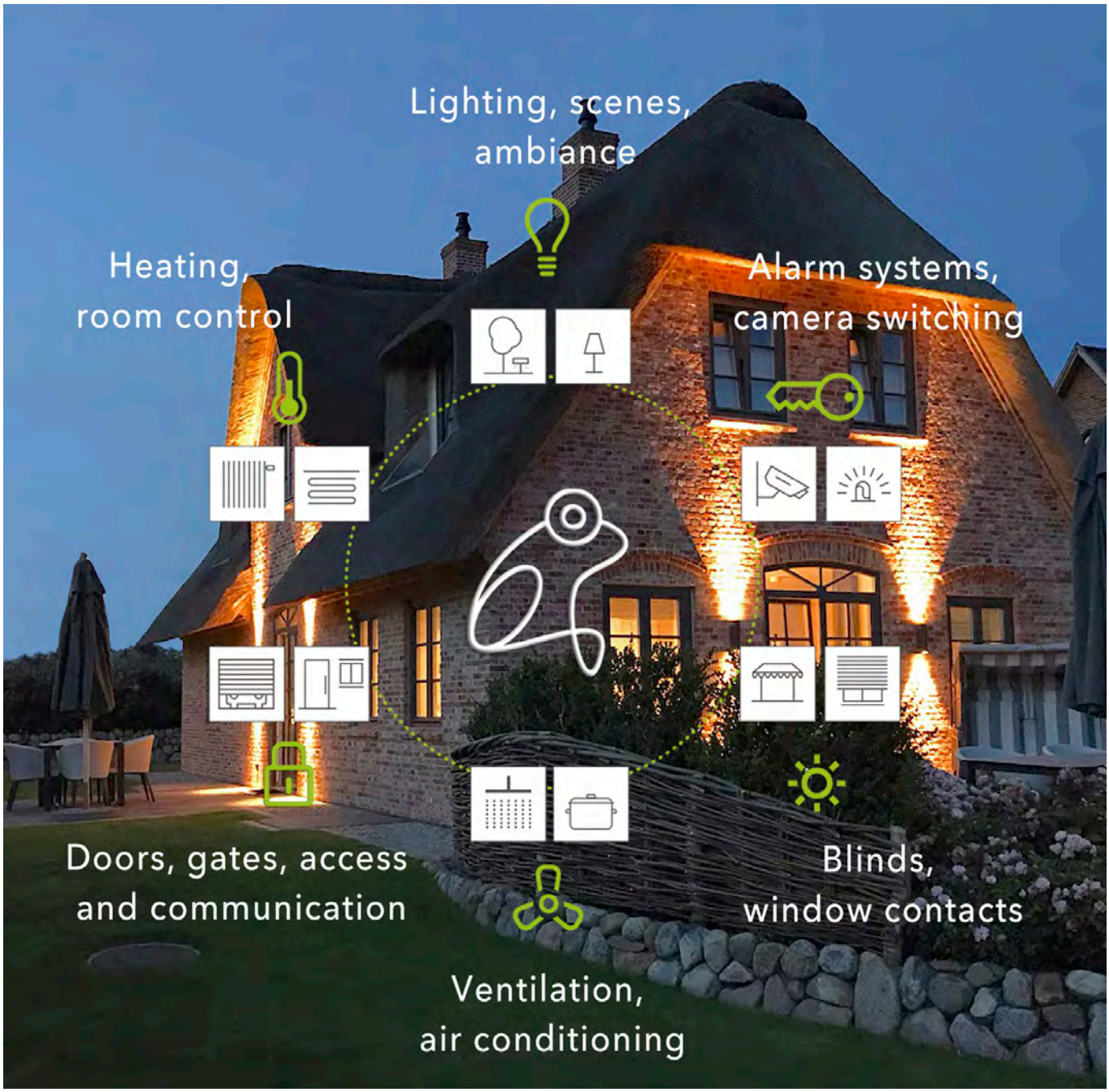
frogblue™

SMART BUILDING
TECHNOLOGY
GERMANY



Revolutionarily simple

frogblue - the efficient solution for the really smart home

"With frogblue, we offer installation companies and their customers an innovative system solution, from the flexible house to the Smart Home, that sets new standards with regard to simplicity and functionality. Pioneering and cable free, affordable for all, and extremely secure. frogblue is the beginning of intelligent living for everyone!"

Dr. Ralf Hinkel
Founder and CEO of frogblue

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Founder and CEO of frogblue

Innovation is our life.

frogblue is a medium-sized family company with its headquarters in the Palatinate region of Germany. We have an in-depth understanding of innovative start-ups and have already successfully founded several high-tech businesses:

- In 1990: QUADRIGA GmbH, the innovative laser level manufacturer und inventor of the laser spirit level
- In 1999: the listed company MOBOTIX AG, which introduced an intelligent network camera to the market for the first time and in 2007 the hemispheric 180-degree camera technology.

René Hinkel
Founder and Head of Development

Made in Germany

Revolutionarily simple!

"***The Smart Home, simple, flexible and secure***", this is the vision that drives us forwards. Affordable for everyone and less expensive than a conventional installation in the home. Of course wireless and ideal for retrofitting.

Frogblue offers everything that a house or building has to be able to do. A complete solution from a single source. Our energy efficient frogs control the lighting, blinds, heating, access and alarm systems. From every standard light switch or smartphone. Frogblue is easy to install, needs no control cabinet, no space on the sub-distribution board and no high-maintenance IT installations.

Frogblue can be extended at any time, from one frog to hundreds. Quick to install, effortless to configure and undoubtedly secure since it does not use the Cloud. Completely encrypted and more reliable than radio-based solutions, frogblue now also makes your KNX® wireless.

And the quality? 100 % made in Germany. VDE certified.


Lighting, scenes, ambiance
Heating, room control
Alarm systems, camera switching
Doors, gates, access and communication
Blinds, window contacts
Ventilation, air conditioning

One small box - one major advance

At first glance, it just looks like an inconspicuous box, sitting invisibly inside the recessed installation box behind the light switch. It is small and green, which is why we call it the **frog**. But our frog has a lot to offer. It is smart, packed full of innovative functions, extremely easy to program and, thanks to Bluetooth®, a real communications virtuoso.

Our frogs can switch, dim, measure, open doors or react to buttons, switches and window contacts. They can set blinds throughout the building to the desired position. Using Bluetooth®, they connect wirelessly, via "**virtual cables**", to other frogs and then exchange switching commands or synchronise with each other when dimming. This all happens at lightning speed, as with cables.

The messages from other frogs are passed along, thus extending their range. Securely, of course, since all messages are encoded a second time by frogblue.


1-1,5 mm²
8 mm
3
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A
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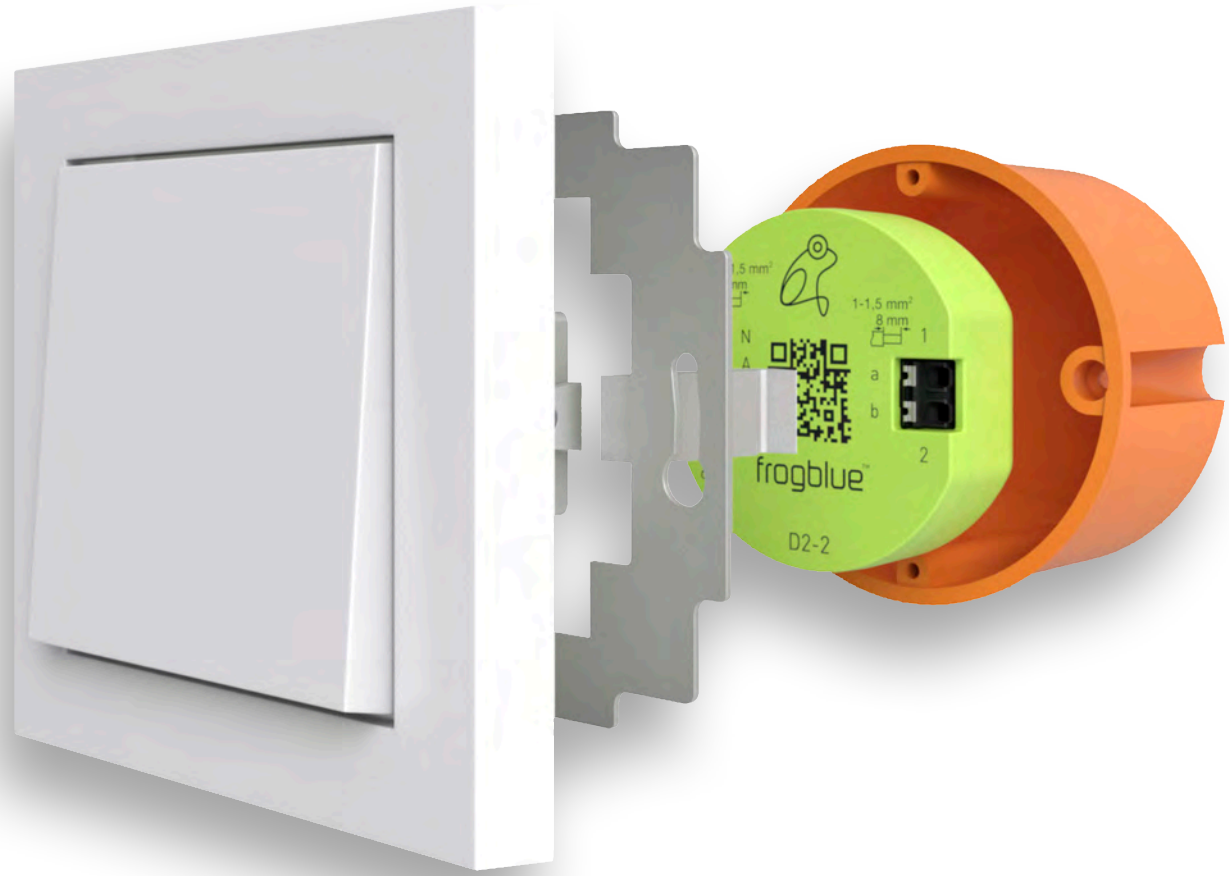
L
b
1-1,5 mm²
8 mm
1
a
b
2
D2-2
frogblue™


1-1,5 mm²
8 mm
1
a
b
2
frogblue™
D2-2

Actuators

Dimmers

Input modules

Relay modules

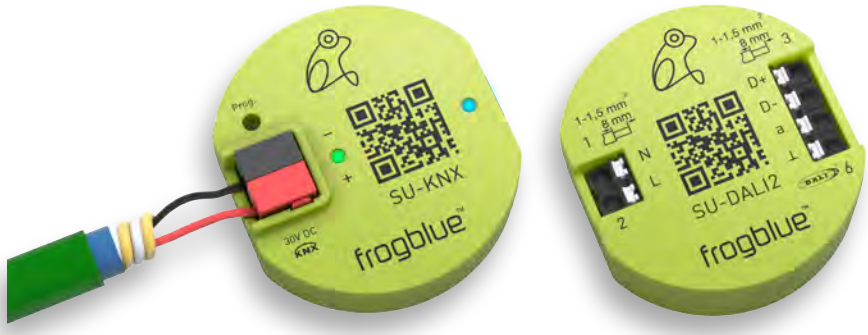
Clock module

Suppressor

Door modul

4-channel 0-10 V

Bridges: KNX and Dali®



Wireless flexibility

The Smart Home is now easier than ever before. In new buildings and existing buildings, and always extendable. A power connection (230 V) is all the frog needs.

No control cables or connecting cables are required. Alternatively, switching inputs can be powered by batteries, which only need replacing about once every 10 years.

Frogblue communicates wirelessly but is not a radio-based solution. Why? Frogblue is encrypted, needs much less energy, and the frogs pass on messages automatically to other frogs.

The standard light switches and light fittings from all manufacturers are compatible with frogblue. Installation in existing light switches or lamp connections is possible at any time.

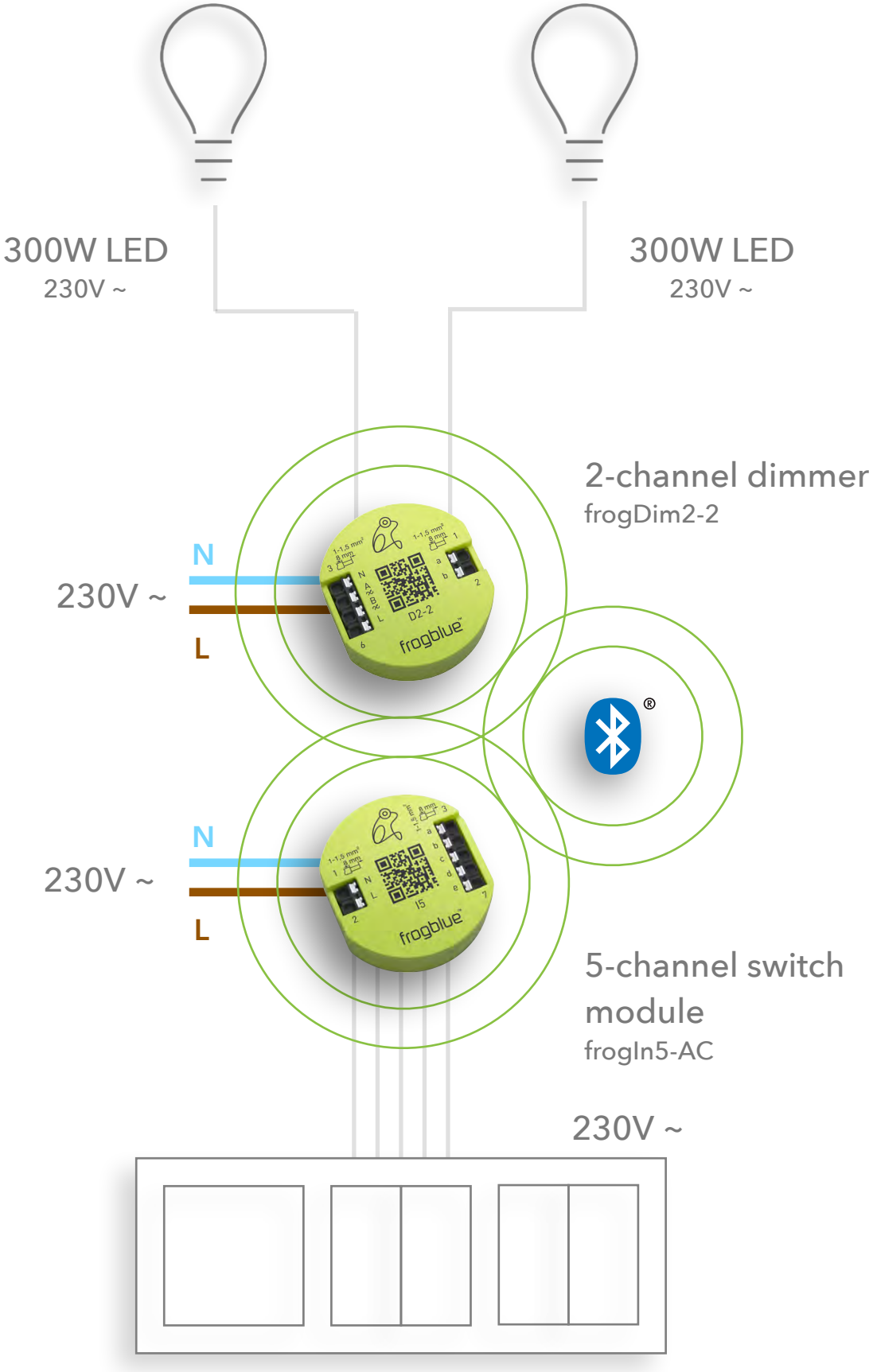

Living room
Lighting
Shading
Heating
Alarm
frogblue
C5
I5
D2-2

Technology

The frogblue dimmers are designed to actuate 300 W lamps, per channel, and are simply connected to the 230 V mains network behind the light switch. The outputs are short-circuit proof and offer a wide range of timer and logic functions. With some dimmers, light switches can be connected to them directly.

The frogblue input modules have up to five channels, are powered with 230 V or by battery, and convert the pressing of the light switches into control commands. Simply pressing the switch briefly turns the light on or off. If the switch is pressed for longer, this activates the dimmer function. You can configure whether or how the light is dimmed. This can be different at night than during the day.

Additional features such as a centralised, building-wide switch-off function or multiroom lighting scenarios can be assigned to the light switches using different pressing patterns (double click, for example).



Light switch with switch module
in the recessed switch box

Unbeatably cost-effective

The frogblue Smart Home system is worthwhile even if used only for the lighting in a house. It greatly simplifies the installation, since central control functions and multi-way switching can be achieved wirelessly and without a central control unit.

From just one frog up to hundreds, the decentralised frogblue system can be expanded indefinitely. And there is no problem of the control cabinet being too small either, since no cabinet is required.

Frogblue offers special comfort functions such as lighting controlled by a timer or by outdoor light levels, dimming of all types of lights, soft on/off switching for reduced material wear, and the important centralised on/off function actuated from any light switch in the house.

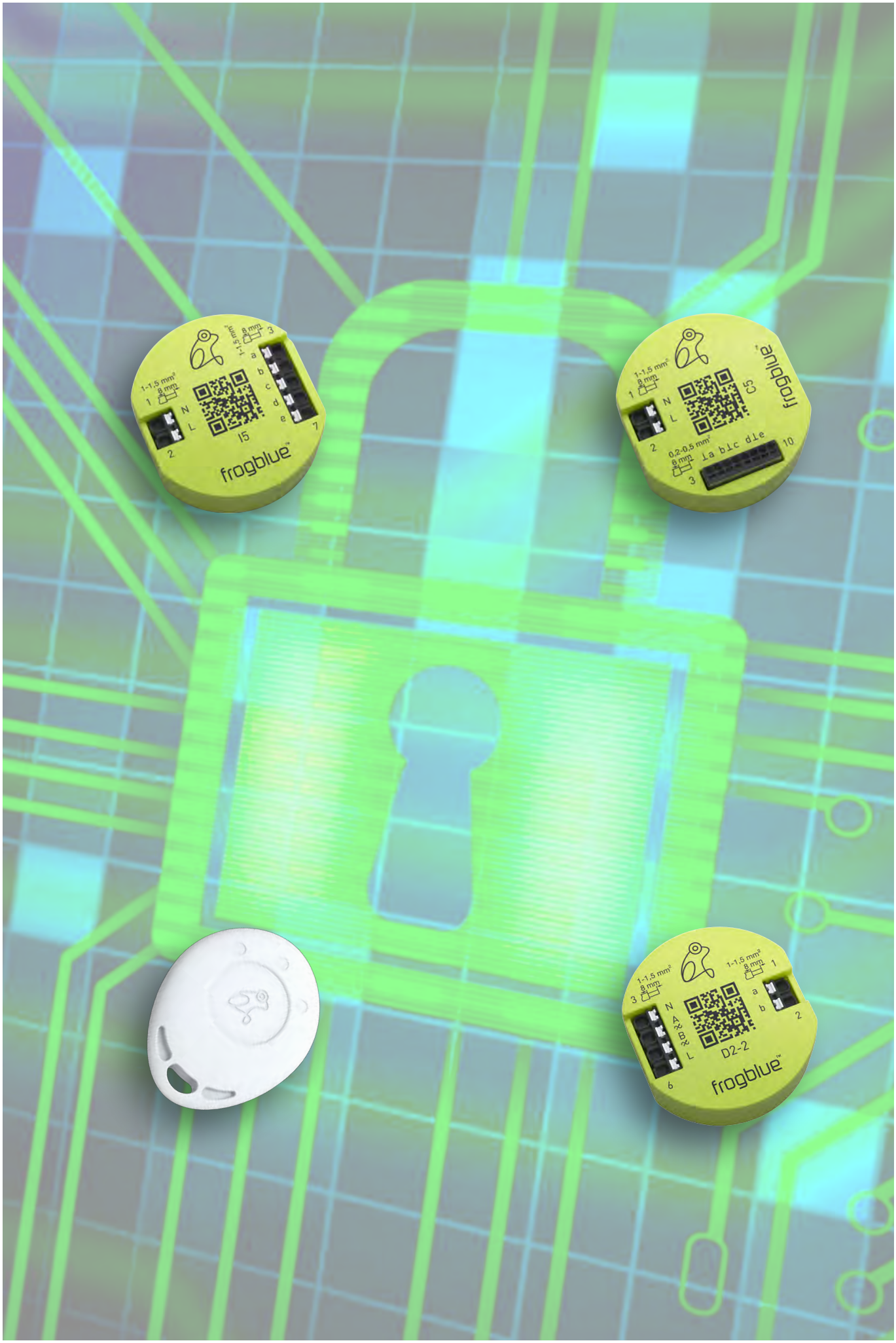

09:06

Doubly Safe and Secure

The safety of our systems is an important topic for us, in every respect. Electrical safety and fire protection can only be guaranteed by VDE (association of german electrical engineering) approval. This certification consists of more than 100 rigorous tests and frogblue has passed them all.

All information remains within the building. frogblue doesn’t need an Internet connection and doesn’t store any information in the Cloud. All messages and data passed between the frogblue components or to the smartphone app are encrypted by frogblue with 128-bit, in addition to the Bluetooth™ encryption.

Bluetooth™ messages, opening a door, for example, cannot be copied and transmitted again later, since only messages with the correct time stamp are accepted; and these will be invalid after they have been sent. We play it doubly safe and secure.


frogblue
I5
frogblue
C5
frogblue
D2-2
frogblue

Pioneering

Bluetooth® has established itself worldwide as the standard for close-range wireless communication. Whether for phoning from the car, for transmitting music to wireless speakers, or for measuring your pulse with a fitness device. All of these use the same future-proof standard as we do. To be more precise, we use the energy-saving Bluetooth® LE (Low Energy) standard.

Using Bluetooth®, every smartphone and every tablet can communicate with the frogs directly and without any detours. The reaction time is significantly faster than with WiFi and no complicated programming is required for the installation. We like to keep it simple.

Frogblue has made communications between the frogs even faster than the standard (mesh network) and, by including additional encryption and a time stamp, significantly more secure.

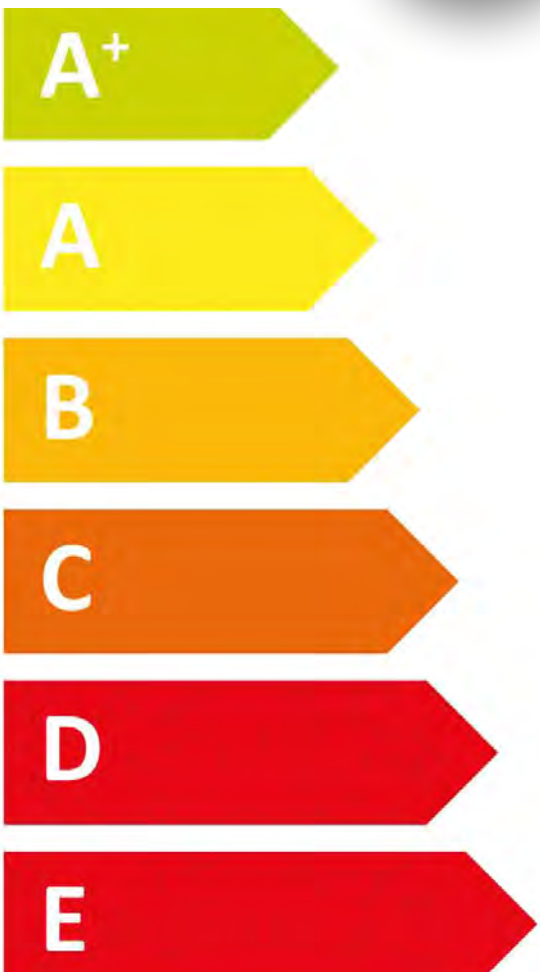

●●●○○ WLAN

Frogblue is green

Compared to wired systems in the control cabinet, our frogs are extraordinarily energy conscious, with a power consumption of just 0.2 watts. In a family home with 40 frogs, the consumption amounts to less than 8 watts.

When dimming 600 W, the frogs don’t even become warm to the touch. Our patented technology takes care of this, and saves energy at the same time. Another advantage is that, as every electrician knows, cooled products live longer.

If you consider the frogblue system as a whole, the energy balance looks even better. The cables that aren’t needed now don’t need to be produced. And these amount to up to 80 %. The hammer drills also run less frequently since significantly fewer cable channels need to be cut.



Frogblue needs no control cabinet and no space on the sub-distribution board. This saves space and costs as well as reducing the energy consumption by a factor of 10.

Cubes

have a flat, minimalist design in white glass and their size and depth is just about the same as a light switch. Whether they are used as a multifunctional switch with a room thermostat or as a display to relay videos from cameras, all the functions and scenarios of intelligent living are controlled via touch screen.

The frogDisplay connects locally, via WiFi and DSL box, to smartphones/tablets at remote locations. Always encrypted and, of course, only when needed. If doors and windows are opened, or if a light switch is operated at the wrong time, alarm signals can be sent, also in the form of a telephone call with voice message. If boredom arrises, an Internet video can be shown on the display.

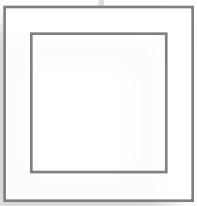
The Cubes communicate with the frogs directly via Bluetooth®. They fit inside a recessed switch box, where they are supplied with 230 V~ or, if required, 12/24 V=. A door contact or light switch can be connected in addition. The integrated relay switches the heating on or opens the door, as required.

frogDisplay

81 x 81 x 12 mm in
recessed switch box with
230 V~ supply
or, optionally, 12 V/24 V=

frogMotion

PIR motion detector



Contact

One contact
or switch

Relay output

Relay to open
the door

frogAccess

Access control via PIN

Cubes with glass-touch control can switch on scenarios, open doors, set blinds,
measure the room temperature/brightness and can be customised

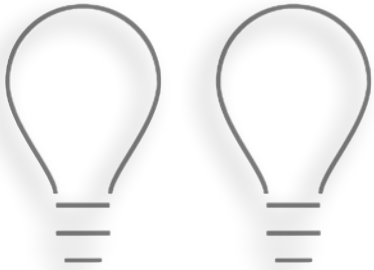
Transponder

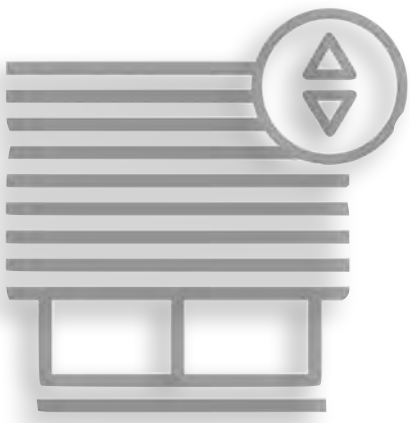
Innovation is our strength. In the frogblue Smart Home, “one button” controls the whole house. Lights, blinds and doors. And always the door you’re standing in front of when you press the button.

This is thanks to the position and gesture sensor in our **frogKey**. Point it upwards and it switches the light, point it downwards and the blinds respond, point it forwards horizontally and it opens doors. With activated room recognition, the frogblue transponder switches only the lights in the room it is currently in.

In any position, the button can be clicked in a pattern (e.g. double clicked) to control other functions such as the “central off” function for the whole building. Naturally, all the control commands can be freely configured.

The transponder only transmits when it is within its project. Encrypted and time stamped. That means secure.





frogKey

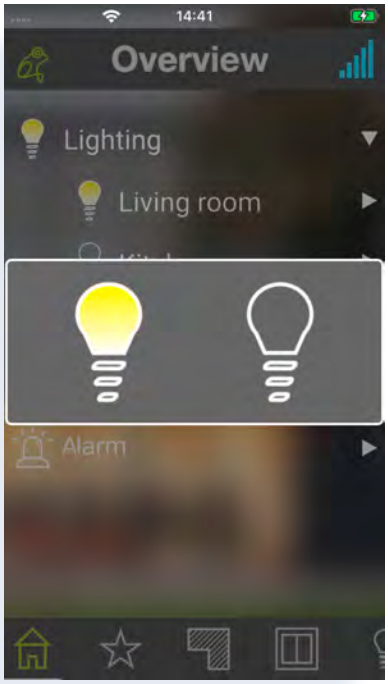
Transponder for operating the frogblue system (49 x 38 x 10 mm)

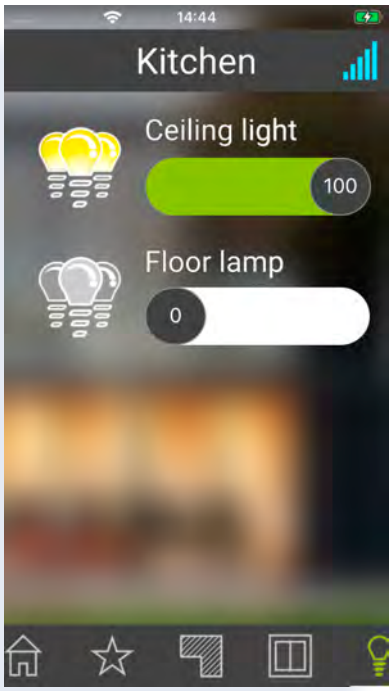
HomeApp

If you want to operate your Smart Home using a smartphone or tablet, you simply download the free frogblue HomeApp. The app communicates with the frogs directly and without any detours, and controls the lights at lightning speed via Bluetooth®. Also from remote locations via the Internet, using WiFi. Always encrypted and secured.

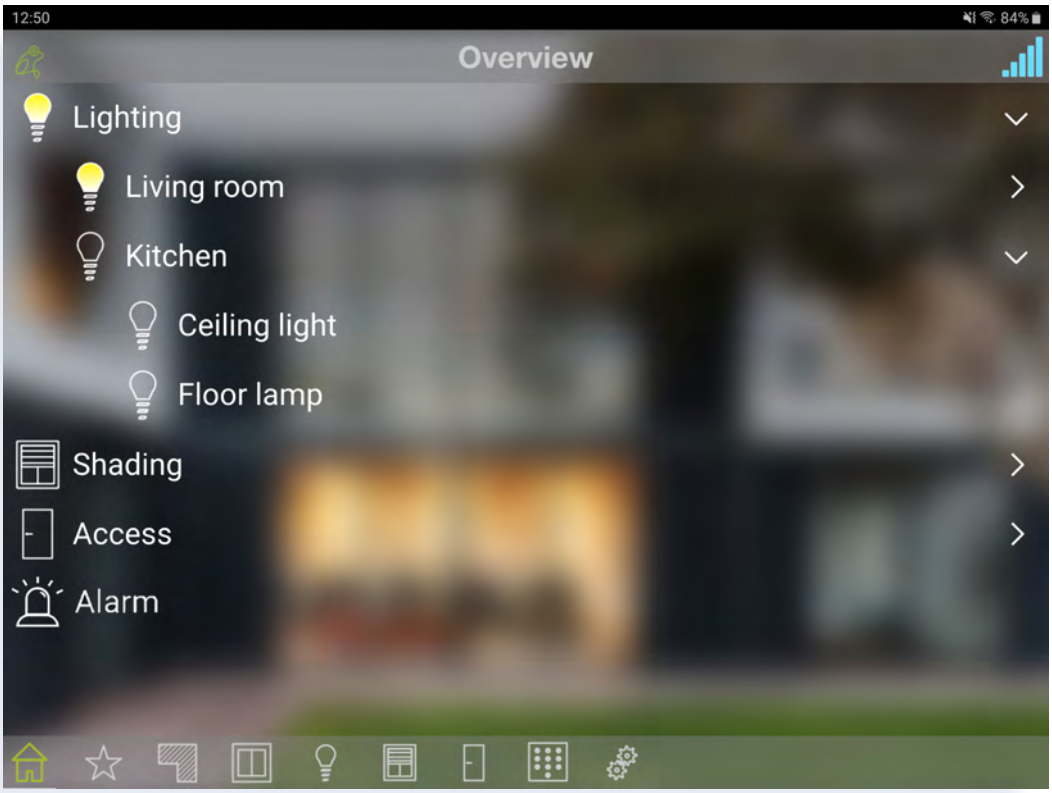
As a backup, in case the tablet is out of charge or isn't at hand, there is always our smartphone on the wall (frogDisplay). We have also installed the HomeApp on the frogblue display, so that it can be operated in exactly the same way.

The HomeApp is set up automatically from the ProjectApp that was used by the installer to install the frogblue system. It immediately knows the rooms and names of the lights or doors. This is what a Smart Home can achieve when everything comes from a single source, as with frogblue.





FREE DOWNLOAD



frogblue HomeApp on a tablet, smartphone and the frogblue display, the intuitive Smart Home software with automatic setup for Android™, iPhone™, iPad™, PC and MacBook™

Configuration

How does a frog know what it’s supposed to do? How are dimmers configured to work in synchronisation? How does the multi-way system know which light switch is responsible for which light? It's quite simple: thanks to the names.

The outputs of three-way dimmers are given names, such as “living room light”, “dining room light” and “kitchen light”. This name is then also assigned to the switch or input channel that switches the corresponding light. This switch is then connected virtually to the light and actuates it.

If two light switches have the same name, they activate the same light with multi-way switching. If two dimmer channels have the same name, they dim the lights synchronously. It’s that simple. And this was important to us.

How does the installer go about this? With the free frogblue ProjectApp for tablet or PC.

FREE DOWNLOAD

frogblue ProjectApp for the installer, shown here with 2-channel dimmer frogDim2-2 in the "living room" area and two lights: "ceiling light" and a "floor lamp"

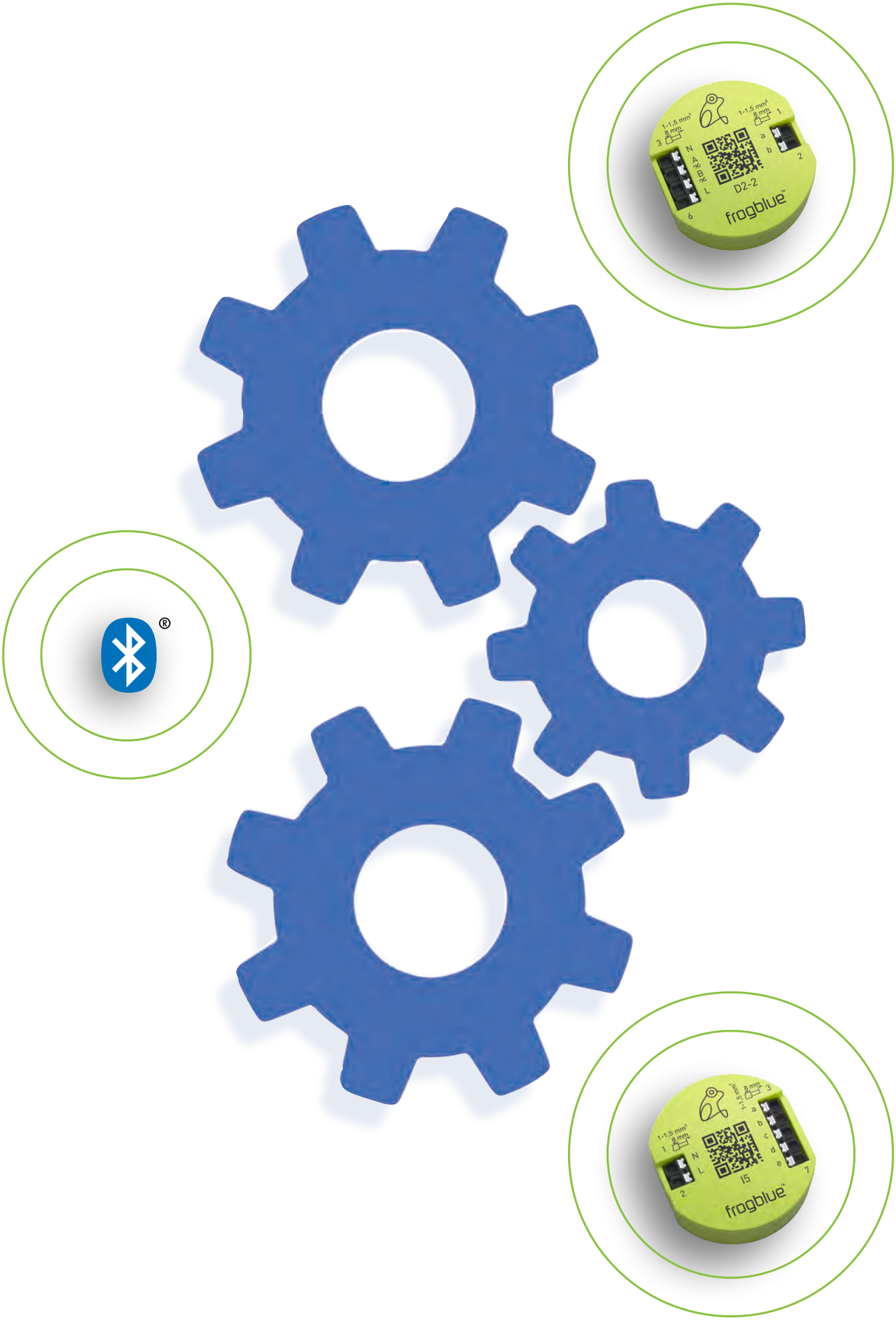
The frogLink USB connects the frogblue Bluetooth® network at high speed to the PC or acts as a gateway or SDK to other systems, such as MOBOTIX™ cameras or overarching building control systems.

Logic module included

When it's dark outside, you might want the lights to be dimmed differently than during the day. With a standard daylight control switch, this is no problem. This is simply connected to an input channel and configured in the ProjectApp as a night signal. This signal is then available to all the frogs in the building.

In the same way, wind monitors can be integrated so that all of the blinds in the building can be raised automatically if the wind gets up. Central control is always included with our frogs. For blinds, in particular, there are many different functions, such as position and degree of shading.

The lights should go on if movement is detected or a window is opened at night? No problem. Simply connect a motion detector or window contact anywhere to an input channel. All the frogs can then respond to it. Logically and without you having to lay a single cable.


D2-2
frogblue
I5
frogblue

Data backup

There are Smart Home systems that drive installers to distraction. Due to software updates that paralyse the system. Because employees leave or configurations were not properly saved. There are many reasons why a Smart Home system may need to be reprogrammed. But it's always the customer who pays.

Frogblue has put a stop to this. We save the project data and configurations of all the frogblue modules in a single file. So nothing gets mixed up. Password protected. This complete configuration can be sent via email, saved to a USB stick or archived "**in the frogs themselves"**.

The app or the wall display then always shows whether or not the current project has been properly stored in a frog. And everything stays in-house.


frogblue
I5
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D2-2
frogblue

Sensors and accessories

The battery-powered **frogMultiSense** measures the room temperature, air humidity, brightness and air pressure. With its 10-year battery life, it can be fitted exactly where it is needed, where the heating needs to be controlled. It has two magnetic contacts, right and left, to detect doors and windows.

The battery-powered **frogWindow** is installed directly in the window profile and comes with adapters for the most common brands. Four integrated magnetic contacts allow various magnet positions. Fixed to the casement, the position sensor determines whether the window is tilted or open. Vibrations can also trigger an alarm, if required.

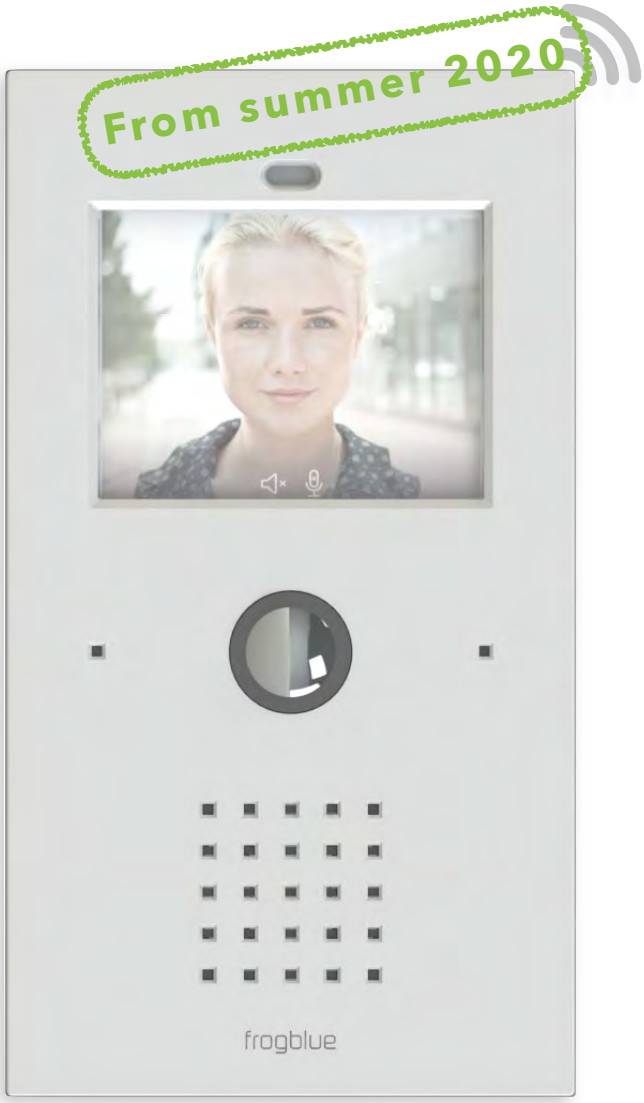
The weatherproof **frogBoxGPS** receives the current time from GPS satellites. It also measures the outdoor temperature and brightness. This allows the heating to be controlled according to the weather and the lights to be switched on when it gets dark. An outdoor wind sensor and a motion detector can be integrated via the switching inputs.

frogMultiSense

Temperature sensor with
replaceable battery CR2450
(45 x 45 x 13 mm)

frogWindow

Window sensor with replaceable
battery CR2032 (75 x 25 x 8 mm)



frogDoorVision

IP/SIP video door intercom station with
hemispherical 180° camera
(Bluetooth, WiFi, PoE, LSA+)

frogBoxGPS0-2

GPS time module for weather-regulated
building control (116 x 116 x 40 mm)

frogBoxRelais5-2

5-channel actuator (6 A/230 V~) for
switching lights or heating valves

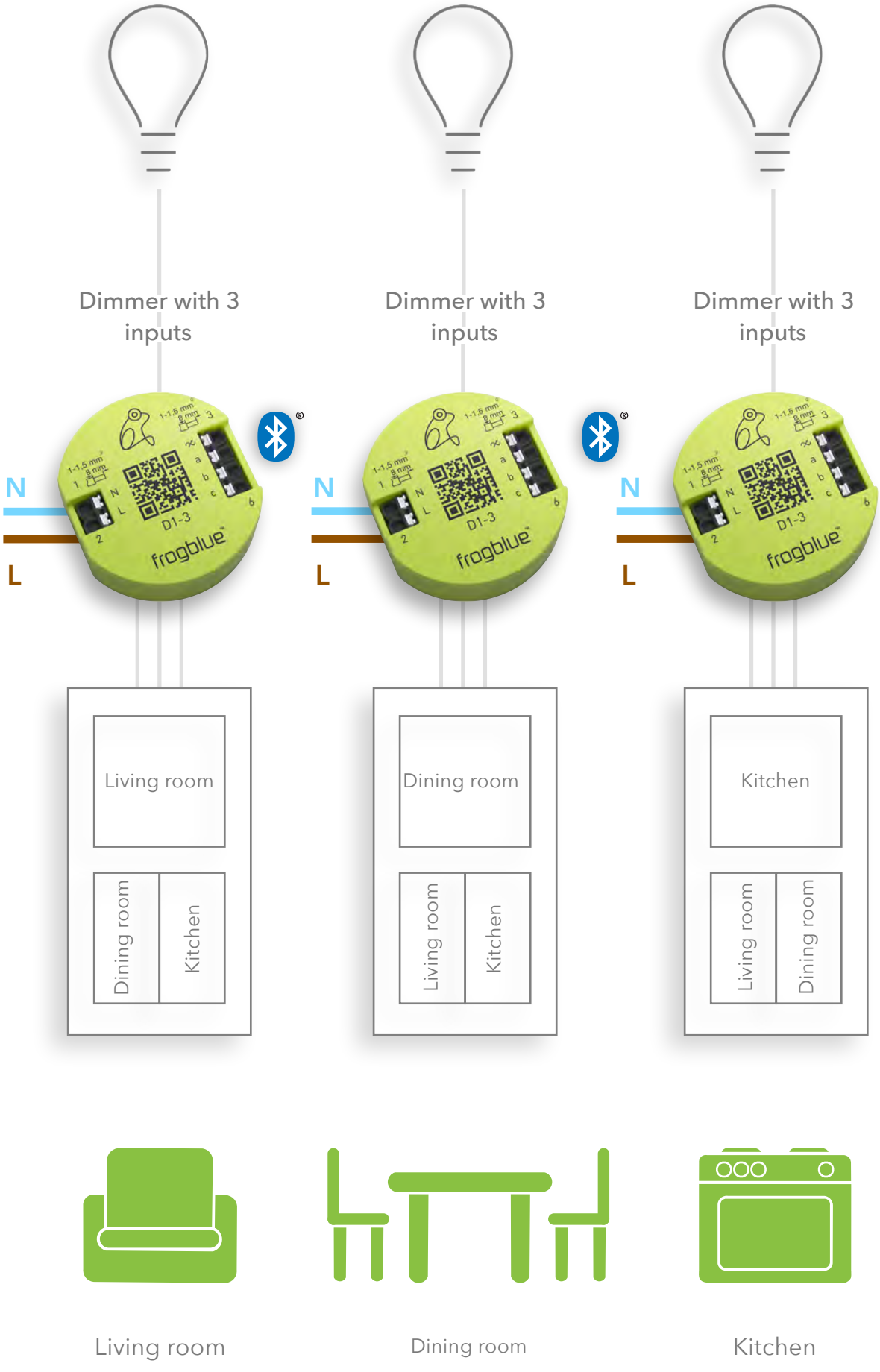
Example of multi-way switching

With frogblue, multi-way switching is easy and no cables need to be laid, no central unit is required and no control components have to be connected on the sub-distribution board. The living room, dining room and kitchen lights can be controlled with just three frogblue units (frogDim1-3) installed behind the light switches, because three light switches can be connected to each of the 300 W dimmers.

Additional centralised, building-wide functions or lighting scenarios can also be assigned to the light switches by using different clicking patterns (e.g. double click). Compatible with all makes of switch.

A double click could be configured for all or selected light switches to switch on the lights in all three rooms at once. The switch could be set to reduce the brightness of the light to 50 % if held pressed for a short or a long time.

Solution for approx. 500 €

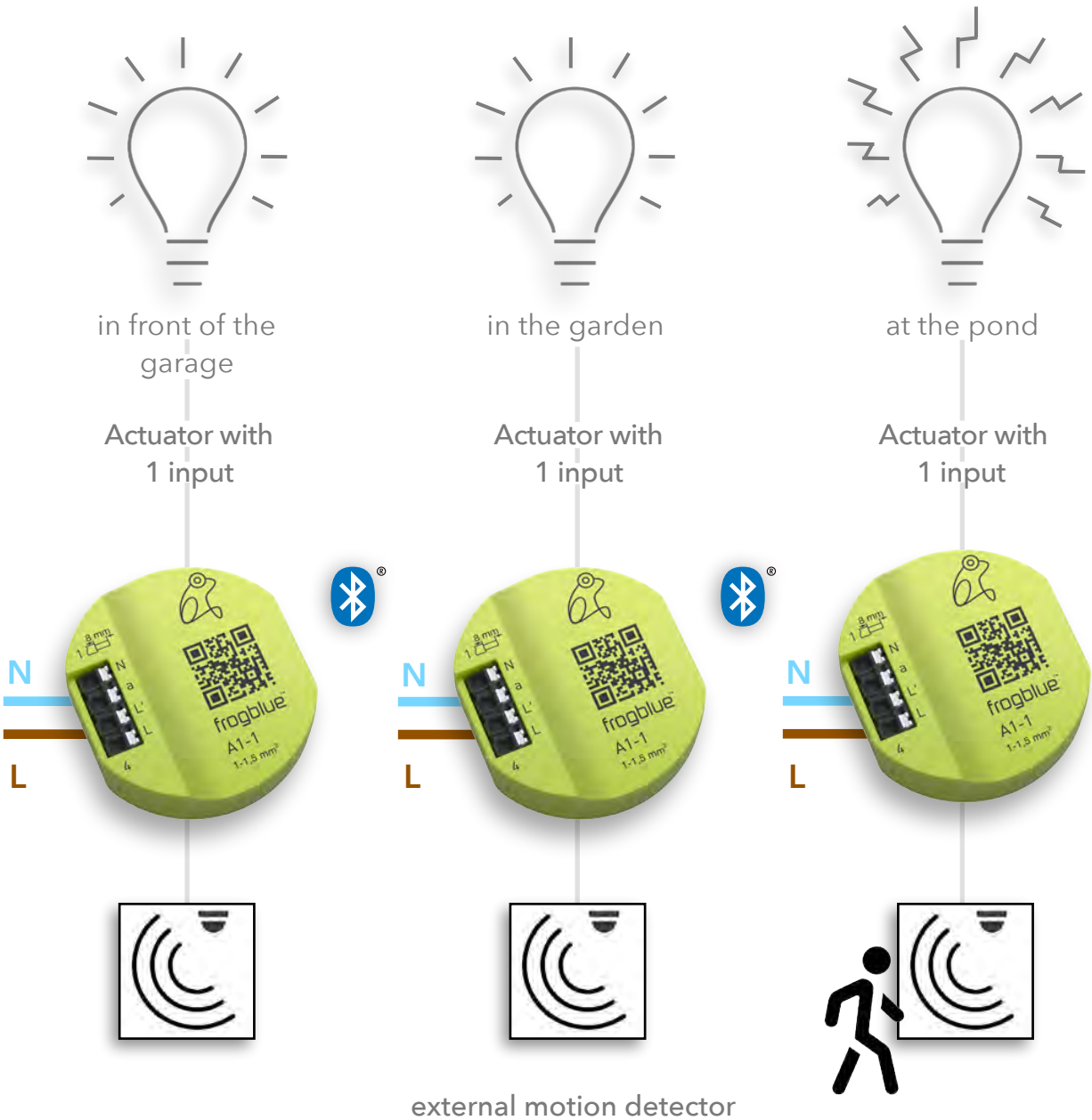


Example of outside lighting

Frogblue makes outside lighting and outdoor security for large outdoor ar eas possible without any cables - a power connection is all that's needed. The floodlights are controlled by a frogblue actuator with a motiondetector connected to its input. The actuators connect with each other via their wireless frogblue Bluetooth® network.

If a motion detector is triggered, all the floodlights are switched on for a preset length of time. One of the floodlights flashes at first to indicate the area where motion was detected.

With an input module and a light switch, the outside lighting can be controlled, or switched permanently on or off for example, from inside the building. A frogblue GPS Box or a conventional daylight control switch connected to an input module can be used to switch the light on automatically at night, also using astro function.


in front of the garage
in the garden
at the pond
Actuator with 1 input
Actuator with 1 input
Actuator with 1 input
N
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N
L
N
L
frogblue
A1-1
external motion detector
outside
inside
Manual
always on
anways off
frogblue
I3

frogblue™

Our wireless frog controls the lighting, blinds, heating, access and alarm systems. Via every light switch or smartphone. Frogblue is easy to install, doubly secure since it does not use the Cloud, and is also affordable for private households. No cable trays, switch cabinets or IT equipment are necessary with frogblue. Frogblue can be extended at any time, from one frog to hundreds, and now makes your KNX® wireless too. VDE certified.

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TECHNOLOGY
GERMANY

frogblue AG
Luxemburger Straße 6
67657 Kaiserslautern
Tel. +49-631-520 829-0
info@frogblue.com

www.frogblue.com

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frogblue.com