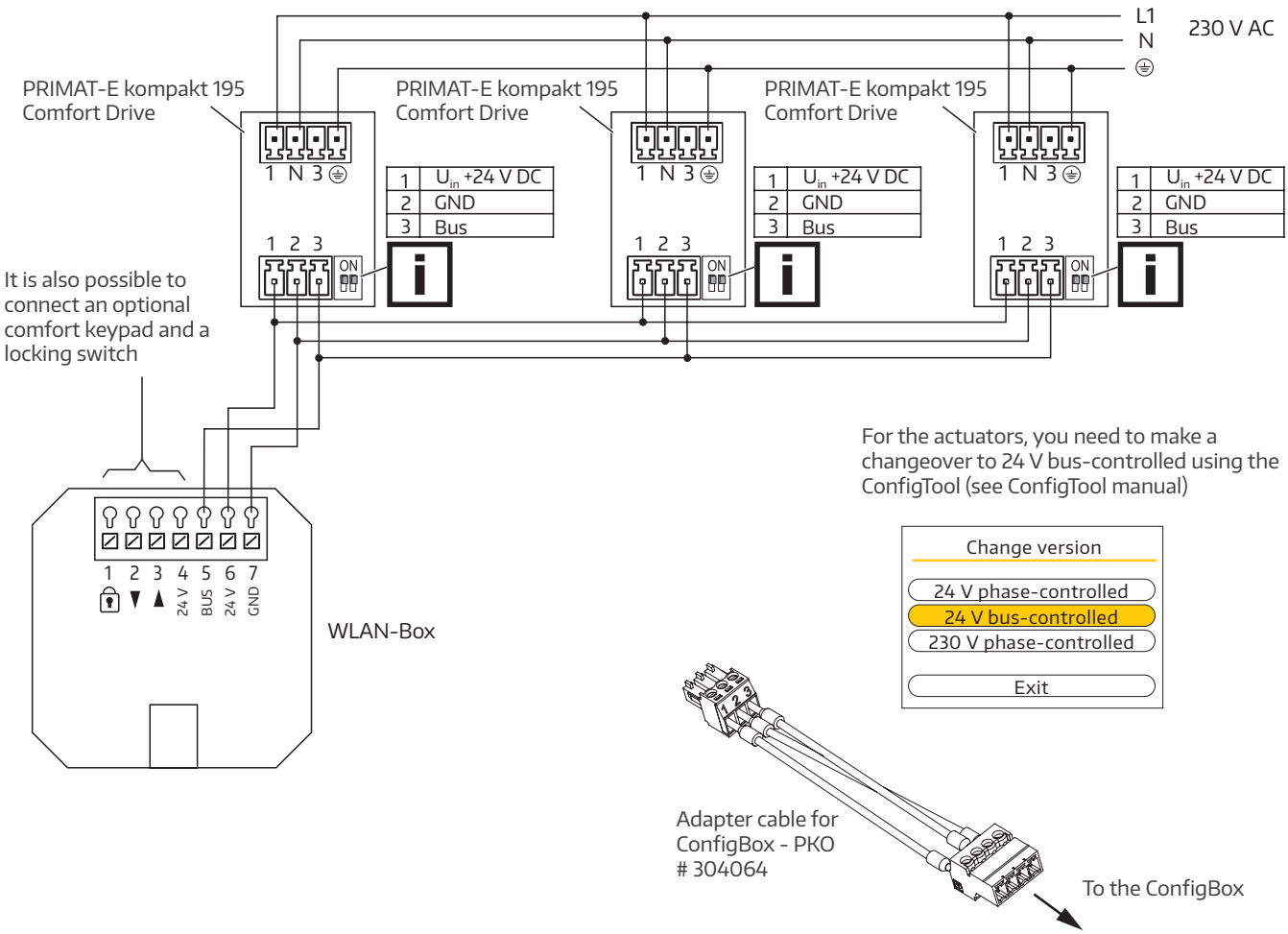
The WiFi Box is powered directly by the PRIMAT-E kompakt 195 Comfort Drive power supply unit.
The PRIMAT-E kompakt 195 Comfort Drive power supply unit can power only one WiFi Box.



WiFi Box (continued)

Circuit diagram (continued)

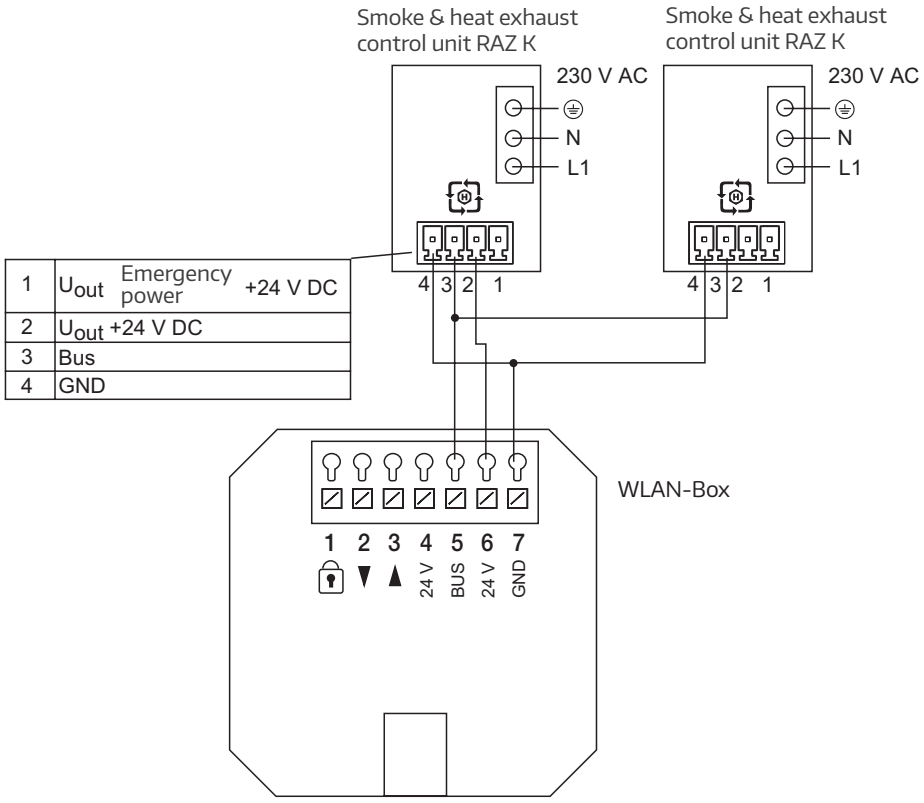
Circuit diagram for multiple 230 V AC actuators, model: PRIMAT-E kompakt 195 Comfort Drive



WiFi Box (continued)

Circuit diagram (continued)

Circuit diagram for smoke & heat exhaust control unit RAZ K



Optical signals and button assignment

Signal **optical indicator and** WPS/Reset **button**		
Button	Signal	Position
-	LED flashes 	WiFi Box in operation
Pressed briefly (< 1 s)	LED on	WPS log-on
Pressed for longer (> 1... 5 s)	LED flashes (after 2 s)	Wi-Fi settings reset to factory settings
Pressed for long time (> 5 s)	LED flashes quickly (after 5 s)	Complete reset to factory settings. Current configurations are deleted. Peripherals must be re-registered.

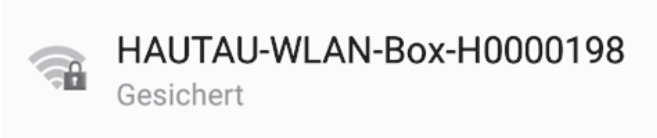
The WPS registration depends on the router used.
Please follow the instructions in the router description.

WiFi Box (continued)

WLAN log-on

The WiFi Box must be installed ready for operation and connected to a 24 V DC power supply. The search for new WiFi networks needs to be enabled on the smartphone or tablet. The WiFi Box is quickly detected with its name.

Example:



The WiFi Box name contains the WiFi key for the initial connection, such as "H0000390". After successfully establishing a connection, change the WiFi key using the HAUTAU ConfigApp.

Functional description

The functions depend on the WiFi Box firmware version, the type of products used with the HAUTAU interface and the HAUTAU ConfigTool version.
The HAUTAU ConfigTool software application (app) is required to guarantee operation.

Description of the inputs in conjunction with actuator operation		
Terminal	Position	Description
1	Locking	Primary input, e.g. to place all actuators in the closed position and then lock; it is not possible to operate with a smartphone or a comfort keypad connected via the WiFi Box.
2	Comfort keypad CLOSED	Primary input for a comfort keypad to close all actuators together
3	Comfort keypad OPEN	Primary input for a comfort keypad to open all actuators together
4	Output 24 V DC	24 V power supply for an external comfort keypad and/or locking switch
5	HAUTAU bus	To connect the HAUTAU bus
6	Input 24 V DC	Operating voltage for WiFi Box
7	GND	GND for operating voltage

WiFi Box (continued)

Technical specifications

Operational power supply	
Supply voltage	24 V DC (–10%/+30%)
Ripple	≤ 20% in relation to the nominal voltage
Wattage in transmission mode	about 1.5 W
Wattage in standby mode	about 1 W
Current draw in transmission mode	about 60 mA
Current draw in standby mode	about 40 mA

Comfort keypad output	
Voltage input	10 to 30 V DC
Current	1 mA
Fuse	No

Material and mechanical properties	
Dimensions: w x h x d (mm)	50 x 47 x 28
Plastic housing	
Colour Grey	
Halogen-free	Yes
Silicone-free	Yes
RoHS-compliant	Yes

Connection and operation	
Suitable for SHEV	No
Suitable for ventilation	Yes
Maintenance	Recommended yearly
Connection terminals	Spring clamp terminals 1.5 mm²

Indicators and operating controls	
Indicator for operation and configuration	Yes, yellow LED
Button for configuration	Yes, for reset and WPS registration

Wireless LAN	
Radio standard	802.11n/g/b
Encryption	Yes, WPA
Range	Without interferences: about 10 m, depending on the building
Log-on per WPA	Yes
Password assignment	Yes, in ConfigTool

HAUTAU bus	
Cable length	Max. 300 m
Cable cross-section	0.14 ... 0.5 mm² (recommended: 0.25mm²)
Cable type	not shielded
Number of peripherals	31 per WiFi Box

Installation and environmental conditions	
Nominal temperature	20 °C
Ambient temp. range	0 °C to +40 °C
Installation conditions	Dry
Suitable for outdoor installation	No
Protection rating	IP20 (as per EN 60529)

Approvals and certificates	
CE-compliant	Yes, with EMC Directive 2004/108/EC and Low Voltage Directive 2006/95/EC
RoHS-compliant	Yes, with Directive 2011/65/EC
Protection class Class III	

Required accessories	
HAUTAU ConfigTool software application (app)	To parametrise the WiFi Box and for operation

Integrating the WiFi Box in a router supplied by customer

(procedure using a FritzBox router as an example)

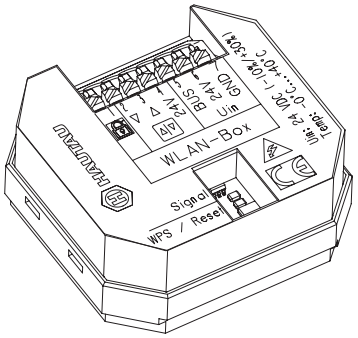
Introduction

The WiFi Box offers the following options for WiFi operation as standard:

As a WLAN access point

The WiFi Box transmits and receives WLAN commands directly from the tablet or smartphone.

This option is practical if there is no local WiFi network available, there is a preference not to integrate the router, or when there was no on-site router installed during installation and functional handover.



As a client

The WiFi Box transmits and receives the WLAN commands from a router. The router receives the commands from a tablet or smartphone.

This version is a good idea if simultaneous operation via the WiFi Box and internet functions, such as internet browsing, is desired. As a result, there is no need to switch manually between different WiFi connections.

In this section, the function is described as a WiFi client .

Preparations

On-site router

The router must be operational. Internet access is not required for the function with the WiFi Box.

The following details must be known about the router:

a) the router's name (WiFi SSID)

b) the router password to establish a WiFi connection

c) the internet address which can be used to access the router in a browser

d) the password to access the router configuration level

WiFi Box

The WiFi Box must be ready for operation. The HAUTAU ConfigTool app must be installed. The HAUTAU products must be linked to the WiFi Box. This includes wiring with the WiFi Box and integration using the ConfigTool via device scanning and, if necessary, new address assignment. Internet access is not required for the function with the WiFi Box.

The following details must be known about the WIFi Box:

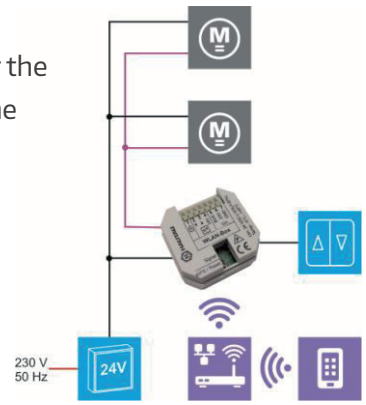
a) the name of the WiFi Box (Example: "HAUTAU-WiFi Box-H0000110")

b) the WiFi Box password to establish a WiFi connection (example: "H0000110")

Integrating the WiFi Box in a router supplied by customer (continued)

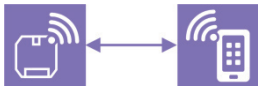
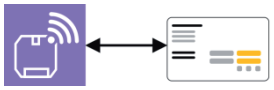
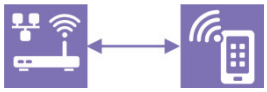
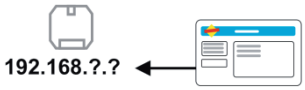
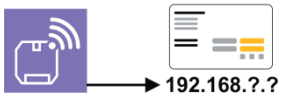
Main function

Wiring must be carried out as specified in the installation instructions for the WiFi Box. This application example demonstrates the basic function of the WIFi Box as a client in combination with an on-site router.



Basic procedure

Basic procedure for setting up the WiFi Box and the router. You will find the specific details in the following steps.

Step	Brief description
1	 Establish a direct WiFi connection between WiFi Box and tablet or smartphone.
2	 Launch ConfigTool and switch to Via router mode in the menu and enter the router identifier (router name and password).
3	 Establish a WiFi connection between router and tablet or smartphone.
4	 Launch internet browser and enter the address to access the router. Enter the password to access the router configuration level. The WiFi Box must be listed here. Always assign the same IP address to the WiFi Box.
5	 Write down the address indicated for the WiFi Box in the router configuration level.
6	 The address for the WiFi Box must be transferred to the ConfigTool.
7	 The WiFi Box function has been set up as a client. Operation via the router has been established.

Integrating the WiFi Box in a router supplied by customer (continued)

Establishing a direct WiFi connection

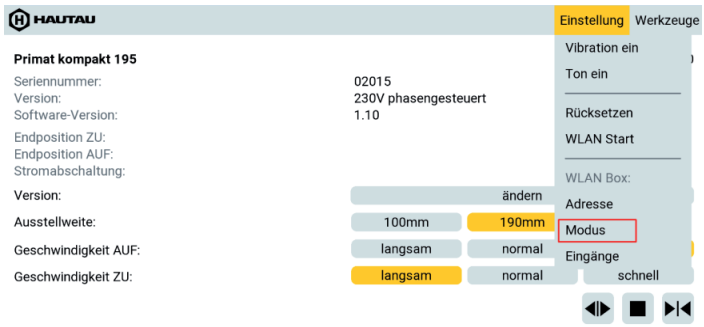
The WiFi Box must be installed ready for operation and connected to a 24 V DC power supply. The search for new WiFi networks needs to be enabled on the smartphone or tablet. The WiFi Box is quickly detected with its name.
The WiFi Box name contains the WiFi key for the initial connection, such as "H0000390". After successfully establishing a connection, change the WiFi key using the HAUTAU ConfigTool app.

Example of a successful connection

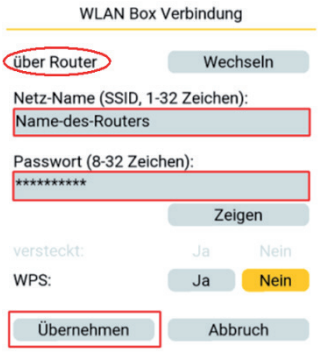
Settings in ConfigTool

A direct configuration must be established between the WiFi Box and the tablet or smartphone to make the necessary settings. You need the password to set up the connection to the WiFi Box.

The menu can be accessed once the connection is successfully established and the ConfigTool launched:
ConfigTool > Setting >Mode > WiFi Box connection



Make the setting to access the router:
WiFi Box connection = via router
Network name (SSID): This is where the router name is entered.
Password: This is where the router password is entered to access the WiFi network.



Press Accept to confirm the inputs.

Caution: Check that the router name and the router password are correct and do not enter the WiFi Box name and access code. If you do otherwise, you will no longer be able to access the WiFi Box and you will need to reset the WiFi Box to factory settings.

Connection to the router

Establish a WiFi connection to the router. This is where the router password is entered to access the WiFi network.
This is an example of a successful connection to the router.
The name "WlanBoxRouter" shown here is just an example.

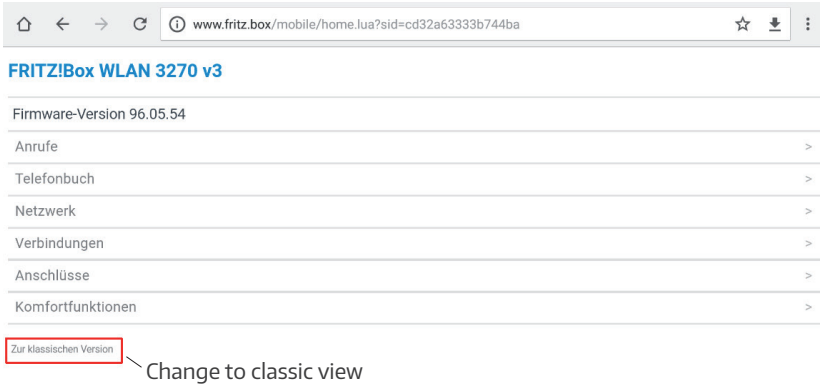
Integrating the WiFi Box in a router supplied by customer (continued)

Settings in the router

You then need to open the internet browser and enter the address to access the router. The log-in page for access to the configuration level will now open. You will need to enter the access password here and confirm by clicking Log-in. Example of access to a FritzBox router: www.fritz.box

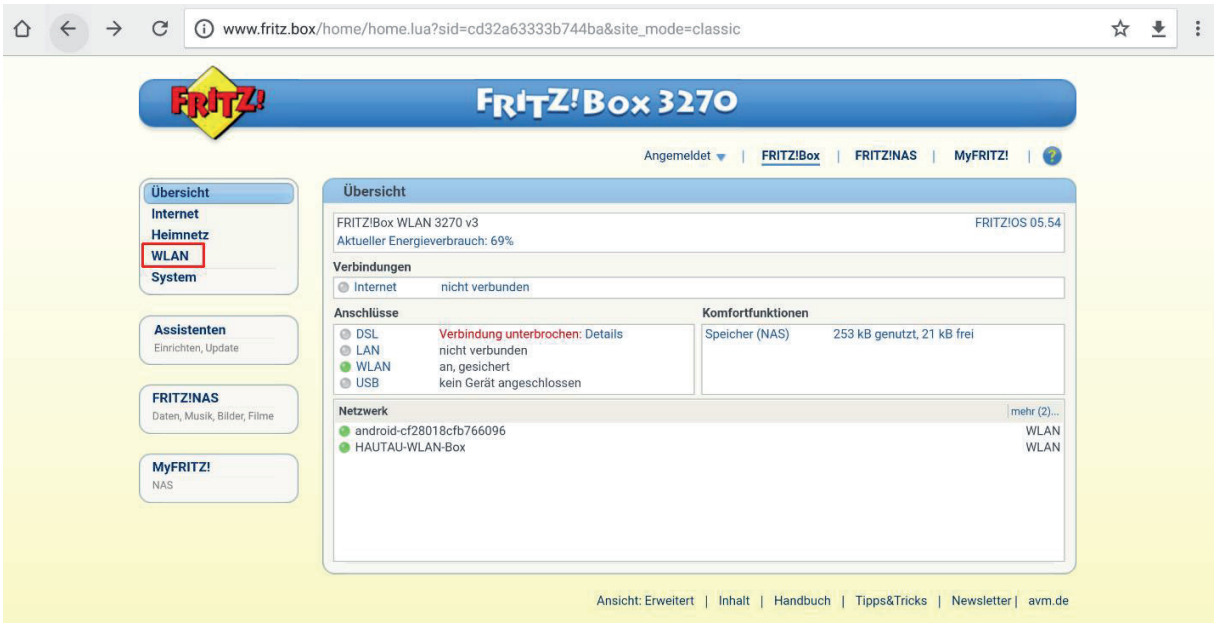
Note:
If it is not possible to access the router, check the address in the browser to ensure it is correct.
The router configuration interface will open.
If the mobile layout appears as shown in the screenshot, you need to switch to the classic view.

Screenshot of the mobile view



After switching to the classic view, select the menu item WiFi.

Screenshot of the classic view

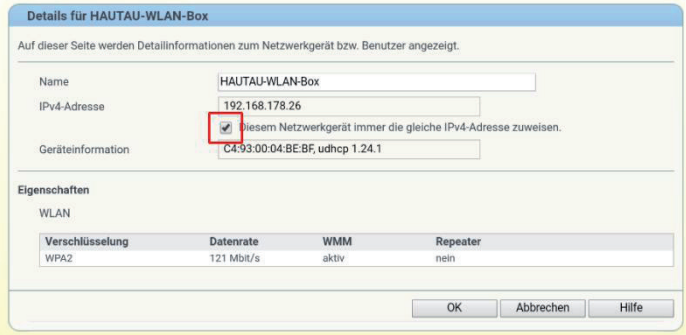


The WiFi Box should appear automatically in the list of Known WiFi devices. If it does not, review and adjust the settings as instructed in this manual.

Integrating the WiFi Box in a router supplied by customer (continued)

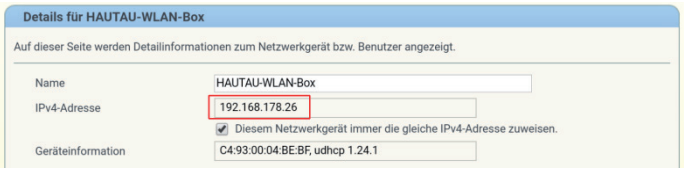
Router settings (continued)

To ensure that the HAUTAU WiFi Box always receives the same IP address, click the (Edit) icon to open the detailed view and check the box for Always assign the same IPv4 address to this network device.



WiFi Box address

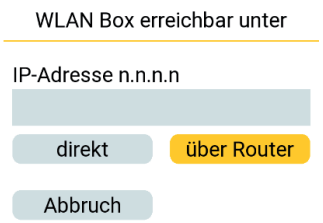
Write down the address for the HAUTAU WiFi Box to enter it into the ConfigTool.



Integrating the WiFi Box in a router supplied by customer (continued)

Settings in the ConfigTool

As the last step, you need to enter the IP address for the WiFi Box into the ConfigTool. You can find this address on the router configuration interface or from your notes – for example, as shown in the screenshot above: 192.168.178.26
ConfigTool > Setting > Address > WiFi Box accessible at



Completion

The WiFi Box is not set up ready for operation via a router and HAUTAU products can be operated using the ConfigTool without changing the WiFi network.

ConfigTool app
(Version 2.0.20)

Description

This section describes how the HAUTAU ConfigTool app operates in combination with the HAUTAU WiFi Box or the HAUTAU LAN module.

The HAUTAU ConfigTool features an identical interface for:

- PCs and notebooks with the Microsoft Windows operating system
- Smartphones and tablets with the Google Android operating system
- Smartphones and tablets with the Apple iOS operating system

It is used to parametrise and control the following devices via the HAUTAU bus:

- PRIMAT kompakt 195
- SKA 20 Comfort Drive
- SM2/EM2
- SM2/EM2 Comfort Drive
- Smoke & heat exhaust control unit RAZ-K,
- Multisensor MS
- WiFi Box,
- LAN module
- Move HS Comfort Drive
- Output Box 230 V
- Unknown devices on the HAUTAU bus

The ConfigTool requires a connection to a HAUTAU WiFi Box or a HAUTAU LAN module.

The ConfigTool offers functions to configure and remote-control devices with the HAUTAU bus.
Use the HAUTAU Bus web service to integrate the WiFi Box and LAN module into a smart home application, such as Mediola (https://www.mediola.com) or other web server-based smart home solutions. You can obtain the HAUTAU plugin for the Mediola smart home solution at https://www.mediola.com.

ConfigTool app (continued)

WARNING:
Important safety instructions

Safety instructions

You must observe the safety instructions for the corresponding device families. See the relevant installation instructions at www.hautau.de/en/

Connection and installation conditions

Before you put the device into operation, take into account the connection and installation conditions in the manual for the device series concerned.

Operation

The software is designed for remote control of actuators among other things. Do not reach into the window rebate and the active actuator during operation. There is a risk of **crushing** and **pinching**.

Intended use

The devices and the HAUTAU app must be used for their intended use only. HAUTAU assumes no liability for any injuries or damage to property if there is failure to comply with this requirement.

Manual

Read and observe the information in this manual and follow instructions in the specified order. You must store this manual away ready for use/maintenance at a later stage.

Maintenance work

The power supply to the device must be disconnected at all poles when cleaning or performing other maintenance work.

Warranty

HAUTAU assumes no liability for any damages caused by the installation and use of the software. Always use the most recent version to use all the software's functions and ensure maximum safety. No support is provided and no liability is assumed for older versions. After initial operation, the factory access codes for the WiFi Box and the LAN module must be changed to a more secure, customised password, using upper and lower case letters with numbers and special characters, for example. A Wi-Fi network should only be used with password protection. Liability is generally not assumed for damages and manipulation due to integration in open networks and/or use without passwords, or use of weak passwords.

ConfigTool app (continued)

General information

Connection via LAN or WLAN

- **Directly to a WiFi Box/LAN module via a WiFi network**

The WiFi Box/LAN module acts as a WiFi access point and is accessible at the fixed IP address 192.168.33.1 once connected.

This mode is configured on delivery and can be reset using the button (see notes below). A stand-alone solution is possible without a router log-in. Set the WiFi network name and the access point password using the ConfigTool; see Mode in the WiFi Box: mode section.
The password should be changed after the initial setup.

- **Via Router**

WiFi Box/LAN module connect to a router as a client. The user can also connect them. Following this, they can be reached using the IP address assigned by the router. This mode is first set with the ConfigTool; see Mode via router in the WiFi Box: Mode section. Then configure the IP address assigned by the router in the ConfigTool; see via router in the section on WiFi Box: Address.

- **LAN module only: via a router using an Ethernet cable**

The LAN module is connected directly to the router via an Ethernet cable. Once connected, continue via the router as described in the previous paragraph.

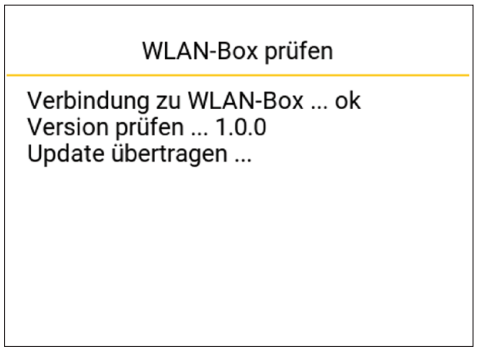
Note:

Before accessing the ConfigTool, establish a direct WiFi connection from your PC/smartphone/tablet. The ConfigTool can assist with this on Windows and Android; see section on WiFi Start.
If you operate via a router, the IP address assigned by the router to the WiFi Box or LAN module should remain the same each time the WiFi Box or LAN module connects to the router. This needs to be configured in the router. For instance, in the case of a Fritzbox, navigate to Home Network, Home Network Overview, click on Change Device Settings (pencil icon). Always assign the same IPv4 address to this network device. For Linksys routers, go to Setup, DHCP Reservation, select the device and add clients.
The WiFi Box and LAN module can both be reset to their basic WiFi settings by pressing the button for 3 seconds until the LED flashes constantly: Operation as an access point, WLAN network name HAUTAU-WiFi-Box-Hnnnnnnn or HAUTAU-LAN-Module-Hnnnnnnn, WiFi password Hnnnnnnn, WiFi not hidden.
If no connection is established, the LAN module will automatically turn off WLAN after 5 minutes. If you wish to connect the LAN module again via the WLAN, you must press the button on the LAN module for 3 seconds until the LED flashes constantly.

ConfigTool app (continued)

Start

After the ConfigTool app is launched, it establishes a connection to the WiFi Box or the LAN module and checks if the firmware version installed is compatible. If it is not compatible, a compatible firmware version is downloaded onto the WiFi Box or LAN module and then launched.

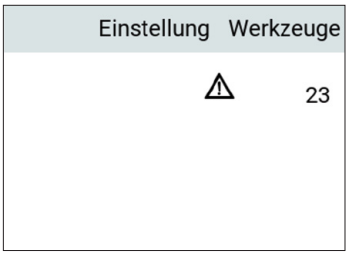


Note:
If the smartphone is slow, attempting to connect to the WiFi Box or LAN module may result in a timeout. It may help to relaunch the ConfigTool several times to make a connection.
After performing a firmware update on the LAN module with the LAN/KNX interface connected, you need to switch off the interface and then on again, or you need to reset.

Operation

You control the system by tapping and swiping. If there is no touch screen (Windows), you use the mouse to click and select; to swipe, click on the object with the left mouse button and drag while holding the button down.
Swipe left or right to change to the previous or next device if more than one is found during the address scan; see section on Find devices.
You swipe up/down to scroll if not all information fits on the screen, e.g. in the case of lists or device information.
Selected options are displayed in orange.

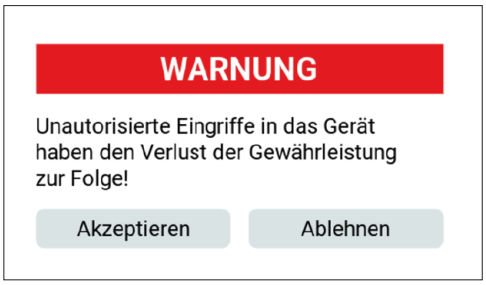
The HAUTAU bus address for each device is displayed in the top right-hand corner under the menu bar.
If a connection cannot be established to the device, a warning triangle with an exclamation mark appears on the left:



ConfigTool app (continued)

Operation (continued)

If you need to change device parameters which affect the warranty, a warning is displayed one time, which you need to accept:



There are other device-specific warnings, such as those for the RAZ-K control unit.

Address assignment in the HAUTAU bus system

Every device has a unique address between 0 and 255 in the HAUTAU bus system.
A maximum of 30 devices may be connected to the HAUTAU WiFi Box or the HAUTAU LAN module. It is a good idea to only use addresses 1 to 30 so that you can find devices more quickly during a device search.
Each device with a HAUTAU bus interface has a fixed address for its device type on delivery. If more than one device of the same type is used, the address needs to be changed. It is recommended to proceed as follows:

1. Connect device to the HAUTAU ConfigBox
   or to HAUTAU WiFi Box/LAN module without any other devices connected
2. Connect device to power supply (not necessary for 24 V devices on the ConfigBox with a plug-in power supply unit)
3. Follow instructions in the Find devices section to find the address currently configured
4. Section on Change address - change the device address
5. Install device and connect to the installed HAUTAU bus

If you install the device first and then configure the address, ensure that the device address configured for delivery has not been configured on any other connected devices or the other devices need to be switched off to configure the address for the new device.
The addresses 62 and 170 are not available for technical reasons.

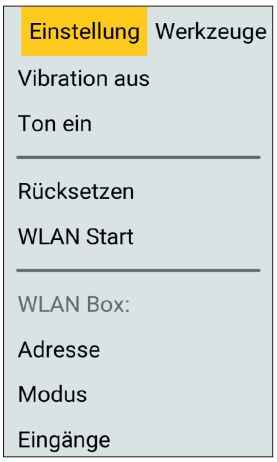
ConfigTool app (continued)

Menu

The menu can be accessed via the menu bar on the upper edge. If you tap on an entry, the lists will open with the individual menu options.
In the case of on/off settings, you can adjust the displayed setting by tapping the menu item.
Menu lists can be closed without issuing a command by tapping outside the lists.

Setting

If you tap on Setting in the menu bar, the settings menu will open:

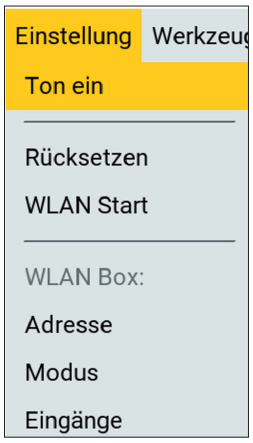


Vibration on/off

This menu option will only appear for devices (smartphone/tablet) which have a vibration function.
If vibration is switched on, a short vibration provides tactile feedback each time you make an input.

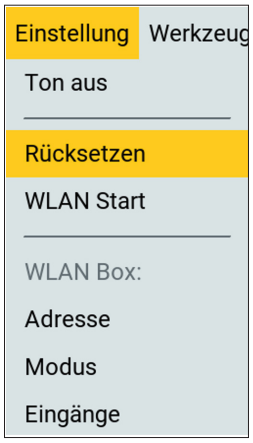
ConfigTool app (continued)

Sound on/off

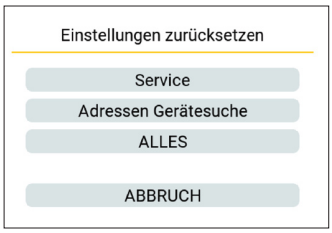


It is a good idea to activate **Sound on** if vibration is switched off or there is no vibration function. A short audible signal provides feedback each time you make an input.

Resetting



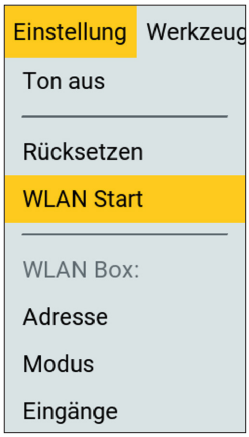
An option menu will appear:



Service resets the devices available at launch to PRIMAT kompakt 195 with HAUTAU bus address 20, SKA 20 Comfort Drive with address 22.
Device search address resets the HAUTAU bus addresses configured for device search to:
0, 1, 2, 14, 20-34, 103 – included are all possible devices addresses on delivery.
ALL resets all the above settings and all other saved settings.

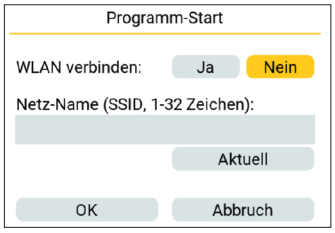
ConfigTool app (continued)

WLAN launch

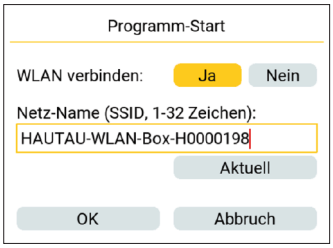


For Windows and Android only. You can specify a WLAN network which the smartphone/tablet/notebook should to connect to when launching the ConfigTool app. After the app is closed, the smartphone/tablet/notebook will reconnect to the WLAN network to which it was connected before the app was launched.
This option is used for automated log-in if a WLAN network is available via a router, but the WiFi Box or LAN module is not registered to this router and operates directly or through another router instead. This option is not required in normal mode - in either direct operation or via a single router.

The following dialogue box will appear:



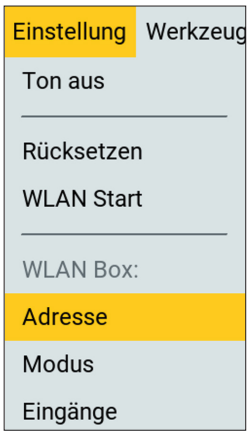
If you select **Yes**, you will need to enter a WLAN network name:



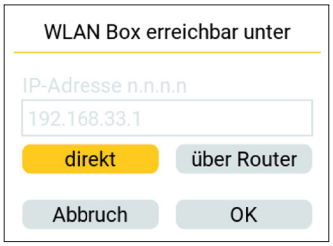
If a connection to a WLAN network currently already exists, the Current button will appear. You can use this button to use the current network name.
There is no need to enter a password. To ensure that a connection can be successfully established, it must be set up on the smartphone/tablet/notebook, or must have already been configured previously (connected at least once).

ConfigTool app (continued)

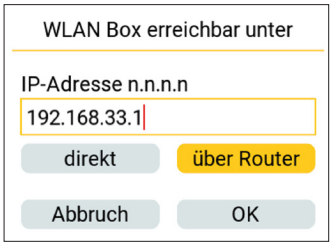
WiFi Box: Address



This is where the IP address is configured which the ConfigTool uses to establish a connection with the WiFi Box or the LAN module. The mode itself, direct/via router, is not configured here; see WiFi Box: Mode section for more details.
If the connection is direct, i.e. not via a router, no address needs to be configured since the WiFi Box or LAN module has the non-adjustable fixed IP address 192.168.33.1.

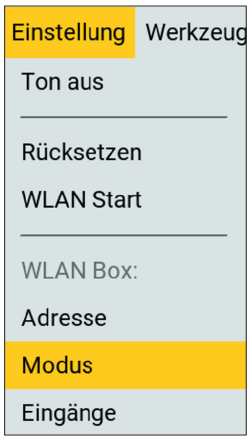


If you select via router, you can enter the IP address. Only a valid address will be accepted. If an address is not valid, it will be highlighted in red.

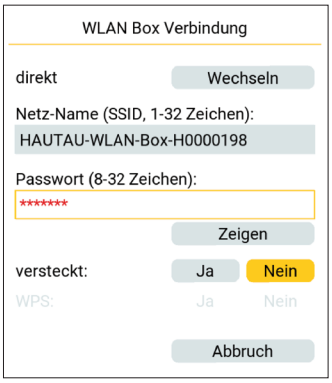


ConfigTool app (continued)

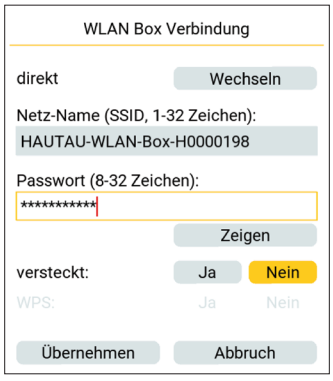
WiFi Box: Mode

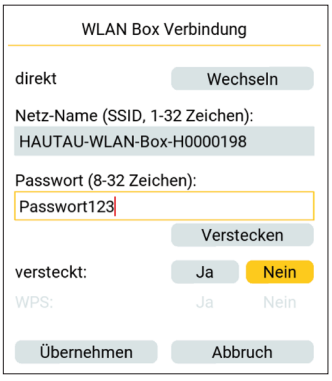


Configure WLAN operating mode for the WiFi Box or the LAN module. Also see Connection via LAN or WLAN for more information. This is where you configure whether the WiFi Box or LAN module should work as a WLAN access point so that you can connect directly with a smartphone/tablet/notebook (Direct mode), or whether the WiFi Box or LAN module should log on to the a WLAN router and are only accessible in this way (Via router mode).
Both modes can only be configured if the entered password is at least 8 characters long. If it is shorter, it is displayed in red and the Accept button is not available:



You can press on the Show button to display the password in plain text and use the Hide button to hide it again:





ConfigTool app (continued)

WiFi Box: Mode (continued)

In Direct mode, i.e. when the WiFi Box or LAN module operates as a WLAN access point, you can press Hide: Yes to switch off the automatic log-on to the WLAN network. The access point will then remain invisible unless a connection is established manually. **This option should also be selected if the WiFi Box is only used solely as a switch input without WLAN for connected devices, for example.**

In via router mode, the connection to the router can also be easily set up using WPS (WiFi Protected Setup) if the router supports it. You do not need to enter the network name or the password. The Start button will appear, which should be pressed once WPS has been activated on the router.

Procedure for direct mode without router:

1. Settings, WiFi Box: Mode section,
   Direct - change button if Via router configured
2. Enter WLAN network name under which the WiFi Box/LAN module should be accessible
3. Enter password to log on to the WiFi Box/LAN module (Show/Hide buttons to display the password)
4. Only enter WLAN: hidden: Yes if the WIFi Box/LAN module should not be visible (a connection is then only possible if you enter the network name manually)
5. Accept – the connection is interrupted
6. Establish a new WLAN connection with a smartphone/tablet/notebook

ConfigTool app (continued)

WiFi Box: Mode (continued)

See separate step-by-step guide Integration in an on-site WLAN router at www.hautau.de/en/

Procedure for operation via a router (without WPS):

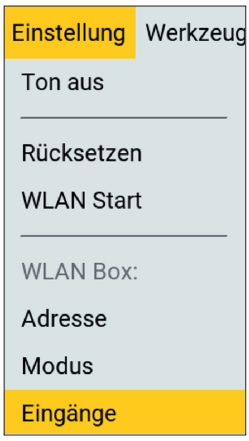
1. Settings, section on WiFi Box: Mode, Via router - Change button if Direct configured
2. Enter the router's WLAN network name under which the WiFi Box/LAN module should be able to connect
3. Enter password for the router's WLAN network (Show/Hide buttons to display the password)
4. Accept – the connection is interrupted
5. Check the network connections on the router, note the device name HAUTAU-WiFi-Box or HAUTAU-LAN-Module, remember the IP address assigned by the router and set the router to always assign this IP Address to this device
6. Provide the above address to the ConfigTool - Setting, WiFi Box: Address section
7. Establish a WLAN connection with the router on a smartphone/tablet/notebook

Procedure for operation via a router (with WPS):

1. Settings, WiFi Box: Mode section, Via router - Change button if Direct configured
2. WPS: Yes
3. Enable WPS on the router
4. Start – the connection is interrupted
5. Continue as in Without WPS, Point 5.

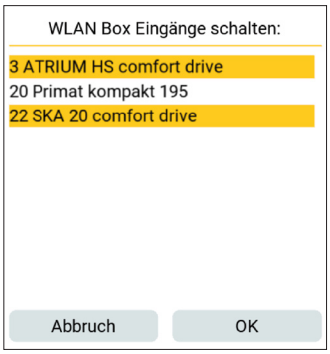
ConfigTool app (continued)

WiFi Box: Inputs



This is where you set the HAUTAU bus devices addressed by the switch inputs in the WiFi Box or LAN module. Not all devices are automatically addressed, allowing for situations such as connecting a rain sensor that only closes the windows without other devices connected to the HAUTAU bus responding. The devices with HAUTAU bus addresses 20 and 22 are pre-configured on delivery.

The devices to be selected are the ones previously configured and those found as described in the Find device section that understand the OPEN/STOP/CLOSE commands. The entries highlighted in orange are configured. Tapping an entry changes its status.

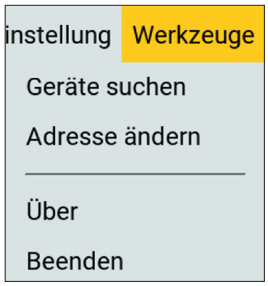


Note:
Switches and buttons can both be connected to the OPEN/CLOSE inputs (arrow symbols) in the WiFi Box or the LAN module.
If an OPEN or CLOSE input is activated for longer than 1.5 seconds, dead man mode is activated, i.e. releasing or resetting the operating control/switch stops the movement of the actuator.
If the opposite input is also activated within 0.5 seconds after activating OPEN or CLOSE, STOP is activated. This allows operation with two buttons (e.g. double button) as well as with the HAUTAU comfort keypad where pressing the third separate button (STOP) triggers the simultaneous pressing of the other two buttons.
When the input is activated with the lock symbol, the CLOSE command is transmitted to all configured devices (dead man mode: master command). The OPEN/STOP/CLOSE commands are blocked as long as the input remains activated (dead man mode: by the button and WiFi input). A rain sensor can be connected here, for example.

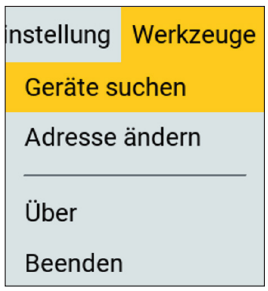
ConfigTool app (continued)

Tools

If you tap on Tools in the menu bar, the tools menu will open:



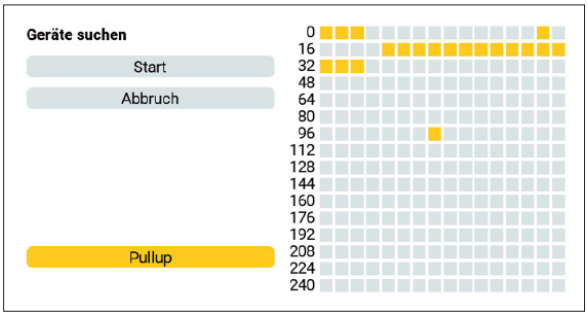
Find devices



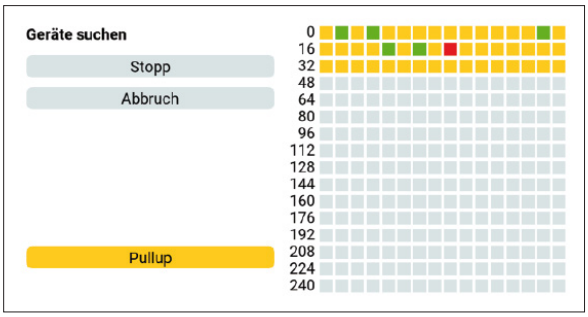
You can use this tool to identify all devices connected to the HAUTAU bus and incorporate the devices to display them in the ConfigTool.
The address range can be restricted since scanning all possible HAUTAU bus addresses can take a long time. Only the addresses highlighted in orange will be queried. Tapping on a square switches between 'queried' and 'not queried'. Tapping on any of the numbers switches the entire row between 'queried' and 'not queried'.
Changes to the queries are automatically saved as a configuration. The default configuration includes all addresses that HAUTAU bus devices may have in their factory state. The default configuration can be restored at any time as outlined in the Reset section.
The HAUTAU bus system contains just one device with a load resistor, a Pullup. This is normally the WiFi Box or the LAN module. In specific situations, such a resistor may be in another device. It can then be turned on/off on the WiFi Box/LAN module using the Pullup button (orange: on; grey: off).
The default setting for the RAZ-K control unit, for example, is with a Pullup (jumper). If such an RAZ-K is to be configured with the ConfigTool, the WiFi Box/LAN module pullup resistor must be turned off.

ConfigTool app (continued)

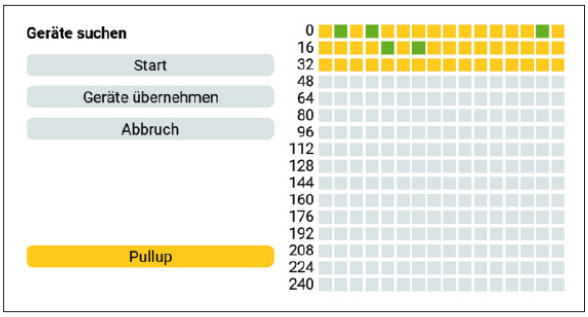
Tools (continued)



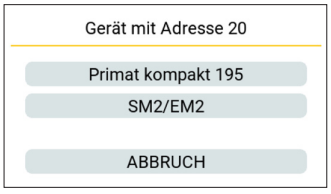
Use the Start button to launch the search for HAUTAU bus devices. Red shows which address is currently being queried. Green indicates a located device. Press the Stop button to stop the scanning. The devices found up to that point can be integrated. The Cancel button ends scanning without integrating devices.



Once the device search is complete, you can use the Accept devices button to incorporate the devices found. Accept means that the devices will appear in the device display in the ConfigTool, including when the ConfigTool is restarted.



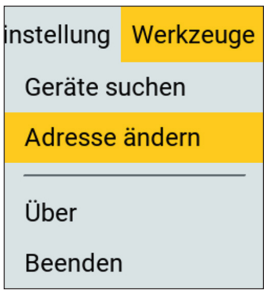
There are a few devices which cannot be clearly identified due to historic technical reasons. In such a case, a selection dialogue box will appear to select the right device:



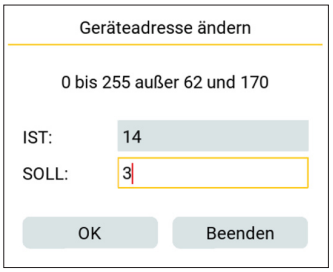
Older Control Units RAZ-K cannot be identified either. In this case, you select between an unknown device and a Control Unit RAZ-K.

ConfigTool app (continued)

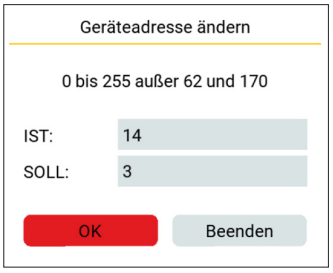
Changing the address



You can use this tool to change the HAUTAU bus address. To do so, you need to know the currently configured address, e.g. using Find devices (see Find devices section). See Address assignment in the HAUTAU bus system section on the HAUTAU bus system addresses.
You must enter CURRENT for the current address and TARGET for the new address. Multiple addresses can be changed one after the other. Press the OK button to complete the address change and the Exit button to exit the tool. Once the change is successfully complete, carry out the Find devices search again (see Find devices section).
The addresses 62 and 170 are not permitted for technical reasons. If you enter these addresses, the OK button will disappear.

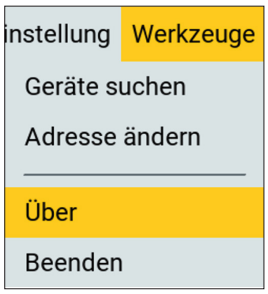


If the address change is not successful, the OK button turns red.

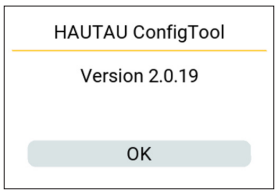


ConfigTool app (continued)

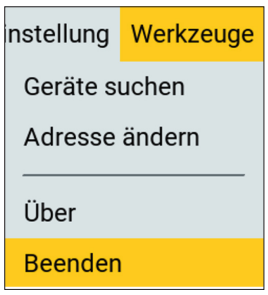
About



Indicates the ConfigTool version number:



Exit



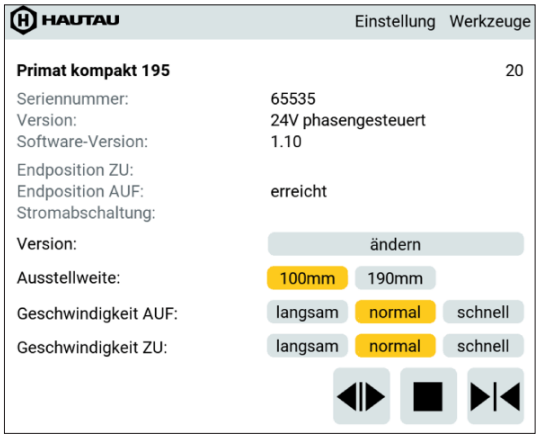
Closes the ConfigTool without further prompts.

ConfigTool app (continued)

Devices

Note:
Actuators are delivered with an active phase control. If the actuators need to be controlled via the HAUTAU bus only, you need to switch over to 24 V bus-controlled as otherwise they might inadvertently start running after a power failure.

PRIMAT kompakt 195



The following are displayed:

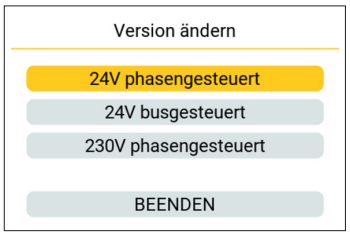
Serial number:	The serial number 1-65534, 65535 = internal serial number
Version:	24V phase-controlled - once power is connected, the actuator operates with the direction determined by the polarity 24V bus-controlled - the actuator will not operate until it receives a command via the HAUTAU bus 230V phase-controlled - once power is connected, the actuator operates with the direction determined by the supplied phase 24 V and 230 V are both available as the same firmware is used The 230 V is based on the 24 V version. You then only need to correctly configure the direction detection
Software version:	Major/minor version of the firmware in the actuator
End position CLOSE:	no message/Reached if the CLOSE limit switch has triggered
End position OPEN:	no message/Reached if the OPEN limit switch has triggered
Power cut-off:	no message/Triggered if the power cut-off has triggered

ConfigTool app (continued)

PRIMAT kompakt 195 (continued)

Settings:

Version: See above for version



Opening width: 100 or 190 mm

OPEN speed:

Slow	4 mm/s (no time specified)
Normal	5 mm/s
Fast	9.5 mm/s

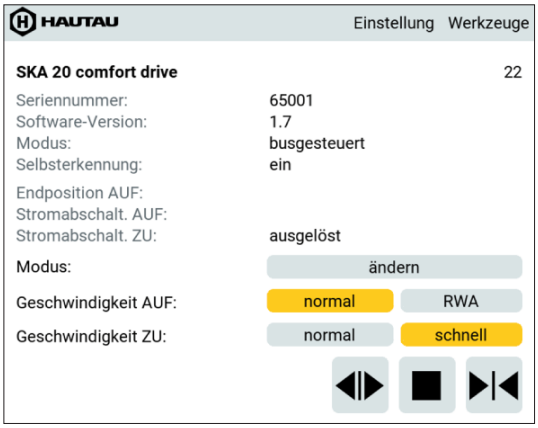
CLOSE speed: same as for OPEN

Immediately after setting a value, the drive re-reads the current setting. If the value was not accepted, the display returns to the previous value.

The actuator can be operated using the buttons right at the bottom: OPEN – STOP – CLOSE.

ConfigTool app (continued)

SKA 20 Comfort Drive



The following are displayed:

Serial number: The serial number 1-65534,
65535 = internal serial number

Software version: Major/minor version of the firmware in the actuator

Mode: Phase-controlled - Once power is connected, the actuator operates with the direction determined by the polarity
Bus-controlled - The actuator will not operate until it receives a command via the HAUTAU bus
Master tandem, Slave, Master sequential, Master tandem/sequential - operating modes for tandem, sequential, tandem/sequential operation (exactly one drive is the master; the others are slaves)

Self-detection: On - the operating mode is automatically detected for tandem, sequential, tandem sequential (not operated with ConfigTool); Off - the operating mode is not self-detected. Just one single drive can be operated with the ConfigTool

End position OPEN: no message/Reached if the OPEN limit switch has triggered

Power cut-off OPEN: No indicator/Triggered if the power cut-off has triggered in OPEN direction

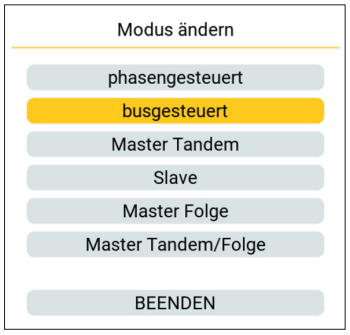
Power cut-off CLOSE: No indicator/Triggered if the power cut-off has triggered in CLOSE direction (there is no limit switch for the CLOSED position)

ConfigTool app (continued)

SKA 20 Comfort Drive (continued)

Settings:

Mode: operating mode setting, see above. All settings except phase-controlled and bus-controlled only if automatic self-detection is switched off.



OPEN speed:

Normal	7.7 mm/s
SHEV (fast)	10 mm/s - SHEV operation is only permitted with this speed

CLOSE speed:

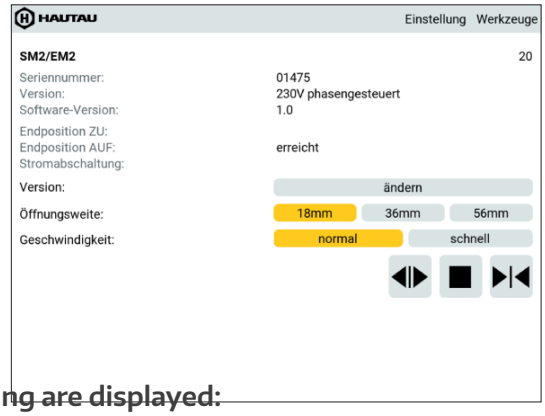
Normal	7.7 mm/s
Fast	10 mm/s

Immediately after setting a value, the drive re-reads the current setting.
If the value was not accepted, the display returns to the previous value.
The actuator can be operated using the buttons right at the bottom: OPEN – STOP – CLOSE.

Note:
Multiple actuators which operate via the HAUTAU bus as tandem/sequential/tandem-sequential cannot be operated together with the ConfigTool.

ConfigTool app (continued)

SM2/EM2



The following are displayed:

Serial number: The serial number 1-65534,
65535 = internal serial number

Version: 24V phase-controlled - once power is connected, the actuator operates with the direction determined by the polarity

24V bus-controlled - the actuator will not operate until it receives a command via the HAUTAU bus

230V phase-controlled - once power is connected, the actuator operates with the direction determined by the supplied phase

24 V and 230 V are both available as the same firmware is used. The 230 V is based on the 24 V version. You then only need to correctly configure the direction detection.

Software version: Major/minor version of the firmware in the actuator

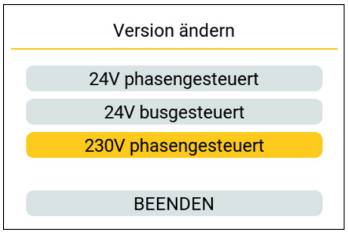
End position CLOSE: no message/Reached if the CLOSE limit switch has triggered

End position OPEN: no message/Reached if the OPEN limit switch has triggered

Power cut-off: no message/Triggered if the power cut-off has triggered

Settings:

Version: See above for version



Opening width: 18 or 36 or 56 mm

Speed: For OPEN and CLOSE: normal 4 mm/s

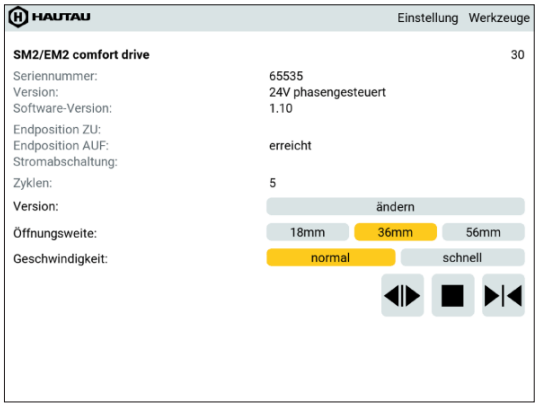
Immediately after setting a value, the drive re-reads the current setting.

If the value was not accepted, the display returns to the previous value.

The actuator can be operated using the buttons right at the bottom: OPEN – STOP – CLOSE.

ConfigTool app (continued)

SM2/EM2 Comfort Drive



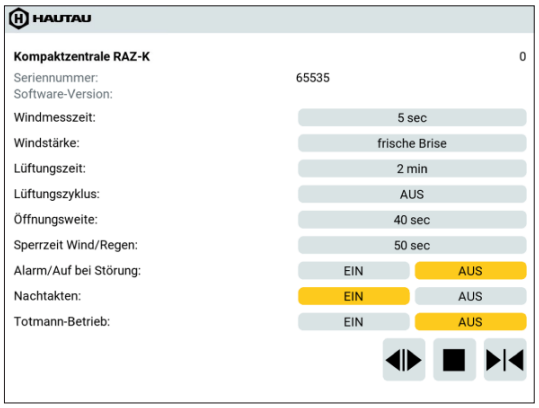
Speed: For OPEN and CLOSE
Slow 1.3 mm/s
Normal 1.5 mm/s
Fast 2.8 mm/s

Otherwise, section SM2/EM2; the number of cycles that the actuator has completed so far is also displayed. A cycle comprise open and close once.

ConfigTool app (continued)

Control Unit RAZ-K

The Control Unit RAZ-K features a pullup resistor on the HAUTAU bus when delivered. As a result, the WiFi Box or LAN module pull-up resistor must be turned off for a device search; see Find devices section.



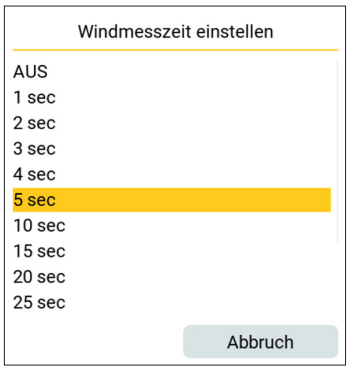
The following are displayed:

Serial number: The serial number 1-65534,
65535 = internal serial number

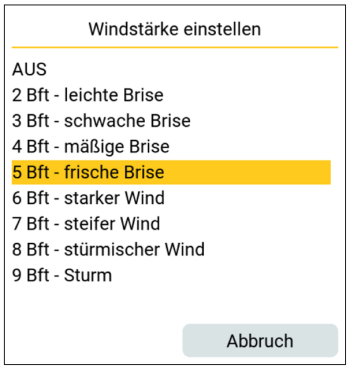
Software version: Major/minor version of the firmware

Settings:

Wind measurement time: OFF, 1, 2, 3, 4, 5, 10, 15, 20, 25, 30, 40, 50, 60 seconds



Wind strength: OFF or 2 Bft to 9 Bft; see Dialogue



ConfigTool app (continued)

Control Unit RAZ-K (continued)

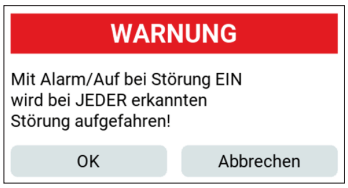
Ventilation time: OFF, 1, 2, 3, 4, 5, 10, 15, 20, 25, 30, 40, 50, 60 minutes

Ventilation cycle: OFF, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24 hours

Opening width: 3, 4, 5, 10, 15, 20, 25, 30, 40, 50, 60 seconds, 3 minutes, no switch-off

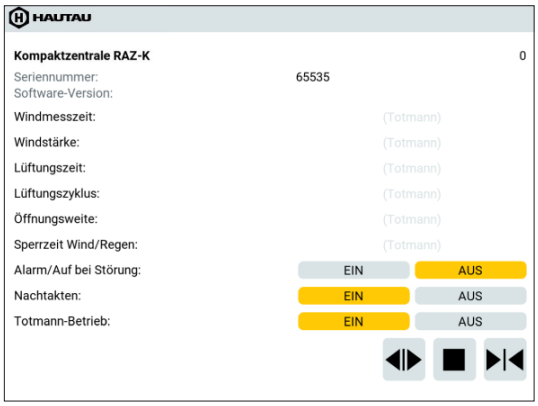
Wind/rain cut-off time: OFF, 1, 2, 3, 4, 5, 10, 15, 20, 25, 30, 40, 50, 60 sec

Alarm/Open in the event of error: Set to OFF, the system only opens in the event of an alarm; with ON, it opens for every error. Before setting this option, a warning will appear:

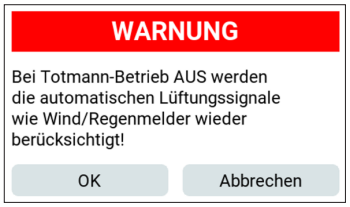


Night actions: ON or OFF

Dead man mode: ON or OFF - if ON, most settings are no longer valid:



and a warning message will appear before changing from ON to OFF:



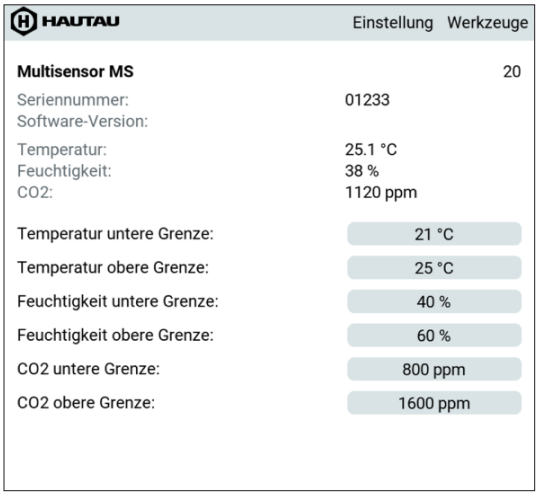
The current setting is re-read immediately after setting a value.

If the value was not accepted, the display returns to the previous value.

The connected actuators can be operated using the buttons right at the bottom: OPEN – STOP – CLOSE.

ConfigTool app (continued)

Multisensor MS



The following are displayed:

Serial number: The serial number 1-65534,
65535 = internal serial number

Software version: Major/minor firmware version - empty for older devices which don't provide this information yet.

Temperature: [°C]

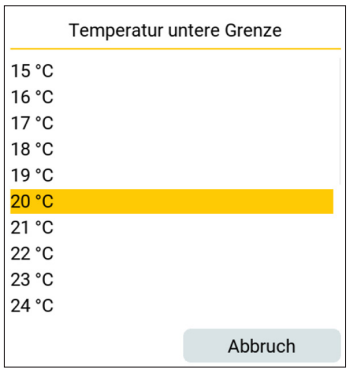
Humidity: [%]

CO2: [ppm]

Settings:

Lower temperature limit: 15-35 °C

Upper temperature limit: (Same as lower temperature limit)



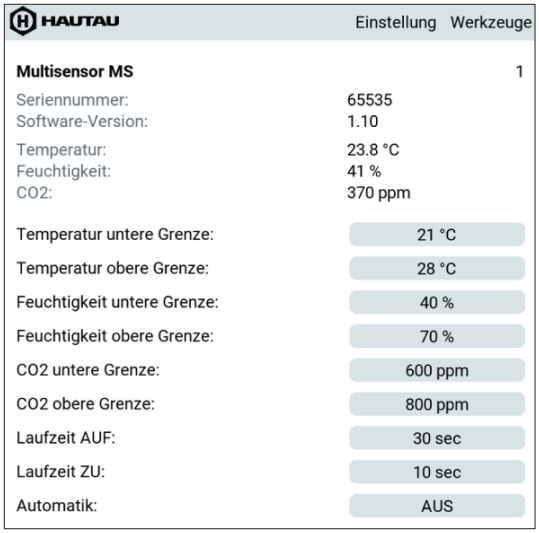
ConfigTool app (continued)

Multisensor MS (continued)

Lower humidity limit:	0, 5, 10.15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 65, 70, 75, 80, 85, 90, 95, 100%
Upper humidity limit:	(same as lower humidity limit)
Lower CO_2 limit:	300, 400, 500, 600, 800, 900, 1000, 1200, 1400, 1600, 1800, 2000, 2200, 2400 ppm
Upper CO_2 limit:	(same as lower CO2 limit)

Software version 1.10 and higher only:

Run time OPEN:	OFF, 1, 2, 3, 4, 5, 5, 10, 15, 20, 25, 30, 40, 50 seconds, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 minutes
Run time CLOSE:	(As run time OPEN)
Automatic system:	ON or OFF



ConfigTool app (continued)

Move HS Comfort Drive

The following are displayed:

Serial number: The serial number 1-65534,
65535 = internal serial number

Software version: Major/minor version of the firmware

Window lowered: Position reached when the window has been lowered – for windows with lift actuator only

Window closed: Position reached when the window is closed

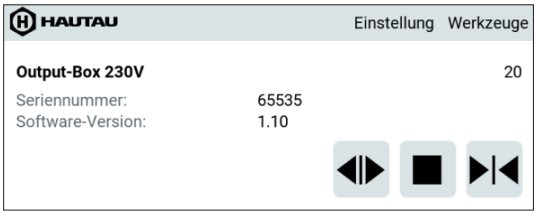
Faults: None or the number of errors found - in this case you can press on the button to display the error list

The following errors are detected:
Light curtain 1/2
Linear motor current measurement
Short circuit in PWM Transistor T13
Communication with control keypad
T0 Int or main loop
CPU control register
Checksum RAM, Flash, EEPROM
RAM test
External watchdog has triggered
Emergency off button pressed
Switch-off by light curtain 1/2
Position counter
Speed measurement
Twice saved variable
Motor phase

The actuator can be operated using the buttons right at the bottom: OPEN – STOP – CLOSE.

ConfigTool app (continued)

Output-Box 230 V



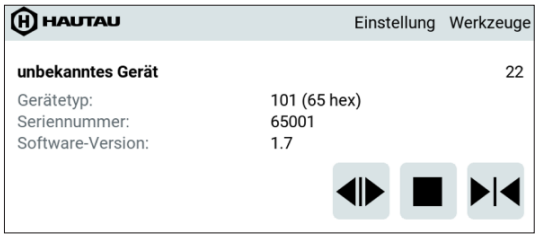
The following are displayed:

Serial number: The serial number 1-65534,
65535 = internal serial number
Software version: Major/minor version of the firmware

The actuator can be operated using the buttons right at the bottom: OPEN – STOP – CLOSE.

Unknown devices on the HAUTAU bus

New devices whose type is not yet known to the ConfigTool will be displayed as unknown devices.



The following are displayed:

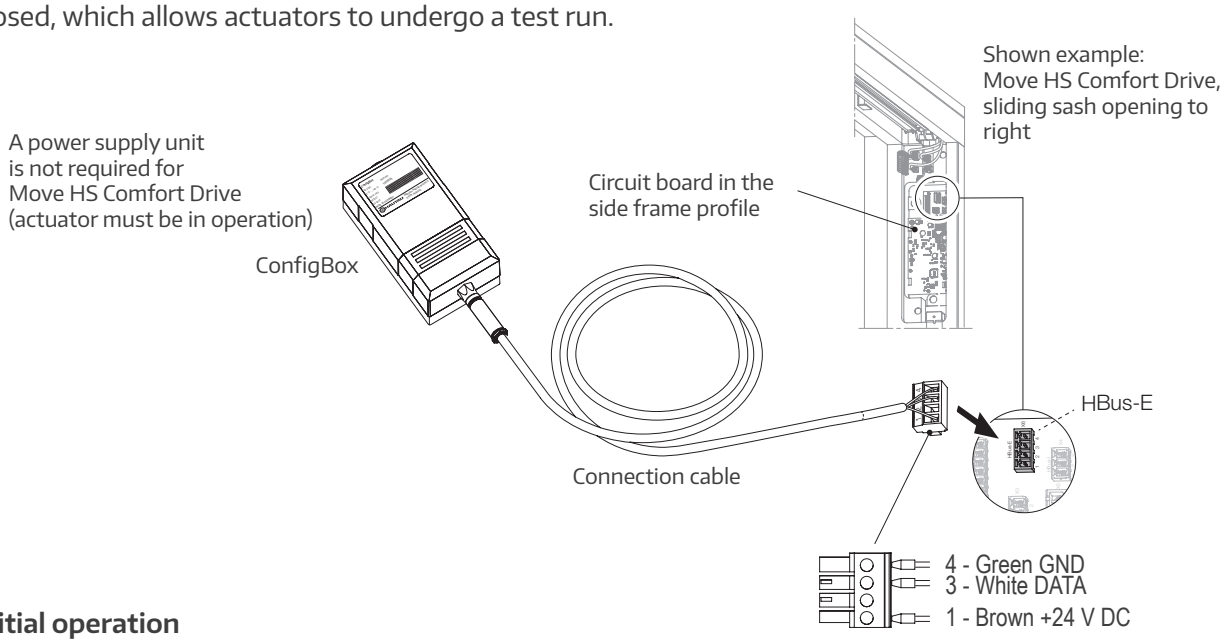
Device model: Device model number
Serial number: The serial number 1-65534,
65535 = internal serial number
Software version: Major/minor version of the firmware

The device can be displaced using the buttons at the very bottom: OPEN – STOP – CLOSE.

ConfigBox

Description

The ConfigBox offers a simple way of parametrising and configuring products with the HAUTAU interface in combination with the ConfigTool. The connection between the mobile terminal device and the ConfigBox is established via a WLAN connection. The supply package contains the required cable and adapter, so that the system can be easily connected by simply plugging it in. Power is supplied via the plug-in power supply enclosed, which allows actuators to undergo a test run.



Initial operation

After installing the ConfigTool app (e.g. on a tablet or smartphone) and connecting the ConfigBox to the power supply (if necessary), it is operational and ready to establish a connection via WiFi between the actuator to be configured and the digital input device within approximately 1 minute.

Actuator parametrisation/configuration

When multiple identical actuators are grouped together, their device addresses need to be changed so that each actuator can be controlled separately.

To do so, use the Find devices/Change address functions in the ConfigTool app.

Refer to the ConfigTool app section for detailed instructions on setting up the actuators.

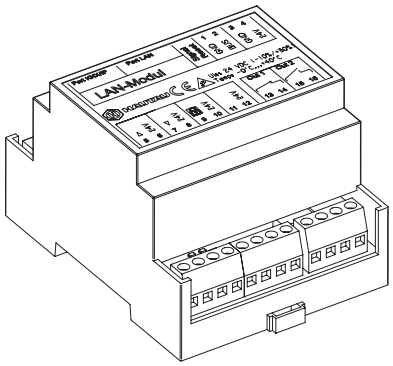
Technical specifications

Supply voltage	24 V DC
Current output from the plug-in power supply	Max. 1 A
Ambient temperature range	0 °C ... +40 °C
Protection rating	IP20 (as per EN 60529)
ConfigBox dimensions w x h x d	55 x 40 x 100 mm
Connection cable	About 2 m with 4-pole connector
Adapter cable for EM 2	About 2 m

LAN module

Description

The LAN module acts as an interface to exchange commands between the HAUTAU network and an IP-based network. The data is exchanged via cable with fixed data points as required by the compatible HAUTAU products. Connectivity to other established networks is provided via the IP protocol to integrate products into a comprehensive building automation system. Depending on the bus system used, additional gateways are required, such as a KNX/IP gateway.



Important information

The LAN module itself does not support KNX. As a basic principle, a WEINZIERL KNX IP BAOS 771 or WEINZIERL KNX IP BAOS 773 interface is required to integrate KNX. **This interface cannot be acquired through HAUTAU.** An Ethernet patch cable is required for KNX integration. Short cables with angled connectors are recommended. **This cable cannot be acquired through HAUTAU.** Before connecting HAUTAU bus devices to a common bus line, they must be configured with different HAUTAU bus addresses. You can configure them with:

- the HAUTAU ConfigBox and the ConfigTool app or
- the HAUTAU LAN module and the ConfigTool app or
- the HAUTAU LAN module and the web service running on it

Features

- A connection to established bus systems is possible thanks to the open data transfer concept; standalone solutions are avoided
- Operation using existing user interfaces such as KNX and thus no need to adjust to using another user interface
- Direct integration in server solutions thanks to LAN connection, consequently no need for additional gateways
- DIN rail mount, which ensures easier installation in electrical enclosures and distribution boxes
- Convenient configuration using WLAN and a smartphone instead of PC with USB cable connection
- Parametrisation using ConfigTool (via WLAN)
- Multiple LAN modules can be integrated into a network by using different addresses, so there is no limit to a maximum of 30 peripherals in the network.

Installation instructions

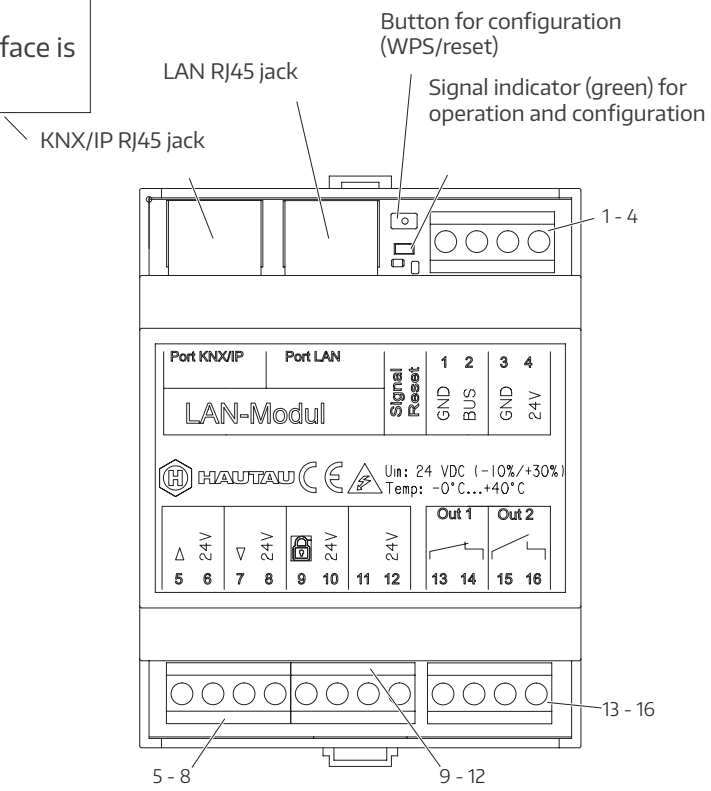
Connection of all components only as indicated on circuit diagrams, which are included with the products.
You must comply with DIN and VDE standards, German Employers' Liability Insurance Association and state building regulations (selection: VDE 0100, VDE 0833, VDE 0800, BGV).

LAN module (continued)

Device overview

Important note:

KNX/IP does **not** mean KNXnet/IP. Here, a KNX interface is merely connected via IP.



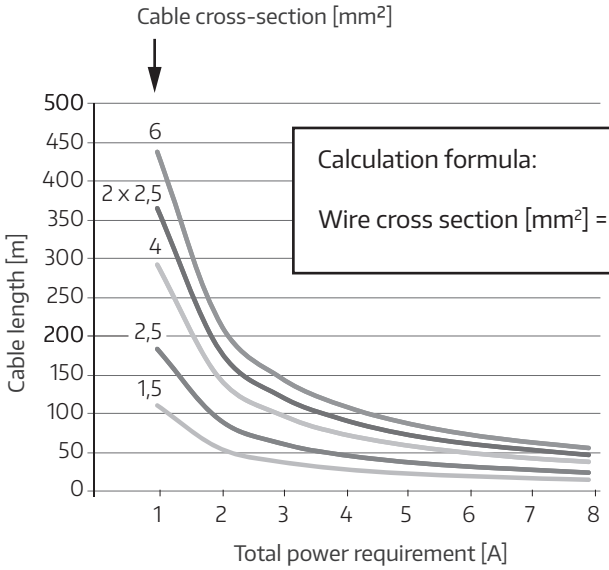
Connection for ...

1 - GND (operating voltage)
2 - HAUTAU bus
3 - GND (operating voltage)
4 - Operating voltage 24 V DC
5 - OPEN input
6 - Operational power supply 24 V DC
7 - CLOSE input
8 - Operational power supply 24 V DC
9 - LOCKED (INHIBIT) input
10 - Operational power supply 24 V DC
11 - Input (unassigned)
12 - Operational power supply 24 V DC
13/14 - Relay 1 output (normally closed contact)
15/16 - Relay 2 output (normally open contact)

Cable lengths and gauges

Important information for 24 V actuators

You must comply with the maximum cable lengths from the power source to the last junction box, based on the wire cross section used and the maximum current draw per actuator group.



Calculation formula:

$$\text{Wire cross section [mm}^2\text{]} = \frac{\text{Total current draw [A] x max. cable length [m]}}{73}$$

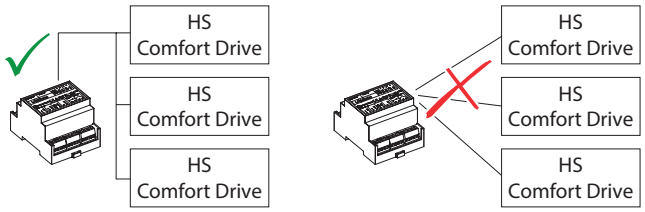
WARNING:

VDE regulations must be observed.

LAN module (continued)

Notes regarding HAUTAU bus

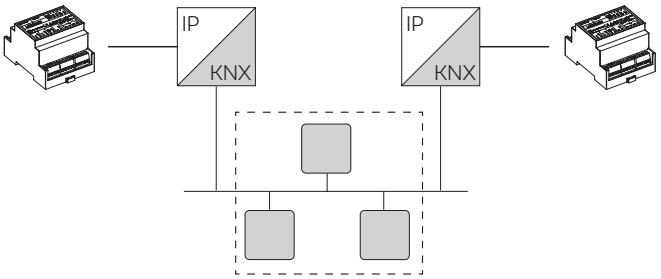
- Maximum total length for bus wiring: 300 m (sum of connections to all connected actuators)
- Unused bus wiring lines and any shielding in the cable must be connected to ground (GND).
- Install bus wiring as shown



(example actuators)

IP addressing

Multiple LAN modules can be operated in a network with various devices thanks to the different IP addressing of the LAN modules.



Parametrisation

Parametrisation configures the values at which environmental changes detected by sensors should trigger responses in the devices concerned.
Parametrisation is performed via the ConfigTool via WLAN. The LAN module contains the WLAN technology in the HAUTAU WLAN module.
It is recommended to use employees with relevant experience in KNX or similar systems to connect HAUTAU devices to the network.

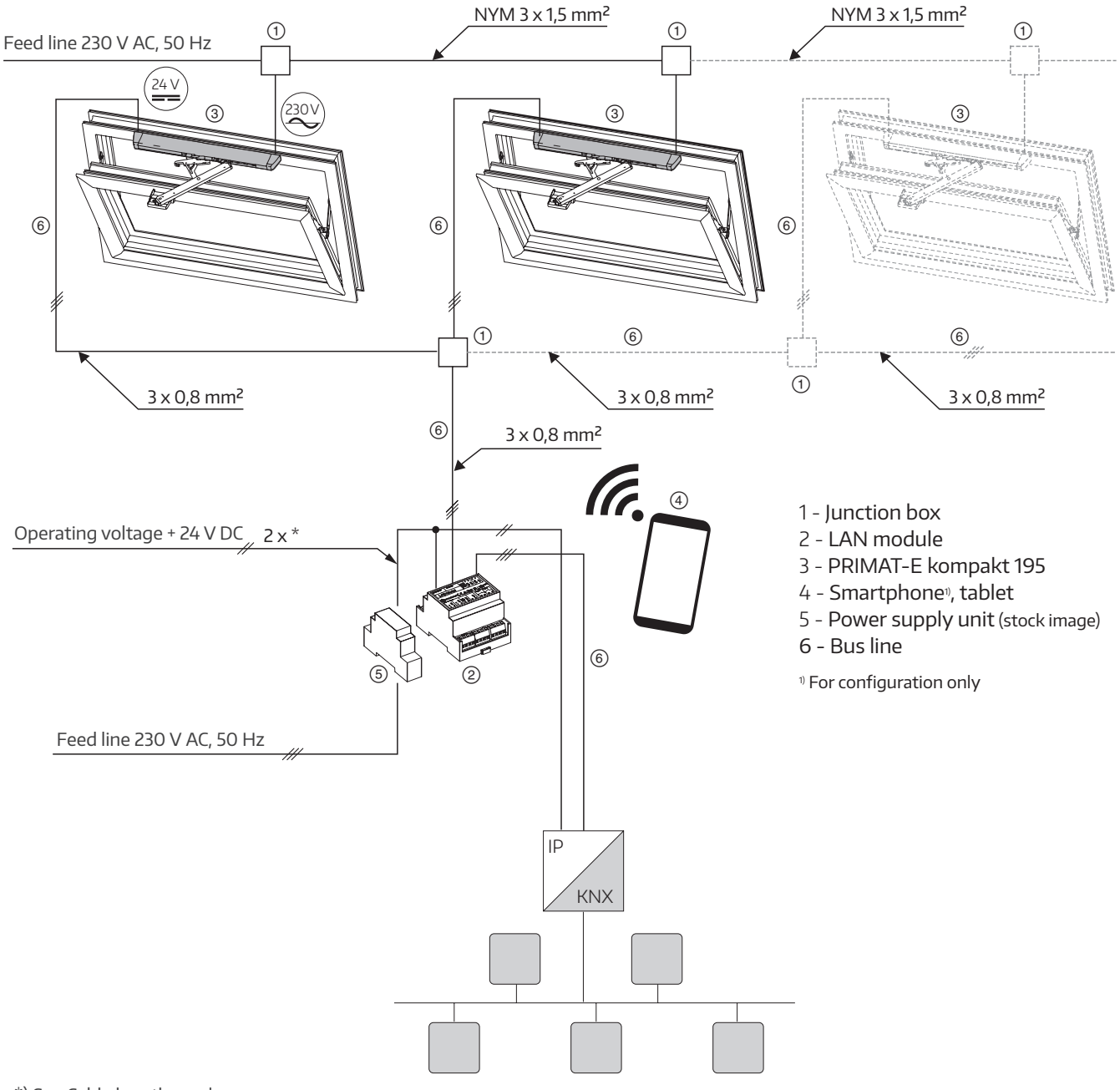
Installation

The LAN module is designed for installation on a DIN rail in electrical enclosures and junction boxes. The installation location must be dry and easy to access.
Cabling is installed as per the wiring plan.
The current operating software must be installed before using the LAN module. This is done automatically if a current ConfigTool app (Android or Windows) is connected with the LAN module via WLAN.
The LAN module can be connected via WLAN once it is powered. If there is no longer a WLAN connection for 5 minutes, the LAN module will automatically turn off the WLAN. If the button on the LAN module is pressed for about 2 to 3 seconds, the indicator flashes, signalling that WLAN can be activated for another 5 minutes.

LAN module (continued)

Examples of use and wiring plan

Example of integrating one or more
230 V AC fanlight actuators for PRIMAT-E kompakt 195
in a KNX network.

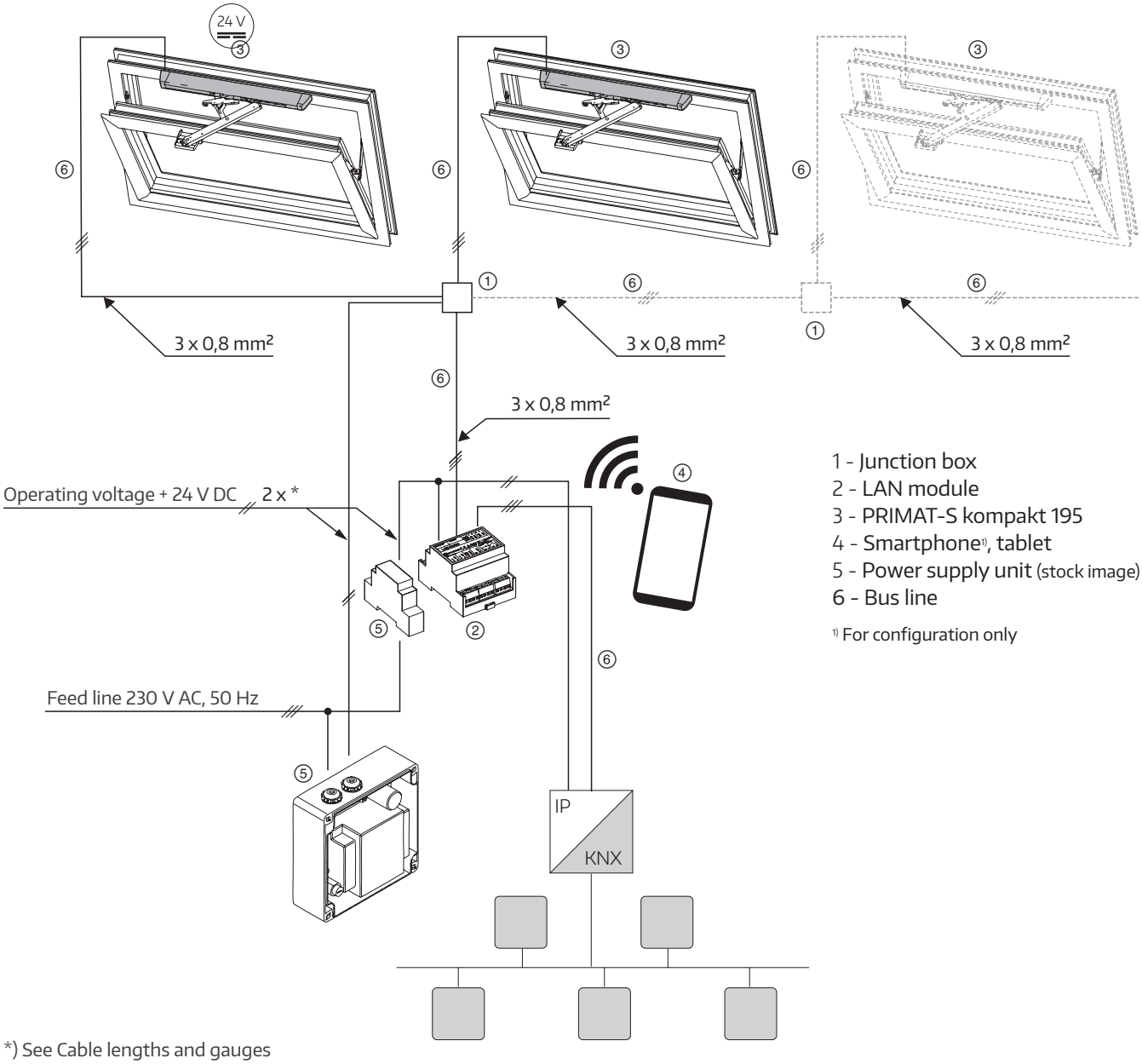


*) See Cable lengths and gauges

LAN module (continued)

Examples of use and wiring plan

Example of integrating one or more
24 V DC fanlight actuators for PRIMAT-S kompakt 195 in
a KNX network.



1 - Junction box
2 - LAN module
3 - PRIMAT-S kompakt 195
4 - Smartphone[1], tablet
5 - Power supply unit (stock image)
6 - Bus line

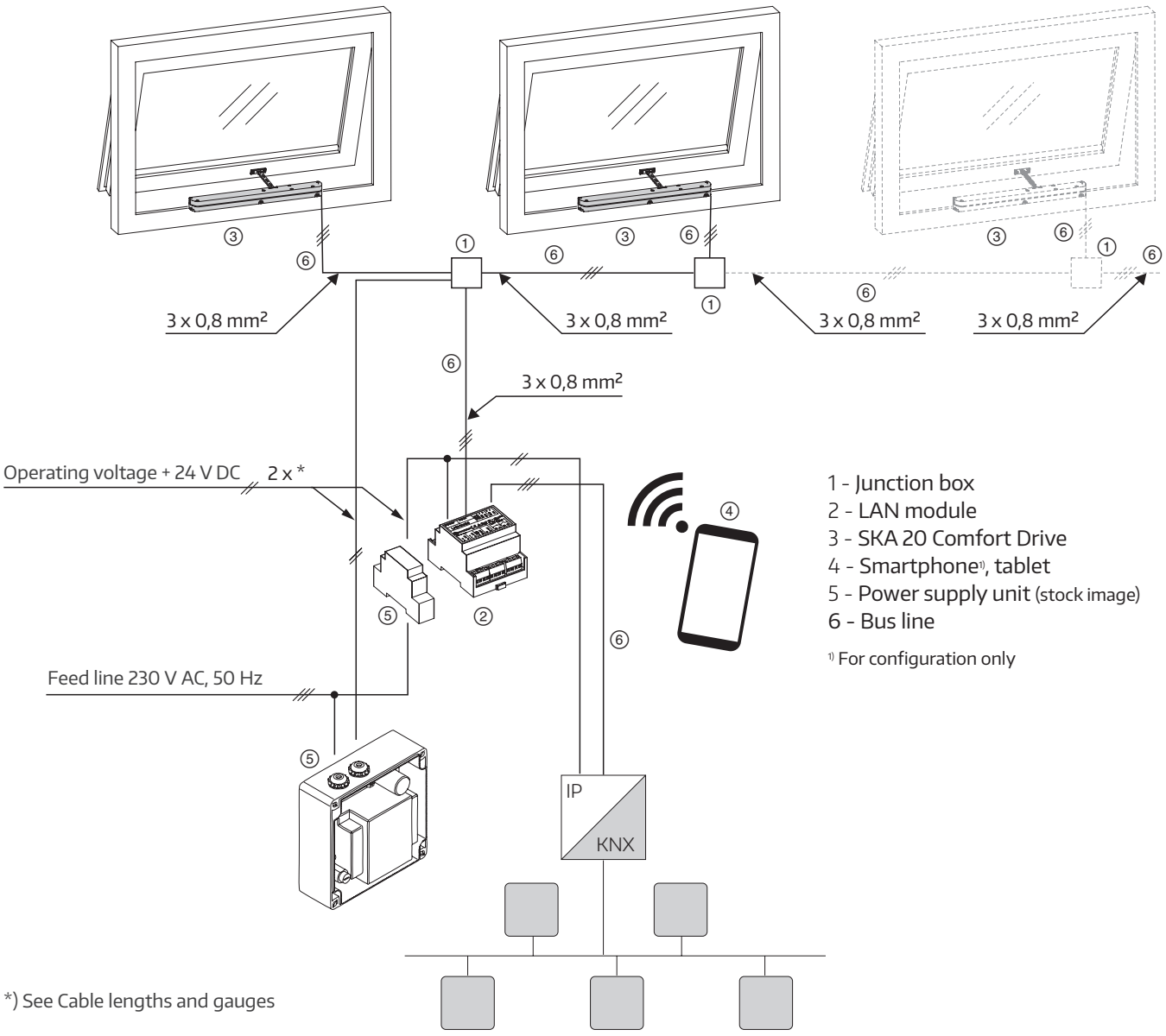
[1] For configuration only

*) See Cable lengths and gauges

LAN module (continued)

Examples of use and wiring plan

Example of integrating one or more **24 V DC actuators for SKA 20 Comfort Drive** in a KNX network.



1 - Junction box
2 - LAN module
3 - SKA 20 Comfort Drive
4 - Smartphone[1], tablet
5 - Power supply unit (stock image)
6 - Bus line

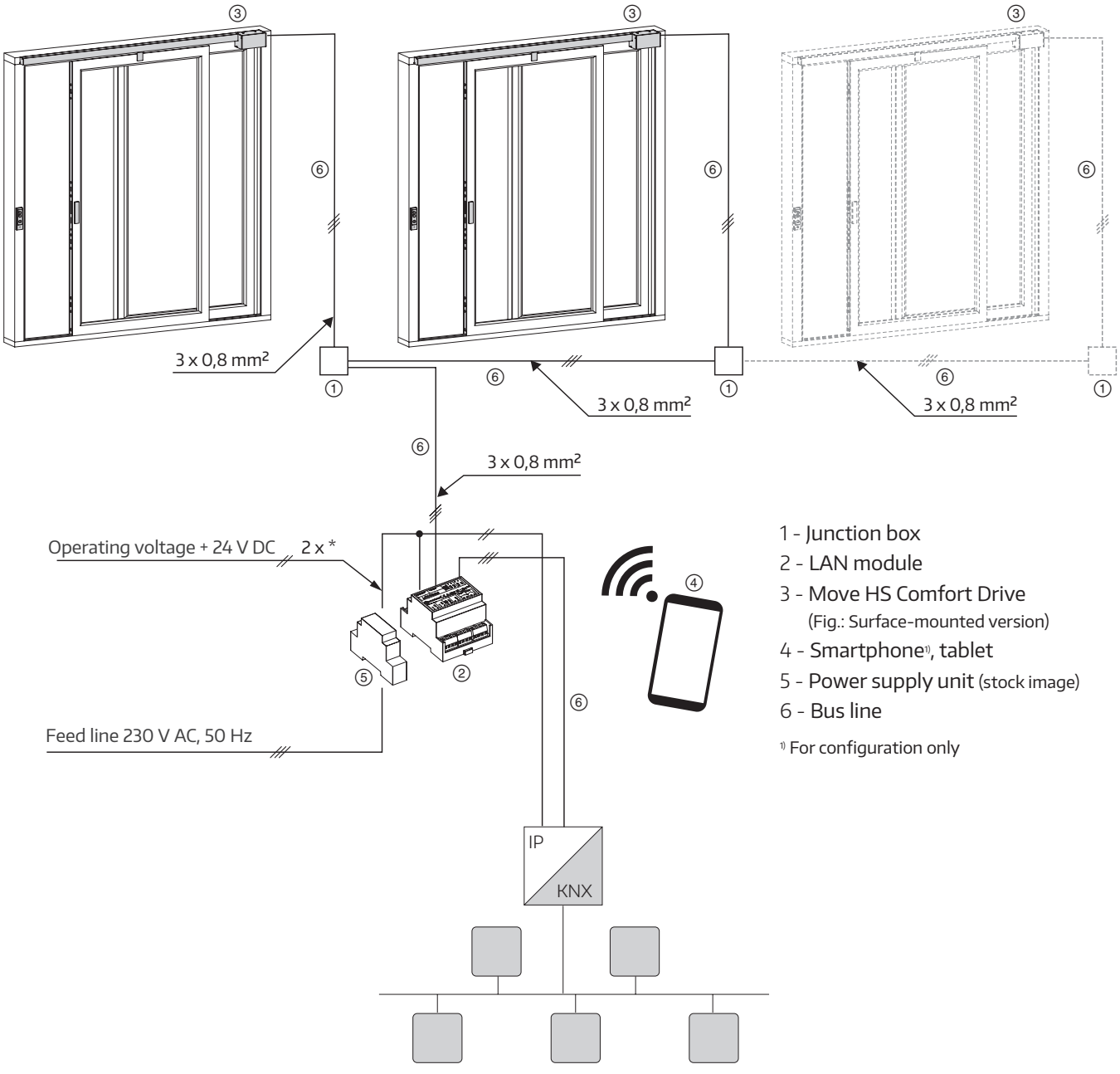
[1] For configuration only

*) See Cable lengths and gauges

LAN module (continued)

Examples of use and wiring plan

Example of integrating one or more
24 V DC Move HS Comfort Drive actuators in a KNX network.



1 - Junction box
2 - LAN module
3 - Move HS Comfort Drive
(Fig.: Surface-mounted version)
4 - Smartphone[1], tablet
5 - Power supply unit (stock image)
6 - Bus line

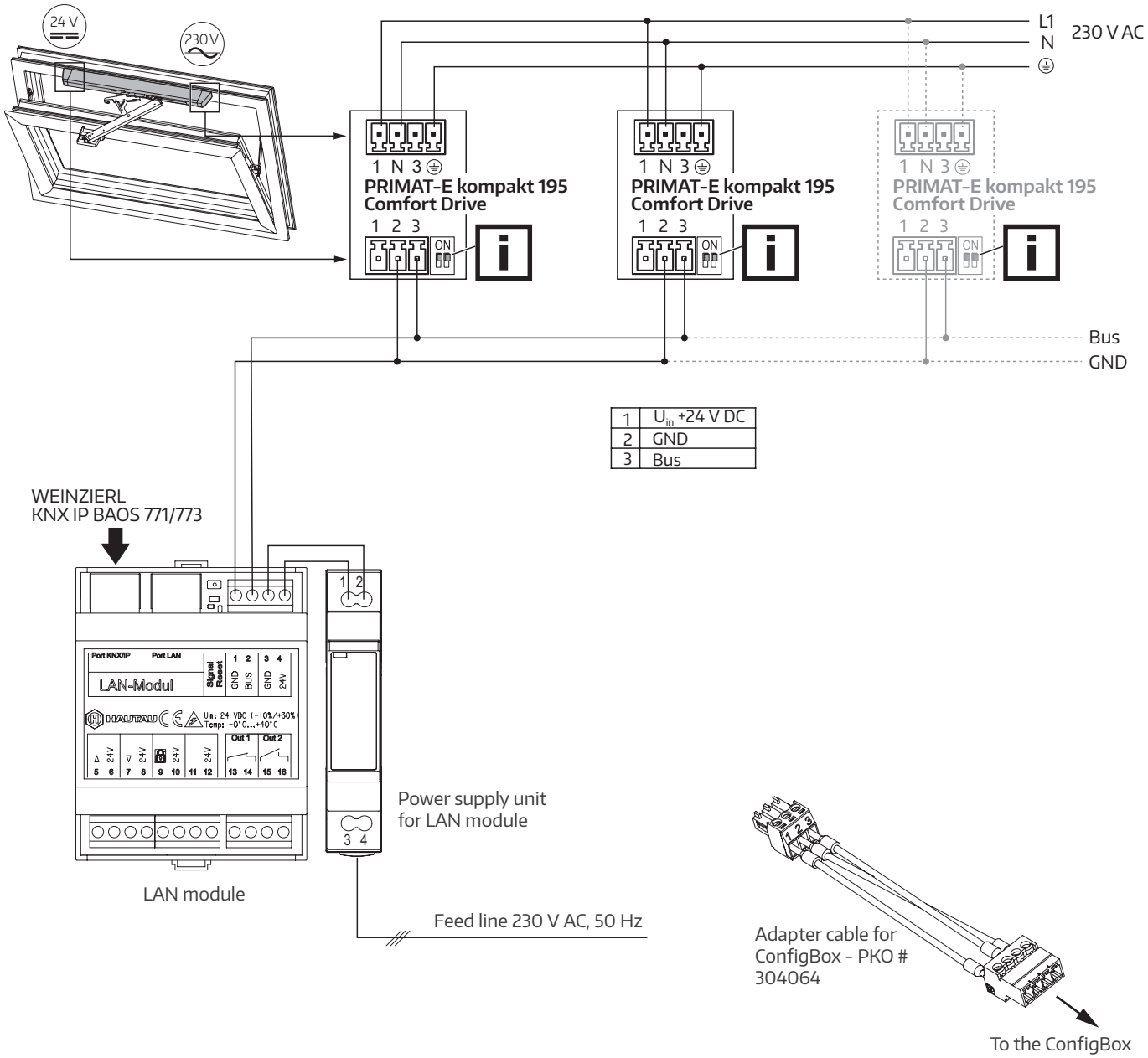
[1] For configuration only

*) See Cable lengths and gauges

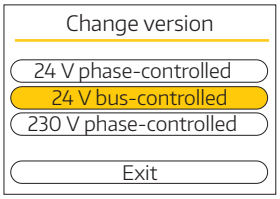
LAN module (continued)

Circuit diagram

230 V AC PRIMAT-E kompakt 195 fanlight actuators



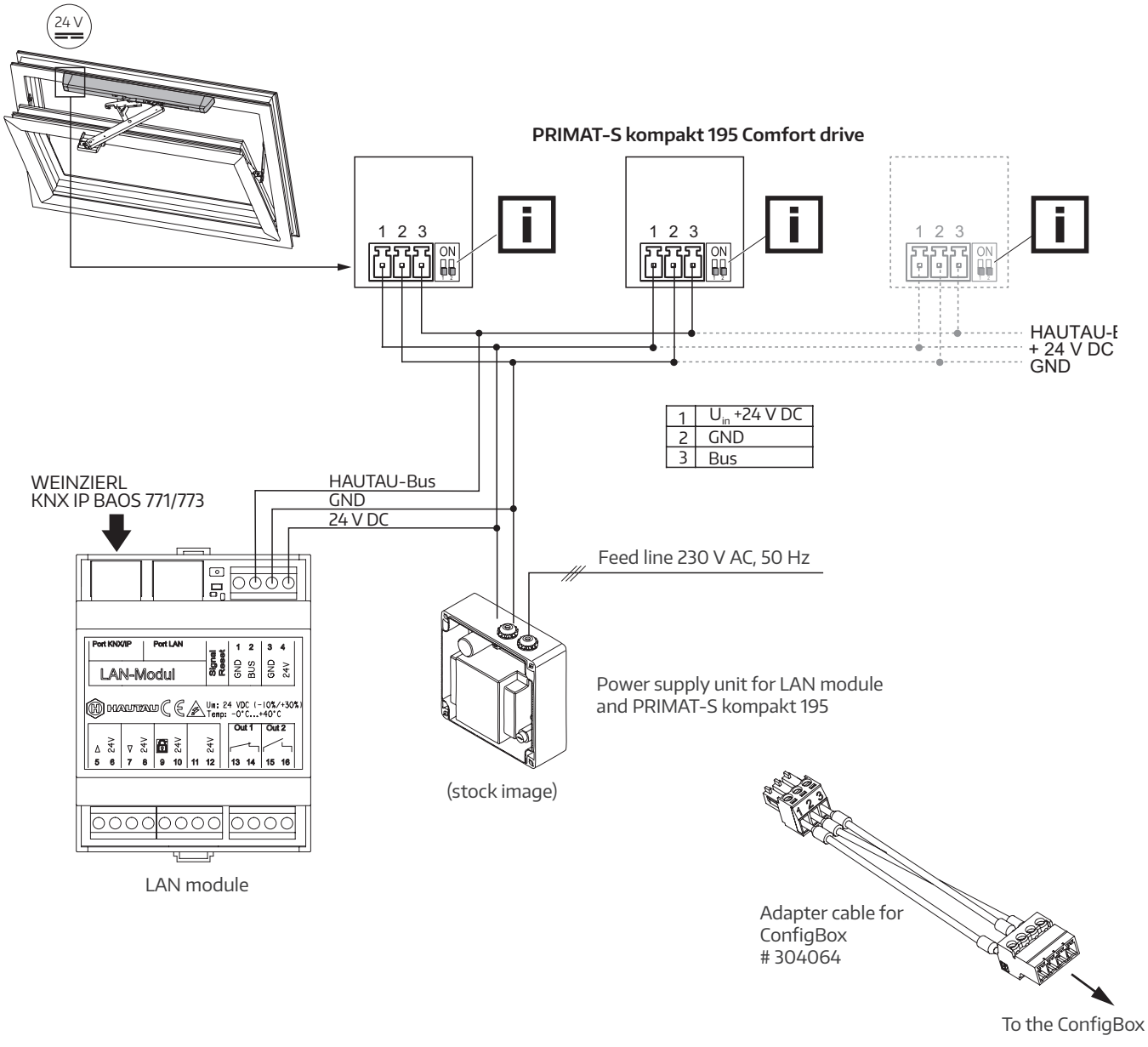
For the actuators, you need to make a changeover to **24 V bus-controlled** using the ConfigTool (see ConfigTool manual).



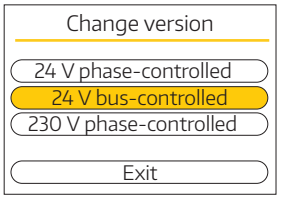
LAN module (continued)

Circuit diagram

24 V DC fanlight actuators for PRIMAT-S kompakt 195



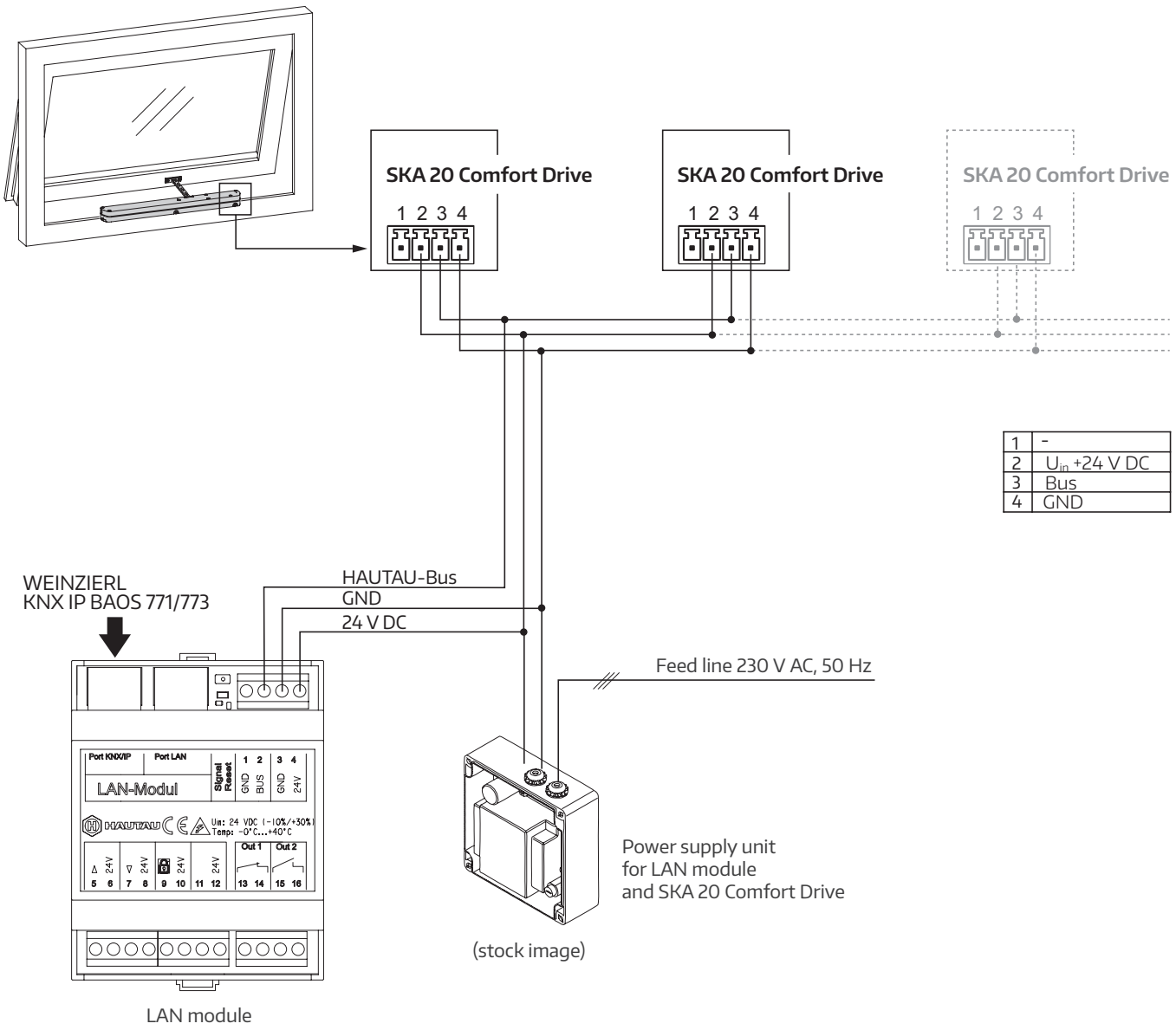
For the actuators, you need to make a changeover to **24 V bus-controlled** using the ConfigTool (see ConfigTool manual).



LAN module (continued)

Circuit diagram

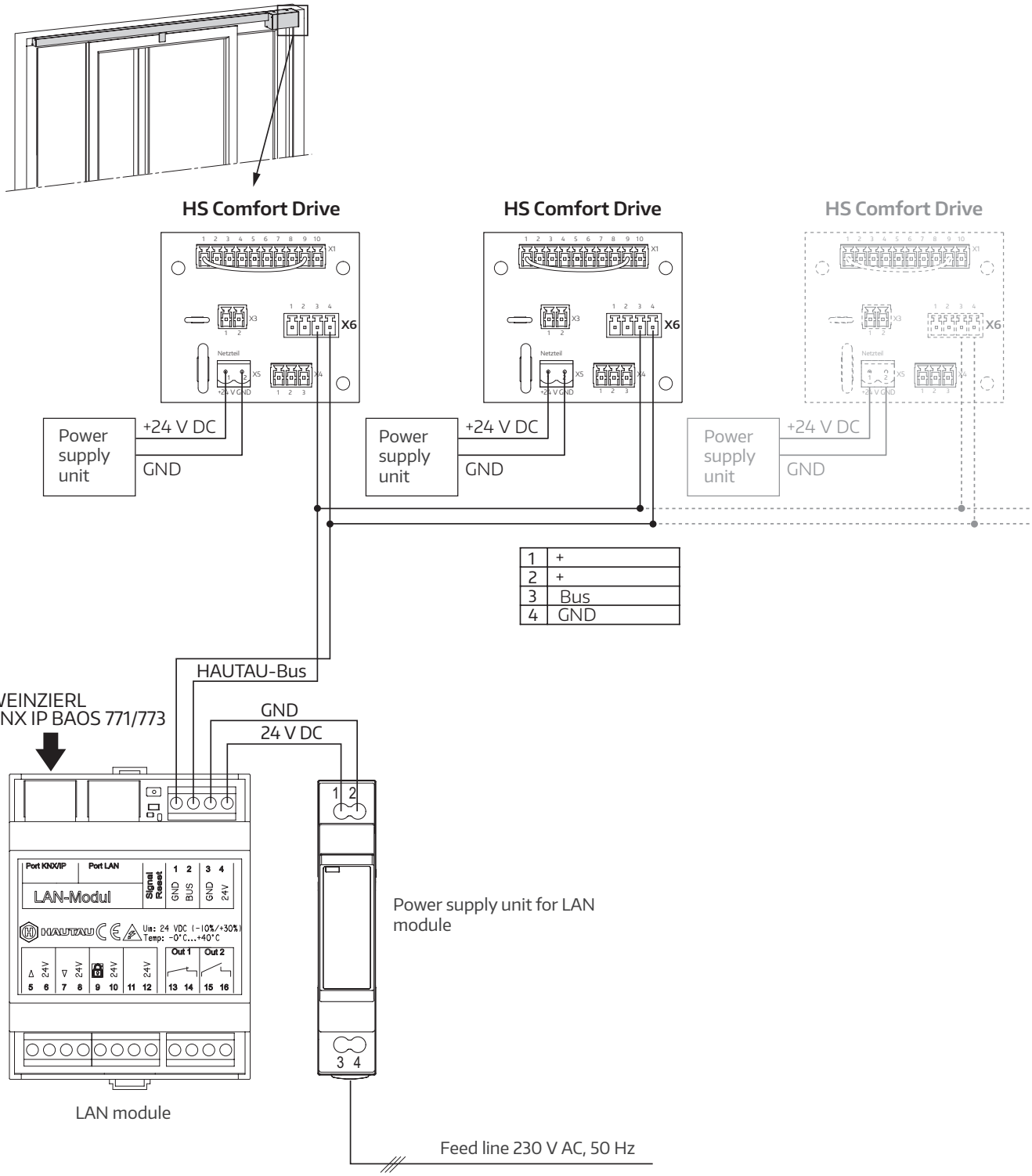
24 V DC SKA 20 Comfort Drive a



LAN module (continued)

Circuit diagram

24 V DC actuator for Move HS Comfort Drive



LAN module (continued)

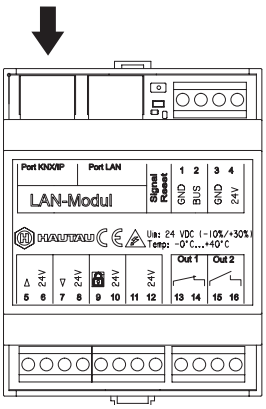
KNX mapping

KNX mapping is used to process signals for network communication in such a way that they can be further used as required.

Mapping for interface KNX IP BAOS 771/773

Up to 250 objects can be mapped.
With a maximum of 30 HAUTAU devices, this corresponds to a maximum of 8 KNX data points per device, which can vary depending on the detected HAUTAU device.

WEINZIERL
KNX IP BAOS 771/773



Mapping of HAUTAU bus addresses to BAOS data points

Connected HAUTAU bus devices must be parametrised to a HAUTAU bus address between 1 and 30.

8 KNX data points are reserved for each HAUTAU bus device. The HAUTAU bus addresses are assigned to the WEINZIERL KNX IP BAOS 771/773 data points (counting from 1) as follows:

HAUTAU bus address	BAOS data points	
1	1	... 8
2	9	... 16
3	17	... 24
4	25	... 32
5	33	... 40
6	41	... 48
7	49	... 56
8	57	... 64
9	65	... 72
10	73	... 80
11	81	... 88
12	89	... 96
13	97	... 104
14	105	... 112
15	113	... 120

HAUTAU bus address	BAOS data points	
16	121	... 128
17	129	... 136
18	137	... 144
19	145	... 152
20	153	... 160
21	161	... 168
22	169	... 176
23	177	... 184
24	185	... 192
25	193	... 200
26	201	... 208
27	209	... 216
28	217	... 224
29	225	... 232
30	233	... 240

Calculation: (adr - 1) x 8 + 1 .. adr x 8

Data points 241-250 remain unassigned for future applications.

LAN module (continued)

KNX data points for HAUTAU bus device

The data from a HAUTAU bus device is queried every 2 seconds. After about 1.5 minutes, all 30 possible HAUTAU bus addresses will thus have been queried, meaning that, in the worst case, a status change will be available to KNX only after this interval.

Commands such as OPEN/CLOSE for a drive are carried out immediately.

If fewer data points than specified are used, only the used data points need to be parametrised in the WEINZIERL KNX IP BAOS 771 or WEINZIERL KNX IP BAOS 773 with the corresponding DPT.

KNX flags:

C = **c**ommunication: always 1; otherwise, deactivated

R = **r**ead: object can be read -> status indicator

W = **w**rite: object writeable -> accept command

T = **t**ransmit: object itself can transmit, e.g. if button is pressed or status changes

U = **u**pdate: not used: read is also interpreted as a status change)

Example:

The third actuator for a PRIMAT kompakt 195 needs to be connected to the bus. The KNX data point for stopping is to be used.

When delivered, a PRIMAT kompakt 195 has the HAUTAU bus address 20 (decimal). First, this address is set from current: 20 to target: 3 using the HAUTAU ConfigTool app, under Tools, Change Address command.

Use the KNX ETS app to access configuration of the WEINZIERL BAOS 771 module (select the device, then click on the Parameters tab at the bottom). The HAUTAU-BUS address 3 is assigned to the BAOS data points (3 - 1) x 8 + 1 to 3 x 8, i.e. 17 to 24.

The Stop data point has a BAOS offset of 1, making it BAOS data point 17 + 1 = 18. The BAOS data point is set to DPT 01 - 1 bit with the data type Trigger. Enter something like PRIMAT-S compact 3 Stop for the description. Later set the data type to 1.017 DPT_Trigger in the object view and configure the flags as specified above.

LAN module (continued)

KNX data points for actuators

Feature	BAOS offset	KNX flags	Length	KNX data type	BAOS
Open/close [1]	+ 0	C-W--	1 bit	1.009 DPT_OpenClose	DPT 01
Stop [1]	+ 1	C-W--	1 bit	1.017 DPT_Trigger	DPT 01
Status Opened [2]	+ 2	CR---	1 bit	1.002 DPT_Bool	DPT 01
Status Closed [3]	+ 3	CR---	1 bit	1.002 DPT_Bool	DPT 01
Status Power cut-off [4]	+ 4	CR---	1 bit	1.002 DPT_Bool	DPT 01
Error [5]	+ 5	CR---	1 bit	1.005 DPT_Alarm	DPT 01

[1] For all devices, including unknown ones
[2] Not for HS/S Comfort Drive or RAZ-K
[3] Not for RAZ-K; for SKA 20 Comfort Drive if power is cut off on closing
[4] Not for HS/S Comfort Drive or RAZ-K
[5] For HS/S Comfort Drive only

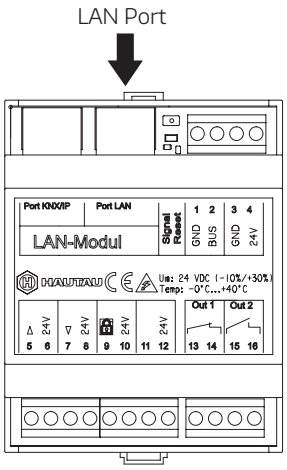
KNX data points LAN module input/relay

Feature	BAOS index	KNX flags	Length	KNX data type	BAOS
Input switched, Terminal 11	241	CR---	1 bit	1.002 DPT_Bool	DPT 01
Relay Out 1, Terminal 13 + 14	242	C-W--	1 bit	1.001 DPT_Switch	DPT 01
Relay Out 2, Terminal 15 + 16	243	C-W--	1 bit	1.001 DPT_Switch	DPT 01

Port forwarding for LAN Port

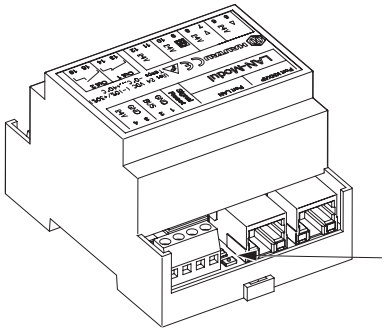
The following ports on the WEINZIERL KNX IP BAOS 771/773 are forwarded on the LAN port:

	BAOS	LAN
BAOS web service HTTP	80	8080
BAOS binary protocol	12004	12004
KNXnet/IP	3671	3671



LAN module (continued)

Optische Signale und Verwendung des Tasters | Optical signals and use of the button



Signal optical indicator and WPS/Reset button		
Button	Signal	Position
-	LED flashes 	LAN module in operation
Pressed briefly (< 1 s)	LED on	WPS log-on
Pressed for longer (> 1... 5 s)	LED flashes (after 2 s)	Wi-Fi settings reset to factory settings
Pressed for long time (> 5 s)	LED flashes quickly (after 5 s)	Complete reset to factory settings. Current configurations are deleted. Peripherals must be re-registered.

The WPS registration depends on the router used. Please follow the instructions in the router description.

WLAN log-on

The LAN module must be installed ready for operation and connected to a 24 V DC power supply so that you can carry out parametrisation in the ConfigTool. The search for new WiFi networks needs to be enabled on the smartphone or tablet. The LAN module (with integrated WLAN technology) is quickly identified with its name.

Example:

HAUTAU-LAN-Module-H0000198

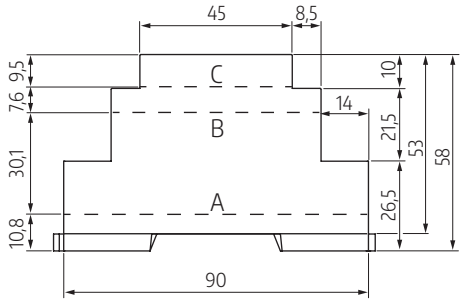
The WiFi Box name contains the WLAN code for the initial connection, such as "H0000390". After successfully establishing a connection, change the Wi-Fi key using the HAUTAU ConfigTool app.

LAN module (continued)

Technical specifications

Electrical characteristics	
Nominal voltage	24 V DC (-10%/+ 30%)
Ripple	≤ 20% in relation to the nominal voltage
Wattage in transmission mode	about 2 W
Wattage in standby mode	about 1.5 W
Current draw in transmission mode	about 80 mA
Current draw in standby mode	about 60 mA
Protection class	III safety extra-low voltage (SELV)
Ventilation button connection, locking input and free Input	
Voltage	10 to 30 V DC
Current	1 mA
Fuse	No
Relay outputs	
Max. voltage	30 V DC
Max. current	2 A (at 30 V DC)
Connection and operation	
Suitable for SHEV	No
Suitable for ventilation	Yes
Maintenance	Recommended, yearly
Connecting terminals	Screw terminals 1.5 mm²
LAN and KNX/IP interfaces	RJ45 jack
Indicators and operating controls	
Indicator for operation and configuration	Yes, green LED
Button for configuration	Yes, for reset and WPS log-on
Wireless LAN	
Radio standard	802.11n/g/b
Encryption	Yes, via WPA
Range	About 10 m, without interferences, depending on the building
Log-on per WPA	Yes
Password assignment	Yes, in ConfigTool
HAUTAU bus	
Cable length	Max. 300 m
Cable cross-section	≥ 0.8 mm²
Cable type	Not shielded
Number of participants	30 per LAN module

Installation and environmental conditions	
nominal temperature	20 °C
Ambient temperature	0 °C to +40 °C
Protection rating	IP20 as per EN 60529
Environmental conditions	For dry environments only; no dew formation, no aggressive steams/ vapours, no dusty environments
Approvals and certificates	
Electrical safety	Yes, as per EN 60335-1
EM compatibility	Yes, as per EN 55014-1, 55014-2 AND 61000- 6- 3
CE-compliant	Yes, with EMC Directive 2004/108/ EC and Low Voltage Directive 2006/95/EC
TÜV certification	No
VdS certification	No
CCC certification	No
UL certification	No
Halogen-free	Yes
Silicone-free	Yes
RoHS-compliant	Yes
Material	
Housing	Plastic UV94-V0 PC, light grey
Dimensions	Width: 71 mm
Scope of supply	1x LAN module 1x installation and operating instructions
Weight	117 g
Required accessories	
Configuration software	HAUTAU ConfigTool, free from Android or Apple Store
Hardware	Smartphone or tablet with WLAN and compatible with HAUTAU ConfigTool
KNX gateway	
Compatible with LAN module	WEINZIERL gateway Type KNX IP BAOS 771/773



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