

Completely open

Sustainable, personal building automation with AFRISOLab



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A networked home has many benefits. Apps facilitate numerous day-to-day routines, make leisure activities even more fun and control consumer electronics and household appliances. Wireless technologies are also used to reliably monitor and operate domestic technology equipment. The Internet of Things combines all this in an intelligently networked life environment.

Compatible systems

However, uncertainty grows among consumers every time they decide to purchase an individual

smart component: Will it be possible to use the building automation components with a central system in the future and can they be combined with other devices? The complete systems currently available on the market often turn out to be isolated islands that do not support the integration of sensors and actuators provided by other manufacturers. The user is forced to trust that the manufacturer will be able to offer compatible components for many years to come.

Learn more about the solution to the three typical problems in wireless building automation systems on the next page.



EDITORIAL

Dear Reader

„Smart Building“ is rapidly gaining momentum – building automation is no longer just a trend for large buildings, but has reached private homes and apartments. The only open question seems to be: Which system will come out on top. This is not easy for users and specialised companies to predict, and even experts seem to be unsure. Therefore, AFRISO integrates all current wireless standards in a SINGLE „multi gateway“. Classical

alarm equipment can be integrated and new technologies allow for operation without batteries and cables. Our approach lets you to manage and control components from a great variety of different suppliers via a central gateway. Privacy is also a top priority – what you do is your business and nobody else's. This issue will show you how all this works. And we'd be happy to introduce you to more details at one of this year's trade fairs, during our

seminars or at your site. We are looking forward to tackling the future of the smart home together with you.

We wish you pleasant reading.

Best regards
Matthias Blasinger
Managing Director Sales
and Distribution
AFRISO-EURO-INDEX GmbH

Title continuation

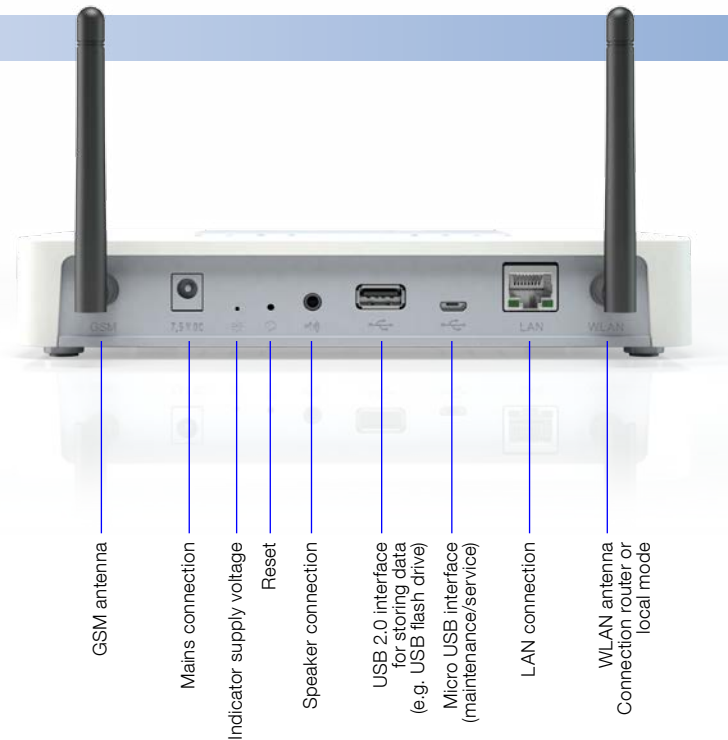
Three problems in smart home applications

The implementation of smart home solutions typically poses the same three challenges:

1. There are numerous suppliers of interesting sensors and actuators, but they use different wireless standards and cannot be networked.
2. The „central control“ unit, the building controller or gateway, does not necessarily have Internet access or permanent access does not make sense from an economic point of view.
3. Wiring all the sensors is difficult to manage or unwanted – batteries are not to be used because they are expensive, difficult to handle and have a limited service life.

The solution

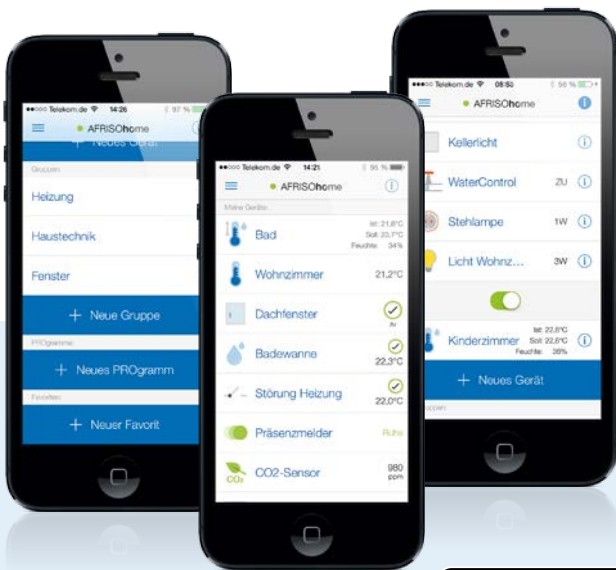
The smart building system AFRISOLab provides clever solutions to each of these issues. The AFRISOhome gateway HG 01 serves as the central building controller; its modular design and the open software architecture allow for the parallel operation and interaction of multiple wireless standards. EnOcean® and Z-Wave modules are already on board, optional M-Bus and Zigbee modules can be simply plugged in. This integrates a virtually unlimited, vendor-independent range of sensors and actuators which can be included fast and without a lot of effort in a building manage-



ment system. A LAN and a WLAN interface are provided for Internet access and communication. It is also possible to operate the multi function gateway without Internet connection. In this case, an independent WLAN network is created that communicates with mobile devices via GSM. This allows you to monitor and remotely control holiday homes, construction sites or unoccupied buildings.

In addition, the smart building system AFRISOLab comprises innovative EnOcean wireless sensors which require neither cables nor batteries. Energy harvesting is the foundation of this type of battery-less, maintenance-free building automation. The energy required for sending messages is derived from ambient sources – small movements, pressure, light, temperature or vibration are sufficient to allow for power-independent operation of the sensors.

However, in one respect, the AFRISOhome gateway is indeed a closed system: All user data and passwords are stored and processed on the local gateway. Privacy is key with AFRISO smart homes.



The free AFRISOhome iOS and Android app allows for fast and easy operation of the gateway and the sensors.



www.afrisolab.de

For more comfort and security

Smart starter kits

The motto of the entire AFRISOLab system also applies to the starter kits: Start with a compact system and enjoy almost limitless expansion possibilities. All kits comprise typical smart home solutions for single family homes and can be easily combined with and extended by other sensors.



Starter kit

Underfloor heating/cooling



Starter kit

Radiator



Starter kit

Water leakage

Smart retrofitting or modernisation of your wall or underfloor heating system. Convenient, wireless room temperature control. At home or on the road – you always have access to your favourite temperature.

Scope of delivery:

- 1 x CosiTherm® base module BM
- 1 x CosiTherm® controller module F6A, wireless for 6 control circuits
- 3 x Room temperature sensor FT
- 4 x Thermal actuator TSA-02
- 1 x AFRISOhome gateway (EnOcean®, WLAN, LAN)

Maximum ease of use of the actuator directly at the radiator – or from anywhere in the world via the AFRISOhome app.

Scope of delivery:

- 3 x Wireless actuator AVD 20-D, with display
- 1 x AFRISOhome gateway (EnOcean®, WLAN, LAN)

Damage to buildings and equipment resulting from water leaks totalling 1.7 billion euros every year. Each second counts – a detection system allows the water supply to be immediately shut off.

Scope of delivery:

- 1 x Water valve WaterControl 01, connection G $\frac{3}{4}$
- 2 x Water sensor WaterSensor eco
- 1 x Wireless plug-in socket APR 234 with repeater function
- 1 x Wireless rocker switch FT4F-rw

RRP **999.-***

Part no. 78993

RRP **799.-***

Part no. 78994

RRP **699.-***

Part no. 78995

Interview with Matthias Steiner, Olympic gold medallist, central heating system engineer and gas/plumbing expert

Who benefits from a smart building?

Weightlifter and Olympic gold medallist Matthias Steiner has been an AFRISO brand ambassador since January 2013. In this interview, he talked with the editors about the potential of smart building systems and benefits for specialised companies and end users.

Mr. Steiner, everybody seems to be talking about smart homes. What do you feel are the benefits of wireless home automation and safety and security systems that can be operated via the smartphone?

The smartphone has become so much more than just a phone. People use it for all kinds of things, even as a remote control. It makes all kinds of sense to monitor and control equipment in your home using the smartphone. This works not only on state-of-the-art systems, but even on „old“ radiators. There are so many useful things that can be taken care of via apps, for example, if somebody opens a window, the heating system is turned down and so on. I think the main benefits are greater convenience and savings.

So is this something for technologically savvy users only? And what are the benefits for HVAC companies and electricians?

Well, the private user only operates things via an app. If, for example, you want to control your roller blinds or close water pipes automatically, the technology must first be installed by an expert, i.e. an HVAC specialist or an electrician. And this can even be an opportunity to promote additional services such as automatic transmission of error messages or planning of preventive maintenance. This not only increases the user's convenience, but can even boost more customer loyalty. So we are talking about a typical win-win situation.

You are planning to buy a farmhouse and use it as your private home. So what's the status of this project and will smart building be a part of your project?

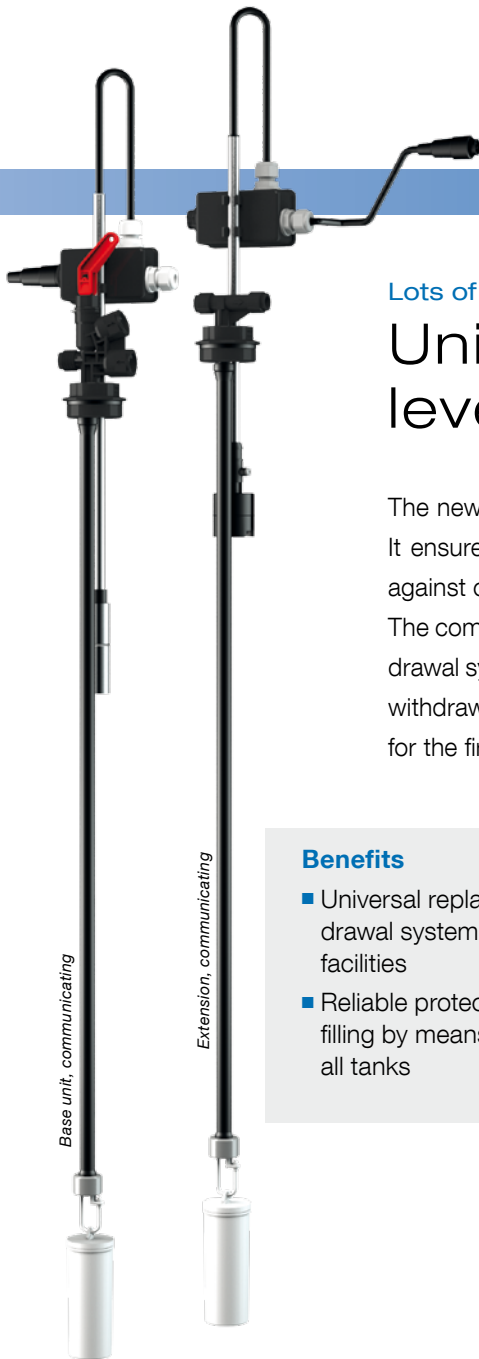
We are still looking for a suitable farm. You know, in old buildings, it is often particularly difficult to install cables. So wireless solutions are great for certain applications. And we will definitely use products that do not require batteries. We are on the road quite a bit and do not want to have to rely on batteries. And I don't want to be tied to one single standard; instead, I want to network those things little by little that make my life easier or increase security, regardless of the wireless technology. The AFRISO gateway can handle a whole variety of different wireless



signals and also offers a GSM module. So the system is open and I can use sensors from many different manufacturers. And if there is a problem with the Internet connection, we are still ok. This definitely meets my requirements.

So what exactly would you like to monitor?

Well, when you renovate a building, there are quite a few things that come to mind. I definitely want to be able to control the heating and lighting systems, and maybe we will have a controller for the blinds ... we're on the road quite a bit and I don't like the idea of surveillance cameras all over the place, so we may implement some sort of presence simulation using occupancy sensors and light switches for the light control system. And I really like the plug-in power sockets that allow you to measure the consumption of household appliances and to switch them at the same time. And they even have a repeater function to extend the range of your wireless network.



Lots of safety and convenience for little money

Universal withdrawing with level sensor chain



The new universal withdrawal system is a cost-effective, complete system with level sensor chain. It ensures reliable oil supply to any fuel oil consuming system and provides maximum protection against overfilling of the tanks.

The combination of withdrawal line, level sensor with metallised sleeve, level limiter and floating withdrawal system is the ideal replacement for withdrawal systems in battery tank facilities. The universal withdrawal system is available for communicating and non-communicating systems. The base unit for the first tank and an extension unit for each additional tank are easy to install; this directly integrates the level sensor chain. Each unit is shipped with a number of universal adapters for the tank connections of tanks of virtually all manufacturers.

Benefits

- Universal replacement for withdrawal systems of battery tank facilities
- Reliable protection against overfilling by means of monitoring of all tanks

Permanently reliable

The metallised surface and the shape of the slot of the GWG level sensor largely prevent the growth of microorganisms. This increases the long-term reliability of the level sensor.



For more than 60 years

Pneumatic, hydrostatic level measurement from AFRISO



First measuring instruments in the 1950s: Level in fuel oil tanks at the press of a button.



Proven for years: UNITOP with numerous additional features such as consumption monitoring or date indication. Maximum energy efficiency due to operation without power.



DTA 10 with battery operation: Getting started with electronic, hydrostatic level measurement.



TankControl 10 with convenient functions: Graphical indication of consumption and remaining range, visual/audible alarms for minimum and maximum levels, etc.



HydroFox® DMU 08 with digital display/control unit VarioFox®: This high-end unit measures a great variety of different media and offers wide features in terms of evaluation and signal processing.

NEW

The NEW BlueLine series member

Flue gas analyser EUROLYZER STx

The new EUROLYZER STx flue gas analyser is a genuine all-rounder in its class. Just like its big brother MULTILYZER STe, it offers a vast array of technical highlights and maximum ease of use.

The new all-rounder can be equipped with up to three measuring cells (O₂, CO_{H2}, NO) and is available in three attractive sets. EUROLYZER STx already uses the latest generation of O₂ measuring cells on the market. This lead-free ECO sensor is resistant to biogenous fuels.

All measurement logs can be archived as HTML files without any additional software and opened with any Web browser. It is also possible to convert them to QR codes so that they can be scanned by smartphones and transferred to management software. In conjunction with the free app EuroSoft mobile, the unit offers numerous functions for modern data communication.



Benefits

- All-in-one: Flue gas analysis, (differential) pressure measurement, (differential) temperature measurement
- Ready for the future: Pairing with Bluetooth® Smart probes and devices for additional measuring tasks
- Measurement logs as QR code, database memory, customer data management
- 5 years warranty on O₂ measuring cell



reddot award 2014 winner



Measurement logs as QR codes

BlueLine series flue gas analyser with Bluetooth Smart, QR code generator, easy pairing of optional equipment and the new app EuroSoft mobile.



Simply dynamic: Automatic hydraulic balancing

Thermostat valve Vario-DP

The new dynamic thermostat valve Vario-DP makes hydraulic balancing in single and two family homes an easy and fast job. The patented dynamic valve insert automatically limits the water volume adjusted at the valves, independent of pressure variation in the heating system. So regardless of the number of open or closed thermostat valves in the system, Vario-DP ensures that the right water volume is always supplied to the radiator.

This unique technology can do even more: Since the control membrane is installed directly in the valve insert and since the valve spindle is used as the pressure sensor, there are no additional control components which might be subject to pollution.

The valve operates with a standard valve gasket and does not require additional dirt filters. And if the valve insert should have to be replaced, this can be done with the mounting unit MGV with the system remaining pressurised.

Vario-DP is available in the standard designs angled, straight, axial and double angle and in the dimensions $\frac{3}{8}$ " , $\frac{1}{2}$ " and $\frac{3}{4}$ ".



Benefits

- Automatic control of water volume
- Fast hydraulic balancing without measuring instrument
- High reserve due to adjustment range up to 250 l/h
- Patented, simple valve insert provides protection against pollution

App EuroSoft mobile for BlueLine measuring instruments

The new Android/iOS app „EuroSoft mobile“ allows you to visualise measurement results and logs. Ideal for long-term measurements and adjustments or for use of the data logger function for professional, comprehensive documentation of results for customers. EuroSoft mobile is also available as evaluation software for Windows operating systems.

Functions

- Live visualisation of measured value as graphic or bar chart
- Digital pressure gauge for pressure measurement
- Conversion of QR code into indication of measurement result
- Measurement logs can be directly transmitted (e-mail, social networks)
- Transmission of the measurement logs created, Windows version, etc.



Correct calculation – correct adjustment

Hydraulic balancing with VarioQ, the thermostat valve with measuring function

HVAC experts who manage larger heating systems such as those in public buildings, schools and administration buildings favour the patented thermostat valve VarioQ. Due to the fixed measuring unit, each valve can be accurately measured and adjusted with the measuring instrument HMG 10. This needs to be done only once and ensures hydraulic balancing in larger and more complex heating systems – in addition, VarioQ saves time and money since dynamic valves or line fittings are not required.

Compared to heating systems balanced in the standard way, up to 80 % of the pump capacity can be saved.

This usually means a considerably smaller pump.



New program - new topics

Courses and training 2015

Date	Subject
2015-04-22, 2015-05-21	Oil installations – new: New technical rules TRWS 791-1 and legislation, TRÖL 2.0
Planned	Hydraulic balancing with the VarioQ valve program with measuring function and the HMG measuring instrument.
2015-09-08	Dust measuring instrument STM: Measuring, service, maintenance
2015-09-23	Flue gas measurement and inspection of gas lines

Visit www.afriso.de/schulung for the complete training program



One, two, three ...

AFRISO catalogues 2015/2016

To facilitate the search for „your“ product even more, AFRISO has re-arranged the well-known complete catalogue and divided it into three individual catalogues:

The catalogue **DOMESTIC TECHNOLOGY** covers all products for safety and measuring equipment for heating systems, solutions for energy saving and rainwater harvesting as well as alarm units and smart building systems for wireless building automation. The catalogue **INDUSTRIAL TECHNOLOGY** comprises the complete range of high-quality measuring instruments and system solutions for pressure, temperature and level as well as customised, industrial solutions for stationary gas analysis – for your specific industrial application. The catalogue **PORTABLE MEASURING INSTRUMENTS** is geared towards specialised companies, service technicians and installers and covers certified, mobile service measuring instruments for flue gas analysis as well as testing and inspection equipment for maintenance and diagnostics. Ready to be used in any industry.

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info@afriso.de · www.afriso.de

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Frank Altmann, Matthias Blasinger

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INFORUM-FAX +49 7135 102-7269

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Catalogue DOMESTIC TECHNOLOGY

Catalogue INDUSTRIAL TECHNOLOGY

Catalogue PORTABLE MEASURING INSTRUMENTS

Starter kits AFRISOLab

AFRISO-WATCHDOG alarm units

Digital tank contents indicator DTA 10

Level indicator TankControl 10

Digital display/control unit VarioFox®

AFRISO GWG level sensor chain / universal withdrawal system

Dynamic thermostat valve Vario-DP

VarioQ for large buildings

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My industry

First name

Telephone

Name

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Postcode, city

I authorise AFRISO to send me information on the product range on a regular basis, also via e-mail. I can revoke this authorisation at any point in time. No data will be disclosed to third parties.