With new server GFVS-Safe II



Eltako – The Wireless Building



The blue wireless network in the building



The Eltako Wireless Building is the wireless network for buildings of any size. The wireless pushbuttons, wireless sensors and wireless actuators from Eltako work perfectly together and control, regulate and switch all areas in the building. GFVS software and hardware for visualisation and control.

- If a GSM module FGSM14 is installed in the house, it can be monitored and controlled with the available free smart-phone app as remote control, without a server and an internet connection being required. A data card with flat is included. Easy and reliable application with the **Eltako quickcon® technology**.
- An additional installed server GFVS-Safe II installed with the Wireless Building Visualisation and Control Software GFVS 3.0 provides extra functions and permits modern visualisation and control via tablet or smartphone over the integrated WLAN and integrated wireless antenna module. Remote over smartphone including camera videos.
- All pushbutton, sensor and actuator functions are retained even if the server is down e.g. for maintenance purposes.

Switching on the future 07/2013

Eltako – The Wireless Building The Basis with Sensors and Actuators

Without **Eltako sensors and actuators** no information or control commands can be sent over the wireless network. They form the basis for the **Eltako Wireless Building** and of course they operate without a server if there is no requirement for centralised building monitoring, centralised building control or visualisation. Smartphone access is still possible for Series 14 actuators.

Eltako sensors for switch commands, temperature, brightness, motion, humidity and air quality run partly without external power supply.

Batteryless and cordless **Eltako wireless pushbuttons and hand-held transmitters** generate their own power requirements for wireless telegrams when operated. Many **Eltako sensors** generate their power requirements from a solar cell and save excess energy from daylight to storage capacitors so that there is sufficient energy for troublefree functioning in the dark.

Some of these sensors and solar cells can be made 'winterproof' with additional batteries. Further Eltako sensors have a higher power requirement which they cannot generate themselves and therefore require an external power supply.

Eltako actuators are the backbone of the **Eltako Wireless Building.** They only evaluate directly addressed wireless telegrams in order to switch or control any number of consumers in the building. Many have a **bidirectional function.** This allows them to send back their switch states to the server or displays or directly initiate other functions via actuators. In addition, these actuators may also function as repeaters.

Of course there are specific actuators for either centralised or decentralised installation. If the **Eltako RS485 bus** is installed centrally with rail mounted devices in switch cabinets, a **wireless antenna module FAM14** is used to communicate with the actuators. The RS485 bus can also be used composite or without wireless by means of the **Eltako remote switch system FTS.**

The Eltako Wireless Building uses all Eltako wireless components in an ingenious way and can be installed even in small installations. The components are all downwards-compatible!

All sensors and actuators communicate within the Eltako wireless network by means of telegrams using the world-wide standard of the **EnOcean Alliance**. The batteryless and cordless wireless modules in the Eltako wireless pushbuttons are produced by **EnOcean** in Germany as well as the wireless microchips in the other sensors and actuators.

Eltako therefore develops and manufactures **all** the offered sensors and actuators with the Eltako logo. These are of course compatible with all products made by other manufacturers within the enormous international EnOcean family.



Eltako – The Wireless Building for all



You can start small with Eltako Wireless Building

An actuator with two batteryless and wireless pushbuttons is already a very elegant solution to the problem of missing pushbuttons. The old light switch is replaced by a wireless actuator preceded by a wireless pushbutton and any number of other wireless pushbuttons can be fitted. Then of course, the wireless actuator can also be a wireless dimming actuator.

At the other end of the unlimited and wide spectrum of possibilities with the Eltako Wireless Building, there are networked skyscrapers with hundreds of wireless sensors and wireless actuators, in groups or grouped floor by floor, monitored, controlled and visualised by servers GFVS-Safe II and installed software GFVS 3.0.

The 4 stages on the Eltako Wireless Building success ladder

Stage 1

A few wireless sensors and wireless actuators to improve or expand an existing installation. Generally with actuators installed decentrally.



Stage 2

Several wireless sensors and wireless actuators to renovate an existing building or construct a new building but without centralised monitoring, control or visualisation. With actuators installed decentralised and centralised. Smartphone access by app and GSM module.



Stage 3

Several wireless sensors and wireless actuators in a residential building with centralised monitoring, control or visualisation. With a server GFVS-Safe II with integrated wireless antenna module and installed software GFVS 3.0. Actuators mainly installed centrally and supplemented by decentralised installation. With internet access, standard external access to smartphones over the mobile radio network. Visualisation and control from tablet PCs and smartphones.



Stage 4

Many wireless sensors and wireless actuators in a large building with centralised monitoring, control or visualisation. With the server GFVS-Safe II, the software GFVS 3.0, the wireless LAN access points BSC-BAP and gateways to the central computer. Actuators partly installed centrally, partly installed decentrally e.g. in false ceilings. With internet access, standard external access to smartphones over the mobile radio network. Visualisation and control from tablet PCs and



The Blue Wireless Network in the Building ¹⁾ The Server GFVS-Safe II with Wireless Building Software GFVS 3.0

Server-controlled building monitoring, control and visualisation. Secure data management ²⁾ by means of **GFVS-Safe II** ³⁾ and the factory installed **Wireless Building Visualisation and Control Software GFVS 3.0** ⁴⁾.

Monitors and transmits wireless information independent of the size of the building or number of locations.

Integrated wireless antenna module for smaller buildings.

Wireless LAN access points BSC-BAP 5) for 200 to 400 m² building surface area including large data buffer and automatic management of key functions.

With internet access, standard access to smartphones over the mobile radio network.

Tranmission of **electricity meter parameters** directly from the RS485 interface of the meter to the bus and then to the wireless network, if required.

The **Eltako Wireless Building** is prepared to set up an encrypted data link to power supply companies. This is a precondition for future load-dependent tariff controls in the **Smart Net** ⁶⁾. **Eltako** also supplies the associated **Smart Meters with MID**.



- The blue network. Derived from the Eltako corporate colour blue which is the symbolic colour for environmental protection and sustainability in numerous countries e.g. in the USA.
- ²⁾ All data and events are saved to a database for a predefined period. A net storage capacity of up to 12 GB is available for data. As protection against data loss, data is stored redundantly on a hard disc partition using a special process. In addition, data can be stored externally, e.g. on an USB stick.
- 3) The GFVS Safe II is a server of small and fan-less design in the industry standard, which can be mounted anywhere. On the back of an intended VESA mounting MIS-D monitor with special screws. Otherwise fastening with slots with suspension opening at the rear.
- 4) The Wireless Building Visualisation and Control Software GFVS visualises the switch positions of actuators and the consumption of connected meters for electricity, gas, water and heat. On the other hand, direct hook-ups and controls can be switched using preset software links. For this purpose all it takes is a click of a mouse or a touch on a tablet PC, smartphone or notebook. This hardware is not included, so it can be selected according to the personal needs of the user.
- The wireless LAN access points BSC-BAP communicate with all components in the Eltako wireless network. They exchange information by intercommunication and with the server using TCP/IP over the ETHERNET. Every BSC-BAP covers a building surface area of approx. 200 to 400 m². This is dependent on the construction of the building.
- 6) If required, the power supply company can retrieve the load profile of a building and offer the appropriate tariffs.

 Tariffs are then saved in the server so that you can perform and display a calculation of costs. Control information can also be saved so that certain consumers are only switched on depending on the tariff in order to lower energy costs.

The Server and its Assistants



Like a spider in a web the server GFVS-Safe II 'feels' all 'vibrations' in the network. It detects every single wireless telegram within the entire building. This is the work of the integrated **wireless antenna module** or the **wireless LAN access points BSC-BAP** which capture all signals and send them to the computer via ETHERNET.

There is more to the server and its assistants than listening, they can also send control commands and information over the **Eltako wireless network.** For example, to control a building's energy supply, to supply fresh air, control shading elements optimally or switch lighting from a central point.

Reliable calculations show that optimised automatic building control is required to implement the **zero energy building** or even the **+ energy building**.



LAN access point BSC-BAP for large areas



Switching and dimming actuators Series 61 and 70, decentralised installation



Switching and dimming actuators Series 14, for central installation



Uninterruptible power supply unit



Wireless Building Server GFVS-Safe II

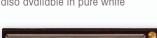
GFVS-Safe II







also available in pure white





Wireless Building server GFVS-Safe II with WLAN and if need be **M2M** communication

The GFVS Safe II is a server of small and fan-less design in the industry standard, which can be mounted anywhere. On the back of an intended VESA mounting MIS-D monitor with special screws. Otherwise fastening with slots with suspension opening at the rear.

The Linux operating system is installed as well as the Wireless Building Visualisation and Control Software GFVS 3.0. The wireless antenna module is integrated, a power supply is

The power consumption is only 11 or 13 watts. For power supply a switching power supply unit 230 V/12 V DC is included. The 12 V cables can be used for permanent connection to a switching power supply unit in a box with wall outlet.

All data and events are saved to a database for a predefined period. There is a net memory capacity of up to 12 GB available for data. As protection against data loss, data is stored redundantly on a hard disc partition using a special process. In addition, data can be stored externally, e.g. on an USB stick.

The installed Wireless Building Visualisation and Control Software GFVS 3.0 visualises the switch positions of actuators and the consumption of taught-in meters for electricity, gas, water and heat. On the other hand, direct hook-ups and controls can be made using preset software links. For this purpose all it takes is a click of a mouse or a touch on a tablet PC, smartphone or notebook. This hardware is not included, so it can be selected according to the personal needs of the user

If an ETHERNET network is available, a building surface area of 200 to 400 m² can be covered with one Wireless LAN Access Point

The GFVS-Safe II is equipped with a WLAN antenna to permit wireless WLAN communication inside the building with notebooks, tablet PCs and/or smartphones. A notebook or PC can also be connected by cable.

If there is no internet available, tablet PC and/or smartphones can be connected to an existing in-house wireless access point or router with an integrated wireless access point. Only for speech recognition an internet connection is required.

For external communication (M2M), the GFVS-Safe II GSM is equipped as standard with a GSM modem. Recognisable by the third antenna for communication over the GSM mobile network.

Provided an internet access exists, it permits external access by smartphone and/or tablet PC for visualisation and control. This is free of charge on the building side. However, smartphones should have a flat rate. Very simple and secure registration using Eltako quickcon® technology. If no internet access exists, the data communication packet FVS-Comm is required to permit external access. **GSM** is the Global System for Mobile Communications which is used for mobile radio (D and E networks in Germany) and to exchange data packets

Technical data		
CPU	Intel® Atom™ N2800 (2 x 1,86 GHz)	
chip set	Intel® NM10 Express	
RAM	2GB DDR 3	
hard disk	32GB SSD	
graphic card	Intel® GMA	
connections	1x Intel® 10/100/1000, 4x USB 2.0 (2x HighCurrent 1.3 A), 1x LAN RJ-45, 1x HDMI, 1x VGA, 1x Line out, 1x Mic in	
antennas	1x GSM antenna (only version GFVS-Safe II GSM), 1x wireless antenna, 1x WLAN antenna 2.4GHz	
power consumption	11 watts (without GSM modem), 13 watts (with GSM modem)	
ventilation	silent, passive cooling	
dimensions (HxWxT)	199x180x39mm	
weight	ca. 1.1 kg	

GFVS-Safe II-rw -sz	Eltako Wireless Building server, pure white Eltako Wireless Building server, black	EAN 4010312315378 EAN 4010312315385
GFVS-Safe II GSM-rw GSM-sz	with GSM modem, pure white with GSM modem, black	EAN 4010312315408 EAN 4010312315392

Eltaka ELECTRONICS

GFVS 3.0





Wireless Visualisation and Control Software GFVS 3.0. Included in the scope of supply of the server GFVS-Safe II.

A wireless receiver for transmitting and receiving the wireless telegrams is already integrated in the server GFVS-Safe II.

Additionally it is possible to utilize one or more wireless access points BSC-BAP with existing LAN connection for transmitting and receiving.

For connecting tablets, smartphones or PC, access rights for 5 devices (clients) are included in delivery.

Free download of apps for tablets and smartphones from Google and Apple stores.

- two language system in German and English with simple switchover
- status feedbacks can be integrated from most actuators in Series 14, 61 and 70
- appealing operating apps for smartphone and tablet PC
- 5 clients included in the system scope of supply for direct control by smartphone, tablet and PC
- voice control of Android apps over internet access
- direct communication over M2M via mobile radio network with the version GFVS-Safe II GSM
- automatic data backup of the entire system
- recovery mode to restore system backups
- visualisation software with control functions for:
 - control and dim light on/off
 - control roller shutters/blinds/awnings
 - control temperature in individual rooms
 - light scenes
 - time-controlled astro functions
 - register and control by email
 - evaluate electricity meters via the energy cockpit with currency selection
 - surveillance functions with up to 5 cameras
 - hotline free of charge

Performance features	GFVS 3.0
Number of supported sensors and energy meter transmitter modules	unlimited
Number of supported actuators	unlimited
Number of supported clients	5
Number of supported cameras up to a resolution of 1280x1024	5
Number of supported timers	unlimited
Supports BSC-BAP	unlimited
SQL database in scope of delivery	✓
Sends text messages/e-mails	✓
Voice control	✓
Supports Eltako apps	✓
256 bit encryption	✓

V-5

Wireless LAN Access Point BSC-BAP and Uninterruptible Power Supply Unit

BSC-BAP





Wireless LAN Access Point with ETHERNET interface for operation with a server GFVS-Safe II in conjunction with the Wireless Building Visualisation and Control Software GFVS 3.0.

100 MBit LAN

Delivery including configuration software and power supply unit.

The BSC-BAP receives all wireless telegrams from the Eltako wireless network from a building area of approx. 200 to $400\,\text{m}^2$ and forwards them via ETHERNET to the GFVS software server. It also transmits wireless telegrams at the instigation of the software in the Eltako wireless network. Housing dimensions Ixwxh: $110\,\text{x}75\,\text{x}25\,\text{mm}$.

BSC-BAP

Wireless LAN access point

EAN 4010312302040

EATON 3S 550 DIN



Uninterruptible power supply unit USV for professional applications, 550 VA/330 W.

3 socket outlets with overvoltage protection and rechargeable battery backup (USP), 3 socket outlets only with overvoltage protection. Automatic switchover from mains to battery mode. Replaceable batteries. With USB and LAN ports to configure automatic PC logout.

Loud warning signal in case of power failure. Simple wall mounting system.

Automatic battery recharging with fault display.

10 to 20 minutes power supply guaranteed at full charge of 330 W. When loaded with a GFVS-Safe II, only 11-13 watts are required and this produces a much longer time of uninterruptible power supply.

EATON 3S 550 DIN

Uninterruptible power supply unit

EAN 4010312315002



FGSM14









Wireless GSM module for the Eltako RS485 bus. Bidirectional. Standby loss max. 2 Watt. GSM antenna for German D and E networks is contained in the scope of supply.

DIN rail mounted device for fitting on mounting rail DIN-EN 60715 TH35. 3 modules = 54 mm wide, 58 mm deep.

The GSM module links smartphones encrypted directly to the bus over the mobile radio network. This is an easy way to address up to 16 Series 14 actuators on the same RS485 bus encrypted using the Eltako app. These report their status. Additionally 8 more status messages, for example for temperatures and error messages, are possible. A status overview takes place immediately when the app is activated in the smartphone.

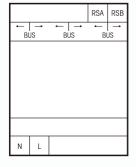
Very simple and secure registration using **Eltako quickcon® technology.**

Download the app from the Google Android Store. The iPhone app is undergoing certification. Power is supplied by an integrated switch mode power supply unit independent from the bus power supply. As a result a 230V supply voltage must be applied to L and N.

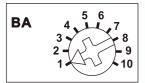
If the GSM receiver is not installed at the same place in a distributor containing Series 14 actuators, the bus is connected to a bus coupler FBA14 using a 2-wire screened bus line (e.g. telephone line). Then connect to the RSA and RSB terminals.

The price includes a data flat rate for 2 years. An application form for commissioning has to be completed and submitted. This is available for download. The activation takes place within a few hours. Access contracts are offered automatically.

A data card is already plugged in. Remove the middle front panel to replace the data card with one from a different provider.



Mode switch



Standard setting ex works.

FGSM14 Wireless GSM module EAN 4010312314098

Additional Licenses FVS-Client Communication Packet FVS-Comm

Additional licenses FVS-Client-1 or FVS-Client-5 permit the expansion by external access (clients). In the basic GFVS 3.0 already supports 5 clients for connecting tablets, smartphones and PCs. FVS-Client-1 to activate one additional client EAN 4010312311110

FVS-Comm

FVS-Client-5



to activate five additional clients

Data communication packet M2M for the GFVS-Safe II GSM. With a data flat rate for 2 years.

Provided an internet access exists, external communication between the GFVS-Safe II GSM and the software GFVS 3.0 and smartphones and tablet PCs are charged by their flat rates. FVS-Comm is not required for this.

EAN 4010312312964

However, if data exchange is without local internet access, the standard M2M card running FVS-Comm integrated in the GSM modem must be activated to exchange data over the mobile radio network.

The FVS-Comm therefore receives prepared M2M contracts with a data flat rate for two years. Access contracts are offered automatically.

GSM is the Global System for Mobile Communications which is used for mobile radio (D and E networks in Germany) and to exchange data packets. The M2M card is activated shortly after receipt of a data flat rate contract.

This communication is encrypted to a very high standard and is very simple to configure with the new **Eltako quickcon® technology**.

Communication packet for GFVS-Safe II GSM

EAN 4010312314265

FVS-Comm

The low-cost entry level start to a Smart Home Central Unit





Eltako Smart Home is not a standalone solution like many smart home systems on the market. All components are genuine parts from the successful Eltako Wireless Building product line. They communicate by means of telegrams that are formatted using the world-wide standard of the EnOcean Alliance. EnOcean in Germany manufactures the transmitter modules in the battery and cordless wireless pushbuttons as well as the wireless chips.

The Eltako Wireless catalogue of over 200 pages contains sensors and actuators for all applications. For more details, visit **www.eltako.de**.

Installation by a trained electrician guarantees proper functioning.

Smart Home means a house which is fast and clever. But what is the purpose? Does it only mean fast and clever operation? The Eltako Smart Home solution is a complete sustainable system that includes everything from **installation**, **start-up** through to later **retrofitting** and **expansion**.

Wireless

No wires to lay when installing switch points and sensors – no plaster or paint work needed.

Simple retrofitting and expansion

Thanks to decentralised switch actuators additional functions can be integrated in the building installations.

Biologically harmless

Wireless signals are only sent when actuating a sensor. The wireless signal has a 100 times lower high frequency emission than conventional light switches.

Energy efficient

Most sensors and buttons draw their energy from mechanical operation or from a light source. Actuators have a very low standby loss.

Sustainable

Eltako has been one of the leading manufacturers of switchgear on the market from over 64 years — this means that Eltako Wireless will still be sold on the European market in decades to come.

Needs oriented

Installation compared with conventional systems is cost-neutral and even young home owners can equip their homes early on. Additional convenient solutions and expansions can be installed without structural modifications to the building.

Standardised

With over 300 EnOcean Alliance members world-wide, the EnOcean wireless protocol has become established in many sectors and industries and has therefore become a standard.

Smartphone/tablet PC link

A smartphone can control consumers and functions, provided there is an internet access. Camera shots and consumer data are sent in parallel to the smartphone/tablet PC on request.

Smart Home Central Unit GFVS-Touch



The Smart Home Central Unit – Switch on, configure and use!

15.6" monitor PC GVS-Touch for continuous duty with integrated wireless antenna module and ready installed Wireless Visualisation and Control Software GFVS 3.0 for all the necessary sensors and actuators, 5 clients, 5 cameras and any number of sensors, actuators and timers. Smartphone link over WLAN. With stand for standalone installation or for mounting on the wall.

The GFVS 3.0 software is activated by the supplied license key.

The **VESA mount** for wall mounting can be ordered separately.

GFVS-Touch	Smart Home Central Unit Touch PC with GFVS 3.0	EAN 4010312315033
VESA mounts	For mounting GFVS-Touch on the wall	EAN 4010312312629

Germany Offices and Sales Representatives

International Contact Addresses and Sales Representatives

Fellbach

Eltako Headauarter Hofener Straße 54 70736 Fellbach

a 0711 94350000

€ 0711 5183740

info@eltako.de

Baden-Württemberg (West)

Carsten Krampe 75172 Pforzheim

3180392

Baden-Württemberg (East)

Philipp Wecker 71155 Altdorf

0162 2575122

wecker@eltako.de

Bavaria (North)

Horst Rock 91126 Schwabach

@ 09122 61179

@ 09122 61159

□ rock@eltako.de

Bavaria (South) Elka Hugo Krischke GmbH

82024 Taufkirchen

8 089 3090409-0

089 3090409-50 krischke@eltako.de

Berlin/Brandenburg

Kristian Neff 13437 Berlin

3 0162 2575123

M neff@eltako.de

Schl.-Holstein/Bremen

Gunnar Wetteborn 25355 Barmstedt

3582502 0176 13582502

€ 04123 6834673

wetteborn@eltako.de

Daniel Böth

63801 Kleinostheim

3180391

Lower Saxony

Detlef Hilker

31840 Hessisch Oldendorf/Barksen

a 05152 6984480

0173 3180390 M hilker@eltako.de

Mecklenburg-Vorpommern/ Brandenburg (North) Klaus-Peter Schmitz

18276 Sarmstorf

3843 215884

€ 03843 215884

3582501 3582501

schmitz@eltako.de

North Rhine-Westphalia (North)

Stefan Krause

32351 Stemwede

0162 2575119

North Rhine-Westphalia (South)

Jörg Kleimann

53844 Troisdorf

0162 2575120 kleimann@eltako.de

North Rhine-Westphalia (East)

Kay Westphal

44265 Dortmund **3582506 3582506**

Rhineland-Palatinate/Saarland

Rainer Brilmayer 55411 Bingen

3582516 3582516

Saxony

Mario Geißler 01454 Radeberg

0162 2575121

□ aeissler@eltako.de

Thuringia/Saxony-Anhalt

Andreas Misch

39218 Schönebeck OT Elbenau

3582505 3582505

M misch@eltako.de

Austria (West)

Representative Robert Goedicke

+43 664 1823322

Austria (East)

Representative Jürgen Harnisch

+43 699 18139294

Marnisch@eltako.com

Austria (East)

Representative Andreas Kaider

a +43 699 11090025

kaider@eltako.com

Austria (East)

Representative Winfried Rac

+43 660 8081310

□ rac@eltako.com

Belgium/France/ Luxembourg

Serelec n.v. B-9000 Gent

a +32 9 2234953

info@serelec-nv.be

Cyprus

MeshMade Ltd CY 1096, Nicosia

a +357 7000 6374

Denmark

SOLAR A/S

DK-6600 Vejen

+45 76 961200

☑ jni@solar.dk

Gulf area

M/S Golden Sand Trading

U.A.E. – Dubai

a +9 71 43595611

□ vasu2000@emirates.net.ae

Iceland

Reykjafell Ltd.

IS-125 Reykjavik Iceland

a +35 4 5886010

□ reykjafell@reykjafell.is

Ireland

PEWL Group

90/4 Lagan Road, Dublin

***** +353(0)1 8304666

+353(0)1 8305788

⊠ sales@pewl.ie www.pewl.ie

Israel

Avital B.S. Ltd II-Holon

a +97 23 5587717

avitalbs@zahav.net.il

Representative Tommaso Scrofani I-64025 Pineto TE

a +39 085 9491796

+39 347 3774888

⊠ scrofani@eltako.com

Netherlands (North) Representative Hans Oving

NL-7701 VV Dedemsvaart

+31 523 616688 +31 6 21816115 NL-5854 PC Bergen (LB) **+31 6 50419067**

Netherlands (South)

Newzealand

Infranet Systems NZ-Clevedon, Auckland

+64 92928056

info@wirelessbuildings.co.nz

www.wirelessbuildings.co.nz

Representative Dennis Schellenberg

Malthe Winje Automasjon AS NO-1415 Oppegard

+47 66996100

Portugal

TEV2, Lda

Rua de Joaquim Silva Vicente Zona Industrial da Maia I Sector VII - Lote 137 4470-434 Maia

a +351 299 478 170

+351 912 518 050

Russia ATLAS Group JSC

RU-127591 Moscow **+7 495 6423463**

Sweden (North/Middle) Representative Patrick Savinainen

S-69332 Degerfors

→ +46 070 9596906

patrick@eltako.com

Sweden (East/South) Representative Dan Koril

S-57010 Korsberga **→** +46 070 3201102

dan@eltako.com

Sweden (West) Representative Daniel Niklasson

S-44292 Romelanda

→ +46 73 5815692

Maniel@eltako.com

Sweden (Stockholm) Representative Niklas Lundell

S-11330 Stockholm

→ +46 70 4875003

M niklas@eltako.com

Switzerland Demelectric AG

CH-8954 Geroldswil

a +41 43 4554400

Representative Thomas Klassmann E-08397 PINEDA/Poble Nou

a +34 93 7692419

+34 650 959702

klassmann@eltako.com

Innomatic (Pty) Ltd - Franz Marktl ZA-Midrand

South Africa

+27 11 8400840 sales@innomatic.co.za

Technical support:

+49 176 13582514 Main thuente@eltako.de

Export Sales Manager:

Fltako GmbH Hofener Straße 54. D-70736 Fellbach

+49 711 94350000 **+49** 711 5183740

