CATALOGUE 2017

PRODUCTS AND SYSTEMS FOR BUILDING AUTOMATION

REGIN
THE CHALLENGER

Meet the challenger that takes building automation personally

It's all about listening and using our collective expertise in the search for the perfect solutions – for you.

AT REGIN we want to be able to offer you the perfect product and the smartest solution adapted specifically to your needs. Whether you're in need of a control valve or if you're about to design a large complex system – we'll always be there to support and help you take on the challenge. That's what we mean when we say we take building automation personally. It's all about listening and using our collective expertise in the search for the perfect solutions for you. Because that's part of the Regin DNA.

This way of thinking and working has been part of who we are since 1947 when we developed our first humidistat in Gothenburg, Sweden. Today you can find solutions based on our product range in a wide variety of buildings and applications all around the world. We've come a long way and we continuously work to improve and to become even better tomorrow.

TABLE OF CONTENTS

REGIN NEWS FOR 2017

AVAILABLE SPRING 2017

GO WIRELESS

READY STEADY GO

CHECK OUT OUR NEW WIRELESS PRODUCT RANGE!

We are happy to offer our markets a completely new product range based on wireless communication. Now, you can mount products in a truly flexible way – the ideal solution for uninvasive mounting in heritage listed buildings with restrictions or for offices where furniture and layout need to change as the business grows. Our new series delivers communication at its best – wireless, with a long communication range and high level of reliability. The products can easily be integrated with any other Modbus based system in the market.

The series includes a receiver, door contact, room temperature sensor, outdoor temperature sensor, presence detector and an electronic pulse meter.

READ MORE IN CHAPTER 8

EXPANSION OF THE PRESIGO PRODUCT RANGE – NEW PRESSURE TRANSMITTERS WITH ANALOGUE OUTPUTS

Presigo is the result of a major development project with the goal of developing an extremely reliable and accurate pressure transmitter with excellent long-term stability. Last year, we released Presigo models with communication and one or two pressure sensors. This year we have added several new models with analogue outputs – Presigo PDT...(-2).

SHORT FACTS

- ✓ Offers an extremely high degree of measurement accuracy
- ✓ Uses the same modern MEMS technology as our previous models – ensuring that no automatic calibration is required
- ✓ Compact design and very simple to install
- ✓ The Presigo PDT...(-2) range consists of single or dual port pressure transmitters with one or two universal outputs
- ✓ Can be configured for output signal 0...10 V DC or 4...20 mA

READ MORE 158

OUR SS2U SERIES OF ULTRA-SONIC ENERGY METERS ARE NOW AVAILABLE IN 9 NEW MODELS

SS2U is a series of externally threaded, compact energy meters with built-in ultrasonic flow meter, intended for heating or cooling. We've now supplemented our SS2U range with new models for nominal flow 6.0 m^3/h.

READ MORE 186

INTRODUCING LTWT10/PT1000 LUX TRANSMITTER

Our new LTWT10/PT1000 transmitter is easy to mount and features a passive PT1000 temperature transmitter as well as DIP-switches when scaling the output signal. The transmitter's protection class (IP65) is suitable for outdoor mounting. The light intensity can be set to four different measuring ranges which are converted into a 0...10 V output signal.

READ MORE 169

THE NEW REGIO MIDI IS HERE!

Regio Midi is our pre-programmed range of controllers with communication. They are intended for control of heating and cooling in a zone control system. The latest version has the following news: An analogue input can be configured for use with a supply air temperature limitation sensor. A boost function can be activated to make the fan run at top speed for a short start-up time. There is also a new fan kickstart function as well as a built-in function for blocking button access to prevent unauthorized users from accessing important functions.

SHORT FACTS

- ✓ Perfect for control of heating and cooling in a zone control system
- ✓ Stand-alone or connected in a system with communication
- ✓ Simply connect your Regio to bus lines such as Modbus, BACnet or Regin's own bus system EXOline in order to communicate with a central SCADA system via RS485
- ✓ Adapt Regio Midi to a specific application using our Regio tool© software

BACnet EXOline Modbus

READ MORE 98

RCF ROOM CONTROLLERS FOR FAN-COIL APPLICATIONS UPDATED WITH NEW FUNCTIONS!

RCF is our custom-tailored range of room controllers for fan-coil applications and control of heating and cooling in a single zone. They are specially adapted for applications requiring high levels of comfort and low energy consumption. RCF works with 3-speed fans or EC fans, uses 230 V AC supply voltage and works both stand-alone or integrated into a SCADA system. RCF can communicate via several communication protocols (BACnet, Modbus, EXOline), making for easy integration into existing systems.

THE NEW FUNCTIONS IN RCF:

- ✓ Kickstart function for safe fan motor start-up
- ✓ New function for min/max supply air temperature limitation creates a pleasant indoor climate without any drafting sensations
- ✓ Adjusted calculation model for the basic setpoint and its hystereses
- ✓ Digital inputs can be configured for a window contact and a presence detector at the same time

READ MORE 102

BACnet® EXOline Modbus

CORRIGO – NOW WITH BACNET B-AAC

We now take Corrigo to the next level with our version 3.6 software update. Our BACnet B-AAC upgrade makes it simpler than ever to integrate Corrigo with TCP/IP into systems using BACnet-IP. The new upgrade also means you can now use pressure transmitters from our Presigo range as expansion modules.

BACnet®

READ MORE 82

DTV…X HAS ARRIVED – OUR NEW, COMPACT, EASY-TO-INSTALL DIFFERENTIAL PRESSURE SWITCH

DTV…X is a pressure switch for supervision of air or non-aggressive, non-flammable gases in air handling systems. The unit offers excellent long-term stability and can be used for example in air filters and air handling units, industrial air cooling circuits, fan overheating protection, etc.

It is constructed for differential pressure of up to 5000 Pa and can be used at temperatures below -20°C.

READ MORE 157

EXOclever – A BRAND NEW FREELY PROGRAMMABLE CONTROLLER FEATURING A REVOLUTIONARY DESIGN

We are proud to introduce EXOclever, our new powerful controller, ideal for installations with a large number of I/O:s and high demands on communication and adaptability. The groundbreaking modular design makes it easy to expand capacity and add more functions. EXOclever can be mounted in two different ways; either in the traditional manner or edge first, enabling many units to fit into a very small space.

SHORT FACTS

- ✓ Works as a stand-alone unit or together with other EXO products as part of a larger automation system
- ✓ Future proof technology
- ✓ Based on EXOrealC
- ✓ Unique solution for space-saving mounting
- ✓ Handles systems with a large number of in-/outputs
- ✓ Build the set of I/O:s you need
- ✓ Easy to expand capacity and add functions
- ✓ Powerful processor and a substantial memory

READ MORE 55

EXO 2016 EDITION 2

CHECK OUT EXOtrend! THE REAL TIME CHART IN THE NEW EDITION OF EXO 2016

The brand new release of EXO 2016 Edition 2 is packed with customer driven improvements such as the new real time chart EXOtrend and a pop-up editor – suggesting possible EXOL functions while typing.

The news in EXO 2016 Edition 2 will make daily work even simpler for system integrators across the world. Our new display tool is designed in cooperation with our system integrators with the goal of creating a good user experience.

READ MORE 50

NEW ROUTERS FOR 3G & 4G

We now further expand our range of products with new 3G router M3G900 and 4G router M4G950.

The router is reliable, fast, secure and easy to install. It features built-in wireless network and dual SIM card slots for extra security. The router is not locked to any one telecom operator, providing increased flexibility. Signal strength, data usage and additional performance can easily be monitored via an internal website.

READ MORE 73

WE ARE NOW OFFERING EXOscada CLOUD SERVICE!

Do you want to work in EXOscada without having to run your own server environment?

Do you also want to ensure your communication is absolutely secure while using the latest virus protection and reliable backups?

If so, EXOscada Cloud Service is the solution for you. We take care of the server while all you have to do is to surf directly into your EXOscada environment.

READ MORE 52

DO YOU WANT TO STAY UPDATED AT ALL TIMES?

Subscribe to our newsletter at www.regincontrols.com

CONGRATULATIONS!

MEET THE WINNERS OF REGIN ENERGY SAVER AWARDS 2016

"For a long time, we've felt like celebrating our global customers and partners for striving to develop intelligent energy saving solutions on a daily basis."

Regin Energy Saver Awards is a new tradition to highlight the integrators and installation engineers who use our range of products and intelligent systems to conserve energy.

A global competition for those who are enthusiastic about using energy in an efficient way. We have an independent jury with a solid, genuine expertise in building automation.

REGIN
THE CHALLENGER

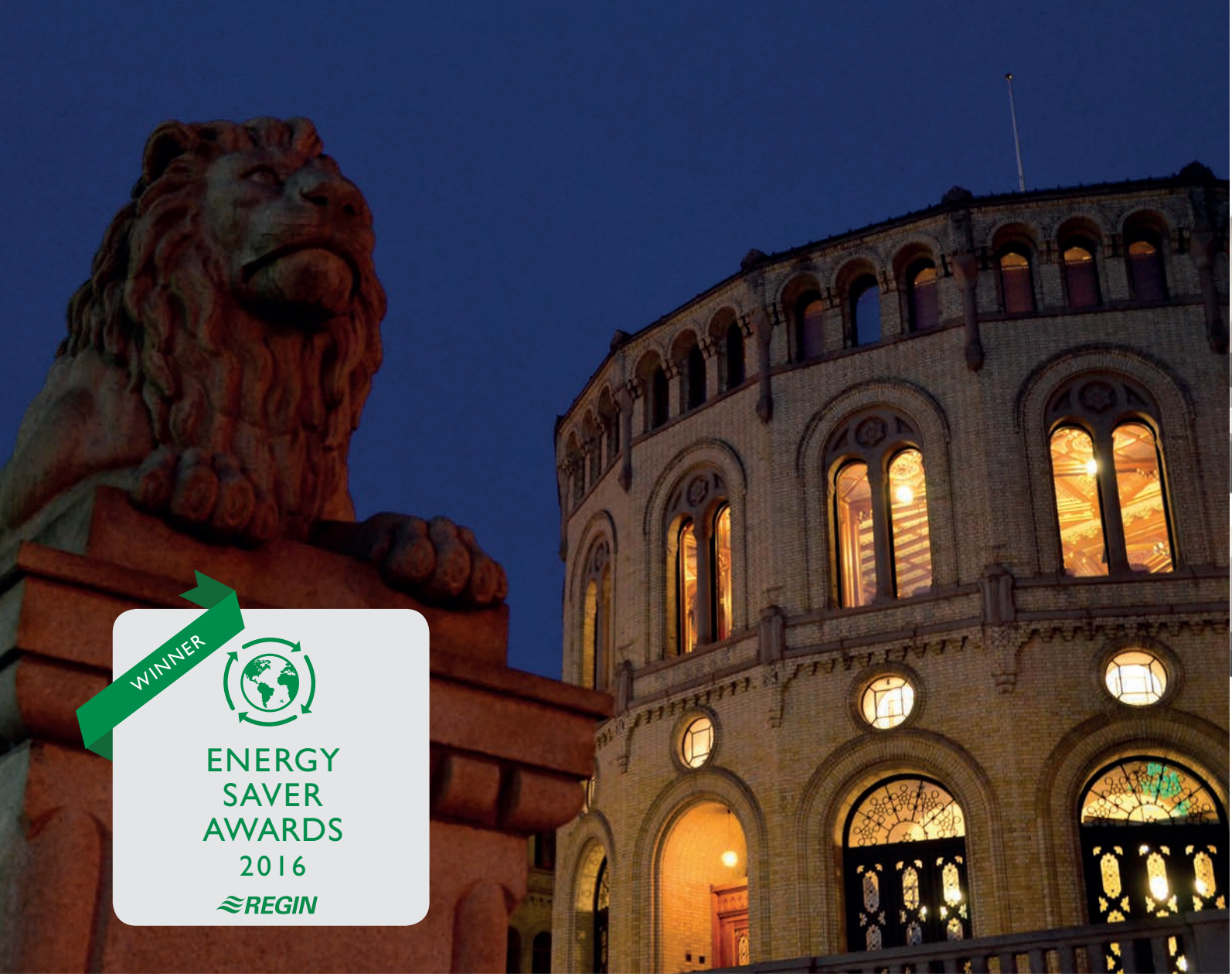
SCHENKER SAVED 10 MILLION EURO IN TEN YEARS!

CATEGORY: The energy-saving-solution of the year

PROJECT Schenker integrated solutions, Sweden | **PARTNER** Systeminstallation

A comprehensive solution strongly contributing to energy savings, which has today been applied to a large number of Schenker's buildings in Sweden.

- ✓ Has saved 10 million Euro over 10 years for Schenker
- ✓ Large savings in small-scale energy solutions through intelligent lighting concepts as well as control of heating and ventilation
- ✓ Terminal ports have been brought online and are supervised
- ✓ Training of personnel in installations surrounding Sweden has helped safeguard energy optimisation in existing systems via web interface and daily review of existing systems through operations and alarm monitoring
- ✓ Careful energy monitoring enables detection of unwanted energy use at an early stage
- ✓ Effective management of planned maintenance and error reports



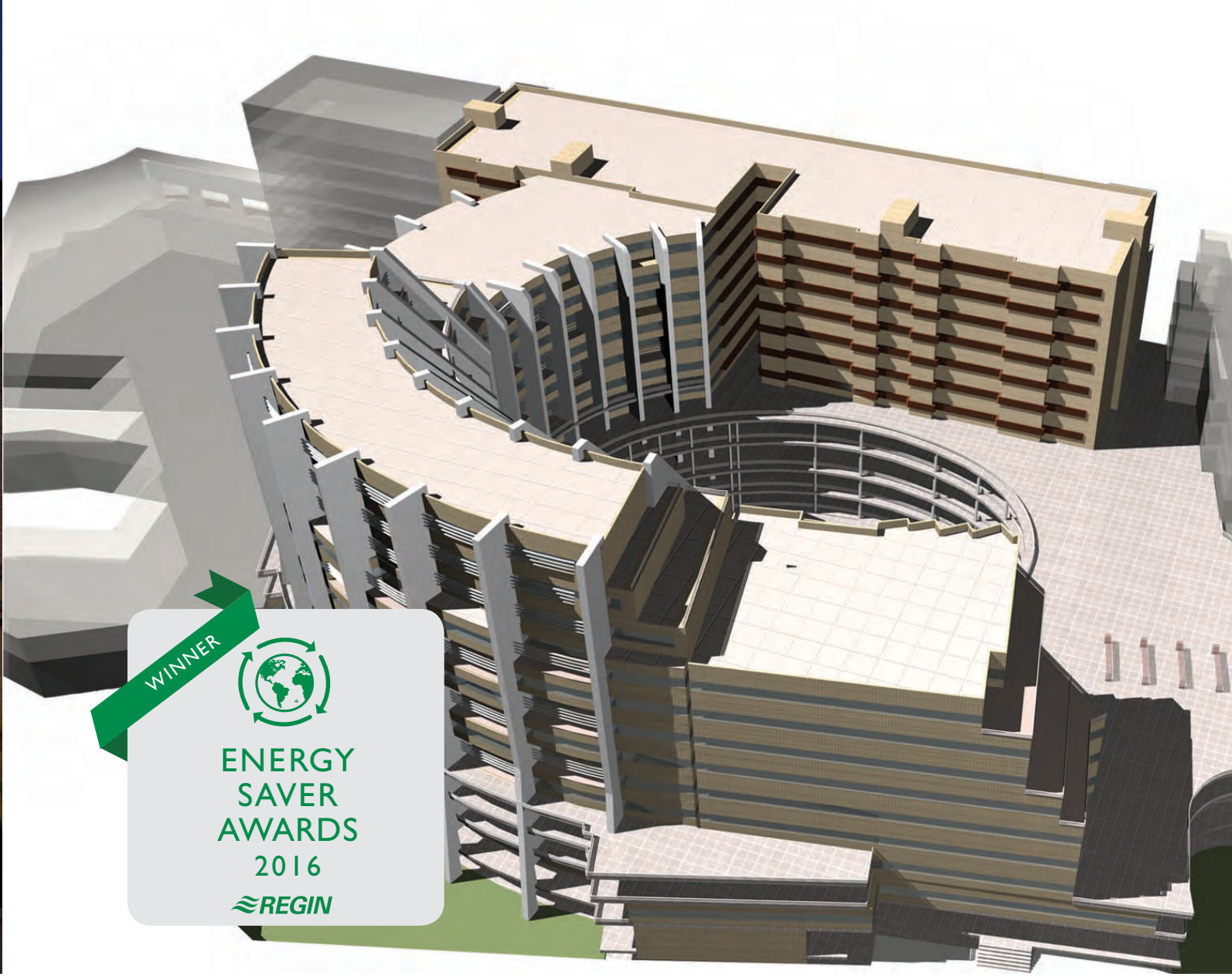
FUTURE PROOF SINCE 1987

CATEGORY: The most future-oriented-solution of the year

PROJECT The Oslo Storting, Norway | **PARTNER** JoTe Systems

A classic building in Oslo with a long history and reputation that has progressively been given many incremental upgrades thanks to future proof technology.

- ✓ Commissioned in 1987, and still fully modern
- ✓ The initial units in the building, installed in 1987, today use modern technology with web access and communication via e.g. TCP/IP
- ✓ Old technology that still works is permitted to remain, to be integrated with today's most advanced technology. "If it's not broken, don't fix it!" is the motto
- ✓ Today, the installation integrates all modern technology and communication standards – including TCP/IP, M-Bus for energy meters, KNX for lighting control, web access for the entire installation, simple user interfaces and more
- ✓ Flexibility and compatibility makes the solution safe even during coming decades



THE VERY DEFINITION OF READY-STEADY-GO

CATEGORY: The ready-steady-go-installation of the year

PROJECT Arman Complex Building, Iran | **PARTNER** Aria Atsez Building Automation

The Arman Complex in Iran made the automation of a very large and advanced building without any single programmer ever being physically present.

- ✓ Using simple tools for Corrigo, the installer was able to deploy the whole system single-handedly
- ✓ A clear-cut Modbus standard enables easy integration with existing SCADA systems
- ✓ The standardised solution handled both simple and advanced applications
- ✓ The standardised solution minimised all error sources during commissioning, service and maintenance
- ✓ The solution can be easily upgraded, if needed

REGIN

THE CHALLENGER

COMPANY PRESENTATION

THE CHALLENGER.

That's what we call ourselves. But with what do we extend our challenge?

Regin in 15 sec

- ✓ Increasing energy efficiency since 1947
- ✓ A comprehensive product range, from Systems to HVAC
- ✓ Our own product development
- ✓ The biggest Swedish-owned company in the business
- ✓ You can find our products in more than 90 countries – and the number is increasing
- ✓ Offices and warehouses in 16 countries with 235 employees
- ✓ Total annual turnover of approx €40 million

1

One of the broadest product ranges on the market

WE KNOW that our broad range from Systems to HVAC makes life easier for our customers. With our comprehensive approach to energy saving we can offer products, service and consulting within all areas of building automation. Every year, we invest 10 % of our annual turnover in product development – that's how we future-proof our solutions.

pages 20–21

2

Global strength with a local presence

WE ALWAYS DO our utmost to make sure everything is in place when the customer needs it, wherever they need it. Thanks to our worldwide local presence, we can offer precise and fast deliveries to our customers' projects no matter where they are. Today, we sell our products in 90 countries and the number is steadily rising.

pages 24–25

3

An individual commitment that makes the difference

COOPERATING with someone you trust and that you know is committed makes a difference. To us, personal communication and fast, internal decision-making is the best way to work. This has become our way towards success – working with our customers, partners and when working together with OEMs.

pages 26–29

From mechanical humidistats to one

GOTHENBURG, 1947: Erik Haglund and Axel Jones buy the right to a humidistat. Under the *Regin* name, they remake it completely and release it to the market as HMH – a simple, stable humidistat that goes on to become a huge international success that is still manufactured and used today.

The evolution

In the late 80s, today's majority owners – Leif Brattschöld, Peter Bolin and John Reed, buy Regin and infuse the company with a fervent commitment and a clear vision: Regin should develop their own products, have a broad range and establish close cooperative relations with installers and system integrators. Also, product development should be customer-driven through cooperation with OEMs and through a continuous dialogue with all kinds of users.

The expansion

During the fist decade of the 2000s, Regin acquires the product companies Osby Armatur, Exomatic and RICCIUS+SOHN, three companies that have been true pioneers within their product fields and that will become important factors in achieving a complete, comprehensive product line. Customer-driven development is further strengthened and the decision is made to invest 10% of annual turnover in the company's product development.

These years also see the foundation of the Regin Academy, the company's centre for international customer education. Coaching and courses are set up to increase product and energy saving system knowledge for all kinds of properties among system integrators, installers and OEM customers. Through the Regin Academy, Regin certifies system integrators who work with Regin systems.

1900 — 1910 — 1920 — 1930 — 1940 — 1950

TOWARDS THE END OF THE 19TH CENTURY Osby Armatur slowly starts to become synonymous with control valves around the world. This is very much due to the high quality valves used in the large ships crossing the world's oceans at that time.

IN 1947 REGIN IS FOUNDED and the first product, HMH, is launched. The humidistat HMH becomes an international success story and a modern version is still marketed today, some 70 years down the line. Few people know that the sensor is made from human hair.

IN BERLIN, DURING THE MID-50S Dr. Claus Riccius, Isolt Riccius and Günter Stroschen found the company RICCIUS+STROSCHEN, later named RICCIUS+SOHN. The first heat controllers for boiler control are manufactured in true pioneering spirit – in the family basement. Here the foundation is laid for the RU, one of Germany's most well known series of heat controllers. It's still on the market today.

of the broadest ranges on the market

Present day

Today we can offer our own, personally developed product program that covers everything from valves and field products to some of the most sophisticated system solutions available within building automation. We sell our products in more than 90 countries worldwide – a number that is steadily increasing. Our Head Office is situated just outside of the city of Gothenburg, Sweden and we have offices and warehouses in 18 different countries.

Everything and nothing has changed since we were established in 1947. However, the one thing that will never change is our personal commitment to create easy and sustainable solutions for our customers, partners and OEMs – and for the people who use our products every day.

OUR HEAD OFFICE *is situated in Kållered just outside the city of Gothenburg. In 2015 the building was renovated and fitted with a new entrance and an updated Regin Centre.*

1970 — 1980 — 1990 — 2000 — 2010 — 2020

IN 1983 EXOMATIC is founded in Svalöv, Sweden and today they are seen as pioneers when it comes to systems. The entrepreneur Carl Eric Olin had already, using huge computers, created one of the first building automation systems for a commercial property.

BETWEEN THE YEARS 1990 and 2010 Regin acquires Osby Armatur, RICCIUS+SOHN and Exomatic. Regin Academy is also established.

DURING THE SAME PERIOD Regin launches four series that all become huge successes and key products: EXOcompact, Regio, Corrigo and Optigo.

BETWEEN 2010 and the present day Regin launches three further key products: Exigo, our controllers for heating applications, EXOdos a freely programmable variation of Exigo, and the next generation valves with 0% leakage. CLOUDigo, an intuitive cloud-based service for building automation, is also launched.

Everything under one roof

Control and climate control for all kinds of real estates

AFTER 70 YEARS IN THE BUSINESS, we know that our product range has to work for the installers in the field and for the system integrator with high demands on intelligent comprehensive solutions. This is why today we offer a complete product program from Systems to HVAC. We're able to do so thanks to our own customer-driven product development, combined with well-balanced acquisitions. With our product range we can provide both partners and OEM customers with the best ways to save energy and create comfort all around the world. But that's not enough.

We're convinced that the road to the right product and the smartest solution is based on a strong commitment, talking to the customer and cooperating – this is what makes the difference in the end.

System

Technical advances are moving faster and faster and every market has its own specific needs. To us, future-proofing and openness towards integration with standardised protocols are guiding principles. Today, you'll be able to find Regin's product range in all kinds of real estates, all around the world.

HVAC

Many of us who work at Regin have experience in fieldwork. We know that field products need to be of the highest quality, that they need to be easy and quick to install and that they should come with easy-to-understand instructions. With Regin's comprehensive HVAC range you'll always have what you need to succeed.

SYSTEM

SCADA system software

Programming tools

OPC server

Integration of hotel booking system

Complete web hosting service

Processor housings and Freely programmable controllers

Freely programmable room controllers

I/O-modules

Displays

OEM – Original Equipment Manufacturer

At Regin, you'll find everything you need in order to achieve a successful OEM cooperation. Our cooperation covers everything from product design to the finished product, from the entire project to smaller parts and from large to small volumes. In order to realise your specific visions, we have a dedicated OEM team that, together with your local contact, will ensure speed and quality during the entire process.

Ready-Steady-Go

Our Ready-Steady-Go concept and marking represents products that have been designed to be easy to install and start up. The concept is a good example of how we always try to focus on simplicity in interaction with our products and our systems.

READY STEADY GO

READY TO USE, RIGHT AWAY. *The Tempero product series has many features that simplify installation. Here you can see an illustration of the housing with a screw-on cap.*

HVAC

CLOUDigo

Pre-programmed controllers

Room controllers

Electric heating controllers

Thermostats

Sensors and Switches

Detectors

Wireless products

Energy meters

Valves

Valve actuators

Damper actuators

Accessories

Regin worldwide

TODAY THERE ARE SOLUTIONS based on Regin's broad product range in all kinds of properties and applications all over the world, both as standard executions or built into OEM products. We have a strong network of professional system integrators that help save energy through intelligent system solutions in building automation every day.

REGIN'S SOLUTIONS *can be found in many different kinds of buildings all over the world. For example, in Google's offices in Madrid, Spain.*

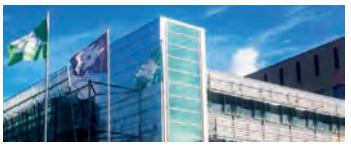
OUR STARTING POINTS FOR PRODUCT DEVELOPMENT

- ✓ Thanks to our comprehensive product program we can be a one-stop shop where our customers will always be able to find the best solution.
- ✓ Our products should always be easy to understand and intuitive to work with. We call it Ready-Steady-Go.
- ✓ Our products should always be flexible and compatible with earlier generations in order to guarantee a long lifecycle and to enable the possibility of growing and expanding with our solutions.
- ✓ We work with open systems and standardised protocols to facilitate integration with different products on the market.

OUR GLOBAL REFERENCES

BANK

Madrid, Spain
BBVA



UNIVERSITY

Helsinki, Finland
Department of Biosciences

RESORT

Ankara, Turkey
Mövenpick Hotel & Resort

SHOPPING MALL

Ankara, Turkey
Panora

LEISURE PARK

Longleat Forrest, UK
Center Parcs

OFFICE BUILDING

Lima, Peru
Graña & Montero headquarter

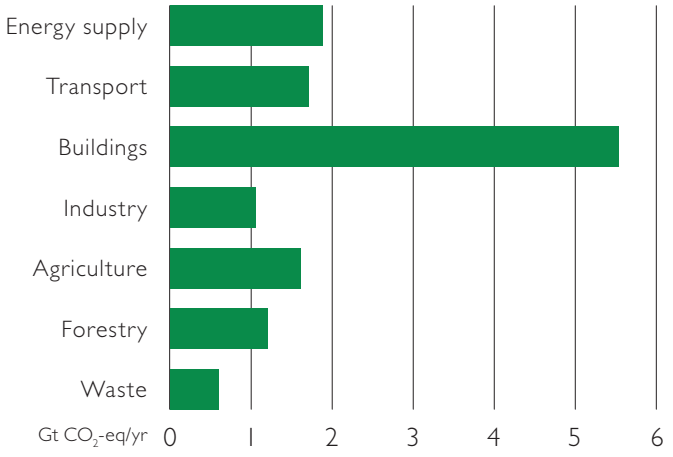
An effective way to reach climate change goals

Long before climate change issues climbed to the top of the international agenda, Regin's systems and products contributed to reductions in energy consumption in buildings all over the world. Thanks to the 2-degree goal set up by IPCC* and the EU's 20% CO_2 emission reduction goal, climate issues have moved even further to the fore.

Today, properties and buildings are responsible for approximately one third of the world's energy consumption. Research shows that investments in this field deliver the highest reductions in CO^2 emissions per invested coin.

At Regin, we're proud to be part of a business that contributes to reaching climate change goals.

** Intergovernmental Panel on Climate Change, UN*

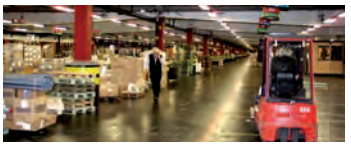


IPPC Climate change 2007: Synthesis Report.
IPPC: Intergovernmental Panel on Climate Change, The UN

SMART ENVIRONMENTAL INVESTMENT. *A reduction in CO_2 emissions results in the biggest increase in energy efficiency per coin spent when it comes to properties and buildings. The currency above is USD.*

HOSPITAL

Vejile, Denmark
Privathospitalet Mølholm



TERMINALS

70 places all over Sweden
DB Schenker

PHARMACEUTICALS PLANT

Helsingborg, Sweden
McNeil

MUSEUM

Beijing, China
China National Film Museum

HOUSING

Gothenburg, Sweden
District heating

GOVERNMENT BUILDING

Ankara, Turkey
Prime Minister's headquarter

Global strength with a local presence

WE ALWAYS DO OUR UTMOST to make sure everything is in place when our customers need it, where they need it. Whether you're in Singapore, Sundsvall or Qatar you should always get the right products, on time. We make sure this is the case through our local sales offices, our main warehouse and our service warehouses all over the world.

However, the very essence of our distribution chains is our flexible and adaptable attitude. No matter the difficulty, we'll always be there to solve the problems at hand and take on the challenges, wherever in the world they may occur.

TODAY WE ARE SELLING
OUR PRODUCTS IN OVER

90 COUNTRIES

WE HAVE OFFICES
AND WAREHOUSES IN

16 COUNTRIES

DOHA

TAOYUAN CITY

HONG KONG

SINGAPORE

JAKARTA

An individual commitment that makes the difference

WE CONTINUOUSLY focus our work on the development and support of our global customer, partner and OEM network. We do this to create added value for everyone involved in a project – from start to finish – in order to succeed together. Regin benefits from the success of our partners' business and we evolve alongside them. This global network gives us important business insights into market differences and future needs and requirements. This is an approach that creates positive effects at every level.

An approach that generates wins for everyone involved

OEM customers

Can access proven expertise and experience from running successful OEM projects. A global network of partners for product integration and installation.

Installers

A complete product range from one single supplier. Direct contact and short decision making processes. Regin assists with problem solving.

System integrators

Everything under one roof. Knowledge exchange and network cooperation. Regin assists with problem solving and marketing.

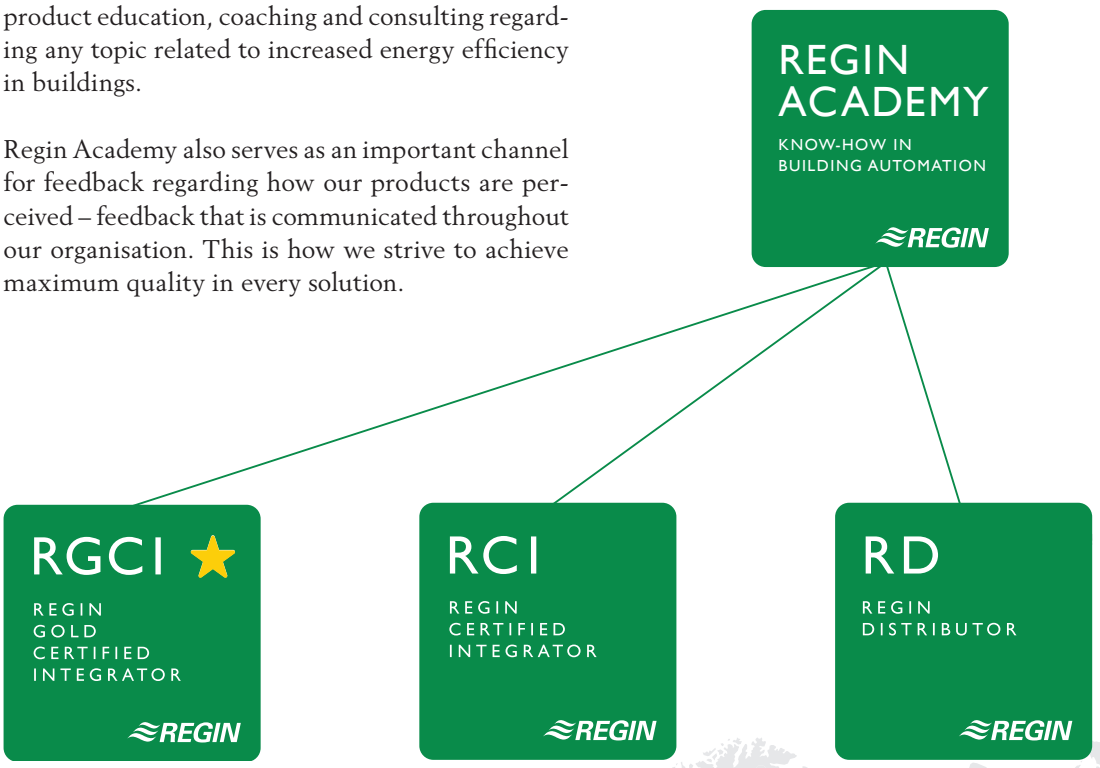
Property owners and consultants

Energy-efficient solutions for the entire property. Access to a global partner network of system integrators.

Regin Academy – certifying success

OUR CUSTOMERS AND PARTNERS, together with us, communicate the Regin brand. All over the world, our customers are the ones installing our products and integrating and programming our systems. In order to provide quality assurance and to be able to offer maximum support, Regin Academy offers product education, coaching and consulting regarding any topic related to increased energy efficiency in buildings.

Regin Academy also serves as an important channel for feedback regarding how our products are perceived – feedback that is communicated throughout our organisation. This is how we strive to achieve maximum quality in every solution.



OEM ORIGINAL EQUIPMENT MANUFACTURER

Our quality – your brand

IF YOU ARE AN OEM CUSTOMER, Regin is the perfect partner for you. You'll get access to our very special combination of a broad product range, expertise in most product areas, short decision-making and last but not least, our outstanding commitment.

Working with Regin means always working with a local contact who has a dedicated OEM team at his or her back. Together, we'll evaluate your requirements and create an offer that suits your needs. Anything from product design to the finished product, from full to part projects, from small to large volumes, from assistance with the range and development of a platform for product development and production.

We're used to long-term, strategic cooperation with OEM customers. Today, a wide variety of Regin products form part of OEM applications worldwide.

TODAY YOU CAN FIND OUR PRODUCTS HERE

- ✓ Electric heating coils & Water coils
- ✓ Customised cabinets
- ✓ Heat exchangers
- ✓ VAV
- ✓ District heating centres
- ✓ AHU
- ✓ Heat pumps
- ✓ Solar panels
- ✓ Dehumidifiers & Humidifiers
- ✓ Air heaters
- ✓ Air curtains
- ✓ Chilled beams
- ✓ Fans
- ✓ Fan coils
- ✓ Chillers
- ✓ Heat recovery ventilation
- ✓ Energy recovery ventilation
- ✓ Fire damper systems

OUR PATH TO OPTIMAL

SYSTEMS

REGIN
THE CHALLENGER



From SCADA systems to field products

AT REGIN we are convinced that the more simple and intuitive our systems are, the more people will choose our solutions when they come looking for energy savings in buildings around the world. We've chosen to focus on the toolbox for building automation – represented by our systems and our field products. That's why we offer our customers anything from flexible and easy-to-program SCADA systems to high quality, easy to install field products.

Integrators are the key

In order to be able to ensure the quality level in every solution based on the Regin product program, we rely on a global network of independent professional integrators. Our integrators are all specialised in our solutions and products and have been licensed through the Regin Academy. Together, we can offer anything from planning and project management to programming, installation, maintenance and service. Below you can see some examples of our cooperative projects.

REGIN'S SYSTEMS IN BRIEF

- ✓ **OPEN** for integration and communication with other systems and products – future-proof
- ✓ **FLEXIBLE** and **SCALABLE** modular design for simple and cost efficient system design
- ✓ **COMMUNICATION** via TCP/IP and via the most common communication protocols
- ✓ **QUICK** and **EASY** for the installer/integrator to get the job done – this is our everyday mission

SYSTEM SOLUTIONS ALL OVER THE WORLD

SUPERMARKET

All over Sweden
Lidl

EMBASSY

New Delhi, India
Embassy of Sweden

AIRPORT

Singapore
Changi Airport

SPA

Laukaa, Finland
Kylpylähotelli Peurunka

UNIVERSITY

Ponta Delgada, Portugal
Universidade dos Açores

OFFICE

Hamar, Norway
Norsk Tipping

RESIDENTIAL BUILDINGS

Kungsbacka, Sweden
Kungsbacka municipality

GOVERNMENT BUILDING

Oslo, Norway
The Oslo Storting

Our way to flexibility

EXOscada & EXOdesigner

Our powerful systems for simple programming and comprehensive building overview

- ✓ The hub of our system creation
- ✓ Simple and quick environment for system construction
- ✓ A large library of customised templates, objects and functions
- ✓ Dynamic licensing system – easy to grow into

Easy-to-use interface

EXOclever

A new range of controllers with increased communication capacity, added memory and a unique design

- ✓ Handles systems requiring many in-/outputs
- ✓ Build the set of I/O:s you need
- ✓ Easy to increase overall capacity and add functions
- ✓ Powerful processor and a substantial memory

EXOflex

Unlimited possibilities for control, supervision and communication

- ✓ Powerful performance and processor
- ✓ For systems with a large number of in-/outputs
- ✓ Easy to expand capacity and add functions
- ✓ Large selection of I/O cards

EXOcompact

Freely programmable controller with powerful performance

- ✓ Control of heating centrals, air handling units, fans etc.
- ✓ Pre-set number of in-/outputs, with options for expandability
- ✓ A total of 7 different ways to communicate via TCP/IP or RS485

EXOdos

Freely programmable controller

- ✓ Optimized for heating applications, but with full flexibility
- ✓ 230 V power supply, 230 V relays
- ✓ DIN-rail or panel mounting
- ✓ Direct communication via RS485 or TCP/IP, 2–3 ports
- ✓ Available with or without operator interface
- ✓ Stand-alone or networked operation

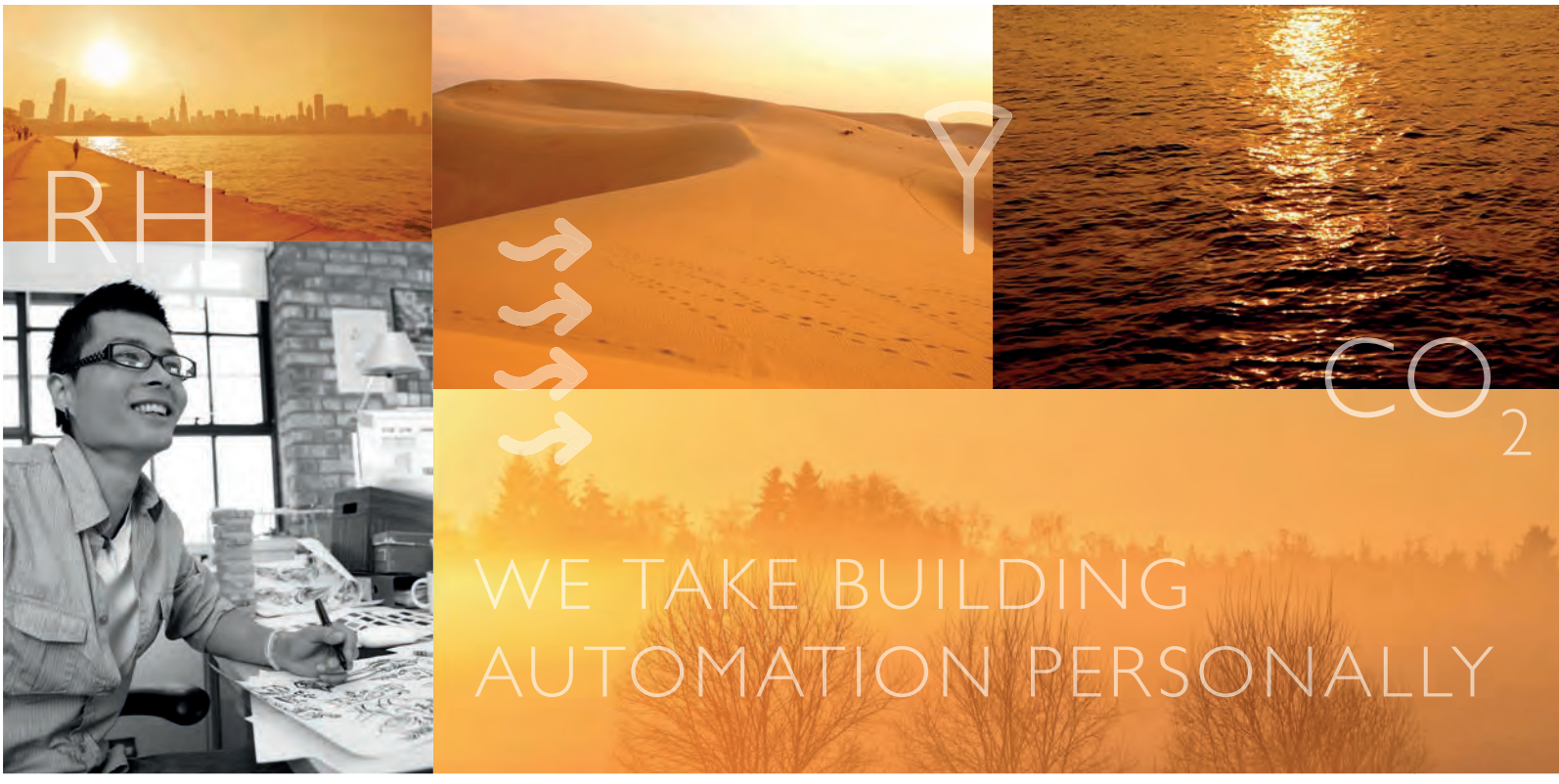
BACnet M-Bus Modbus EXOline

Feel safe in the knowledge that your programs will last you both now and into the future.

Sign up for our upgrade agreement.

OUR PATH TO OPTIMAL

VENTILATION SOLUTIONS



REGIN
THE CHALLENGER

Ventilation solutions to bring the outdoors feeling indoors

WHEN DEALING with ventilation solutions, at Regin we always turn to the concept of bringing the outdoor feeling indoors. Our objective is to create the perfect combination between heat, cold and appropriate air quality – while saving energy. Whether we're dealing with an apartment building, a university or premises where the demands on air quality are extra strict, with Regin's intelligent controllers and wide HVAC and Systems range, the ideal solution for your particular project is always within reach.

At Regin we've been at the very forefront of technological advances within ventilation solutions ever since we began operations in 1947. We've never stopped looking for the perfect balance between pre- and open programming. Constructing a ventilation solution should never be harder than it needs to be. Everything, from documentation to configuration, should be simple and everything should be easy to adapt or expand when the need arises. This is the hallmark for our ventilation solutions.

OUR APPROACH TO VENTILATION SOLUTIONS

- ✓ **EASY** to get started
- ✓ **PERFECT** balance between pre- and open programming
- ✓ **EFFECTIVE** and user friendly operation and maintenance
- ✓ **FULLY FOCUSED** on energy-saving functions
- ✓ **INTELLIGENT** controls and exact measuring
- ✓ **FUTURE SECURITY** in focus

VENTILATION SOLUTIONS ALL OVER THE WORLD

MUNICIPALITY

Simrishamn municipality
Buildings all over Simrishamn municipality

COURT COMPLEX

Jahra, Kuwait
Jahra and Farwaniya Court Complex

RESTAURANT

Venice, Italy
Restaurant in Nave de Vero

OFFICE

Hong Kong
EMSD Headquater training center

SHOPPING CENTRE

Mashhahd, Iran
Arman Commercial & residential complex

ARENA

Stockholm, Sweden
Globen

PASSIVE HOUSES

Locations all over Sweden

MODULAR HOUSES

Locations all over Sweden

All your ventilation needs answered

Regin's controllers

FLEXIBLE

- ✓ With or without communication
- ✓ With or without display
- ✓ Possibility to connect an external display unit

COMMUNICATING

- ✓ Communicates via EXOline, Modbus, BACnet via RS485 or TCP/IP port
- ✓ Integrated web server

VERSATILE

- ✓ With applications for both small and large facilities
- ✓ At start-up, application, language and time settings are selected

Products

Software & Cloud service

Controllers for ventilation

Accessories

Valves & Actuators

CLOUDigo

Gain full control of your indoor climate via phone, tablet or computer

- ✓ Simple, intuitive and quick user interface
- ✓ Navigate between the settings and values in connected controllers and adjust them in real time
- ✓ Analyze data based on logged historical values
- ✓ The solution for geographic building distribution
- ✓ READY STEADY GO

CORRIGO

The flexible controller for ventilation applications in large buildings

- ✓ For control of air handling units with temperature control (up to 5 sequences)
- ✓ Handles humidity control
- ✓ 1- or 2-speed operation, or alternatively, pressure or air flow control of supply air fan and extract air fan, humidity control and other functions within ventilation.
- ✓ One, two or three communications ports
- ✓ Pressure transmitters can be used as I/O expansion
- ✓ Connect the controller, set the parameters as desired and start up

OPTIGO

Pre-programmed, configurable controller for simple applications

- ✓ Pre-loaded with several application modes
- ✓ Simple configuration via the back-lit display
- ✓ Language independent
- ✓ Available for 24 V or 230 V power supply

BACnet EXOline Modbus TCP/IP

OUR PATH TO OPTIMAL

HEATING SOLUTIONS

REGIN
THE CHALLENGER

A heating system is never stronger than its weakest link

AT REGIN we constantly have the comprehensive solution in mind when developing our heating systems and products. For us it's all about making sure our customers can use our product range to create comfort and energy savings, worldwide - no matter the heating source or the type of building. Our solutions are a result of close cooperation with our customers and our partners. The products are a direct answer to their needs as they are expressed every day of the week, every month of the year. This is also why all our products are both forward and backward compatible and why they can handle gradual upgrades and are fully open to systems and products of other makes, if required. When adding our problem solving and personal commitment to meet our partners' needs and challenges to the mix, you can always be secure in the knowledge that our solutions – from systems and controllers, to valves and actuators – will endure and never let you down.

Heating solutions for any type of application

We've developed our range of heating products and systems for more than half a century. We've also been continuously complementing our own development with the knowledge gained from the acquisitions that we've made over the years. The end result, the sum of the parts, answers the question of how we're able to offer our customers fully comprehensive heating solutions. By acquiring reputable niche companies such as Osby Armatur, Exomatic and RICCIUS + SOHN, we've made sure that we can offer one of the broadest product ranges for building automation available today.

HEATING SOLUTIONS ALL OVER THE WORLD

UNDERFLOOR HEATING

De Leyhoeve, The Netherlands
Apartment building

BOILER

Beijing, China
China National Film Museum

DISTRICT HEATING

Fredriksstad, Norway

NATURAL GAS

Sevilla, Spain
Chare Lebrija hospital

SOLAR ENERGY/
SUPPLY AIR CONTROL

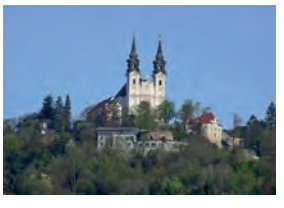
Locations all over France.

DISTRICT HEATING/
DISTRICT COOLING

Malmö, Sweden

HEAT PUMP

Bodö, Norway



DISTRICT HEATING

Linz, Austria

Everything you need for heating control

Regin's controllers

FLEXIBLE

- ✓ One to three communication ports
- ✓ With or without display, an external display unit can also be connected

COMMUNICATING

- ✓ Communicates via EXOline, Modbus, BACnet via RS485 or TCP/IP port
- ✓ Energy meter communication via M-Bus/Pulse
- ✓ Integrated web server

VERSATILE

- ✓ With applications for heating and boiler control
- ✓ At start-up, application, language and time settings are selected

Products

Software & Cloud service Heating controllers

Accessories

Valves & Actuators

Energy meters

CLOUDigo

Gain full control of your indoor climate via phone, tablet or computer

- ✓ Simple, intuitive and quick user interface
- ✓ Navigate between the settings and values in connected controllers and adjust them in real time
- ✓ Analyze data based on logged historical values
- ✓ The solution for geographic building distribution
- ✓ READY STEADY GO

CORRIGO

The flexible controller for heating solutions in larger buildings

- ✓ Supports control of up to 3 heating circuits and 2 DHW circuits
- ✓ Also with built-in boiler control for a total of 4 boilers
- ✓ Great flexibility through up to three ports and expansion units
- ✓ Optimized control of temperature differentials for maximum energy efficiency
- ✓ 8, 15 or 28 in-/outputs with expansion possibilities

EXIGO

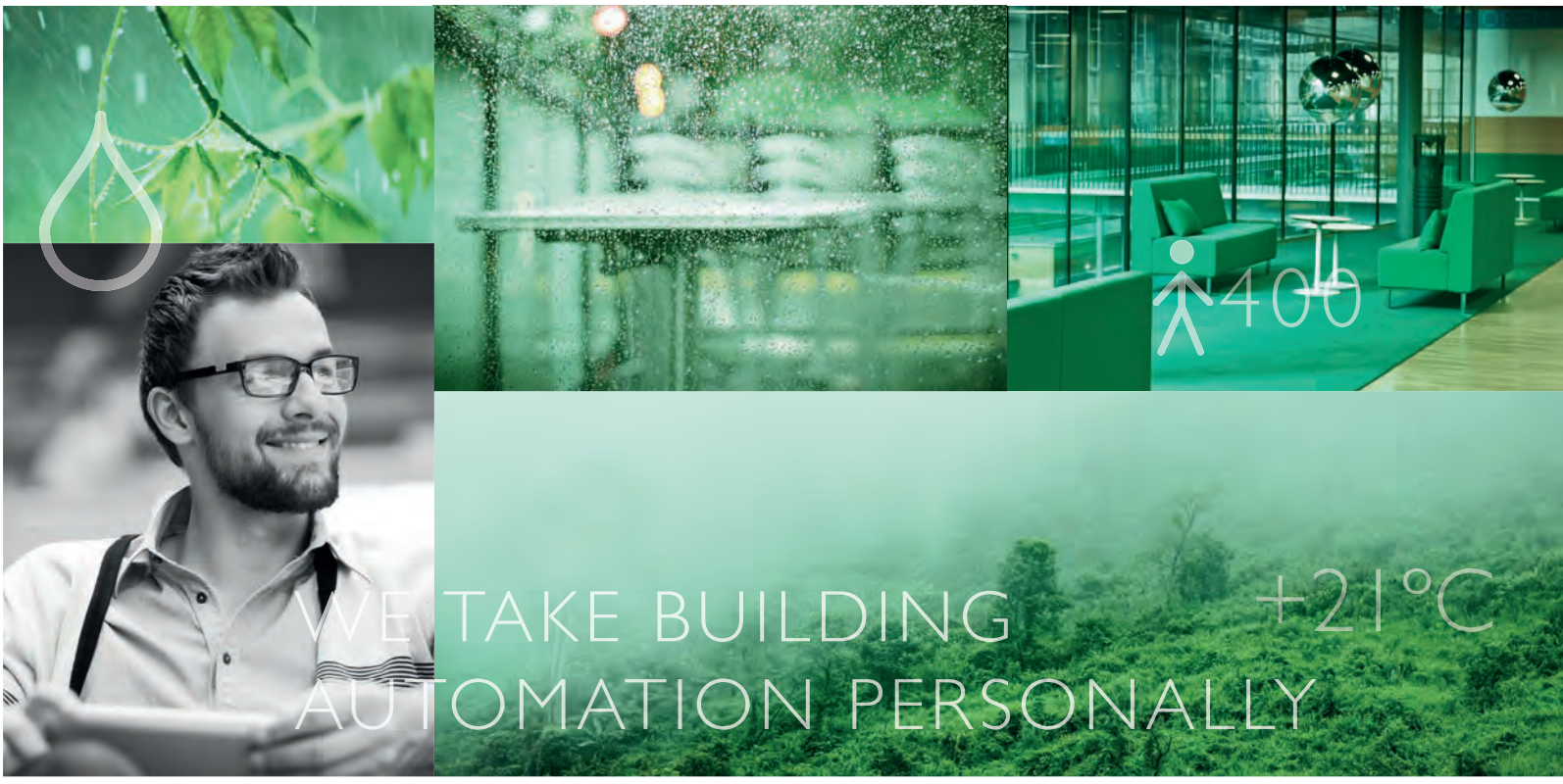
Custom made for district heating

- ✓ Supply voltage 230 V
- ✓ Potential-free relays
- ✓ Energy saving functions
- ✓ Handles pump stop day and night with built-in alarm functions
- ✓ Easy to mount in a cabinet, with or without DIN-rail
- ✓ 19 in-/outputs, with expansion options

BACnet EXOline Modbus M-Bus TCP/IP

OUR PATH TO OPTIMAL

ROOM CONTROL



REGIN
THE CHALLENGER

A comprehensive view of room control

THE STARTING POINT for all of Regin's solutions for room control lies in simplicity and thoroughness. Every product we develop is the result of close cooperation with our customers and partners. Together, we make it easy to create comfort and decrease energy usage in both a large and small scale. Our tool to make this happen is our wide selection of products - products that create the necessary prerequisites for tailor-made solutions – from VAV to chilled beams and fan coil applications.

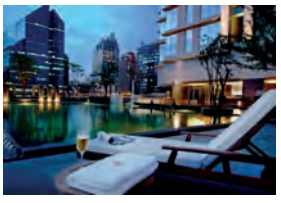
Communication – the easy way to long-term energy savings

At Regin, we are specialised in the most energy-saving solutions available. For the most part that means controllers that are set up in systems connected through intelligent communication. These systems make it possible for us to take a holistic approach to the building – something that saves energy both in the short and long term. Our solutions are future-proof and adaptable to any changes in the buildings' needs. We have excellent reference cases from the four corners of the world and what they all have in common is the fact that they save energy, create comfort and contribute to a better environment – all at the same time.

WHY CHOOSE THE REGIN CONCEPT?

- ✓ **ONE OF THE** market's broadest and most flexible ranges of controllers for room control
- ✓ **SPECIALISATION** in zone control solutions through intelligent communication
- ✓ **COMPREHENSIVE** solutions from Systems to HVAC, from one single supplier
- ✓ **CUSTOMER-DRIVEN** range and product development
- ✓ **NO MATTER** if it's one or a thousand rooms, it's always just as easy
- ✓ **PRE-CONFIGURED** controllers – ready to go

ROOM CONTROL SOLUTIONS ALL OVER THE WORLD



HOTEL

Bangkok, Thailand
Marriott Executive Apartments

HOTEL

Stockholm, Sweden
Winery hotel

OFFICE

Madrid, Spain
Torre Picasso, Google Office

KONTOR

Safat, Kuwait
EQUATE Huvudkontor

HOTEL

Alna, Norway
Park Inn Radisson Blu

OFFICE

Oslo, Norway
Fornebuporten

HOSPITAL

Gothenburg, Sweden
Angered Hospital

UNIVERSITY

Al Baha city, Saudi Arabia
Al-Baha University

Room control in both a large and small scale

REGIO – THE ULTIMATE ZONE CONTROL SYSTEM

RC/RCP

- ✓ Control and monitoring of room temperature, air quality, humidity, lighting and blinds
- ✓ Pre-configured – ready for immediate use
- ✓ Communication via RS485 or TCP/IP
- ✓ Regio tool© enables easy configuration
- ✓ Stand-alone or SCADA system integration

RCF

A specially adapted fan-coil controller

- ✓ Single-zone heating and cooling control
- ✓ Adapted for applications requiring high comfort and low energy consumption
- ✓ 3-speed or EC fan control
- ✓ 230 V AC
- ✓ Stand-alone or SCADA system integration
- ✓ Stylish design

Products

SCADA system & Software

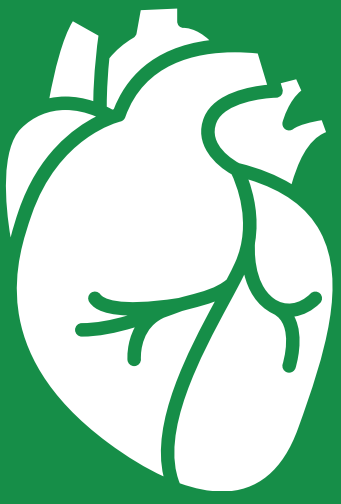
Room controllers

Switches & Detectors

Valves & Actuators

REGIN SYSTEMS

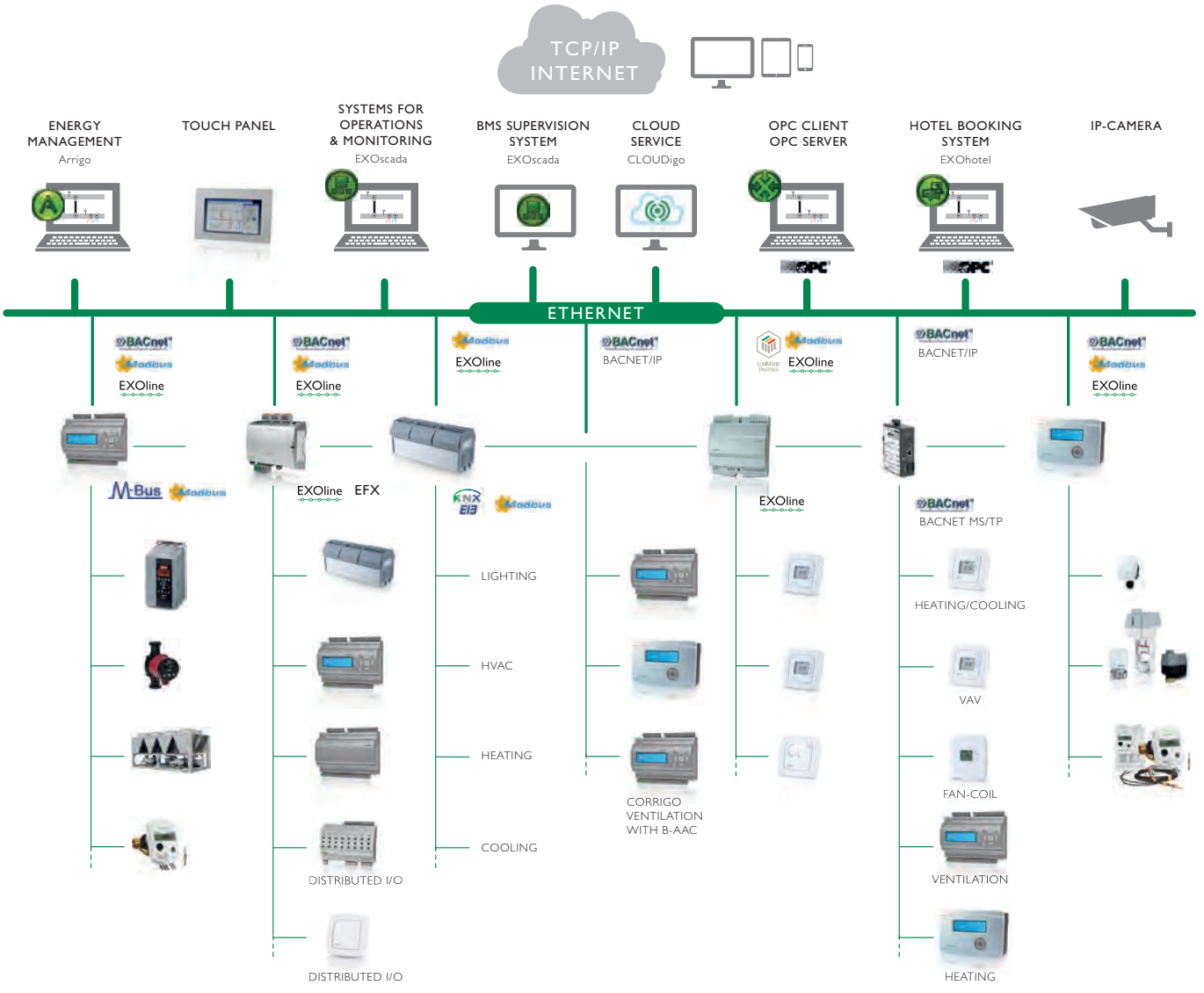
THE FORCE BEHIND THE PERFECT SYSTEM



At Regin we take building automation personally. Sure, we have one of the market's broadest product ranges to handle all types of building automation tasks. But that alone is not enough. Because we are dealing with people. And we believe the way to optimal solutions is through dialogue. Since 1947, we have talked to property owners and partners to find the best solutions for effective energy use. We know that every well-functioning system is powered by heartbeats. That it's the wholehearted commitment of the people behind the system that makes all the difference.

REGIN
THE CHALLENGER

COMPLETE SYSTEM SOLUTIONS



SCADA SOFTWARE FOR COMPLETE CONTROL

EXOscada

A complete and powerful SCADA system for the EXO system. EXOscada enables an operator to monitor and control system processes using a modern and intuitive interface, as well as to handle alarms and display historical values using reports and diagrams.

The built-in report generator enables the creation of advanced reports.

Key features

- ✓ Dynamic visualization of plants and processes
- ✓ Alarm window with filtering function
- ✓ Time channel program
- ✓ Easy to change control curves
- ✓ A powerful history window
- ✓ Large template library
- ✓ Support for large server environments
- ✓ Scalable and vector-based graphics
- ✓ Script language available
- ✓ Built-in report generator for creation of advanced reports
- ✓ Powerful charting of historical data and real time log
- ✓ Alarm distribution as email

Design tools

The built in configuration tools makes it easy to create user-friendly views in EXOscada. The huge library containing graphic symbols and SCADA images simplifies work even further. EXOscada also supports animated symbols and offers many options for configuring the SCADA design according to your personal requirements.

SCADA/HMI software for operator stations

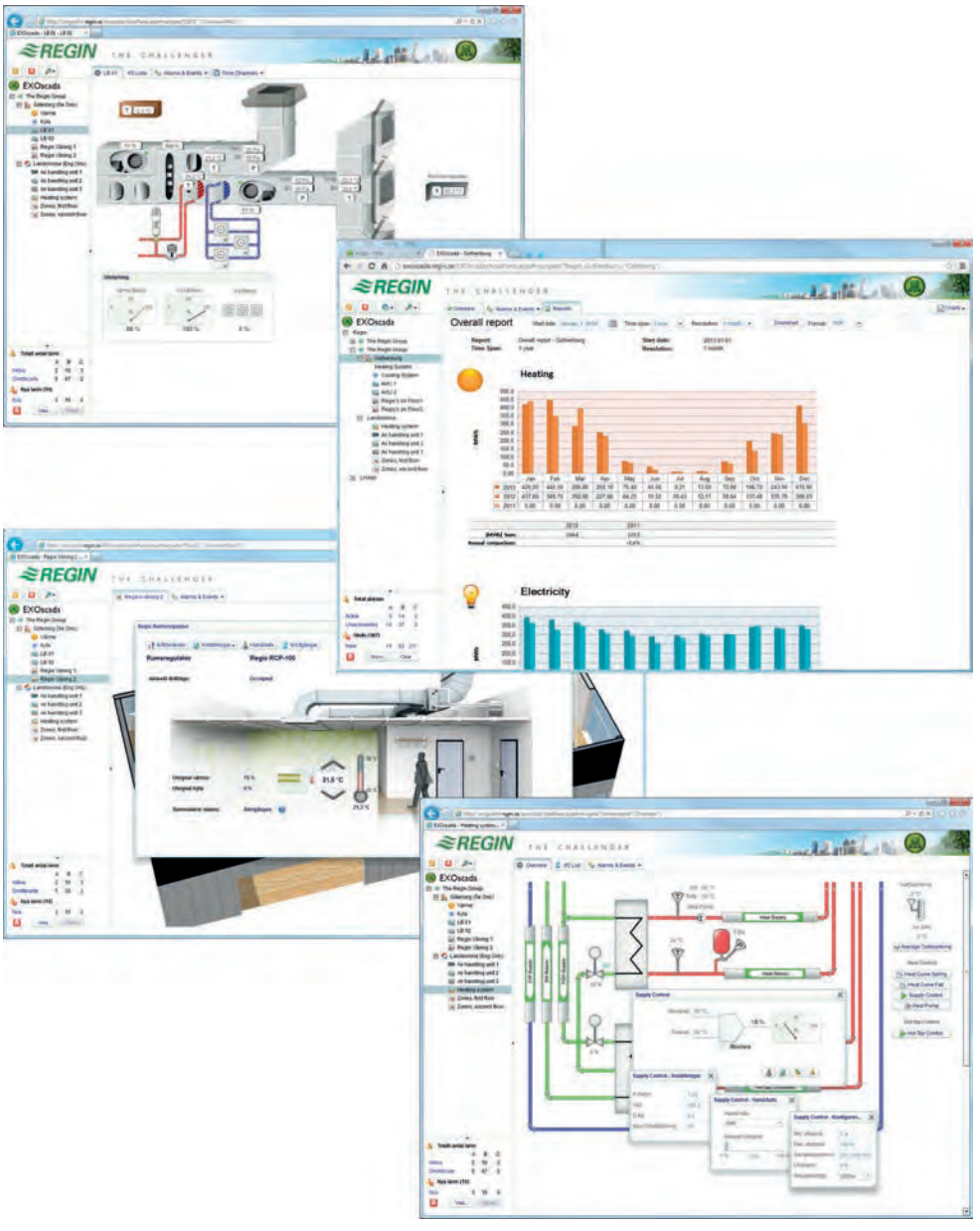
EXOscada has a graphical user interface, making all settings and commands very easy to use.

The licensing system is flexible and can easily be adapted to various needs. A dongle and one or more licence codes are needed for every server running EXOscada.

EXOscada can communicate via OPC with equipment of other brands using various communication protocols.

EXOscada at a glance

Article	Description
EXOSCADA-T	EXOscada Trial. Max. 75 I/O:s, only one user can be logged on at a time.
EXOSCADA-B	EXOscada Base. Max. 200 I/O:s, up to three users can be logged on simultaneously.
EXOSCADA-BSD	EXOscada Base Soft Dongle
EXOSCADA-100	EXOscada 100 I/O. Add-on for EXOscada Base, adds another 100 I/O:s.
EXOSCADA-500	EXOscada 500 I/O. Add-on for EXOscada Base, adds another 500 I/O:s.
EXOSCADA-ULU	EXOscada Unlimited Users. Add-on for EXOscada Base, an unlimited amount of users can be simultaneously logged on.
EXOSCADA-UL	EXOscada Unlimited. Add-on for EXOscada Base, unlimited amount of I/O:s, an unlimited amount of users can be simultaneously logged on.
EXOSCADA-OPC	EXOscada OPC Connection. Add-on for EXOscada Base, 1 OPC server connection.
EXOSCADA-BC	BACnet OPC server. Add-on for EXOscada Base, requires an EXOscada OPC licence.
EXOHOTEL	Hotel booking system. Add-on for EXOscada Base, requires an EXOscada OPC licence.
EXOSCADA-NIMBUS	Nimbus Alarm Server. Add-on for EXOscada Base with support for Nimbus Alarm Server.



EXOscada upgrade agreement

Provides secure and continuous access to the latest version of Regin's software at a fixed annual rate. At least once a year, we will also launch new functions which you can make use of directly. Price per server.

Article	Description	Notes
EXOSCADA-UPGUL	EXOscada Unlimited Upgrade	
EXOSCADA-UPG100	EXOscada 100 I/O Upgrade	
EXOSCADA-UPG500	EXOscada 500 I/O Upgrade	
EXOSCADA-UPG	EXOscada Base Upgrade	
EXOSCADA-UPGBSD	EXOscada Base Soft Dongle Upgrade	
EXOSCADA-UPG-NIMBUS	EXOscada Nimbus Alarm Server Upgrade	
EXOSCADA-UPG-OPC	EXOscada OPC Connection Upgrade	
EXOSCADA-UPGULU	EXOscada Unlimited Users Upgrade	

EXO add-on

EXOscada Cloud Service

EXOscada Cloud Service is a complete web hosting service for property management. By connecting your buildings to EXOscada Cloud Service, you can manage your properties via a web-based SCADA system and subscribe to different services, while at the same time avoiding investments in e.g. servers. The only thing needed is a computer with a web browser. We take care of daily operation, maintenance, hardware and software upgrades on the server etc.

Please contact Regin for a quotation.

Licences

Article	Description	Notes
WEBHOTEL SETUP	Start and setup	
SCADA CLOUD BASE	Base licence (200 I/O:s, 3 simultaneously logged in users)	
SCADA CLOUD DNS	DNS name for connecting controllers to the server	
SCADA CLOUD 100	+100 I/O:s	
SCADA CLOUD 500	+500 I/O:s	
SCADA CLOUD ULU	Unlimited number of users	
SCADA CLOUD UL	Unlimited number of users and I/O:s	
SCADA CLOUD NIMBUS	Nimbus Alarm Server	

EXO add-on

EXOopc Driver

EXOopc Driver enables connecting EXO controllers to any software supporting the OPC standard. This means that most SCADA software in the market today can be used together with Regin's controllers.

The system is programmed using EXOdesigner. The program can be prepared in advance on a PC and loaded into the system at installation. All the data will then be available via the OPC interface.

Article	Description	Notes
EXOOPC-DRIVER	EXOopc Driver	

EXO add-on

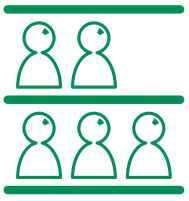
EXOhotel

Hotel booking system

EXOhotel is an add-on program for EXOscada which connects a hotel booking system running the Fidelio protocol to the full range of functionalities offered by the EXO system. Heating and cooling in each hotel room can be controlled to save energy when the room is empty and provide a comfortable indoor climate when the room is occupied.

Article	Description	Notes
EXOHOTEL	Hotel booking system. Add-on for EXOscada Base, requires an EXOscada OPC licence.	

WHY EXOhotel?



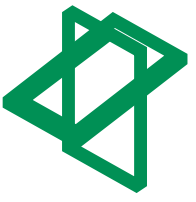
Reduce energy costs by planning reservations on each floor.

Integrate fire protection systems, facilitate fire extinguishing.

Corridor lighting based on time of day and occupancy

Occupancy control common areas to achieve energy savings and safety.

Domestic hot water access based on total number of guests.



Control the temperature, lighting, blinds and bathroom dryers when guests check in/out. Open windows turn the heating/cooling etc. off.

The ventilation in conference rooms is controlled by measuring the CO_2 concentration.

Minimise the risk of leakage.

EXOdesigner

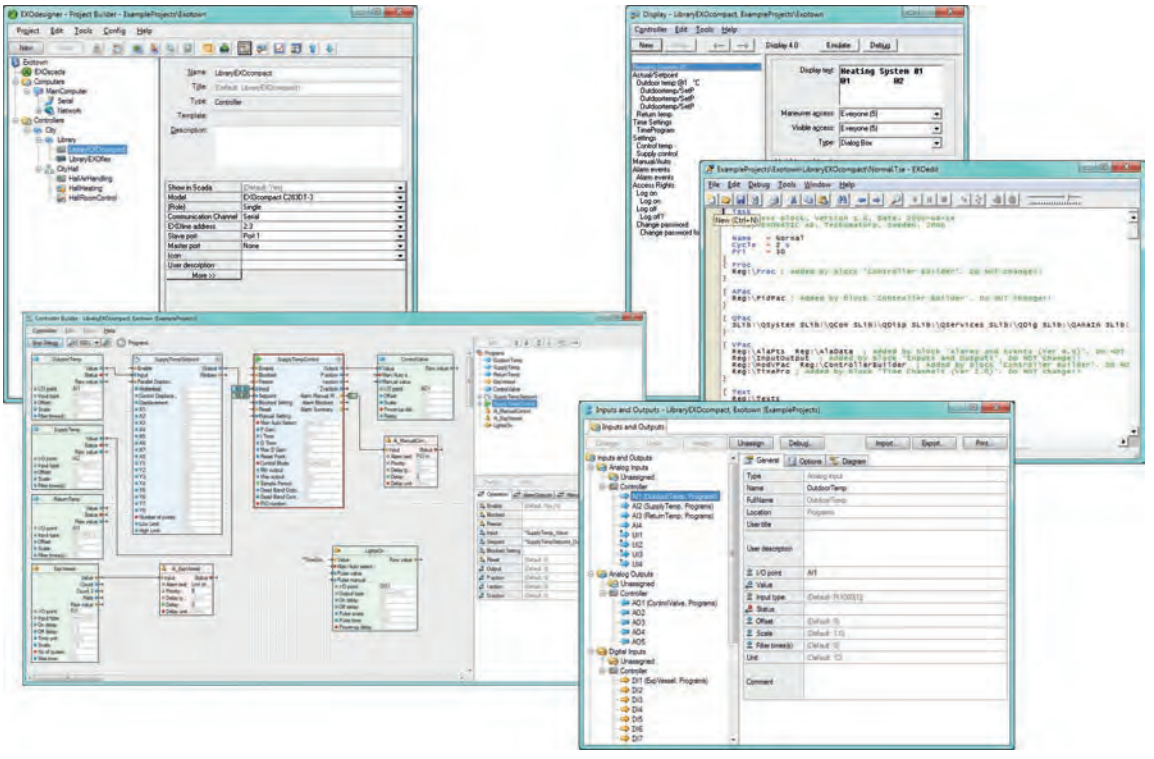
Software tool for design and configuration of a complete EXO system.

All EXO controllers are fully software compatible and are programmed using EXOdesigner, a PC-based development environment. The compatibility also applies across product generations, which means you only need to learn one programming tool and are free to change controllers in a system without having to rewrite all programs.

Controller Builder – Graphical programming without limitations

Controller Builder is an integrated function that makes it easy to construct a system in EXOdesigner. An extensive library of functions is available. Controller Builder provides increased efficiency and speed with maintained flexibility. The function is compatible with all other parts of the EXO system.

Article	Description	Notes
EXODESIGNER	Development software	



EXOclever

NEWS!

Freely programmable controllers

EXOclever is a series of freely programmable controllers with a modular design, which makes it easy to increase the capacity and add more functions.

EXOclever is programmed from EXOdesigner and visualised in EXOscada.

EC-PU4

Processor unit with 4 communication ports

The central processor unit in the EXOclever series. Equipped with three serial ports and one TCP/IP port.

Technical data	
Supply voltage	24 V AC ±15%, 50…60 Hz or 20…36 V DC
Tolerance	18…26 V AC / 22…30 V DC
Power consumption	10 VA / 5 W
Dimensions (W×H×D)	140×136×40mm
Mounting	DIN-rail
Protection class	IP20
Operating system	EXOreal C
Battery backup	RAM, RTC, atleast 5 years
Ambient temperature	0…55°C
Ambient humidity	Max. 95% RH
Storage temperature	-20…+70°C
Storage humidity	Max. 95% RH
Communication ports	
TCP/IP	EXOline, Modbus, BACnet/IP
RS485	EXOline, Modbus
M-Bus	Via external X1176 unit

Article	Description	Notes
EC-PU4	Processor unit, 4 communication ports	

EXOcompact – FREELY PROGRAMMABLE CONTROLLERS

EXOcompact controller

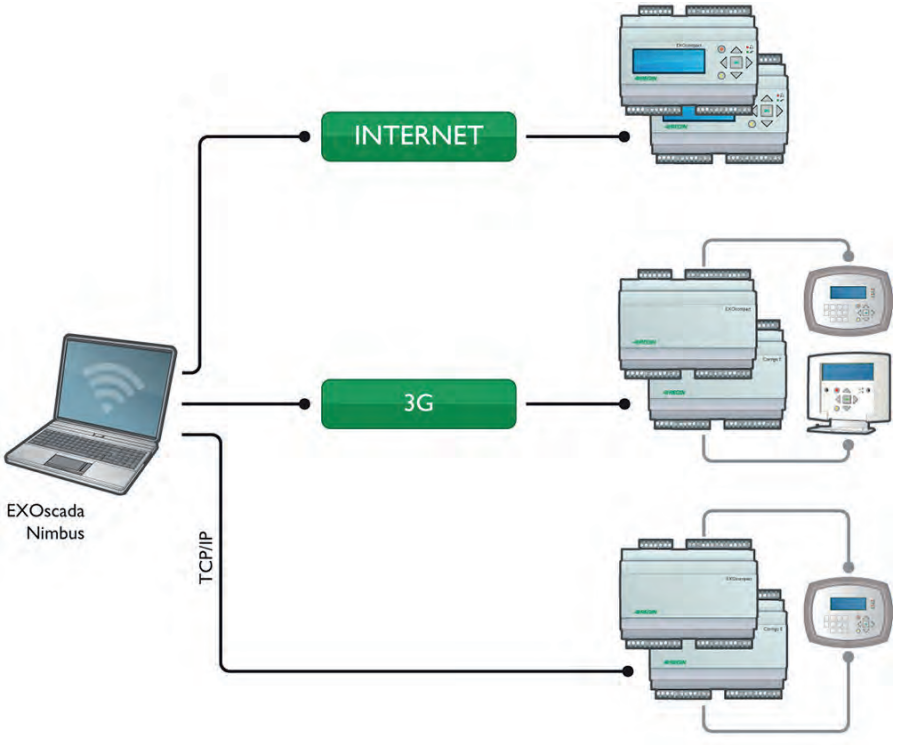
The EXOcompact controllers are perfect for applications, e.g. zone control, control of heating and air handling units, as well as for system integration or as stand-alone units. They have a powerful processor and are available in three sizes with 8, 15 or 28 I/O:s, with or without display.

Programming takes place in EXOdesigner. The controllers communicate via EXOline or Modbus via RS485 or alternatively via TCP/IP. M-Bus is also available as an option. EXOcompact is available with one, two or three communication ports, enabling easy input/output expansion, connection of electricity/energy meters or communication with other controllers.

- ✓ Freely programmable with fixed I/O configuration
- ✓ For control of heating centrals, air handling units etc.
- ✓ 8, 15 or 28 I/O:s, with or without display
- ✓ Digital outputs via Mosfet with 2 A, 24 V AC/DC
- ✓ Powerful processor
- ✓ Optional DC supply voltage
- ✓ Possible to expand the number of I/O:s using two ports and expansion units based on EXOcompact without display
- ✓ One, two or three communication ports
- ✓ Programming is performed in EXOdesigner
- ✓ TCP/IP optional
- ✓ Communication via RS485 (EXOline or Modbus), TCP (EXOline-TCP, BACnet/IP), M-Bus (internally for M-3 models or via external X1176 unit)
- ✓ Complement to EXOflex in large automation systems

Technical data	
Supply voltage	24 V AC ±15%, 50…60 Hz or 20…36 V DC
Power consumption	4 VA without load, no display
BTL approval	EXOreal version 3.1-1-02 or later
+C output	+ 24 V DC, 0.15 A, short-circuit proof
Operating system	EXOreal C
Battery backup	Memory and real-time clock, at least 5 years
Ambient temperature	0…50°C
Storage temperature	-20…+70°C
Ambient humidity	Max. 95% RH
Display	Backlit, LCD, 4 rows of 20 characters, international character set
Dimensions (W×H×D)	149×121×60mm
Casing	Polycarbonate, PC
Protection class	IP20
Mounting	DIN-rail or cabinet
Number of modules	8.5
Communication ports	
TCP/IP	EXOline, Modbus, BACnet/IP
RS485	EXOline, Modbus
M-Bus ports	Internally for M-3 models or via external X1176 unit
Inputs	
Analogue inputs (AI)	0(4)…20 mA, 0…10 V DC, 0…200 mV, PT1000, Ni1000 DIN, Ni1000 LG, 800…1600 Ω, 0…4000 Ω, 12-bit A/D
Digital inputs (DI)	Floating switch, 24 V DC, configurable for pulse input
Universal inputs (UI)	AI or DI (see above)
Outputs	
Analogue outputs (AO)	0...10 V DC, 5 mA, 12-bit D/A, short-circuit proof
Digital outputs (DO)	Mosfet 24 V AC/DC, 2 A. Totally max. 8 A.
24 V DC output	0.15 A, short-circuit proof


BACnet
M-Bus
Modbus
EXOline


INTERNET
3G
EXOscada
Nimbus
TCP/IP

Controller with display

Article	AI	DI	UI	AO	DO	RS485 ports	Notes
C81D-3	2	3	-	1	2	1	
C151D-3	4	4	-	3	4	1	
C152D-3	4	4	-	3	4	2	
C281D-3	4	8	4	5	7	1	
C282D-3	4	8	4	5	7	2	

Controller without display

Article	AI	DI	UI	AO	DO	RS485 ports	Notes
C81-3	2	3	-	1	2	1	
C151-3	4	4	-	3	4	1	
C152-3	4	4	-	3	4	2	
C281-3	4	8	4	5	7	1	
C282-3	4	8	4	5	7	2	

Controller with TCP/IP communication, with display

Article	AI	DI	UI	AO	DO	RS485 ports	TCP/IP ports	M-Bus ports	Notes
C152DT-3	4	4	-	3	4	1	1	-	
C282DT-3	4	8	4	5	7	1	1	-	
C283DT-3	4	8	4	5	7	2	1	-	
C283DTM-3	4	8	4	5	7	1	1	1	

Controller with TCP/IP communication, without display

Article	AI	DI	UI	AO	DO	RS485 ports	TCP/IP ports	M-Bus ports	Notes
C152T-3	4	4	-	3	4	1	1	-	
C282T-3	4	8	4	5	7	1	1	-	
C283T-3	4	8	4	5	7	2	1	-	
C283TM-3	4	8	4	5	7	1	1	1	

EXOdos

Freely programmable controllers

Small, compact controller with different types of communication and with or without built-in display. It can be used either as a stand-alone unit or as part of a larger system.

The EXOdos series of controllers are available with 1 or 2 communication ports, and with or without M-Bus.

They are fully compatible with all other products in the EXO range. The controllers are freely programmable using the high-level EXO language EXOL®. Programming takes place in EXOdesigner, the same environment used for other EXO controllers.

EXOdos is primarily intended for use in installations with a limited number of I/O:s, placing a high importance on a freely programmable, compact controller providing both communication capabilities and high performance. EXOdos can be used either together with other EXO products as part of a larger automation system or as a stand-alone unit.

In large automation systems, EXOdos makes an excellent complement to EXOflex, being ideally suited for localised tasks such as control of heating and ventilation applications.

Technical data	
Supply voltage	230 V AC +10%/-6%
Dimensions (W×H×D)	146.7×97.6×76.0mm
Mounting	In cabinet door, on DIN-rail or on wall, alt. over a device box
Protection class	IP20 , IP40 when mounted in cabinet door
Display	4 rows of 20 characters with backlight
Operating system	EXOrealC
Battery backup	Memory and real-time clock, at least 5 years
Ambient temperature	0…+50°C
Ambient humidity	Max. 95% RH
Storage temperature	-20…+70°C
Communication ports	
TCP/IP	EXOline, Modbus, BACnet/IP
RS485	EXOline, Modbus
M-Bus ports	Internally for M-1 models or via external X1176 unit
Inputs	
Analogue inputs (AI)	PT1000 (-50…+150°C)
Digital inputs (DI)	Potential-free closure
Outputs	
Analogue outputs (AO)	0…10 V DC (8 bit D/A short-circuit protected)
Digital outputs (DO)	7x relay, 230 V AC, 1 A inductive load, max. 7 A total
Universal analogue I/O (UA)	AI or AO

Article	Display	AI	DI	UA	DO	RS485 ports	TCP/IP ports	M-Bus ports	Power consumption	Notes
XF192DT-1	X	8	2	2	7	1	1	-	10 VA	
XF192T-1	-	8	2	2	7	1	1	-	9 VA	
XF193DTM-1	X	8	2	2	7	1	1	1	10.5 VA	
XF193TM-1	-	8	2	2	7	1	1	1	9.5 VA	

EXOflex – FREELY PROGRAMMABLE CONTROLLERS

Freely programmable controllers for building automation without limits

The EXOflex controllers are primarily intended for use in systems with a large number of I/O:s and high demands on communication and adaptability. EXOflex consists of processor and expansion housings available in one to four sections. Programming is made using EXOdesigner or in free EXOL code.

The controller is tailored to its application by a selection of PIFA cards (Peripheral Interface Adapters). The cards are easily slotted into place in the housing and all connection ports are then accessible externally, offering easy connection of sensors, actuators, transmitters etc. The PIFA cards enable communication via protocols and field buses such as TCP/IP, KNX/EIB, Modbus, SIOX and M-Bus. EXOflex also supports communication via radio, telephone lines, GSM, cable, satellite, etc.

- ✓ For large buildings and integration of many buildings/installations
- ✓ For systems with a large number of I/O:s (cost-efficient for more than 75 I/O:s)
- ✓ Easy to expand capacity and adding functions
- ✓ Communication via EXOline, TCP/IP, KNX, Modbus, SIOX, M-Bus
- ✓ Large number of PIFA cards for different applications

EH20-S

Technical data*	
Operating system	EXOreal
Power supply	24 V DC
Operating temperature	0…50°C
Battery backup	Memory and real-time clock, at least 5 years
Dimensions (W×H×D mm)	1-section housing, 117×160×137 (EH10-S, EH11-S) 2-section housing, 229×160×137 (EH20-S, EH21-S) 3-section housing, 341×160×137 (EH30-S, EH31-S) 4-section housing, 453×160×137 (EH40-S, EH41-S)
Mounting	35 mm DIN-rail, cabinet or wall
Protection class	IP20
Inputs	
Analogue inputs (AI)	0(4)…20 mA, 0…10 V DC, 0…200 mV, 0…2000 Ω, PT1000, PT100, DIN Ni1000, LGNi1000
Digital inputs (DI)	Floating switch, 24 V DC, configurable for pulse input
Outputs	
Analogue outputs (AO)	0…10 V DC
Digital outputs, communication (DO)	24 V DC, configurable for pulse output
Available interfaces	RS232/RS485 (EXOline, Modbus, etc.) TCP/IP, LON, KNX, SIOX, M-Bus. Other connections depend on the PIFA units installed.

Modbus

EXOline

M-Bus

*The input and output data depends on the choice of PIFA units.

PROCESSOR HOUSINGS

EH11-S

Processor housing, 1 section

Processor housing with room for the Main Power PIFA and one additional PIFA unit.

Article	Description	Notes
EH11-S	Processor housing, 1 section	

EH21-S

Processor housing, 2 sections

Processor housing with room for the Main Power PIFA and three additional PIFA units.

Article	Description	Notes
EH21-S	Processor housing, 2 sections	

EH31-S

Processor housing, 3 sections

Processor housing with room for the Main Power PIFA and five additional PIFA units.

Article	Description	Notes
EH31-S	Processor housing, 3 sections	

EH41-S

Processor housing, 4 sections

Processor housing with room for the Main Power PIFA and seven additional PIFA units.

Article	Description	Notes
EH41-S	Processor housing, 4 sections	

EXPANSION HOUSINGS

EH10-S

Expansion housing, 1 section

Expansion housing with room for the Power PIFA for Extender and one additional PIFA unit.
The expansion housing connects to the main processor via the EFX channel (115 200 bps).

Article	Description	Notes
EH10-S	Expansion housing, 1 section	

EH20-S

Expansion housing, 2 sections

Expansion housing with room for the Power PIFA for Extender and three additional PIFA units.
The expansion housing connects to the main processor via the EFX channel (115 200 bps).

Article	Description	Notes
EH20-S	Expansion housing, 2 sections	

EH30-S

Expansion housing, 3 sections

Expansion housing with room for the Power PIFA for Extender and five additional PIFA units.
The expansion housing connects to the main processor via the EFX channel (115 200 bps).

Article	Description	Notes
EH30-S	Expansion housing, 3 sections	

EH40-S

Expansion housing, 4 sections

Expansion housing with room for the Power PIFA for Extender and seven additional PIFA units.
The expansion housing connects to the main processor via the EFX channel (115 200 bps).

Article	Description	Notes
EH40-S	Expansion housing, 4 sections	

PIFA UNITS

EP1011

Main Power PIFA

Has a socket for the EFX channel and battery backup for the EXOL-processors. LEDs indicating battery error, power supply and communication.

Article	Description	Notes
EP1011	Main Power PIFA	

Accessories

Article	Description	Notes
X9035	Battery charger/UPS	

EP1004

Power PIFA for Extender

Power supply for EXOflex expansion housings. Has a socket for the EFX channel.

Article	Description	Notes
EP1004	Power PIFA for Extender	

EP2032

32 DI Multifunction PIFA

Multifunction PIFA with 32 digital inputs for mounting in EXOflex housings.

Technical data	
Inputs/outputs (I/O:s)	28 DI with standard functionality (filtering, on/off delay, operating-time measurement). 4 DI with advanced functionality (pulse counting, frequency measurement, etc.) in addition to the standard functions.
Digital inputs (DI)	Signal levels 0 V/24 V DC or floating switch

Article	Description	Notes
EP2032	32 DI Multifunction PIFA	

EP3016

16 DO Multifunction PIFA

Multifunction PIFA with 16 digital outputs for mounting in EXOflex housings.

Technical data	
Inputs/outputs (I/O:s)	16 DO with standard functionality (on/off delay, pulse-width modulation, frequency generation, settable offline action)
Digital outputs (DO)	Signal levels 0 V/24 V DC current source, max. 0.5 A per output and max. 3.5 A simultaneously. Short-circuit protected thermal protection with software-based error handling (short-circuit protected output).

Article	Description	Notes
EP3016	16 DO Multifunction PIFA	

EP4024

16 DI / 8 DO Mixed Multifunction PIFA

Mixed Multifunction PIFA with 16 digital inputs and 8 digital outputs for mounting in EXOflex housings.

Technical data	
Inputs/outputs (I/O:s)	12 DI with standard functionality (filtering, on/off delay, operating time-measurement). 4 DI with advanced functionality (pulse counting, frequency measurement, etc.) in addition to standard functions. 8 DO with standard functionality (on/off delay, pulse-width modulation, frequency generation, settable offline action).
Digital inputs (DI)	Signal levels 0 V/24 V DC or floating switch
Digital outputs (DO)	Signal levels 0 V/24 V DC current source, max. 0.5 A per output and max. 2 A simultaneously. Short-circuit protected thermal protection with software-based error handling (short-circuit protected output).

Article	Description	Notes
EP4024	16 DI / 8 DO Mixed Multifunction PIFA	

EP5012

12 AI Multisensor PIFA, 12-bit

Multisensor PIFA with 12 analogue inputs for mounting in EXOflex housings.

Technical data	
Inputs/outputs (I/O:s)	12 AI with possibility to set the measuring ranges individually
Analogue inputs (AI)	0...20 mA, 0...10 V DC, 0...200 mV, PT100, PT1000, Ni1000 DIN, LG-Ni1000, resistance 0...2000 Ω, etc. 12-bit A/D converter.

Article	Description	Notes
EP5012	12 AI Multisensor PIFA	

EP5112

12 AI Multisensor PIFA, 16-bit

Multisensor PIFA with 12 analogue inputs for mounting in EXOflex housings.

Technical data	
Inputs/outputs (I/O:s)	12 AI with possibility to set the measuring ranges individually
Analogue inputs (AI)	0...20 mA, 0...10 V DC, 0...200 mV, PT100, PT1000, Ni1000 DIN, Ni1000 LG, resistance 0...2000 Ω, etc. 16-bit A/D converter.

Article	Description	Notes
EP5112	12 AI Multisensor PIFA	

EP6012

12 AO Voltage Multifunction PIFA

Voltage Multifunction PIFA with 12 analogue outputs for mounting in EXOflex housings.

Technical data	
Inputs/outputs (I/O:s)	12 AO
Analogue outputs (AO)	0...10 V DC, max. 20 mA, 11-bit resolution, scaling factor and offset, ramp generation, settable offline and power-up actions.

Article	Description	Notes
EP6012	12 AO Voltage Multifunction PIFA	

EP7218

12 AI / 6 AO Mixed Multifunction PIFA

Mixed Multifunction PIFA with 12 analogue inputs and 6 analogue outputs for mounting in EXOflex housings.

Technical data	
Inputs/outputs (I/O:s)	12 AI for individually settable measuring ranges. 6 AO.
Analogue inputs (AI)	0...10 V DC, 0...200 mV, PT100, PT1000, Ni1000 DIN, LG-Ni1000, resistance 0...2000 Ω, etc. Accuracy: 0.1% of the measuring range, 12-bit A/D converter.
Analogue outputs (AO)	0...10 V DC, max. 20 mA, 11-bit resolution, scaling factor and offset, ramp generation, settable offline and power-up actions.

Article	Description	Notes
EP7218	12 AI / 6 AO Mixed Multifunction PIFA	

EP7408

8 Mixed I/O and Serial PIFA (2 DI / 4 AI / 2 AO)

8 Mixed I/O and Serial PIFA with 2 digital inputs, 4 analogue inputs and 2 analogue outputs for mounting in EXOflex housings.

Technical data	
Inputs/outputs (I/O:s)	2 DI with standard functionality (filtering, on/off delay, operating time-measurement). 4 AI with possibility to set the measuring ranges individually. 2 AO.
Communication	1 serial port (Port 3), switchable between RS232, RS485 (EXOline) and hIEXOline. Can be complemented with option cards for modem, KNX, SIOX, etc. Can also be supplemented with an external M-Bus/SIOX connection.
Digital inputs (DI)	Signal levels 0 V/24 V DC or floating switch
Analogue inputs (AI)	0...20 mA, 0...10 V, 0...200 mV, PT100, PT1000, Ni1000 DIN, LG-Ni1000, resistance 0...2000 Ω, etc. Accuracy: 0.1% of the measuring range, 12-bit A/D converter with digital filter, scaling factor and offset, monitoring of the measuring range.
Analogue outputs (AO)	0...10 V DC, max. 20 mA, 11-bit resolution, scaling factor and offset, ramp generation, settable offline and power-up actions.

Article	Description	Notes
EP7408	8 Mixed I/O and Serial PIFA (2 DI / 4 AI / 2 AO)	

EP7416

16 Mixed I/O PIFA (6 DI / 2 DO / 4 AI / 4 AO)

Mixed I/O PIFA with 6 digital inputs, 2 digital outputs, 4 analogue inputs and 4 analogue outputs for mounting in EXOflex housings.

Technical data	
Inputs/outputs (I/O:s)	2 DI with standard functionality (filtering, on/off delay, operating time-measurement). 4 DI with advanced functionality (pulse counting, frequency measurement, etc.) in addition to the standard functions. 2 DO with standard functionality (on/off delay, pulse-width modulation, frequency generation, settable offline action). 4 AI with possibility to set the measuring ranges individually. 4 AO.
Digital inputs (DI)	Signal levels 0 V/24 V DC or floating switch
Digital outputs (DO)	Signal levels 0 V/24 V DC current source, max. 0.5 A per output and max. 0.8 A simultaneously. Short-circuit protected thermal protection with software-based error handling (short-circuit protected output).
Analogue inputs (AI)	0...20 mA, 0...10 V, 0...200 mV, PT100, PT1000, Ni1000 DIN, LG-Ni1000, resistance 0...2000 Ω, etc. Accuracy: 0.1% of the measuring range, 12-bit A/D converter with digital filter, scaling factor and offset, monitoring of the measuring range.
Analogue outputs (AO)	0...10 V DC, max. 20 mA, 11-bit resolution, scaling factor and offset, ramp generation, settable offline and power-up actions.

Article	Description	Notes
EP7416	16 Mixed I/O PIFA (6 DI / 2 DO / 4 AI / 4 AO)	

EP8101

Basic Serial PIFA

Communication PIFA with one serial port. Can be complemented with option cards for modem, KNX, SIOX, etc. Can also be supplemented with an external M-Bus/SIOX connection.

Article	Description	Notes
EP8101	Basic Serial PIFA	

EP8102

Dual Basic Serial PIFA

Communication PIFA with two serial ports. Can be complemented with option cards for modem, KNX, SIOX, etc. Can also be supplemented with an external M-Bus/SIOX connection.

Article	Description	Notes
EP8102	Dual Basic Serial PIFA	

EP8282

TCP/IP PIFA

Communication PIFA with Ethernet 10Base-T/100Base auto-negotiation for TCP/IP communication. Occupies one serial port (Port 3). Supports DHCP and DNS.

Article	Description	Notes
EP8282	TCP/IP PIFA	

EP0000

Slot cover

For covering empty PIFA slots in an EXOflex housing.

Article	Description	Notes
EP0000	Slot cover	

Card holder

Article	Description	Notes
EH-CARDHOLDER	Card holders for EXOflex housings	

COMMUNICATION OPTIONS

X9017

Option KNX

X9017 is a KNX communication card for connection to a KNX network via a KNX interface. The KNX interface is ordered by an external supplier. X9017 is intended for internal mounting in an EXOflex house, occupying Port 2 or Port 3.

Requires that EP7408, EP8101 or EP8102 is installed.

Article	Description	Notes
X9017	Option KNX	

EX8282

TCP/IP Gateway

Communication gateway for TCP/IP communication, intended for connection of one or several controllers with serial communication to a computer network.

Technical data	
Power supply	18...30 V AC or DC, 5 VA (connected to a network)
Internal serial port	RS232 or RS485, 9600 bps
Ethernet port	10 Base-T/100Base auto-negotiation
Max. cable length	100m (min. CAT 5)m

Article	Description	Notes
EX8282	TCP/IP Gateway	

X9035

Battery charger/UPS

Battery charger for EXOflex. Charges two external 12 V batteries connected in series (sealed lead cells) for UPS functionality. Batteries are not included.

Requires that EP1011 is installed.

Article	Description	Notes
X9035	Battery charger/UPS	

EK20

Communication cable

Communication cables for RS232 connection between a computer and the EXOflex Main Power PIFA (9pol D-Sub female and RJ45 male).

Article	Cable length	Notes
EK20	2m	
EK22	5m	
EK24	10m	

I/O MODULES

IO-RU-7

IO-16AI

IO-4X4-M

Overview

Regin's I/O modules offer the possibility to expand the EXOflex, EXOcompact and EXOdos controllers. The I/O modules are available in models with 7, 10 or 16 in-/outputs.

Integration of the I/O modules into an EXO system is intended for advanced system integrators only, as integration of the I/O modules demands a deep knowledge of the EXO system. Up to 32 I/O modules can be connected but the limit is set by the system integrator and the application.

Article	AI	DI	UI	AO	DO	UO	LED	Switches	Total number of I/O:s	Notes
IO-RU-7	1	2 DI or CI	1	-	-	3	-	-	7	
IO-RU-10	1	2 DI or CI	1	-	4	2	-	-	10	
IO-16AI	16	-	-	-	-	-	-	-	16	
IO-16DI	-	16	-	-	-	-	X	-	16	
IO-16DO-M	-	-	-	-	16	-	X	X	16	
IO-8DO8AI-M	8	-	-	-	8	-	X	X	16	
IO-8DO8AO-M	-	-	-	8	8	-	X	X	16	
IO-4X4-M	4	4	-	4	4	-	X	X	16	

IO-RU-7

I/O module with 7 or 10 inputs/outputs

I/O module for expansion of Regin's programmable EXOflex, EXOcompact and EXOdos controllers.

Technical data	
Supply voltage	18…30 V AC, 50…60 Hz
Power consumption	2.5 VA
Ambient temperature	0…50°C
Storage temperature	-20…70°C
Ambient humidity	Max. 90% RH
Protection class	IP20
Communication	EXOline RS485
Communication speed	9600 bps
Built-in temperature sensor	NTC type, measuring range 0...50°C
Accuracy	±0.5°C at 15...30°C
Material, casing	Polycarbonate (PC)
Weight	110 g
Inputs	
Analogue inputs (AI)	PT1000, 0...50°C
Condensation input (CI)	Input for Regin's condensation detector KG-A/1
Digital inputs (DI)	Closing potential-free contact
Universal inputs (UI)	Analogue input (AI), PT1000 sensor, 0...100°C or digital input (DI)
Outputs	
Digital outputs (DO)	24 V AC, max. 0.5 A.
Universal outputs (UO)	Digital output (DO) 24 V AC, max. 2.0 A or analogue output (AO), 0...10 V DC

Article	AI	DI	UI	DO	UO	Total number of I/O:s	Notes
IO-RU-7	1	2 DI or CI	1	-	3	7	
IO-RU-10	1	2 DI or CI	1	4	2	10	

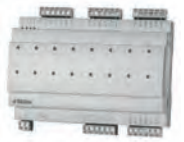
IO-16AI

I/O module with 16 analogue inputs

I/O module for expansion of Regin's programmable EXOflex, EXOcompact and EXOdos controllers.

Technical data	
Supply voltage	24 V AC ±15%, 50…60 Hz
Power consumption	Max. 3.5 VA
Communication	EXOline, CAN-Bus
Inputs	16 analogue, PT1000, microsensors, 0…10 kΩ, 0...10 V, 0(4)...20 mA
Mounting	DIN-rail or in a standard casing
Number of modules	8.5
Operating temperature	0…50°C
Dimensions (W×H×D)	148×123×59mm(incl. terminals)
Protection class	IP20

Article	Description	Notes
IO-16AI	Input module	



IO-16DI

I/O module with 16 digital inputs

I/O module for expansion of Regin's programmable EXOflex, EXOcompact and EXOdos controllers. Terminal status indicated by LEDs.

Technical data	
Supply voltage	24 V AC ±15%, 50…60 Hz
Power consumption	Max. 3.5 VA
Communication	EXOline, CAN-Bus
Inputs	16 digital, potential-free closing contact between +C and DI, 24 V DC, can be configured as a pulse input
Mounting	DIN-rail or in a standard casing
Number of modules	8.5
Operating temperature	0…50°C
Dimensions (W×H×D)	148×123×60mm(incl. terminals)
Protection class	IP20

Article	Description	Notes
IO-16DI	Input module	

IO-16DO-M

I/O module with 16 digital outputs

I/O module for expansion of Regin's programmable EXOflex, EXOcompact and EXOdos controllers. The outputs have manual switches which can be set to manual or auto position. Terminal status indicated by LEDs.

Technical data	
Supply voltage	24 V AC ±15%, 50…60 Hz
Power consumption	Max. 3.5 VA
Communication	EXOline, CAN-Bus
Outputs	16 digital, potential-free relay (closing), 24 / 230 V AC (not mixable), max. 1 A inductive load or 4 A resistive load
Mounting	DIN-rail or in a standard casing
Number of modules	8.5
Operating temperature	0…50°C
Dimensions (W×H×D)	148×123×74mm(incl. terminals)
Protection class	IP20

Article	Description	Notes
IO-16DO-M	Output module	

IO-8DO8AI-M

I/O module with 8 digital outputs and 8 analogue inputs

I/O module for expansion of Regin's programmable EXOflex, EXOcompact and EXOdos controllers. The outputs have manual switches which can be set to manual or auto position. Terminal status indicated by LEDs.

Technical data	
Supply voltage	24 V AC ±15%, 50…60 Hz
Power consumption	Max. 3.5 VA
Communication	EXOline, CAN-Bus
Inputs	8 analogue, PT1000, microsensors, 0…10 kΩ, 0...10 V, 0(4)...20 mA
Outputs	8 digital, potential-free relay (closing), 24 / 230 V AC (not mixable), max. 1 A inductive load or 4 A resistive load
Mounting	DIN-rail or in a standard casing
Number of modules	8.5
Operating temperature	0…50°C
Dimensions (W×H×D)	148×123×74mm(incl. terminals)
Protection class	IP20

Article	Description	Notes
IO-8DO8AI-M	Input and output module	

IO-8DO8AO-M

I/O module with 8 digital and 8 analogue outputs

I/O module for expansion of Regin's programmable EXOflex, EXOcompact and EXOdos controllers. The outputs have manual switches which can be set to manual or auto position. Terminal status indicated by LEDs.

Technical data	
Supply voltage	24 V AC ±15%, 50…60 Hz
Power consumption	Max. 3.5 VA
Communication	EXOline, CAN-Bus
Outputs	8 digital, potential-free relay (closing), 24 / 230 V AC (not mixable), max. 1 A inductive load or 4 A resistive load. 8 analogue, 0...10 V DC, 5 mA, 8 bit D/A, short-circuit proof.
Mounting	DIN-rail or in a standard casing
Number of modules	8.5
Operating temperature	0...50°C
Dimensions (W×H×D)	148×123×74mm(incl. terminals)
Protection class	IP20

Article	Description	Notes
IO-8DO8AO-M	Output module	

IO-4X4-M

I/O module with 4 digital inputs, 4 analogue inputs, 4 digital outputs and 4 analogue outputs

I/O module for expansion of Regin's programmable EXOflex, EXOcompact and EXOdos controllers. The outputs have manual switches which can be set to manual or auto position. Terminal status indicated by LEDs.

Technical data	
Supply voltage	24 V AC ±15%, 50…60 Hz
Power consumption	Max. 3.5 VA
Communication	EXOline, CAN-Bus
Inputs	4 digital, potential-free closing contact between +C and DI, 24 V DC, can be configured as a pulse input. 4 analogue, PT1000, microsensors, 0…10 kΩ, 0...10 V, 0(4)...20 mA.
Outputs	4 digital, potential-free relay (closing), 24 / 230 V AC (not mixable), max. 1 A inductive load or 4 A resistive load. 4 analogue, 0...10 V DC, 5 mA, 8 bit D/A, short-circuit proof.
Mounting	DIN-rail or in a standard casing
Number of modules	8.5
Operating temperature	0...50°C
Dimensions (W×H×D)	148×123×74mm(incl. terminals)
Protection class	IP20

Article	Description	Notes
IO-4X4-M	Input and output module	

EXO ACCESSORIES

NEWS!

3G/4G router

3G/4G router between TCP/IP connected controllers and a wireless, mobile 3G/4G/GPRS network.

Technical data	
Connections	RJ45 (3 LAN, 1 WAN), WiFi
Communication	TCP/IP
Mobile network	GSM/GPRS/EDGE
WiFi	IEEE 802,11 b/g/n WiFi standard
Software	Open VPN, IPsec, GRE, L2TP, PPTP, Dynamic DNS and DHCP server
SIM card	2
Dimensions (W×H×D mm)	106x80x46
Weight	250 g
Power supply	9 - 30 V DC. Wall adapter included.
Power consumption	< 7 W
Operating temperature	-40 to +75°C

Article	Description	Notes
M3G900	3G router	
M4G950	4G router	

Accessories

Article	Description	Notes
MXGDIN	DIN-rail kit for M3G900 and M4G950	

Displays for panel mounting

Panel computers intended for mounting in, for example, a cabinet door. They can easily be connected to Regin's EXOscada system and to controllers with integrated web server.

Technical data	
CPU type	Intel®Atom™ E3845 (2M Cache, 1.91 GHz)
RAM	4 GB, DDR3L on-board
Supply voltage	Power supply unit for 12 V DC (2.5 A) included in the delivery
Protection class	IP65
Mounting	Cabinet mounting (screws included), VESA 75 / 100 (ordered separately)
Ports	4×COM ports (RS232), 4×USB ports, 2×LAN ports (Intel GbE)

Article	Monitor size	Resolution	Description	Notes
DP102N	10.2”	1024×600	Display for panel mounting	
DP156N	15.6”	1366×768	Display for panel mounting	
DP102N-BSD	10.2”	1024×600	Display for panel mounting, EXOscada is pre-installed (EXOscada Base with max. 200 I/O:s)	
DP156N-BSD	15.6”	1366×768	Display for panel mounting, EXOscada is pre-installed (EXOscada Base with max. 200 I/O:s)	

External display unit for Corrigo, Exigo, EXOclever, EXOcompact, EXOdos and EXOflex.

ED9200 is an external, independent display and configuration unit for EXOflex, Corrigo, EXOcompact, Exigo, EXOdos or EXOclever. EXOdos, Exigo, EXOcompact C...-3 and Corrigo E...-3 supports use of ED9200 and an internal display at the same time. Earlier versions support either only an external or an internal display.

When connected to an EXOflex system, it acts as a free-standing PIFA which can be connected to a processor housing via the EFX channel. The display can be connected in two ways, either temporarily via a quick cable connection in the front panel of the Power PIFA, or permanently via screw connectors. ED9200 can be connected to an EXOflex system configured for EP9040 (LOT).

Technical data	
Power supply	With Corrigo, Exigo, EXOdos, EXOclever or EXOcompact: Internal supply, via communication cable With EXOflex: 24 V DC, via the EFX channel
Cabling	With Corrigo E...-S or EXOcompact C...-S: EK12 (3 m), EK14 (10 m) With Corrigo E...-3, EXOcompact C...-3, Exigo, EXOdos or EXOclever: EDSP-K3 (3 m), EDSP-K10 (10 m) or self-made With EXOflex: Cat 5
Cable type when self-made	With Corrigo, Exigo, EXOdos, EXOclever or EXOcompact: 26AWG With EXOflex: Cat 5
Quick connection when self-made	With Corrigo E...-3, EXOcompact C...-3, Exigo, EXOdos or EXOclever: 4P4C With EXOflex: USB type A male connector
Tolerance	With Corrigo, Exigo, EXOdos, EXOclever or EXOcompact: N/A With EXOflex: 18...30 V DC
Power consumption	With Corrigo, Exigo, EXOdos, EXOclever or EXOcompact: N/A With EXOflex: 50 mA
Communication port	With Corrigo, Exigo, EXOdos, EXOclever or EXOcompact: Serial, special With EXOflex: The EFX channel
Max. cable length	With Corrigo E…-S or EXOcompact C…-S: 10 m With Corrigo E...-3, EXOcompact C...-3, Exigo, EXOdos or EXOclever: 100 m With EXOflex: 200m
Software requirements	With Corrigo, Exigo, EXOdos, EXOclever or EXOcompact: EXOreal 2.8-1-29 or later With EXOflex: EXOreal 2.8-1-26 or later

Article	Protection class	Notes
ED9200	IP41	
ED9200IP65	IP65	

Accessories

Article	Description	Cable length	Notes
EK10	Cable for connecting ED9200 to an EXOflex system	1.5m	
EK10-3	Cable for connecting ED9200 to an EXOflex system	3m	
EK12	Cable for connecting ED9200 to a Corrigo E...-S, EXOcompact C...-S, Exigo, EXOdos or EXOclever	3m	
EK14	Cable for connecting ED9200 to a Corrigo E...-S EXOcompact C...-S, Exigo, EXOdos or EXOclever	10m	
EDSP-K3	3m cable for connecting E3-DSP or ED9200 to a Corrigo E...-3, EXOcompact C...-3, Exigo, EXOdos or EXOclever	3m	
EDSP-K10	10m cable for connecting E3-DSP or ED9200 to a Corrigo E...-3, EXOcompact C...-3, Exigo, EXOdos or EXOclever.	10m	

External display unit for EXOcompact C...-3, Corrigo E...-3, EXOdos and Exigo

Display for operation of a EXOcompact C...-3, Corrigo E...-3, EXOdos or Exigo. E3-DSP can be connected to controllers with or without a built-in display. The external display and the built-in display can be used simultaneously.

Technical data	
Protection class	IP30
Connection cable	3 m, 10 m or user-supplied cable, max. 100 m

Article	Description	Notes
E3-DSP	External display	

Cable must be ordered separately.

Accessories

Article	Description	Notes
EDSP-K3	3 m cable for connecting E3-DSP or ED9200 to a Corrigo E...-3, EXOcompact C...-3, Exigo, EXOdos or EXOclever	
EDSP-K10	10 m cable for connecting E3-DSP or ED9200 to a Corrigo E...-3, EXOcompact C...-3, Exigo, EXOdos or EXOclever	

FMCE

Front mounting kit

Mounting kit for easier mounting of controllers in a control panel or cabinet door.

Technical data	
Protection class	IP40

Article	Description	Notes
FMCE	Front mounting kit, room for one EXOcompact/Corrigo unit	

PLTCE

Plug-in terminal blocks for controllers

A set of angled plug-in terminal blocks for simple wiring of controllers when using the front mounting kits. The terminal blocks enable easy access to the clamping screws even after cabinet mounting.

Article	Description	Notes
PLTCE	Plug-in terminal blocks for EXOcompact, Optigo and Corrigo	
PLT-E8	Set of plug-in terminals for E8 models	
PLT-E15	Set of plug-in terminals for E15 models	
PLT-E28	Set of plug-in terminals for E28 models	

X1176

Connection unit M-Bus/SIOX

External interface converter for connection of meters to processor controllers. X1176 is connected to controllers with RS232, RS485 (EXOline) and hlEXOline. Meters are connected to X1176 via SIOX or M-Bus. Powered by 24 V DC or AC. IP65-classed polycarbonate casing.

Article	Description	Notes
X1176	Connection unit M-Bus/SIOX	

PC-cable for EXOclever, EXOflex, EXOcompact, Corrigo, Exigo and EXOdos

Cables for connecting EXOclever, EXOflex, EXOcompact, Exigo or EXOdos to RS232 or USB standard.

Article	Description	Notes
E-CABLE2-USB	Cable for USB connection	

Battery

Article	Description	Notes
BATTERY-4289	Battery for EP1011, EXOcompact, Corrigo	
BATTERY-5518	Battery for 1304/1305	
BATTERY-5702	Battery for 5540	

E-CASE-
E283DW-24

EXOcompact demo kit

Complete kit for testing the EXO system, containing an EXOcompact C283DT-3. Simply plug the

controller into a wall socket and connect it to a computer running the EXO software to make simulations, trigger alarms, view indications, etc.

Article	Description	Notes
E-CASE-C283DT-3-24	Complete kit for system evaluation	

EXOflex mounting kit

Four brackets for mounting an EXOflex controller on a backplate, as an alternative to DIN-rail mounting.

Article	Description	Notes
X204-0052:4	EXOflex mounting kit	

REPEAT485

Repeater

Repeater for connecting multiple units or for lengthening a cable. REPEAT485 is suitable in Regio systems since it provides galvanic isolation for RC controllers during communication.

Article	Description	Notes
REPEAT485	Repeater, RS485	

CONV232-485

RS232 to RS485 converter

RS232 to RS485 converter. Can be used together with a PC to convert the serial com port into RS485 when using EXOline.

Article	Description	Notes
CONV232-485	RS232 to RS485 converter	

X1171A

EXOline to hlEXOline converter

RS485 EXOline to hlEXOline converters. Can be used for communication over long distances or unshielded signal cables.

Article	Description	Notes
X1171A	EXOline to hlEXOline converter	

5540PCB

Replacement unit for 5540 controllers

EXOflex for replacement of a 5540 controller using existing wiring.

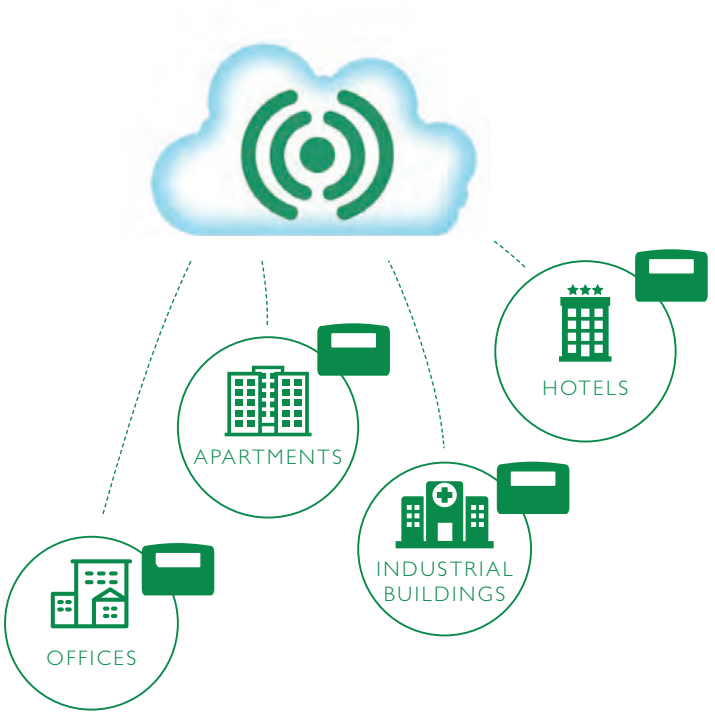
Technical data	
Power supply	24 V DC
Accuracy	+ 1% (0...20 mA)
Shunt resistors AI	10 Ohm (0...20 mA)
Dimensions (W×H×D)	5540, original: 268×115×118mm/ 5540, replacement: 258×160×160mm
Mounting	DIN-rail (TS35)

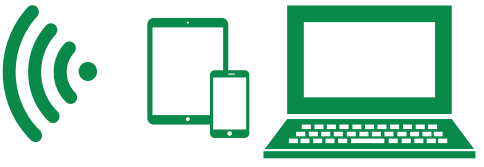
Article	Description	Notes
5540PCB	Replacement unit for 5540 controllers	

2

CONTROLLERS FOR DIN-RAIL MOUNTING

IOT GIVES YOU FULL CONTROL OVER YOUR PROPERTIES





THIS IS CLOUDigo:

- ✓ Let the cloud do the work and visualise your plant for you
- ✓ Check status and configure online
- ✓ Ready-Steady-Go installation of the controllers
- ✓ No programming necessary
- ✓ Work independently from IT support and firewalls

CONTROLLERS WITH TCP/IP

CLOUDigo

READY STEADY GO

CLOUDigo – The easiest way to complete control of your installations

For the user who wants complete control of the buildings' indoor climate at all times, CLOUDigo is the tool of choice. Our web-based platform can always be reached both by you and your colleagues regardless of your physical location.

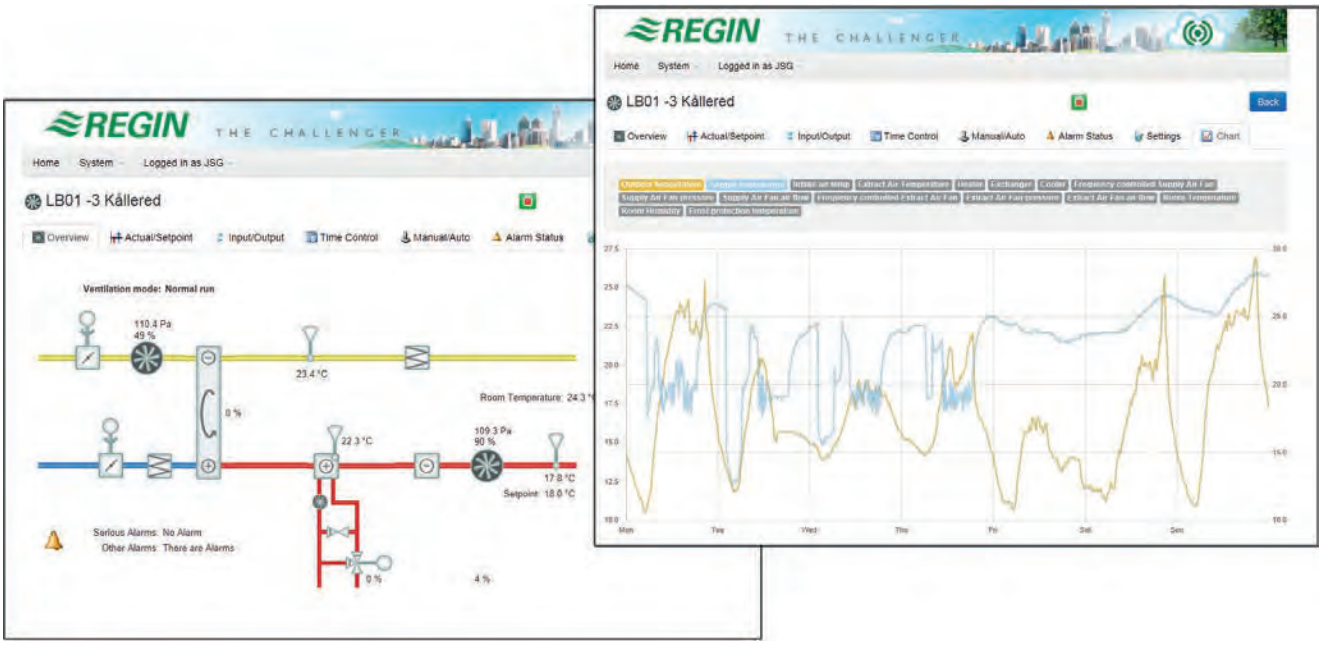
Complete control – anywhere and at any time

Follow your installations in real time with just a few simple clicks. Navigate between the settings and values in connected controllers. CLOUDigo offers excellent overview of all your controllers. All settings made in CLOUDigo take full effect in the controllers instantly. This makes CLOUDigo the natural choice for individuals working with multiple installations or installations distributed over a wide geographical area.

Short facts about CLOUDigo

- ✓ Gain control of the indoor climate of your buildings – anywhere and at any time.
- ✓ You get the ability to analyse data and act instantly. Quickly, easily and effectively.
- ✓ CLOUDigo handles historical data for complete control and overview.
- ✓ Work using any screen while still retaining full functionality.
- ✓ Getting started is easy. The installation of connected controllers is extremely easy and developed in accordance with our "Ready-Steady-Go" concept.
- ✓ Work using a platform that permits you to grow. You handle your installations – CLOUDigo handles the rest.

Article	Description	Notes
CLO-LIC	Cloud service for controller access	



CORRIGO

Corrigo comes preloaded with applications for control of ventilation as well as heating (except for models with built-in M-Bus which can only be used for heating applications).

Corrigo ventilation

Corrigo running a ventilation application is intended for control of air handling units with temperature control, 1- or 2-speed operation or, alternatively, pressure or air flow control of supply air fan and extract air fan, humidity control as well as other common functions in ventilation.

Corrigo heating

Corrigo running a heating application is intended for control of heating substations in buildings. The controller supports control of up to 3 heating circuits and 2 DHW circuits. Corrigo heating also has built-in boiler control for a total of 4 boilers. It can also controll a cooling circuit with dew-point control.

Technical data	
Supply voltage	24 V AC ± 15%, 50...60 Hz or 21...36 V DC
Power consumption	8 VA, 4 W (DC), model E...W-3: 12 VA, 6 W (DC)
Ambient temperature	0...50°C
Storage temperature	-40...+50°C
Ambient humidity	Max. 90% RH
Protection class	IP20
Connection	Disconnectable terminal strips, 4 mm^2
Memory backup	Built-in long life battery gives long backup time of all settings incl. real time
Display	Backlit LCD (blue), 4 rows of 20 characters
Mounting	DIN-rail or cabinet
Number of modules	8.5
Dimensions (W×H×D)	149×121×60mm
Number of languages	22
Communication ports	
TCP/IP	EXOline, Modbus, BACnet/IP, CLOUDigo, web server
RS485	EXOline, Modbus, BACnet MS/TP
M-Bus ports	M-Bus communication
Inputs	
Analogue inputs (AI)	For PT1000 sensors (accuracy ± 0.4°C) or 0...10 V DC (accuracy ± 0.15% of full output signal). 12 bit resolution in the A/D conversion.
Digital inputs (DI)	For potential-free contacts
Outputs	
Analogue outputs (AO)	0...10 V DC, 1 mA, short-circuit proof
Digital outputs (DO)	Mosfet outputs, 24 V AC or DC, 2 A continuous. Max. 8 A in total.

Controller with built-in web server and TCP/IP communication, with display

Article	AI	DI	UI	AO	DO	RS485 ports	TCP/IP ports	Notes
E151DW-3	4	4	-	3	4	-	1	
E152DW-3	4	4	-	3	4	1	1	
E281DW-3	4	8	4	5	7	-	1	
E282DW-3	4	8	4	5	7	1	1	
E283DW-3	4	8	4	5	7	2	1	

Controller with built-in web server and TCP/IP communication, without display

Article	AI	DI	UI	AO	DO	RS485 ports	TCP/IP ports	Notes
E151W-3	4	4	-	3	4	-	1	
E152W-3	4	4	-	3	4	1	1	
E281W-3	4	8	4	5	7	-	1	
E282W-3	4	8	4	5	7	1	1	
E283W-3	4	8	4	5	7	2	1	

Controller with built-in M-Bus, web server and TCP/IP communication, with display

Article	AI	DI	UI	AO	DO	RS485 ports	TCP/IP ports	M-Bus ports	Note
E152DWM-3	4	4	-	3	4	-	1	1	
E282DWM-3	4	8	4	5	7	-	1	1	
E283DWM-3	4	8	4	5	7	1	1	1	

These models can only be used for heating applications.

EXIGO


EXIGO

EXOline

Modbus

BACnet

The easy way to control heating installations in residential buildings

Exigo are controllers for heating and boiler control that make every step from installation to operation and maintenance easier than ever. Simply connect the controller, enter any settings as desired and start up. Exigo can be used either stand-alone or integrated into a network. It has built-in support for many different languages. Exigo is designed for mounting on a DIN-rail or in a cabinet door or above a device box. It can also be mounted directly on a wall.

Technical Data	
Supply voltage	230 V AC
Ambient temperature	0...50 °C
Storage temperature	-20...+70 °C
Ambient humidity	Max. 95% RH, non-condensing
Protection class	IP20 (IP40 when mounted in cabinet door)
Battery backup	Memory and real-time clock function
Display	4 rows of 20 characters each, backlit
Inputs	
Analogue inputs (AI)	PT1000 (-50…+150°C)
Digital inputs (DI)	Potential-free closure
Universal inputs (UI)	AI or DI
Outputs	
Universal analogue I/O (UA)	Configurable 0…10 V DC; 2…10 V DC; 10…0 V DC or 10…2 V DC output (12 bit short-circuit protected) or 0…10 V DC input
Digital outputs (DO)	7x relay, 230 V AC, 1 A load per relay
Communication ports	
TCP/IP	Web server, EXOline, Modbus, BACnet/IP, CLOUDigo
RS485	EXOline, Modbus, BACnet MS/TP
M-Bus ports	M-Bus communication

Article	Display	AI	DI	UA	DO	RS485 ports	TCP/IP ports	M-Bus ports	Power consumption	Note
HC190D-1	X	4	2	2	7	-	-	-	7.5 VA	
HC191D-1	X	4	2	2	7	1	-	-	7.5 VA	
HC192DW-1	X	4	2	2	7	1	1	-	10 VA	
HC193DWM-1	X	4	2	2	7	1	1	1	10.5 VA	

OPTIGO – PRE-PROGRAMMED, STAND-ALONE CONTROLLERS

READY STEADY GO

Controller for simple applications

A series of compact, economic and versatile stand-alone controllers. They are pre-configured and intended for smaller applications. The controllers are extremely easy to install, commission and control.

Technical data	
Power consumption	4 VA
Ambient temperature	0...50 °C
Storage temperature	-40…+50 °C
Ambient humidity	Max. 90 % RH
Mounting	DIN-rail
Number of modules	7
Protection class	IP20
Display	Backlit LCD, numeric/graphic, language-independent symbols
Dimensions (W×H×D)	123×123×60 mm
Clock	Week-based 24-hour clock models with 10 I/Os only)
Inputs	
Analogue inputs (AI)	PT1000
Digital inputs (DI)	Closing potential-free contact
Universal inputs (UI)	0...10 V DC or digital
Setpoint input (SPI)	For an external PT1000 setpoint device, e.g. TG-R4/PT1000
Outputs	
Analogue outputs (AO)	0...10 V DC, short-circuit protected
Digital outputs (DO)	OP10 and OP10-230 only. Triac 24 V AC, 0.5 A (3-point control or alarm output) and NO/NC 230 V AC, 5 A (fan start).

Inputs/Outputs (I/Os)

Article	AI	DI	UI	AO	DO	Total number of I/Os	Notes
OP5U	1	1	1	2	-	5	
OP10	2	2	1	2	3	10	
OP10-230	2	2	1	2	3	10	

Article	Supply voltage	Number of I/Os	Notes
OP5U	24 V AC ±15%	5	
OP10	24 V AC ±15%	10	
OP10-230	230 V AC	10	

DUCT CONTROLLERS

Duct controller, one 0...10 V DC output

Compact controller for mounting in ventilation ducts. The controller has a built-in sensor and setpoint control. An external setpoint potentiometer can be connected if required. Can be used to control either heating or cooling. P- or PI-control optional.

The controller has an input for change-over between heating and cooling. The change-over function can be activated by means of an external closing contact or a sensor mounted on the supply-water side of the heating/cooling unit.

Technical data	
Supply voltage	24 V AC, 2 VA
Output	One, 0...10 V DC
Setpoint	0...30 °C
P-band	0.5...50 K
I-time	2 min/20 min, selectable
NO/NC	Input for closing contact or sensor (0...30°C)
Mounting	Duct
Protection class	IP65

Article	Description	Notes
AL24A1K	Duct controller, one 0...10 V DC output	

ACCESSORIES FOR CORRIGO AND EXIGO

E3-DSP

ED9200

External display units for Corrigo and Exigo

Article	Cable length	Protection class	Compatible with	Notes
E3-DSP	Max. 100 m	IP30	Corrigo E...-3, EXOcompact C...-3, Exigo, EXOdos, EXOclever	
ED9200	Max. 10 m (EXOcompact C...-S), max. 100 m (Corrigo E...-3, EXOcompact C...-3, Exigo, EXOdos, EXOclever)	IP41	Corrigo, EXOcompact, Exigo, EXOdos, EXOclever	
ED9200IP65	Max. 10 m (EXOcompact C...-S), max. 100 m (Corrigo E...-3, EXOcompact C...-3, Exigo, EXOdos, EXOclever)	IP65	Corrigo, EXOcompact, Exigo, EXOdos, EXOclever	

Accessories

Article	Description	Notes
EDSP-K3	3m cable for connecting E3-DSP or ED9200 to a Corrigo E...-3, EXOcompact C...-3, Exigo, EXOclever or EXOdos	
EDSP-K10	10m cable for connecting E3-DSP or ED9200 to a Corrigo E...-3, EXOcompact C...-3, Exigo, EXOclever or EXOdos	

Graphic touch display for Corrigo

For operation of a Corrigo ventilation with two ports. Intended for supervision and control of an air handling system.

Technical data	
Protection class	IP30
Power supply	24 V DC via terminal 4 (+C) and G0 on the Corrigo
Power consumption	50 mA
Connection cable	Twisted pair, 0.25 mm^2
Display	TFT-LCD (resistive), backlit LED
Language	Swedish or English, set automatically depending on the language used in the Corrigo
Aspect ratio	4:3
Resolution	320×240
Dimensions (W×H×D)	120×90×27 mm
Mounting	Room or device box
Communication	EXOline

Article	Description	Notes
ED-TCV	External graphic touch display	

ED-RU-O

ED-RU-FO

ED-RU-DO

ED-RU-DFO

ED-RU-DOS

External room unit

The ED-RU units are primarily intended for control of an air handling unit via a Corrigo controller running a ventilation application. They can be used to change fan speed, set temperature, extended running, etc. at a distance of up to 300 m. Their stylish design is suitable for all environments.

The units have a built-in temperature sensor. An external PT1000-sensor can also be connected.

Technical data	
Supply voltage	24 V AC
Power consumption	25 mA
Protection class	IP20
Ambient humidity	Max. 90% RH
Storage temperature	-20…+70 °C
Mounting	Room or device box
Dimensions (W×H×D)	95×95×28 mm
Communication	EXOline

Article	Occupancy button	3-step fan control	Setpoint knob	Multi-function button	Hidden setpoint	Display	Notes
ED-RU-O	X	-	X	-	-	-	
ED-RU-FO	X	X	X	-	-	-	
ED-RU-DO	X	-	-	-	-	X	
ED-RU-DFO	X	X	-	-	-	X	
ED-RU-DOS	X	-	-	X	-	X	

The ED-RU range can also be used together with EXOcompact, EXOdos and EXOflex. If so, the room units must first be configured by a competent system integrator via Project Builder.

Displays for panel mounting

Panel computers intended for mounting in, for example, a cabinet door. They can easily be connected to Regin's EXOscada system and to controllers with integrated web server.

Technical data	
CPU type	Intel®Atom™ E3845 (2M Cache, 1.91 GHz)
RAM	4 GB, DDR3L on-board
Supply voltage	Power supply unit for 12 V DC (2.5 A) included in the delivery
Protection class	IP65
Mounting	Cabinet mounting (screws included), VESA 75 / 100 (ordered separately)
Ports	4×COM ports (RS232), 4×USB ports, 2×LAN ports (Intel GbE)

Article	Monitor size	Resolution	Description	Notes
DP102N	10.2”	1024 × 600	Display for panel mounting	
DP156N	15.6”	1366×768	Display for panel mounting	

Software for configuration of Corrigo and Exigo

E tool© is a PC-based configuration software with graphical user interface. The program provides an excellent overview of the settings of the Corrigo and the Exigo. Using E tool©, all settings can be made on the computer and downloaded into the controller. An infinite number of configurations can be stored in the computer memory for later use.

E tool© can be downloaded free of charge from our web site.

Article	Description	Notes
E-TOOL HEATING	PC software for fast and easy configuration of Exigo, can be downloaded free of charge from www.regincontrols.com	
E-TOOL VENTILATION	PC software for fast and easy configuration of Corrigo, can be downloaded free of charge from www.regincontrols.com	

PLTCE

Connection cables and plug-in terminals

Article	Description	Notes
E-CABLE2-USB	Cable for USB connection	
PLT-E8	Set of plug-in terminals for E8 models	
PLT-E15	Set of plug-in terminals for E15 models	
PLT-E28	Set of plug-in terminals for E28 models	
PCTCE	Set of plug-in terminals for EXOcompact, Optigo and Corrigo	

NEWS!

3G/4G router

3G/4G router between TCP/IP connected controllers and a wireless, mobile 3G/4G/GPRS network.

Technical data	
Connections	RJ45 (3 LAN, 1 WAN), WiFi
Communication	TCP/IP
Mobile network	GSM/GPRS/EDGE
WiFi	IEEE 802,11 b/g/n WiFi standard
Software	Open VPN, IPsec, GRE, L2TP, PPTP, Dynamic DNS and DHCP server
SIM card	2
Dimensions (W×H×D mm)	106×80×46
Weight	250 g
Power supply	9 - 30 V DC. Wall adapter included.
Power consumption	< 7 W
Operating temperature	-40 to +75°C

Article	Description	Notes
M3G900	3G router	
M4G950	4G router	

Accessories

Article	Description	Notes
MXGDIN	DIN-rail kit for M3G900 and M4G950	

Cabinets for Corrigo

Turn-key ready cabinets developed for the Corrigo series. Can also be used for the EXOcompact controllers. All inputs and outputs are pre-connected to the terminals. The CAB-STD... units are delivered with trafo, switches, relays and a wiring schematic for the cabinet.

Article	Description	Dimensions (H×W)	Protection class	Relays	Notes
CAB-STD2	Cabinet intended for Corrigo E15...D... models	483×403mm	IP65	2	
CAB-STD3	Cabinet intended for Corrigo E28...D... models	483×403mm	IP65	3	

Corrigo must be ordered separately.

Corrigo demo case

Complete case with everything you need to test Corrigo. Simply plug the controller into the wall socket using the included transformer in order to make simulations, trigger alarms, view indications, etc.

Technical data	
Supply voltage	24 V AC
Dimensions	28×38×9cm (H×L×W)

Article	Description	Notes
E-CASE-E283DW-3-24	Demo case, contains a Corrigo E283DW-3 unit. Transformer included.	

FMCO

Front mounting kit

Mounting kit for easier mounting of controllers in a control panel or cabinet door.

Technical data	
Protection class	IP40

Article	Description	Notes
FMCE	Front mounting kit, room for one EXOcompact/Corrigo unit	
FMCO	Front mounting kit, room for one Optigo unit	

PLTCE

Plug-in terminal blocks for controllers

A set of angled plug-in terminal blocks for simple wiring of controllers when using the front mounting kits. The terminal blocks enable easy access to the clamping screws even after cabinet mounting.

Article	Description	Notes
PLTCE	Plug-in terminal blocks for EXOcompact, Optigo and Corrigo	

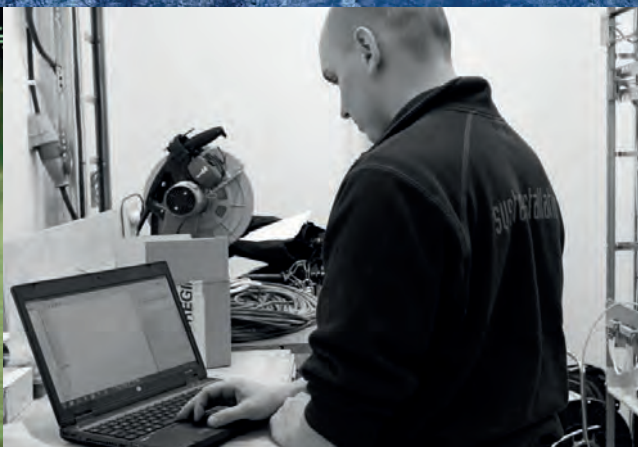
Battery

Article	Description	Notes
BATTERY-4289	Battery for EP1011, EXOcompact, Corrigo	

800 ppm

3

ROOM CONTROLLERS



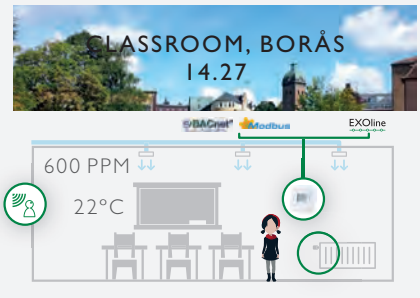
REGIO

ROOM TEMPERATURE COMFORT AROUND THE CLOCK, FROM BORÅS TO HONG KONG

LARGE SELECTION, MAXIMUM FLEXIBILITY

- ✓ Stand-alone
- ✓ Pre-programmed
- ✓ Freely programmable
- ✓ Configure with Regio tool©

CHILLED BEAMS | VAV | FAN-COIL | RADIATORS



BACnet® Modbus EXOline

REGIO MAXI – THE ULTIMATE ZONE CONTROL SYSTEM

Freely programmable/pre-programmed zone controllers

Regio Maxi consists of RCP controllers prepared for quick connection of the RU room units. The controllers are compatible with other Regin products and can easily be integrated into systems with EXOflex, Corrigo, EXOcompact, EXOdos and EXOscada.

The standard RCP model includes an application program for climate control in public buildings. It can also be used as a freely programmable room controller. Programming takes place in EXOdesigner, the same environment used for all other Regin system controllers.

The RCP controllers can be used in systems with communication, e.g. EXOline (over RS485 or TCP/IP), Modbus (RS485) or LON. They are installed in a ceiling void, on a junction box plate or on a DIN-rail.

Regio tool©

The pre-loaded room application is configured in Regio tool©, downloadable free of charge from www.regincontrols.com.

Product overview, Regio Maxi

RCP100 and RCP200 are the basic models in the range. The other models have various functions, indicated by the letters in the product name:

F = Fan control (3-speed), T = TCP/IP communication, L = LON communication

Technical data	
Supply voltage	230 V AC ±10%, 50...60 Hz
Power consumption	2 VA
Ambient humidity	Max. 95% RH
Storage temperature	-40...+50°C
Mounting	Ceiling, on a junction box plate, or DIN-rail
Number of modules	8.6
Protection class	IP20
Inputs	
Analogue inputs (AI)	PT1000 or 0...10 V DC
Condensation input (CI)	Input for Regin's condensation detector KG-A/1
Digital inputs (DI)	Potential-free closing contact
Outputs	
Analogue outputs (AO)	0...10 V DC
Digital outputs (DO)	Triac outputs: 24 V AC, 0.5 A / Relay outputs: 230 V AC, 4 A
Dimensions (WxHxD)	150×180×60mm

Inputs/outputs (I/O:s)

Article	AI	DI	CI	AO	DO, 230 V AC relay for fan control	DO, 24 V AC	Total number of I/O:s	Notes
RCP100 / RCP100T / RCP100L	2	3	1	-	-	5	11	
RCP100F / RCP100FT / RCP100FL	2	3	1	-	3	5	14	
RCP200 / RCP200T / RCP200L	2	3	1	2	-	2	10	
RCP200F / RCP200FT / RCP200FL	2	3	1	2	3	2	13	

Models with communication via RS485 (Modbus or EXOline)

Article	3-step fan control	Output signal	Can be combined with	Notes
RCP100	-	3-point or on/off	RU, RU-O, RU-DO, RU-DOS	
RCP100F	X	3-point or on/off	RU-F, RU-FO, RU-DFO, RU-DOS	
RCP200	-	0...10 V DC	RU, RU-O, RU-DO, RU-DOS	
RCP200F	X	0...10 V DC	RU-F, RU-FO, RU-DFO, RU-DOS	

Models with TCP/IP communication

Article	3-step fan control	Output signal	Can be combined with	Notes
RCP100T	-	3-point or on/off	RU, RU-O, RU-DO, RU-DOS	
RCP100FT	X	3-point or on/off	RU-F, RU-FO, RU-DFO, RU-DOS	
RCP200T	-	0...10 V DC	RU, RU-O, RU-DO, RU-DOS	
RCP200FT	X	0...10 V DC	RU-F, RU-FO, RU-DFO, RU-DOS	

Models with LON communication

Article	3-step fan control	Output signal	Can be combined with	Notes
RCP100L	-	3-point or on/off	RU, RU-O, RU-DO, RU-DOS	
RCP100FL	X	3-point or on/off	RU-F, RU-FO, RU-DFO, RU-DOS	
RCP200L	-	0...10 V DC	RU, RU-O, RU-DO, RU-DOS	
RCP200FL	X	0...10 V DC	RU-F, RU-FO, RU-DFO, RU-DOS	

By connecting the RCP to a PC with Regio tool©, it is possible to configure the RCP for different room conditions

RU

RU-F

RU-O

RU-DO

RU-FO

RU-DFO

RU-DOS

Room units for the RCP controllers

There are seven different room units (RU) in the Regio Maxi range, with or without display. They are intended to be combined with the freely programmable RCP controllers and are installed directly on the wall or on a wall socket.

RU is the basic model. The other models have various functions, indicated by the letters in the product name:

D = Display, F = Fan speed control button, O = Occupancy button, S = Multifunction button

Technical data	
Power supply	From RCP unit
Ambient humidity	Max. 90% RH
Ambient temperature	0...50°C
Storage temperature	-20...+70°C
Mounting	Room
Protection class	IP20
Display	Backlit, LCD

Article	Occupancy button	3-step fan control	Setpoint knob	CO_2, blinds, lighting, humidity	Display	Notes
RU	-	-	X	-	-	
RU-F	-	X	X	-	-	
RU-O	X	-	X	-	-	
RU-DO	X	-	-	-	X	
RU-FO	X	X	X	-	-	
RU-DFO	X	X	-	-	X	
RU-DOS	X	X	-	X	X	

Regio Maxi accessories

Article	Description	Notes
RU-CBL3	Cable for Regio Maxi, between RU and RCP, cable length 3m	
RU-CBL10	Cable for Regio Maxi, between RU and RCP, cable length 10m	
RCP-CONN:10	A set of 10 connector plates for Regio Maxi RCP	
RCP-CASE	Regio Maxi RCP demo kit	

Regio Midi – Pre-programmed room controllers with communication

Regio Midi are controllers with a built-in temperature sensor and an RS485 communication port. Controllers in different rooms and zones can be connected to a bus line enabling communication with a central SCADA system via RS485 (EXOline, BACnet or Modbus).

Regio tool©

The room controllers are pre-programmed and can be configured to suit specific needs with the software Regio tool©, downloadable free of charge from www.regincontrols.com.

RC-C3,
RC-CT

RC-C3H,
RC-CTH

RC-C3O,
RC-CTO

RC-C3DOC,
RC-CDTO

RC-CF

RC-CFO

RC-CDFO,
RC-C3DFOC

Product overview, Regio Midi

RC-C is the basic model in the range. The other models have various functions, indicated by the letters in the product name:

C = Communication, D = Display, F = Fan control button, H = Hidden setpoint, O = Occupancy button, T = 3-point output, C (at the end) = CO_2 input, 3 = Three universal outputs

Technical data	
Supply voltage	18...30 V AC, 50...60 Hz
Power consumption	2.5 VA
Ambient temperature	0...50 °C
Storage temperature	-20…+70 °C
Ambient humidity	Max. 90% RH
Communication	RS485 (EXOline or Modbus with automatic detection/NO/NC, or BACnet). Note: BACnet communication is only an option for models with display.
Modbus	8 bits, 1 or 2 stop bits. Odd, even (FS) or no parity.
Communication speed	9600, 19200, 38400 bps (EXOline, Modbus and BACnet) or 76800 bps (BACnet only)
Built-in temperature sensor	0...50°C NTC linearised 15 kΩ
Accuracy	±0.5°C at 15...30°C
Mounting	Room
Protection class	IP20
Inputs	
Analogue inputs (AI)	PT1000, 0...50°C, 0...10 V (CO_2)
Condensation input (CI)	Input for Regin's condensation detector KG-A/1
Digital inputs (DI)	Closing potential-free contact
Universal inputs (UI)	Analogue input (AI), PT1000 sensor, 0...100°C or digital input (DI)
Outputs	
Digital outputs (DO)	24 V AC, max. 0.5 A
Universal outputs (UO)	Digital output (DO) 24 V AC, max. 2.0 A or analogue output (AO), 0...10 V DC, max. 5 mA
+C power output for DI only	24 V DC, max. 10 mA, short circuit-protected

Inputs/outputs (I/O:s)

Article	AI	DI	UI	UO	DO	Total number of I/O:s	Notes
RC-C3	1	2	1	3	-	7	
RC-C3H	1	2	1	3	-	7	
RC-C3O	1	2	1	3	-	7	
RC-C3DOC	2	2	-	3	-	7	
RC-CF	1	2	1	2	4	10	
RC-CFO	1	2	1	2	4	10	
RC-CDFO	1	2	1	2	4	10	
RC-C3DFOC	2	2	-	3	-	7	
RC-CT	1	2	1	-	5	9	
RC-CTH	1	2	1	-	5	9	
RC-CTO	1	2	1	-	5	9	
RC-CDTO	1	2	1	-	5	9	

Model overview

Article	Occupancy button / Forced ventilation	3-step fan control	EC fan control	Setpoint knob	Hidden setpoint	Output	Display	Notes
RC-C3	-	-	X	X	-	0...10 V DC or on/off	-	
RC-C3H	-	-	X	-	X	0...10 V DC or on/off	-	
RC-C3O	X	-	X	X	-	0...10 V DC or on/off	-	
RC-C3DOC	X	-	X	-	-	0...10 V DC or on/off	X	
RC-CF	-	X	-	X	-	0...10 V DC or on/off	-	
RC-CFO	X	X	-	X	-	0...10 V DC or on/off	-	
RC-CDFO	X	X	-	-	-	0...10 V DC or on/off	X	
RC-C3DFOC	X	-	X	-	-	0...10 V DC or on/off	X	
RC-CT	-	-	-	X	-	3-point	-	
RC-CTH	-	-	-	-	X	3-point	-	
RC-CTO	X	-	-	X	-	3-point	-	
RC-CDTO	X	-	-	-	-	3-point	X	


RC-H


RC, RC-T


RC-O,
RC-TO


RC-DO, RC-DTO


RC-F


RC-FO


RC-DFO

Regio Mini – Pre-programmed room controllers

Stand-alone controllers for control of heating and cooling in a single zone or room

The Regio Mini controllers are pre-programmed and can be configured for a specific application via the display or dipswitches (in most cases, though, the default settings can be applied). The controllers have a built-in temperature sensor. Alternatively, an external temperature sensor can be connected.

RC is the basic model. The other models have various functions, indicated by the letters in the product name:

D = Display, F = Fan control (3-speed), H = Hidden setpoint, O = Occupancy button, T = 3-point output

Technical data	
Supply voltage	18...30 V AC, 50...60 Hz
Power consumption	2.5 VA
Ambient temperature	0...50°C
Storage temperature	-20...+70°C
Built-in temperature sensor	0...50°C NTC linearised 15 kΩ
Accuracy	±0.5°C at 15...30°C
Mounting	Room
Protection class	IP20
Inputs	
Analogue inputs (AI)	PT1000, 0...50°C
Condensation input (CI)	Input for Regin's condensation detector KG-A/1
Digital inputs (DI)	Closing potential-free contact
Universal inputs (UI)	Analogue input (AI), PT1000 sensor, 0...100°C or digital input (DI)
Outputs	
Digital outputs (DO)	24 V AC, max. 0.5 A.
Universal outputs (UO)	Digital output (DO) 24 V AC, max. 2.0 A or analogue output (AO), 0...10 V DC, max. 5 mA
+C power output for DI only	24 V DC, max. 10 mA, short circuit-protected

Inputs/outputs (I/O:s)

Article	AI	DI	UI	DO	UO	Total number of I/O:s	Notes
RC	1	2	1	1	2	7	
RC-O	1	2	1	1	2	7	
RC-H	1	2	1	1	2	7	
RC-DO	1	2	1	1	2	7	
RC-F	1	2	1	4	2	10	
RC-FO	1	2	1	4	2	10	
RC-DFO	1	2	1	4	2	10	
RC-T	1	2	1	5	-	9	
RC-TO	1	2	1	5	-	9	
RC-DTO	1	2	1	5	-	9	

Model overview

Article	Occupancy button /Forced ventilation	3-step fan control	Setpoint knob	Hidden setpoint	Output	Display	Notes
RC	-	-	X	-	0...10 V DC or on/off	-	
RC-O	X	-	X	-	0...10 V DC or on/off	-	
RC-H	-	-	-	X	0...10 V DC or on/off	-	
RC-DO	X	-	-	-	0...10 V DC or on/off	X	
RC-F	-	X	X	-	0...10 V DC or on/off	-	
RC-FO	X	X	X	-	0...10 V DC or on/off	-	
RC-DFO	X	X	-	-	0...10 V DC or on/off	X	
RC-T	-	-	X	-	3-point	-	
RC-TO	X	-	X	-	3-point	-	
RC-DTO	X	-	-	-	3-point	X	

REGIO ACCESSORIES

Relay unit for Regio RC-...F... controllers in fan-coil applications

Technical data	
Outputs	Three closing relays, 230 V AC, 4 A
Inputs	Three inputs, 24 V AC, from an RC-...F... unit
Mounting	DIN-rail
Protection class	IP00

Article	Description	Notes
RB3	Relay unit for RC-...F... controllers	

Power interface for Regio RC-...F... controllers in fan-coil applications

Article	Description	Notes
X1178	Power interface for RC-...F... controllers	

Service adapter

Article	Description	Notes
RC-TEST	Service adapter for Regio Midi units	

Condensation detector

Article	Description	Notes
KG-A/1	Condensation detector for Regio controllers, 1 m cable length	

Connector plates

Article	Description	Notes
RC-CONN:10	A set of 10 connector plates for RC units	

CONTROLLERS AND THERMOSTATS FOR FAN-COIL APPLICATIONS

RCF...

RCFM...

Modbus

BACnet

EXOline

Fan-coil thermostat with on/off outputs

Electronic fan-coil thermostats for room temperature control. Automatic or manual change-over between heating and cooling. The thermostats have a function for 3-speed fan control (for fan-coil), a built-in temperature sensor, backlit display, and an input for a window contact or an occupancy detector.

Technical data	
Supply voltage	230 V AC ±10%, 50/60 Hz
Power consumption	< 3 VA
Setpoint	5...35 °C
Hysteresis	±0.5 K (adjustable)
Digital outputs (DO)	Three relay outputs for fan control, 230 V AC, 3 A / Two triac outputs for valve actuators, 230 V AC, 300 mA
Analogue inputs (AI)	One PT1000
Digital inputs (DI)	One closing potential-free contact
Universal inputs (UI)	One PT1000 or closing potential-free contact
Mounting	Room
Protection class	IP20

Article	Description	Installations	NO/NC	Notes
RCF-230D	Fan-coil thermostat	2- or 4-pipe	Automatic	
RCF-230CD	Fan-coil thermostat with communication via RS485 (Modbus, BACnet or EXOline)	2- or 4-pipe	Automatic	
RCFM-230D	Fan-coil thermostat	2-pipe	Manual	

RCF...

RCFM...

Modbus

BACnet

EXOline

Fan-coil controller for thermal or 3-point actuators

Electronic fan-coil controllers for room temperature control. Automatic or manual change-over between heating and cooling. The controllers have a function for 3-speed fan control (for fan-coil), a built-in temperature sensor, backlit display, and an input for a window contact or an occupancy detector. RCF-230TD, RCF-230CTD and RCF-230CTD-EC also have a function for control of an electric heater.

Technical data	
Supply voltage	230 V AC ±10%, 50/60 Hz
Power consumption	< 3 VA
Setpoint	5...35 °C
P-band	10°C
Hysteresis	±0.5 K
I-time	300 s
Digital outputs (DO)	Three relay outputs for fan control, 230 V AC, 3 A / Two triac outputs for valve actuators, 230 V AC, 300 mA
Analogue inputs (AI)	One PT1000
Digital inputs (DI)	One closing potential-free contact
Universal inputs (UI)	One PT1000 or closing potential-free contact
Mounting	Room
Protection class	IP20

Article	Description	Installations	NO/NC	Notes
RCF-230TD	Fan-coil controller	2- or 4-pipe	Automatic	
RCF-230CTD	Fan-coil controller with communication via RS485 (Modbus, BACnet or EXOline)	2- or 4-pipe	Automatic	
RCFM-230TD	Fan-coil controller	2-pipe	Manual	

EC fan controller for thermal or 3-point actuators

Electronic fan-coil controller for control of EC fans. Automatic or manual change-over between heating and cooling. The controller has a function for EC fan control, a built-in temperature sensor, backlit display, and an input for a window contact or an occupancy detector. It also has a function for control of an electric heater.

Technical data	
Supply voltage	230 V AC ±10%, 50/60 Hz
Power consumption	< 3 VA
Setpoint	5...35°C
Hysteresis	±0.5 K
P-band	10°C
I-time	300 s
Analogue outputs (AO)	One for EC fan control, 0...10 V DC, max. 1 mA
Digital outputs (DO)	Two triac outputs for valve actuators, 230 V AC, 300 mA
Analogue inputs (AI)	One PT1000
Digital inputs (DI)	One closing potential-free contact
Universal inputs (UI)	One PT1000 or closing potential-free contact
Mounting	Room
Protection class	IP20

Article	Description	Installations	NO/NC	Notes
RCF-230CTD-EC	Fan-coil controller for EC fans with communication via RS485 (Modbus, BACnet or EXOline)	2- or 4-pipe	Automatic	

Fan-coil controller with 0...10 V control signal

Electronic fan-coil thermostats for room temperature control. The controllers have automatic change-over between heating and cooling and can be used for 2- or 4-pipe systems. They have a function for control of a 3-speed fan (for fan-coil), a built-in temperature sensor, backlit display, and an input for a window contact or an occupancy detector.

Technical data	
Supply voltage	230 V AC ±10%, 50/60 Hz
Power consumption	< 3 VA
Outputs	Relays for fan control, 230 V AC, 3 A fan-coil. Actuator, 0...10 V DC, max. 1 mA.
Setpoint	5...35°C
Hysteresis	±0.5 K
P-band	10°C
I-time	300 s
Analogue outputs (AO)	Two for valve actuators, 0...10 V DC, max. 1 mA
Digital outputs (DO)	Three relay outputs for fan control, 230 V AC, 3 A
Analogue inputs (AI)	One PT1000
Digital inputs (DI)	One closing potential-free contact
Universal inputs (UI)	One PT1000 or closing potential-free contact
Mounting	Room
Protection class	IP20

Article	Description	NO/NC	Installations	Notes
RCF-230AD	Fan-coil controller	Automatic	2- or 4-pipe	
RCF-230CAD	Fan-coil controller with communication via RS485 (Modbus, BACnet or EXOline)	Automatic	2- or 4-pipe	

ROOM CONTROLLERS FOR OTHER APPLICATIONS

Room temperature controller for 0...10 V DC or 3-point actuators

This room controller is primarily intended for control of heating or cooling in zone control systems. It has an input for a presence detector (occupancy control). The controller also has an input for change-over, which makes it possible for the control function to switch between heating and cooling.

Technical data	
Supply voltage	24 V AC, ±15% 50...60 Hz, 2 VA
Output	0...10 V DC, 1 mA or 3-point, 24 V AC, 1 A
Inputs	Two digital and one NTC sensor
Setpoint	0...40 °C
P-band	0.5...50 K
Protection class	IP20

Article	Description	Notes
AL24A1T	Room temperature controller	

Room controller with active frost protection for 3-point actuator

Controller intended for control of valve actuators in water-heated systems. It has a built-in room sensor and can be used for control of supply air temperature or room temperature, with or without cascade control. The controller has built-in active frost protection with two alarm relays and automatic heat maintaining function during shutdown.

Technical data	
Supply voltage	24 V AC ±10%, 50/60 Hz
Power consumption	Max. 5 VA
Control signal (output)	3-point floating control, 24 V AC output (heating)
Sensor inputs	Three 0...30°C (the sensor determines the range (NTC sensor))
Setpoint	0...30 °C
Minimum limit	0...30°C (not active for single sensor control)
Cascade factor (CF)	1...15 (must be set to 1 for single sensor control)
Frost alarm setpoint	5 °C
Shutdown mode setpoint	25°C (setpoint on frost protection sensor)
Fan relay	Breaking contact for fan contactor interlock if a frost protection alarm occurs. 230 V AC, 2 A.
Alarm relay	NO/NC contact for alarm indication if a frost protection alarm occurs. 24 V AC, 2 A.
Mounting	Wall
Protection class	IP20

Article	Description	Notes
AQUA24TF	Room controller for HVAC system, with active frost protection	

EC FAN/VAV CONTROLLERS

Room controller, temperature

Temperature controller for control of e.g. an EC fan or a damper in air handling or demand-controlled ventilation applications.

Technical data	
Supply voltage	85…230 V AC, 50/60 Hz
Working range, temperature	5…30 °C
Outputs	1 analogue output 0...10 V (RL > 10 K)
Mounting	Room
Protection class	IP30

Article	Description	Notes
AL230A	Temperature controller	

Room controller, temperature and CO_2

Temperature and CO_2 controller for control of e.g. an EC fan or a damper in air handling or demand-controlled ventilation applications.

Technical data	
Supply voltage	85…230 V AC, 50/60 Hz
Temperature range	5…30 °C
Working range, CO_2	0…2000 ppm
Outputs	1 analogue output 0...10 V (RL > 10 K)
Mounting	Room
Protection class	IP30

Article	Description	Notes
ALC230A	Temperature and CO_2controller	

Room controller, humidity

Humidity controller for control of e.g. an EC fan or a damper in air handling or demand-controlled ventilation applications.

Technical data	
Supply voltage	85…230 V AC, 50/60 Hz
Working range, humidity	0…100% RH
Outputs	1 analogue output 0...10 V (RL > 10 K)
Mounting	Room
Protection class	IP30

Article	Description	Notes
ALH230A	Humidity controller	

Universal room controller

Universal controller for control of e.g. an EC fan or a damper in air handling or demand-controlled ventilation applications.

Technical data	
Supply voltage	85…230 V AC, 50/60 Hz
Working range	0…100%
Outputs	1 analogue output 0...10 V (RL > 10 K)
Inputs	1 analogue input 0...10 V
Mounting	Room
Protection class	IP30

Article	Description	Notes
ALU230A	Universal controller	

+22°C

+21°C

+20°C

+19°C

4

THERMOSTATS

ELECTROMECHANICAL THERMOSTATS

Room thermostat

1-stage room thermostat. Models with on/off switch or summer/winter switch.

Technical data	
Contact	NO/NC 250 V AC 16 (2,5) A
Temperature range	5...30 °C
Ambient temperature	Max. 50 °C
Ambient humidity	10…90 % RH (non-condensing)
Storage temperature	0…50 °C
Mounting	Room
Casing	ABS, fireproof according UL94 V-0 color (Euro White)
Dimensions	80×80×44 mm
Weight	128 g
Protection class	IP20

Article	On/off button	Summer/winter switch	Notes
R31	-	-	
R33	X	-	
R34	-	X	

Electromechanical room thermostat for fan-coils

The thermostat has a switch for or heating/cooling, as well as a switch for fan speed control.

Technical data	
Output	10 (3) A, 250 V AC
Setpoint	10…30 °C
Hysteresis	0.6 K
Mounting	Room
Protection class	IP20

Article	Function	Notes
RRT025A	Heating or cooling switch	

Electromechanical frost protection thermostat

High quality electromechanical frost protection thermostats for use in cooling, heating and ventilation systems. A set of mounting brackets is included upon delivery.

Technical data	
Contacts	SPDT microswitch
Switch capacity	15 (8) A, 24…250 V AC
Accuracy	± 1K
Ambient temperature	Max. 55°C
Ambient humidity	10...90% RH (non-condensing)
Casing	Base in ABS, cover in transparent Polycarbonate (PC)
Dimensions	140×62×65mm (cable gland included)
Weight	340 g
Protection class	IP65

Article	Temperature range	Hysteresis	Reset	Max. bulb temperature	Capillary length	Notes
FT18	-10…+10°C or +14…+50°F	2 K	Automatic	+150°C	1.8m	
FT30	-10…+10°C or +14…+50°F	2 K	Automatic	+150°C	3m	
FT60	-10…+10°C or +14…+50°F	2 K	Automatic	+150°C	6m	
FT18R	-10…+10°C or +14…+50°F	Manual minimal reset	Manual	+150°C	1.8m	
FT30R	-10…+10°C or +14…+50°F	Manual minimal reset	Manual	+150°C	3m	
FT60R	-10…+10°C or +14…+50°F	Manual minimal reset	Manual	+150°C	6m	

Accessories

Article	Description	Notes
DR-01	Brass pocket 120 mm, 12×1	
DR-02	Stainless steel AISI 304 pocket 120 mm, 12×1	
DR-05	Set of mounting brackets for capillary fixing (supplied with product)	

Electromechanical immersion thermostats

High-quality electromechanical immersion thermostats for use in cooling, heating and ventilation systems. They are supplied with a standard immersion well.

Technical data	
Sensor element	Liquid-filled coiled copper bulb
Contacts	Dust-tight microswitches with SPDT contacts (heat/cool)
Switch capacity	15 (8) A, 24...250 V AC
Ambient temperature	-35...+65 °C
Ambient humidity	10...90 % RH (non-condensing)
Casing	Bayblend® base, ABS cover
Weight	440 g
Protection class	IP65

Article	Temperature range	Max. bulb temperature	Notes
MTIB60	0…60 °C	75 °C	
MTIB120	50…120 °C	140 °C	
MTIB90	20…90 °C	100 °C	

Accessories

Article	Description	Notes
DR-16/14	Brass immersion well 120 mm, 10×0.5	
DR-17/14	Stainless steel AISI 301 immersion well 120 mm, 10×0.5	

NEWS!

Boiler thermostat with manual reset

High-quality electromechanical thermostats for use in cooling, heating, ventilation and boiler systems.

Technical data	
Sensor element	Liquid-filled coiled copper bulb
Contacts	Dust-tight microswitches with SPDT contacts (heat/cool)
Switch capacity	16 (6) A, 24…250 V AC
Ambient temperature	-35...+65 °C
Ambient humidity	10...90 % RH (non-condensing)
Casing	Bayblend® base, ABS cover
Weight	560 g
Dimensions	108×70×72 mm
Protection class	IP54

Article	Temperature range	Hysteresis	Notes
MTIB90HL	0…90 °C	4±1 K	

Electromechanical capillary thermostat

High quality electromechanical thermostats for use in cooling, heating and ventilation systems.

Technical data	
Sensor element	Liquid-filled coiled copper bulb
Bulb	Ø 9.5 (Ø 8 for range 50...120°C)
Length, capillary tube	1.5m
Contacts	Dust-tight microswitches with SPDT contacts (heat/cool)
Switch capacity	15 (8) A, 24...250 V AC
Ambient temperature	-35...+65°C
Ambient humidity	10...90% RH (non-condensing)
Casing	Bayblend® base, ABS cover
Weight	400 g
Protection class	IP65

Article	Temperature range	Steps	Hysteresis	Step diff.	Max. bulb temperature	Hidden setpoint	Notes
MTIC30S	-30…+30°C	1	2…20 K	-	60°C	-	
MTIC30H	-30…+30°C	1	2…20 K	-	60°C	X	
MTIC30-2	-30…+30°C	2	1 K	2…5 K	60°C	-	
MTIC30	-30…+30°C	1	1 K	-	60°C	-	
MTIC30R	-30…+30°C	1	Manual minimal reset	-	60°C	-	
MTIC90S	20…90°C	1	2...20 K	-	100°C	-	
MTIC90SH	20…90°C	1	2...20 K	-	100°C	X	
MTIC90	20…90°C	1	1 K	-	100°C	-	
MTIC90R	20…90°C	1	Manual maximum reset	-	100°C	-	
MTIC120S	50…120°C	1	2…20 K	-	150°C	-	

Accessories

Article	Description	Notes
DR-01	Brass pocket 120 mm, 12×1	
DR-02	Stainless steel AISI 304 pocket 120 mm, 12×1	
DR-16	Brass pocket 120 mm, 10×0.5	
DR-17	Stainless steel AISI 304 pocket 120 mm, 10×0.5	

Electromechanical duct thermostat

High quality electromechanical thermostats for use in cooling, heating and ventilation systems.

Technical data	
Sensor element	Liquid-filled coiled copper bulb with 200 mm protection spring and mounting bracket
Contacts	Dust-tight microswitches with SPDT contacts (heat/cool)
Switch capacity	15 (8) A, 24...250 V AC
Ambient temperature	-35...+65 °C
Ambient humidity	10...90 % RH (non-condensing)
Insertion length	200 / Ø 21 mm
Casing	Bayblend® base, ABS cover
Weight	690 g
Protection class	IP65

Article	Temperature range	Steps	Hysteresis	Step diff.	Max. bulb temperature	Hidden setpoint	Notes
MTID30H	-30...+30 °C	1	1 K	-	60 °C	X	
MTID60S	0...60 °C	1	2...20 K	-	75 °C	-	
MTID60-2	0...60 °C	2	1 K	2...5 K	75 °C	-	
MTID60	0...60 °C	1	1 K	-	75 °C	-	
MTID120HR	50...120 °C	1	Manual maximum reset	-	140 °C	X	

Electromechanical wall thermostat

High quality electromechanical thermostats for use in cooling, heating and ventilation systems.

Technical data	
Sensor element	Liquid-filled coiled copper bulb
Contacts	Dust-tight microswitches with SPDT contacts (heat/cool)
Switch capacity	15 (8) A, 24...250 V AC
Ambient temperature	-35...+60 °C
Ambient humidity	10...90 % RH (non-condensing)
Max. bulb temperature	65 °C
Casing	Bayblend® base, ABS cover
Weight	450 g
Dimensions	108 × 70 × 72 mm
Protection class	IP65

Article	Temperature range	Steps	Hysteresis	Step diff.	Hidden setpoint	Notes
MTIR30S	-30...+30 °C	1	2...15 K	-	-	
MTIR30SH	-30...+30 °C	1	2...15 K	-	X	
MTIR30	-30...+30 °C	1	1 K	-	-	
MTIR30-2	-30...+30 °C	2	1 K	2...5 K	-	
MTIR60S	0...60 °C	1	2...15 K	-	-	
MTIR60	0...60 °C	1	1 K	-	-	
MTIR60SH	0...60 °C	1	2...15 K	-	X	
MTIR60S-2	0...60 °C	2	1 K	2...5 K	-	

Electromechanical clamp-on thermostat

High quality electromechanical thermostats for use in cooling, heating and ventilation systems.

Technical data	
Sensor element	Liquid-filled coiled copper bulb for contact
Contacts	Dust-tight microswitches with SPDT contacts (heat/cool)
Switch capacity	15 (8) A, 24...250 V AC
Ambient temperature	-35...+65 °C
Ambient humidity	10...90% RH (non-condensing)
Hysteresis	2…20 K
Casing	Bayblend® base, ABS cover
Weight	410 g
Protection class	IP65 class I

Article	Temperature range	Max. bulb temperature	Hidden setpoint	Notes
MTIS60S	0...60 °C	75 °C	-	
MTIS60SH	0...60 °C	75 °C	X	
MTIS90S	20...90 °C	90 °C	-	
MTIS90SH	20...90 °C	90 °C	X	

FLOORigo – ELECTRONIC THERMOSTATS FOR FLUSH MOUNTING

Electronic room thermostat for underfloor heating, with sensor

Electronic 1-stage thermostat intended for flush mounting. The thermostat is delivered with a floor sensor and has an input for an external sensor. It has a min. and max. limitation feature and night setback function. The unit is supplied with a front cover which fits ELKO casings.

Technical data	
Supply voltage	230 V AC, 6 VA
Output	13 A, 230 V AC, closing relay
Sensor inputs	One for an external sensor, NTC 0...40°C
Setpoint	0...40 °C
Night setback	5 K
Hysteresis	0.4 K
Mounting	Flush mounting
Protection class	IP21

Article	Description	Notes
FL1-S	Electronic room thermostat	

Electronic room thermostat with display for underfloor heating

Electronic 1-stage thermostat with display, intended for flush mounting. It has a week-based scheduler with energy saving mode. The thermostat is delivered with a floor sensor and has an input for an external sensor. It has a min. and max. limitation feature and night setback function. The unit is supplied with a front cover which fits ELKO casings.

Technical data	
Supply voltage	230 V AC, 6 VA
Output	13 A, 230 V AC, closing relay
Sensor inputs	One for an external sensor, NTC 0...40°C
Setpoint	0...40 °C
Night setback	5 K
Hysteresis	0.4 K
Mounting	Flush mounting
Protection class	IP21

Article	Description	Notes
FL1-D	Electronic room thermostat	

Electronic efficiency controller

FLOORigo FL1TP is an electronic pulse width modulating controller intended for flush mounting and floor heating. The controller has manual output and does not need to be connected to a sensor.
The time-proportional output is 10...100% and fits in an ELKO casing.

Technical data	
Supply voltage	230 V AC, 6 VA
Output	13 A, 230 V AC, closing relay
Setpoint	1...10 °C
Cycle time	30 min
Mounting	Flush mounting
Protection class	IP20

Article	Description	Notes
FL1TP	Electronic efficiency controller	

ELECTRONIC THERMOSTATS

Electronic room thermostat, 1-stage

Electronic thermostats intended for heating or cooling with built-in sensor and input for an external sensor.

Technical data	
Supply voltage	230 V AC ±10%, 1 VA
Outputs	16 A, 230 V AC, NO/NC
Setpoint	0...30°C, 20...50°C
Hysteresis	1 K
Sensor inputs	NTC sensor
Mounting	Wall
Protection class	IP30

Article	Temperature range	Notes
TM1-P	0…30°C	
TM1-50	20...50°C	

THERMOSTATS FOR DIN-RAIL MOUNTING

Thermostat, 1-stage, DIN-rail mounting

Electronic thermostat for heating or cooling. Adjustable night setback via an external clock. Multiple thermostats can be connected to the same sensor.

Technical data	
Outputs	One, 16 A, 250 V AC, closing relay
Setpoint	0...30 °C
Hysteresis	0...10 K
Night setback	0...10 K
Sensor inputs	One Regin NTC sensor
Mounting	DIN-rail
Number of modules	3
Protection class	IP20
Dimensions (W×H×D)	53×85×74 mm

Article	Supply voltage	Notes
TM1N/D	230 V AC ±10 %, 3 VA	
TM1N-24/D	24 V AC ±10 %, 3 VA	

Thermostat, 2-stage, DIN-rail mounting

Thermostat with two relay outputs and individually settable steps for heating or cooling function. Sequential or binary function.

Technical data	
Supply voltage	24 V AC, 2 VA
Outputs	Two, 10 A, 250 V AC, closing relays
Setpoint	0...30 °C
Hysteresis	0.5...5 K
Step differential	0...5 K
Sensor inputs	One Regin NTC sensor
Mounting	DIN-rail
Number of modules	3
Protection class	IP20
Dimensions (W×H×D)	53×85×74 mm

Article	Description	Notes
TM2-24/D	Electronic 2-stage thermostat	

Scale for other temperature ranges

Alternative setpoint scale for the TM1 and TM2 thermostats, when using sensors with other temperature ranges.

Article	Description	Temperature range	Notes
SKALA-1228	Scale for TM1N/D, TM1N-24/D and TM2-24/D	20...50 °C	

5

ELECTRIC HEATING CONTROLLERS

PULSER, 1- OR 2-PHASE

Controller with automatic adaptation to 230 V AC or 400 V AC

Controllers intended for control of radiators or electric heating coils. They can be mounted on a wall or in a cabinet. The controllers pulse the whole load on/off and utilise time-proportional triac control. Automatic control function adaptation, P- or PI-control.

Technical data	
Supply voltage	200...415 V AC, 50...60 Hz, 1- or 2-phase, automatic adaptation
Ambient temperature	Max 30 °C (NOTE! Device generates 20 W heating at full load.)
P-band	20 K (rapid temperature changes) 1.5 K (slow temperature changes)
I-time	6 min (rapid temperature changes)
Pulse period	60 s
Protection class	IP20
Inputs/outputs (I/O:s)	
Sensor	One main sensor or two main sensors (only PULSER-M)
Setpoint	0...30 °C (the sensor determines the temperature range (NTC sensor))
Night setback	0...10 K
Output (load)	16 A (min. 1 A) 1-phase max. 3.6 kW, 2-phase max. 6.4 kW

Article	Description	Mounting	Number of modules	Notes
PULSER	Electric heating controller	Wall	-	
PULSER/D	Electric heating controller	DIN-rail	6.6 (115×88×59)	
PULSER-ADD	Add-on unit	Wall	-	
PULSER-M	Electric heating controller with min./max. limitation	Wall	-	
PULSER-X/D	Electric heating controller for external 0...10 V DC control signal	DIN-rail	6.6 (115×88×59)	

Controller, 1-phase 230 V / 2-phase 400 V

Heating controller for controlling electric heating batteries, electric panels etc. The controller operates on a control signal from an external controller.

Technical data	
Supply voltage	230 V AC, alternatively 400 V AC ±15%, 50...60 Hz, 1-phase or 2-phase
Ambient temperature	0…30 °C (non-condensing)
Pulse period	6 / 60 / 120 s
Dimensions	93×153×40 mm
Mounting	Wall
Protection class	IP20

Article	Description	Supply voltage	Load	Notes
PULSER230X010	Electric heating controller for external 0...10 V DC control signal	230 V AC	Up to 16 A, min. 1 A. Max. output: 3.6 kW. Min. output: 230 W.	
PULSER400X010	Electric heating controller for external 0...10 V DC control signal	400 V AC	Up to 16 A, min. 1 A. Max. output: 6.4 kW. Min. output: 400 W.	

TTC, 3-PHASE

Electric heating controller for wall mounting, 3-phase, 210...415 V

The controller can be used with internal or external setpoint. Automatic control function adaptation, P- or PI-control. The controller can also be set to be controlled by an external 0...10 V DC signal.

Technical data	
Supply voltage	3-phase, 210...255 / 380...415 V AC, automatic adaptation
Setpoint	0...30 °C (the sensor determines the range)
Max. load	Max. 25 A, min. 3 A/phase
Sensor inputs	Two, main and min./max. limiting sensors (NTC sensor)
Control signal	0...10 V DC (external signal)
Mounting	Wall
Protection class	IP30
P-band	Supply air temperature control: 20 K, fixed Room temperature control: 1.5 K, fixed
I-time (supply air temperature control)	6 min, fixed
Pulse period	6...120 s

Article	Description	Notes
TTC2000	Electric heating controller	

To control extra loads, the slave board TT-S1 can easily be mounted into the unit.z

5

Electric heating controller for DIN-rail mounting, 3-phase, 210...415 V, 25 A

For control of electric heating coils or radiators. The controllers pulse the whole load on/off and utilise time-proportional triac control. Automatic control function adaptation, P- or PI-control. The controllers can also be set to be controlled by an external 0...10 V DC signal.

Technical data	
Supply voltage	3-phase, 210...255 / 380...415 V AC, automatic adaptation
Ambient temperature	0...40 °C
Mounting	DIN-rail
Dimensions (W×H×D)	195×200×95mm
Protection class	IP20
P-band	Supply air temperature control: 20 K, fixed Room temperature control: 1.5 K, fixed
I-time	6 min, fixed
Pulse period	6...60 s
Load	25 A
Output	25 A, 3×400 V AC, 17 kW (3×230 V, 10 kW)
Inputs	
Setpoint	0...30 °C (the sensor determines the range) Note: Does not apply to TTC25X.
Sensor inputs	Two, main and max./min. limiting sensors (NTC sensor). Note: Does not apply to TTC25X.
Control signal	0...10 V DC

Article	Description	For use with Regin NTC sensor	For external 0...10 V DC control signal only	External 0...10 V DC control signal option	Notes
TTC25	Electric heating controller with temperature control	X	-	X	
TTC25X	Electric heating controller	-	X	-	

To control larger electrical loads, see the step controllers TT-S4/D and TT-S6/D.

Electric heating controller for DIN-rail mounting, 3-phase, 210...415 V, 40 A

For control of electric heating coils or radiators. The controllers pulse the whole load on/off and utilise time-proportional triac control. Automatic control function adaptation, P- or PI-control. The controllers can also be set to be controlled by an external 0...10 V DC signal.

Technical data	
Supply voltage	3-phase, 210...255 / 380...415 V AC, automatic adaptation
Ambient temperature	0...40 °C
Mounting	DIN-rail
Dimensions (W×H×D)	195×220×95 mm
Protection class	IP20
P-band	Supply air temperature control: 20 K, fixed Room temperature control: 1.5 K, fixed
I-time	6 min, fixed
Pulse period	6...60 s
Load	40 A
Output	40 A, 3×400 V AC, 27 kW (3×230 V, 16 kW)
Inputs	
Setpoint	0...30 °C (the sensor determines the range)
Sensor inputs	Two, main and max./min. limiting sensors (NTC sensor).
Control signal	0...10 V DC

Article	Description	For use with Regin NTC sensor	For external 0...10 V DC control signal only	External 0...10 V DC control signal option	Notes
TTC40F	Electric heating controller with temperature control	X	-	X	
TTC40FX	Electric heating controller	-	X	-	

To control larger electrical loads, see the step controllers TT-S4/D and TT-S6/D.

Electric heating controller for DIN-rail mounting, 3-phase, 210...415 V, 63 A

For control of electric heating coils or radiators. The controllers pulse the whole load on/off and utilise time-proportional triac control. Automatic control function adaptation, P- or PI-control. The controllers can also be set to be controlled by an external 0...10 V DC signal.

Technical data	
Supply voltage	3-phase, 400 V AC ±10%
Ambient temperature	0...40 °C
Mounting	DIN-rail
Dimensions (W×H×D)	195×220×105 mm
Protection class	IP20
P-band	Supply air temperature control: 20 K, fixed Room temperature control: 1.5 K, fixed
I-time	6 min, fixed
Pulse period	6...120 s
Load	63 A
Output	63 A, 3×400 V AC, 43 kW
Inputs	
Setpoint	0...30 °C (the sensor determines the range)
Sensor inputs	Two, main and max./min. limiting sensors (NTC sensor).
Control signal	0...10 V DC

Article	Description	For use with Regin NTC sensor	For external 0...10 V DC control signal only	External 0...10 V DC control signal option	Notes
TTC63F	Electric heating controller with temperature control	X	-	X	

To control larger electrical loads, see the step controllers TT-S4/D and TT-S6/D.

Electric heating controller for DIN-rail mounting, 3-phase, 210...415 V, 80 A

For control of electric heating coils or radiators. The controllers pulse the whole load on/off and utilise time-proportional triac control. Automatic control function adaptation, P- or PI-control. The controllers can also be set to be controlled by an external 0...10 V DC signal.

Technical data	
Supply voltage	3-phase, 400 V AC ±10%
Ambient temperature	0...40 °C
Mounting	DIN-rail
Dimensions (W×H×D)	195×220×105 mm
Protection class	IP20
P-band	Supply air temperature control: 20 K, fixed Room temperature control: 1.5 K, fixed
I-time	6 min, fixed
Pulse period	6...120 s
Load	80 A
Output	80 A, 3×400 V AC, 55 kW
Inputs	
Setpoint	0...30 °C (the sensor determines the range)
Sensor inputs	Two, main and max./min. limiting sensors (NTC sensor).
Control signal	0...10 V DC

Article	Description	For use with Regin NTC sensor	For external 0...10 V DC control signal only	External 0...10 V DC control signal option	Notes
TTC80F	Electric heating controller with temperature control	X	-	X	

To control larger electrical loads, see the step controllers TT-S4/D and TT-S6/D.

ACCESSORIES

Slave board for electric heating controllers

TT-S1 is intended for use together with the electric heating controller TTC2000, in order to control extra loads.

Article	Description	Notes
TT-S1	Slave board for control of extra loads (+17 kW)	

Scales and knobs for Pulser and TTC

Alternative setpoint scales and knobs, when using sensors with other temperature ranges.

Scales for TTC25/40 and Pulser/D

Article	Temperature range	Notes
SKALA-3933	20...50 °C	
SKALA-3934	40...70 °C	
SKALA-3935	60...90 °C	

Knobs for TTC2000

Article	Temperature range	Notes
TRY-RATT-3608	20...50 °C	
TRY-RATT-3609	40...70 °C	
TRY-RATT-3610	60...90 °C	

Knobs for Pulser

Article	Temperature range	Notes
TRY-RATT-2271	0...30 °C	
TRY-RATT-1588	20...50 °C	
TRY-RATT-1589	40...70 °C	
TRY-RATT-1590	60...90 °C	

Step controller, 4- or 6-stage

Controllers intended for control of electric heating coils, four or six relays. They can be used with any controller with a 0...10 V DC or 10...2 V DC output signal. The step controllers also have an analogue output (0…10 V) for control of an electric heating controller to give proportional heating between steps.

Technical data	
Supply voltage	24 V AC, 6 VA
Output	4 alt. 6 relays (closing), binary or sequential control
Input signal	0...10 V DC
Output signal	0…10 V DC
Mounting	DIN-rail
Number of modules	6
Protection class	IP20

Article	Description	Run-on time	Notes
TT-S4/D	Step controller with 4 relays	-	
TT-S6/D	Step controller with 6 relays	3 min	

6

SENSORS & SWITCHES

TEMPERATURE SENSORS – NTC REGIN

Clamp-on sensor, NTC

Clamp-on sensor for surface temperature measurement. Supplied with 1.5m cable.

Technical data	
Sensor element	NTC, 15...10 kΩ
Time constant	13 s
Material	Nickel-plated copper tube
Cable length	1.5m
Protection class	IP65

Article	Description	Temperature range	Notes
TG-A130	Clamp-on sensor, including clamp (Ø 40mm max.)	0...30°C	

Accessories

Article	Description	Notes
PASTA-20	Heat-conductive paste in tube, 20 g	

This sensor cannot be used together with the Pulser series.

Bulb sensor, NTC

Technical data	
Sensor element	NTC, 15...10 kΩ
Diameter	6mm
Cable length	1.5m
Protection class	IP65

Article	Temperature range	Notes
TG-B130	0...30°C	
TG-B150	20...50°C	
TG-B160	0...60°C	
TG-B190	60...90°C	

Accessories

Article	Description	Notes
PASTA-20	Heat-conductive paste in tube, 20 g	

This sensor cannot be used together with the Pulser series.

Floor sensor, NTC

Technical data	
Sensor element	NTC, 15...10 kΩ
Diameter	7 mm
Cable length	2.5 m
Protection class	IP65

Article	Description	Temperature range	Notes
TG-G130	Floor sensor	0...30 °C	

Immersion sensor, NTC

For water temperature measurement.

Technical data	
Sensor element	NTC, 15...10 kΩ
Time constant	4 s
Diameter	R1/4" 6 mm
Material, probe	Stainless steel, SUS304
Pressure rating	PN10
Cable length	1.5 m
Protection class	IP65

Article	Temperature range	Insertion length	Notes
TG-D130	0...30 °C	135 mm	
TG-D150	20...50 °C	135 mm	
TG-D170	40...70 °C	135 mm	
TG-D230	0...30 °C	220 mm	

Accessories

Article	Description	Notes
DF	Mounting flange for 135 mm long sensors for mounting in ventilation ducts	

This sensor cannot be used together with the Pulser series.

Well

Well for immersion sensors.

Technical data	
Connection	R1/2”
Pressure rating	PN25

Article	Description	Material	Insertion length	Notes
DR-90R	Well	Acid-proof stainless steel, SUS316	90mm	
DR-90W	Well for immersion sensor	Acid-proof stainless steel, SUS316	90mm	
DR-135R	Well	Acid-proof stainless steel, SUS316	135mm	

Accessories

Article	Description	Notes
ADAPTER	Adapter 1/4” to 1/2”. For mounting immersion sensors in 1/2”.	

Duct sensor, NTC

For air temperature measurement in ventilation ducts. Adjustable insertion length.

Technical data	
Sensor element	NTC, 15...10 kΩ
Time constant	38 s
Diameter	9mm
Insertion length	15...130mm
Cable length	1.5m
Protection class	IP20

Article	Description	Temperature range	Notes
TG-K300	Duct sensor	-30...+30°C	
TG-K310	Duct sensor	-20...+10°C	
TG-K330	Duct sensor	0…30°C	
TG-K350	Duct sensor	20…50°C	
TG-K360	Duct sensor	0…60°C	
TG-K370	Duct sensor	40...70°C	
TG-K340	Duct sensor for Floorigo/AL24A1T	0…40°C	

Room sensor, NTC

Technical data	
Sensor element	NTC, 15...10 kΩ
Protection class	IP30

Article	Sensor element	Nominal resistance	Protection class	Temperature range	Notes
TG-R530	NTC 15	15 kΩ (0°C)	IP30	0...30°C	
TG-R550	NTC 15	15 kΩ (20°C)	IP30	20...50°C	
TG-R540	NTC 15	15 kΩ (0°C)	IP30	0...40°C	

Room sensor, NTC, with setpoint adjustment

Room sensor for room temperature measurement. Can also be used for setpoint adjustment only.

Technical data	
Sensor element	NTC, 15...10 kΩ
Temperature range	0…30°C
Protection class	IP30

Article	Description	Notes
TG-R430	Room sensor	

Outdoor sensor, NTC

Outdoor sensor for outdoor temperature measurement or for temperature measurement in rooms where higher protection class is needed.

Technical data	
Sensor element	NTC, 15...10 kΩ
Protection class	IP54

Article	Temperature range	Notes
TG-R600	-30...+30°C	
TG-R630	0...30°C	

Setpoint device for panel mounting

Setpoint device intended for NTC sensors only.

Technical data	
Protection class	IP20

Article	Temperature range	Notes
TBI-10	-20...+10°C	
TBI-30	0...30°C	
TBI-100	0...100°C	

Sensor characteristics, NTC Regin

Temperature range	-30...30°C	-20...10°C	0...30°C	0...40°C	0...60°C	20...50°C	40...70°C	60...90°C
Temp. °C	Ω	Ω	Ω	Ω	Ω	Ω	Ω	Ω
150								
140								
130								
120								
110								
100								
90								10000
80								11667
70							10000	13333
65							10833	14167
60					10000		11667	15000
55					10417		12500	
50					10833	10000	13333	
45					11250	10833	14167	
40				10000	11667	11667	15000	
35				10625	12083	12500		
30	10000		10000	11250	12500	13333		
29	10083		10167	11375	12583	13500		
28	10167		10333	11500	12667	13667		
27	10250		10500	11625	12750	13833		
26	10333		10667	11750	12833	14000		
25	10417		10833	11875	12917	14167		
24	10500		11000	12000	13000	14333		
23	10583		11167	12125	13083	14500		
22	10667		11333	12250	13167	14667		
21	10750		11500	12375	13250	14833		
20	10833		11667	12500	13333	15000		
19	10917		11833	12625	13417			
18	11000		12000	12750	13500			
17	11083		12167	12875	13583			
16	11167		12333	13000	13667			
15	11250		12500	13125	13750			
14	11333		12667	13250	13833			
13	11417		12833	13375	13917			
12	11500		13000	13500	14000			
11	11583		13167	13625	14083			
10	11667	10000	13333	13750	14167			
9	11750	10167	13500	13875	14250			
8	11833	10333	13667	14000	14333			
7	11917	10500	13833	14125	14417			
6	12000	10667	14000	14250	14500			
5	12083	10833	14167	14375	14583			
4	12167	11000	14333	14500	14667			
3	12250	11167	14500	14625	14750			
2	12333	11333	14667	14750	14833			
1	12417	11500	14833	14875	14917			
0	12500	11667	15000	15000	15000			
-5	12917	12500						
-10	13333	13333						
-15	13750	14167						
-20	14167	15000						
-25	14583							
-30	15000							
-35								
-40								

TEMPERATURE SENSORS – OTHER ELEMENTS (PT100(0)/NI1000…/NTC…)

Clamp-on sensor with cable

For surface temperature measurement. Including clamp (Ø max 40 mm).

Technical data	
Time constant	13 s
Material	Nickel-plated copper tube
Cable length	1.5 m
Protection class	IP65

Article	Sensor element	Nominal resistance	Temperature range	Equivalent	Notes
TG-A1/PT100	PT100	100 Ω (0°C)	-30...+150 °C	-	
TG-A1/PT1000	PT1000	1000 Ω (0°C)	-30...+150 °C	-	
TG-A1/NTC1.8	NTC 1.8	1800 Ω (25°C)	-30...+120 °C	TAC	
TG-A1/NTC2.2	NTC 2.2	2252 Ω (25°C)	-30...+150 °C	Johnson Controls	
TG-A1/NTC10-01	NTC 10	10 kΩ (25°C)	-30...+150 °C	Aquatrol - Johnson Controls - Satchwell - Trend - Cylon - Honeywell	
TG-A1/NTC10-02	NTC 10	10 kΩ (25°C)	-30...+110 °C	Carel - Evco - Eliwell - AB Industrietechnik	
TG-A1/NTC10-03	NTC 10	10 kΩ (25°C)	-30...+150 °C	Andover - Delta Controls - Siebe - York	
TG-A1/NTC20	NTC 20	20 kΩ (25°C)	-30...+150 °C	Honeywell	
TG-A1/NI1000-01	Ni1000	1000 Ω (0°C)	-30...+150 °C	Siemens - Landis & Staefa	
TG-A1/NI1000-02	Ni1000	1000 Ω (0°C)	-30...+150 °C	Sauter	

Accessories

Article	Notes
PASTA-20	

Clamp-on sensor with housing

Clamp-on sensor for surface temperature measurement, including a metal strap for easy fastening and a tube of heat-conductive contact paste.

Technical data	
Cable gland	M16
Time constant	5 s
Protection class	IP42 (or IP40, depending on the mounting position)

Article	Sensor element	Nominal resistance	Temperature range	Equivalent	Notes
TG-AH1/PT100	PT100	100 Ω (0°C)	-20...+120°C	-	
TG-AH1/PT1000	PT1000	1000 Ω (0°C)	-20...+120°C	-	
TG-AH1/NTC1.8	NTC 1.8	1800 Ω (25°C)	-20...+120°C	TAC	
TG-AH1/NTC2.2	NTC 2.2	2252 Ω (25°C)	-20...+120°C	Johnson Controls	
TG-AH1/NTC10-01	NTC 10	10 kΩ (25°C)	-20...+120°C	Aquatrol - Johnson Controls - Satchwell - Trend - Cylon - Honeywell	
TG-AH1/NTC10-02	NTC 10	10 kΩ (25°C)	-20...+110°C	Carel - Evco - Eliwell - AB Industrietechnik	
TG-AH1/NTC10-03	NTC 10	10 kΩ (25°C)	-20...+120°C	Andover - Delta Controls - Siebe - York	
TG-AH1/NTC20	NTC 20	20 kΩ (25°C)	-20...+120°C	Honeywell	
TG-AH1/NI1000-01	Ni1000	1000 Ω (0°C)	-20...+120°C	Siemens - Landis & Staefa	
TG-AH1/NI1000-02	Ni1000	1000 Ω (0°C)	-20...+120°C	Sauter	

Accessories

Article	Description	Notes
PASTA-20	Heat-conductive paste in tube, 20 g	

TG-B6/PT100

Bulb sensor

Universal sensor.

Technical data	
Material	Stainless steel
Cable length	1.5m
Diameter	6mm

TG-B6/PT1000

Article	Sensor element	Nominal resistance	Temperature range	Diameter	Protection class	Equivalent	Notes
TG-B6/PT100	PT100	100 Ω/0°C	-30...+100°C	6mm	IP65	-	
TG-B6/PT1000	PT1000	1000 Ω/0°C	-50...+110°C	6mm	IP67	-	

Accessories

Article	Description	Notes
PASTA-20	Heat-conductive paste in tube, 20 g	

NEWS!

Bulb sensor, 4mm diameter

Technical data	
Material, bulb	Stainless steel AISI 304
Material, cable	Thermoplastic rubber
Bulb length	40mm
Cable length	1.5m
Diameter	4mm
Protection class	IP67
Accuracy	Class B

Article	Sensor element	Nominal resistance	Temperature range	Equivalent	Notes
TG-B4/PT1000	PT1000	1000 Ω/0°C	-50…+110°C	-	
TG-B4/NTC1.8	NTC 1.8	1800 Ω/25°C	-50…+110°C	TAC	
TG-B4/NTC2.2	NTC 2.2	2252 Ω/25°C	-50…+110°C	Johnson Controls	
TG-B4/NTC10-01	NTC 10-01	10 kΩ/25°C	-50…+110°C	Aquatrol - Johnson Controls - Satchwell - Trend - Cylon - Honeywell	
TG-B4/NTC10-02	NTC 10-02	10 kΩ/25°C	-50…+110°C	Carel - Evco - Eliwell - AB Industrietechnik	
TG-B4/NTC10-03	NTC 10-03	10 kΩ/25°C	-50…+110°C	Andover - Delta Controls - Siebe - York	
TG-B4/NTC20	NTC 20	20 kΩ/25°C	-50…+110°C	Honeywell	
TG-B4/Ni1000-01	Ni1000	1000 Ω/0°C	-50…+110°C	Siemens - Landis & Staefa	
TG-B4/Ni1000-02	Ni1000	1000 Ω/0°C	-50…+110°C	Sauter	

Floor sensor

Sensor for measuring floor temperature.

Technical data	
Material, bulb	Thermoplastic rubber
Material, cable	Thermoplastic rubber exterior with polypropene interior
Cable length	1.5m
Protection class	IP68

Article	Sensor element	Nominal resistance	Temperature range	Equivalent	Notes
TG-G2/PT1000	PT1000	1000 Ω/0°C	-50…+110°C	-	

Duct sensor with housing

Duct sensor for air temperature measurement in ventilation ducts.

Technical data	
Temperature range	-30…+70°C
Time constant	16 s
Cable gland	M16
Material, probe	Stainless steel, SUS304
Diameter	8mm
Protection class	IP65

Article	Sensor element	Nominal resistance	Insertion length	Temperature range	Equivalent	Notes
TG-KH/PT100	PT100	100 Ω (0°C)	60...205mm	-30...+70°C	-	
TG-KH/PT1000	PT1000	1000 Ω (0°C)	60...205mm	-30...+70°C	-	
TG-KH/PT1000-430	PT1000	1000 Ω (0°C)	60…405mm	-30...+70°C	-	
TG-KH/NTC1.8	NTC 1.8	1800 Ω (25°C)	60...205mm	-30...+70°C	TAC	
TG-KH/NTC2.2	NTC 2.2	2252 Ω (25°C)	60…205mm	-30…+70°C	Johnson Controls	
TG-KH/NTC10-01	NTC 10	10 kΩ (25°C)	60...205mm	-30...+70°C	Aquatrol - Johnson Controls - Satchwell - Trend - Cylon - Honeywell	
TG-KH/NTC10-02	NTC 10	10 kΩ (25°C)	60...205mm	-30...+70°C	Carel - Evco - Eliwell - AB Industrietechnik	
TG-KH/NTC10-03	NTC 10	10 kΩ (25°C)	60...205mm	-30...+70°C	Andover - Delta Controls - Siebe - York	
TG-KH/NTC20	NTC 20	20 kΩ (25°C)	60...205mm	-30...+70°C	Honeywell	
TG-KH/NI1000-01	Ni1000	1000 Ω (0°C)	60...205mm	-30...+70°C	Siemens - Landis & Staefa	
TG-KH/NI1000-02	Ni1000	1000 Ω (0°C)	60...205mm	-30...+70°C	Sauter	

Duct sensor

Duct sensor for air temperature measurement in ventilation ducts. Adjustable insertion length.

Technical data	
Temperature range	-30…+70°C
Time constant	50 s including dead time
Insertion length	15…130mm adjustable
Diameter	9mm
Protection class	IP65

Article	Sensor element	Nominal resistance	Cable length	Temperature range	Equivalent	Notes
TG-K3/PT100	PT100	100 Ω (0°C)	1.5m	-30...+70°C	-	
TG-K3/PT1000	PT1000	1000 Ω (0°C)	1.5m	-30...+70°C	-	
TG-K3/PT1000/3,0	PT1000 (DIN class B)	1000 Ω/0°C	3m	-30...+70°C	-	
TG-K3/NTC1.8	NTC 1.8	1800 Ω (25°C)	1.5m	-30...+70°C	TAC	
TG-K3/NTC2.2	NTC 2.2	2252 Ω (25°C)	1.5m	-30...+70°C	Johnson Controls	
TG-K3/NTC10-01	NTC 10	10 kΩ (25°C)	1.5m	-30...+70°C	Aquatrol - Johnson Controls - Satchwell - Trend - Cylon - Honeywell	
TG-K3/NTC10-02	NTC 10	10 kΩ (25°C)	1.5m	-30...+70°C	Carel - Evco - Eliwell - AB Industrietechnik	
TG-K3/NTC10-03	NTC 10	10 kΩ´(25°C)	1.5m	-30...+70°C	Andover - Delta Controls - Siebe - York	
TG-K3/NTC20	NTC 20	20 kΩ (25°C)	1.5m	-30...+70°C	Honeywell	
TG-K3/NI1000-01	Ni1000	1000 Ω (0°C)	1.5m	-30...+70°C	Siemens - Landis & Staefa	
TG-K3/NI1000-02	Ni1000	1000 Ω (0°C)	1.5m	-30...+70°C	Sauter	

Average temperature sensor with housing

Average temperature sensor for duct mounting. It has a cable with four PT1000 elements. The cable is mounted with clamps and is held in place inside the duct by an end spring.

Technical data	
Cable gland	M16
Cable length	3m
Insertion length	0...75mm
Diameter	8mm
Protection class	IP65

Article	Sensor element	Nominal resistance	Equivalent	Notes
TG-MH/PT1000	PT1000 (DIN class B)	1000 Ω (0°C)	-	
TG-MH/NTC1.8	NTC 1.8	1800 Ω (25°C)	TAC	
TG-MH/NTC2.2	NTC 2.2	2252 Ω (25°C)	Johnson Controls	
TG-MH/NTC10-01	NTC 10	10 kΩ (25°C)	Aquatrol - Johnson Controls - Satchwell - Trend - Cylon - Honeywell	
TG-MH/NTC10-02	NTC 10	10 kΩ (25°C)	Carel - Evco - Eliwell - AB Industrietechnik	
TG-MH/NTC10-03	NTC 10	10 kΩ (25°C)	Andover - Delta Controls - Siebe - York	
TG-MH/NTC20	NTC 20	20 kΩ (25°C)	Honeywell	
TG-MH/Ni1000-01	Ni1000	1000 Ω (0°C)	Siemens - Landis & Staefa	
TG-MH/Ni1000-02	Ni1000	1000 Ω (0°C)	Sauter	

Immersion sensor with cable

Immersion sensor for water temperature measurement. The sensor part has a clip fastening for easy mounting.

Technical data	
Temperature range	-30…+70 °C
Time constant	4 s (liquid: 2 m/s)
Cable length	1.5 m
Connection	R1/4”
Diameter	4 mm
Material, probe	Stainless steel, SUS304
Pressure rating	PN10
Protection class	IP65

Article	Sensor element	Nominal resistance	Insertion length	Equivalent	Notes
TG-D1/PT100	PT100	100 Ω (0°C)	135 mm	-	
TG-D1/PT1000	PT1000	1000 Ω (0°C)	135 mm	-	
TG-D1/NTC1.8	NTC 1.8	1800 Ω (25°C)	135 mm	TAC	
TG-D1/NTC2.2	NTC 2.2k3A1	2252 Ω (25°C)	135 mm	Johnson Controls	
TG-D1/NTC10-01	NTC 10	10 kΩ (25°C)	135 mm	Aquatrol - Johnson Controls - Satchwell - Trend - Cylon - Honeywell	
TG-D1/NTC10-02	NTC 10	10 kΩ (25°C)	135 mm	Carel - Evco - Eliwell - AB Industrietechnik	
TG-D1/NTC10-03	NTC 10	10 kΩ (25°C)	135 mm	Andover - Delta Controls - Siebe - York	
TG-D1/NTC20	NTC 20	20 kΩ (25°C)	135 mm	Honeywell	
TG-D1/NI1000-01	Ni1000	1000 Ω (0°C)	135 mm	Siemens - Landis & Staefa	
TG-D1/NI1000-02	Ni1000	1000 Ω (0°C)	135 mm	Sauter	

Article	Sensor element	Nominal resistance	Insertion length	Equivalent	Notes
TG-D2/PT100	PT100	100 Ω (0°C)	220 mm	-	
TG-D2/PT1000	PT1000	1000 Ω (0°C)	220 mm	-	

Accessories

Article	Description	Notes
DF	Mounting flange for 135 mm long sensors for mounting in ventilation ducts	
ADAPTER	Adapter 1/4” to 1/2”. For mounting immersion sensors in 1/2”.	
ACC:10	Adjustable clamp connector	

Immersion sensor with cable, adjustable insertion length

Immersion sensor for water temperature measurement.

Technical data	
Temperature range	-30…+70 °C
Time constant	4 s
Cable length	1.5 m
Connection	R1/4”
Diameter	4 mm
Material, probe	Stainless steel, SUS304
Pressure rating	PN10
Protection class	IP65

Article	Sensor element	Nominal resistance	Insertion length	Equivalent	Notes
TG-D3/PT100	PT100	100 Ω (0°C)	300 mm	-	
TG-D3/PT1000	PT1000	1000 Ω (0°C)	300 mm	-	
TG-D3/NTC10-01	NTC 10	10 kΩ (25°C)	300 mm	Aquatrol - Johnson Controls - Satchwell - Trend - Cylon - Honeywell	
TG-D3/NTC10-02	NTC 10	10 kΩ (25°C)	300 mm	Carel - Evco - Eliwell - AB Industrietechnik	
TG-D3/NTC10-03	NTC 10	10 kΩ (25°C)	300 mm	Andover - Delta Controls - Siebe - York	
TG-D3/NTC20	NTC 20	20 kΩ (25°C)	300 mm	Honeywell	
TG-D3/NI1000-01	Ni1000	1000 Ω (0°C)	300 mm	Siemens - Landis & Staefa	
TG-D3/NI1000-02	Ni1000	1000 Ω (0°C)	300 mm	Sauter	

Immersion sensor with housing, without well

Immersion sensor, threaded.

Technical data	
Temperature range	-20…+120 °C
Time constant	4 s
Cable gland	M16
Insertion length	90 mm
Diameter	5 mm
Connection	R1/4”
Material, probe	Stainless steel, SUS304
Diameter, probe	5 mm
Pressure rating	PN16
Protection class	IP65

Article	Sensor element	Nominal resistance	Temperature range	Equivalent	Notes
TG-DH4/PT100	PT100	100 Ω (0°C)	-20...+120 °C	-	
TG-DH4/PT1000	PT1000	1000 Ω (0°C)	-20...+120 °C	-	
TG-DH4/NTC1.8	NTC 1.8	1800 Ω (25°C)	-20...+120 °C	TAC	
TG-DH4/NTC2.2	NTC 2.2	2252 Ω (25°C)	-20...+120 °C	Johnson Controls	
TG-DH4/NTC10-01	NTC 10	10 kΩ (25°C)	-20...+120 °C	Aquatrol - Johnson Controls - Satchwell - Trend - Cylon - Honeywell	
TG-DH4/NTC10-02	NTC 10	10 kΩ (25°C)	-20...+110 °C	Carel - Evco - Eliwell - AB Industrietechnik	
TG-DH4/NTC10-03	NTC 10	10 kΩ (25°C)	-20...+120 °C	Andover - Delta Controls - Siebe - York	
TG-DH4/NTC20	NTC 20	20 kΩ (25°C)	-20...+120 °C	Honeywell	
TG-DH4/NI1000-01	Ni1000	1000 Ω (0°C)	-20...+120 °C	Siemens - Landis & Staefa	
TG-DH4/NI1000-02	Ni1000	1000 Ω (0°C)	-20...+120 °C	Sauter	

Immersion sensor with housing and well

The sensor part has a clip fastening which makes it easy to mount. The sensor is supplied with a well. The acid-proof stainless steel well DR-90W can be ordered separately.

Technical data	
Temperature range	-20…+120°C
Time constant	18 s (12 s with heat-conductive paste)
Cable gland	M16
Insertion length	90mm
Connection, well	R1/2”
Material, probe	Stainless steel, SUS304
Material, well	Stainless steel, SUS304
Diameter, well	8mm
Pressure rating	PN25
Protection class	IP65

Article	Sensor element	Nominal resistance	Temperature range	Equivalent	Notes
TG-DHW1/PT100	PT100 (DIN class B)	100 Ω/0°C	-20...+120°C	-	
TG-DHW1/PT1000	PT1000 (DIN class B)	1000 Ω/0°C	-20...+120°C	-	
TG-DHW1/NTC1.8	NTC 1.8	1800 Ω/25°C	-20...+120°C	TAC	
TG-DHW1/NTC2.2	NTC 2.2k3A1	2252 Ω/25°C	-20...+120°C	Johnson Controls	
TG-DHW1/NTC10-01	NTC 10k3A1	10 kΩ/25°C	-20...+120°C	Aquatrol - Johnson Controls - Satchwell - Trend - Cylon - Honeywell	
TG-DHW1/NTC10-02	NTC 10k	10 kΩ/25°C	-20...+110°C	Carel - Evco - Eliwell - AB Industrietechnik	
TG-DHW1/NTC10-03	NTC 10k4A1	10 kΩ/25°C	-20...+120°C	Andover - Delta Controls - Siebe - York	
TG-DHW1/NTC20	NTC 20k6A1	20 kΩ/25°C	-20...+120°C	Honeywell	
TG-DHW1/NI1000-01	Ni1000	1000 Ω/0°C	-20...+120°C	Siemens - Landis & Staefa	
TG-DHW1/NI1000-02	Ni1000	1000 Ω/0°C	-20...+120°C	Sauter	

Immersion sensor with housing and well in acid-proof stainless steel

The sensor part has a clip fastening which makes it easy to mount. The sensor is supplied with well model DR-90W.

Technical data	
Temperature range	-20…+120°C
Cable gland	M16
Time constant	18 s (12 s with heat-conductive paste)
Insertion length	90mm
Connection, well	R1/2”
Material, probe	Stainless steel, SUS304
Material, well	Acid-proof stainless steel, SUS316
Diameter, well	8mm
Pressure rating	PN25
Protection class	IP65

Article	Sensor element	Nominal resistance	Temperature range	Notes
TG-DHWA/PT100	PT100 (DIN class B)	100 Ω/0°C	-20...+120°C	
TG-DHWA/PT1000	PT1000 (DIN class B)	1000 Ω/0°C	-20...+120°C	

Well

Well for immersion sensors.

Technical data	
Connection	R1/2”
Pressure rating	PN25

Article	Description	Material	Insertion length	Notes
DR-90R	Well	Acid-proof stainless steel, SUS316	90 mm	
DR-90W	Well for immersion sensor	Acid-proof stainless steel, SUS316	90 mm	
DR-135R	Well	Acid-proof stainless steel, SUS316	135 mm	

Accessories

Article	Description	Notes
ADAPTER	Adapter 1/4” to 1/2”. For mounting immersion sensors in 1/2”.	

Room sensor

For room temperature measurement.

Technical data	
Temperature range	0…50 °C
Protection class	IP30

Article	Sensor element	Nominal resistance	Protection class	Temperature range	Equivalent	Notes
TG-R5/PT100	PT100	100 Ω (0°C)	IP30	0...50 °C	-	
TG-R5/PT1000	PT1000	1000 Ω (0°C)	IP30	0...50 °C	-	
TG-R5/NTC1.8	NTC 1.8	1800 Ω (25°C)	IP30	0...50 °C	TAC	
TG-R5/NTC2.2	NTC 2.2	2252 Ω (25°C)	IP30	0...50 °C	Johnson Controls	
TG-R5/NTC10-01	NTC 10	10 kΩ (25°C)	IP30	0...50 °C	Aquatrol - Johnson Controls - Satchwell - Trend - Cylon - Honeywell	
TG-R5/NTC10-02	NTC 10	10 kΩ (25°C)	IP30	0...50 °C	Carel - Evco - Eliwell - AB Industrietechnik	
TG-R5/NTC10-03	NTC 10	10 kΩ (25°C)	IP30	0...50 °C	Andover - Delta Controls - Siebe - York	
TG-R5/NTC20	NTC 20	20 kΩ (25°C)	IP30	0...50 °C	Honeywell	
TG-R5/NI1000-01	Ni1000	1000 Ω (0°C)	IP30	0...50 °C	Siemens - Landis & Staefa	
TG-R5/NI1000-02	Ni1000	1000 Ω (0°C)	IP30	0...50 °C	Sauter	

Room sensor with setpoint adjustment

For room temperature measurement. Can also be used solely for setpoint adjustment.

Technical data	
Protection class	IP30

Article	Sensor element	Nominal resistance	Temperature range	Equivalent	Notes
TG-R4/PT1000	PT1000	1000 Ω (0°C)	0…50 °C	-	
TG-R4/PT1000-RB	PT1000	1000 Ω/0°C	0...30 °C	-	
TG-R4/NTC10-01	NTC10-01	10 kΩ/25°C	5...30 °C	Aquatrol - Johnson Controls - Satchwell - Trend - Cylon - Honeywell	

Outdoor sensor

Technical data	
Cable gland	M16
Protection class	IP65

Article	Sensor element	Nominal resistance	Temperature range	Protection class	Equivalent	Notes
TG-UH/PT100	PT100	100 Ω (0°C)	-30...+70°C	IP65	-	
TG-UH/PT1000	PT1000	1000 Ω (0°C)	-50...+70°C	IP65	-	
TG-UH/NTC1.8	NTC 1.8	1800 Ω (25°C)	-30...+70°C	IP65	TAC	
TG-UH/NTC2.2	NTC 2.2	2252 Ω (25°C)	-30...+70°C	IP65	Johnson Controls	
TG-UH/NTC10-01	NTC 10	10 kΩ (25°C)	-30...+70°C	IP65	Aquatrol - Johnson Controls - Satchwell - Trend - Cylon - Honeywell	
TG-UH/NTC10-02	NTC 10	10 kΩ (25°C)	-30...+70°C	IP65	Carel - Evco - Eliwell - AB Industrietechnik	
TG-UH/NTC10-03	NTC 10	10 kΩ (25°C)	-30...+70°C	IP65	Andover - Delta Controls - Siebe - York	
TG-UH/NTC20	NTC 20	20 kΩ (25°C)	-30...+70°C	IP65	Honeywell	
TG-UH/NI1000-01	Ni1000	1000 Ω (0°C)	-30...+70°C	IP65	Siemens - Landis & Staefa	
TG-UH/NI1000-02	Ni1000	1000 Ω (0°C)	-30...+70°C	IP65	Sauter	

Setpoint device for PT1000 sensors

Setpoint device which gives resistance corresponding to the standard PT1000 table.

Technical data	
Temperature range	5…30°C
Mounting	Panel mounting
Protection class	IP20

Article	Description	Notes
TBI-PT1000	Setpoint device	

Sensor characteristics, other elements (PT100(0)/Ni1000…/NTC…)

Sensor element	PT100	PT1000	NTC1,8	NTC2,2	NTC10-01	NTC10-02	NTC10-03	NTC20	NI1000-01	NI1000-02
Equivalent			Tac	Johnson Controls	Aquatrol Johnson Controls Satchwell Trend Cylon Honeywell	Carel Evco Eliwell Industrie-technik	Andover Delta Controls Siebe York	Honeywell	Siemens Landis & Staefa	Sauter
Temp. °C	Ω	Ω	Ω	Ω	Ω	Ω	Ω	Ω	Ω	Ω
150	157.3	1573			186					
140	153.6	1536			235				1737	1909
130	149.8	1498			301				1675	1833
120	146.1	1461			390				1615	1760
110	142.3	1423	138	115	511	758	624	818	1557	1688
100	138.5	1385	177	153	679	973	817	1114	1500	1618
90	134.7	1347	230	206	916	1266	1084	1541	1444	1549
80	130.9	1309	303	283	1255	1668	1457	2166	1390	1483
70	127.1	1271	404	395	1752	2228	1990	3098	1337	1417
65	125.2	1252	469	469	2083	2588	2338	3732	1311	1385
60	123.2	1232	547	560	2488	3020	2760	4518	1285	1353
55	121.3	1213	640	672	2986	3536	3270	5494	1260	1322
50	119.4	1194	753	811	3602	4160	3893	6718	1235	1291
45	117.5	1175	888	984	4368	4911	4655	8260	1210	1260
40	115.5	1155	1052	1199	5324	5827	5594	10212	1186	1230
35	113.6	1136	1252	1471	6532	6940	6754	12698	1162	1200
30	111.7	1117	1498	1814	8055	8313	8196	15886	1138	1171
29	111.3	1113	1553	1893	8406	8622	8525	16627	1132	1165
28	111.0	1110	1611	1977	8779	8944	8869	17407	1128	1159
27	110.5	1105	1671	2064	9165	9281	9229	18227	1123	1153
26	110.1	1101	1734	2156	9574	9632	9606	19090	1119	1147
25	109.7	1097	1800	2252	10000	10000	10000	20000	1114	1141
24	109.3	1093	1868	2353	10448	10380	10413	20958	1109	1136
23	109.0	1090	1940	2460	10924	10780	10845	21968	1105	1130
22	108.6	1086	2015	2572	11421	11200	11298	23033	1100	1124
21	108.2	1082	2092	2689	11940	11630	11773	24156	1095	1118
20	107.8	1078	2174	2813	12491	12090	12270	25340	1091	1112
19	107.4	1074	2258	2944	13073	12560	12791	26491	1086	1107
18	107.0	1070	2347	3081	13681	13060	13337	27912	1081	1101
17	106.6	1066	2440	3226	14325	13580	13910	29307	1077	1095
16	106.2	1062	2537	3378	15000	14120	14510	30782	1072	1089
15	105.9	1059	2638	3538	15710	14690	15140	32340	1068	1084
14	105.5	1055	2744	3707	16461	15280	15801	33982	1063	1078
13	105.1	1051	2854	3886	17256	15900	16494	35716	1058	1072
12	104.7	1047	2972	4074	18091	16560	17222	37550	1054	1067
11	104.3	1043	3093	4272	18970	17240	17987	39489	1049	1061
10	103.9	1039	3222	4482	19902	17960	18790	41540	1045	1056
9	103.5	1035	3354	4703	20884	18700	19633	43715	1040	1050
8	103.1	1031	3493	4936	21918	19480	20519	46018	1036	1044
7	102.7	1027	3639	5183	23015	20300	21451	48457	1031	1039
6	102.3	1023	3791	5443	24170	21150	22430	51041	1027	1033
5	101.9	1019	3951	5718	25391	22050	23460	53780	1022	1028
4	101.6	1016	4120	6009	26683	23000	24545	56678	1018	1022
3	101.2	1012	4296	6317	28051	23990	25687	59751	1013	1016
2	100.8	1008	4481	6643	29498	25030	26890	63011	1009	1011
1	100.4	1004	4677	6988	31030	26130	28156	66469	1004	1005
0	100.0	1000	4882	7353	32650	27280	29490	70140	1000	1000
-5	98.0	980	6059	9532	42327	33900	37310	92220	978	973
-10	96.1	961	7580	12460	55329	42470	47540	122260	956	946
-15	94.1	941	9519	16430	72957	53410	61020	163480	935	919
-20	92.2	922	12061	21863	97083	67770	78910	220600	914	893
-25	90.2	902	15359	29371	130422	86430	102900	300400	893	867
-30	88.2	882	19747	39855	176976	111300	135200	413400	872	842
-35	86.3	863							851	816
-40	84.3	843							831	791

TEMPERATURE TRANSMITTERS

Temperature transmitter for room mounting

Technical data	
Output signal	Analogue, 0...10 V
Supply voltage	24 V AC ±10% / 15...35 V DC
Power consumption	< 1 W
Transformer power	2 VA
Temperature range	0…50°C
Accuracy	±0.4°C at 20°C
Mounting	Room
Dimensions	100×85×30.5mm
Protection class	IP30

Article	Output signal	Display	Notes
TRT5	0…10 V DC	-	
TRT5-D	0...10 V DC	X	
TRTN-420	4...20 mA (2 wires)	-	

6

AVAILABLE SPRING 2017

Temperature transmitter for room mounting

Technical data	
Output signal	4…20 mA (2-wire)
Supply voltage	Max 28 V DC, Min 11+(0.02×RL) V DC
Power consumption	0.6 W
DC power	Min. 1 W
Temperature range	0…50°C
Accuracy	±0.5°C at 20°C
Mounting	Room
Dimensions	100×85×30.5mm
Protection class	IP30

Article	Description	Notes
TRT5-420	Temperature transmitter	

Temperature transmitter for wall mounting

Technical data	
Temperature range	0…50°C
Accuracy	±0.7°C
Mounting	Wall
Protection class	IP65

Article	Supply voltage	Output signal	Notes
TRT50	24 V AC or 15...35 V DC , 1 VA	0...10 V DC	
TRT50-420	20...35 V DC	4...20 mA	

Temperature transmitter for Modbus communication, room mounting

Technical data	
Output signal	Modbus
Supply voltage	24 V AC ±10% / 15...35 V DC
Power consumption	< 1 W
Transformer power	2 VA
Temperature range	0…50 °C
Mounting	Room
Dimensions	100×85×30.5mm
Protection class	IP30

Article	Output signal	Display	Notes
TRTC5	Modbus	-	
TRTC5-D	Modbus	X	

Temperature transmitter for duct mounting

Technical data	
Temperature range	0…50 °C
Accuracy	±0.5°C at 20°C
Insertion length	60...230mm (adjustable)
Protection class	IP65
Mounting	Duct

Article	Supply voltage	Output signal	Notes
TDT200	24 V AC or 20...35 V DC, 1 VA	0...10 V DC	
TDT200-420	20...35 V DC	4...20 mA	000

NEWS!

Temperature transmitter for immersion mounting

Mounting	Immersion mounting
Protection class	IP65
Sensor element	NTC 10K

Article	Supply voltage	Temperature range	Output signal	Accuracy	Notes
TLT100	18…24 V AC or 18…35 V DC	0…100 °C	0…10 V	± 2°C	
TLT100-420	11…30 V DC	0…100 °C	4…20 mA	± 2°C	
TLT50	18…24 V AC or 18…35 V DC	-30…+50 °C	0…10 V	± 1.5°C	
TLT50-420	11…30 V DC	-30…+50 °C	4…20 mA	± 1.5°C	

HUMIDISTATS/HUMIDITY CONTROLLERS

Room humidistat

Electromechanical humidistat with a synthetic element. The setpoint knob can be locked.

Technical data	
Output	One, 230 V AC, 5 A, NO/NC
Setpoint	35...95% RH
Hysteresis	7% RH
Mounting	Room
Protection class	IP30

Article	Description	Notes
HR-S	Room humidistat, 1-step	

Room humidistat, 1- or 2-step

Electromechanical humidistat with change-over contact for control of humidification and/or dehumidification. The setpoint knob can be locked.

Technical data	
Setpoint	10...95% RH
Hysteresis	4% RH
Mounting	Room
Protection class	IP21

Article	Description	Output	Step differential	Notes
HR1	Room humidistat, 1-step	5 A, 250 V AC	-	
HR1-DH	Room humidistat, 1-step, for dehumidification only	10 A, 250 V AC	-	
HR2	Room humidistat, 2-step	5 A, 250 V AC	0...30% RH	

Duct/wall humidistat, 1- or 2-step

Electromechanical humidistat with change-over contact.

Technical data	
Output	10 A, 250 V AC, NO/NC
Setpoint	10...100% RH
Hysteresis	3% RH
Mounting	Duct or wall
Protection class	IP54 class I

Article	Output	Step differential	Notes
HMH	1-step	-	
HMH2	2-step	0...25% RH	

Room controller, humidity

Humidity controller for control of e.g. an EC fan or a damper in air handling or demand-controlled ventilation applications.

Technical data	
Supply voltage	85…230 V AC, 50/60 Hz
Working range, humidity	0…100 % RH
Outputs	1 analogue output 0...10 V (RL > 10 K)
Mounting	Room
Protection class	IP30

Article	Description	Notes
ALH230A	Humidity controller	

HUMIDITY/TEMPERATURE TRANSMITTERS

Humidity and temperature transmitter for room mounting

Technical data	
Supply voltage	24 V AC ±10% / 15...35 V DC
Power consumption	< 1 W
Transformer power	2 VA
Working range, temperature	0…50°C
Accuracy, temperature	±0.3°C (PT1000), ±0.4°C (0…10 V) at 20°C
Working range, humidity	10…90% RH
Accuracy, humidity	±3% RH at 20°C
Mounting	Room
Dimensions	100×85×30.5mm
Protection class	IP30

Article	Output humidity	Output temperature	Display	Notes
HTRT10A	0...10 V	0...10 V + PT1000	-	
HTRT10A-D	0...10 V	0...10 V + PT1000	X	
HTRTN-420	4...20 mA	4...20 mA	-	

6

AVAILABLE SPRING 2017

Humidity and temperature transmitter for room mounting

Technical data	
Output signal	4…20 mA (2-wire)
Supply voltage	Max 28 V DC, Min 11+(0.02×RL) V DC
Power consumption	1.2 W
DC power	Min. 2 W
Temperature range	0…50°C
Accuracy, temperature	±0.5°C at 20 °C
Working range, humidity	10…90% RH
Accuracy, humidity	±3% RH at 20°C
Mounting	Room
Dimensions	100×85×30.5mm
Protection class	IP30

Article	Description	Notes
HTRT10A-420	Humidity and temperature transmitter	

Humidity and temperature transmitter for Modbus communication, room mounting

Technical data	
Output signal	Modbus
Supply voltage	24 V AC ±10% / 15...35 V DC
Power consumption	< 1 W
Transformer power	2 VA
Working range, temperature	0…50 °C
Accuracy, temperature	±0.2°C at 20°C
Working range, humidity	10…90% RH
Accuracy, humidity	±2% RH at 20°C
Communication	Modbus RTU
Mounting	Room
Dimensions	100×85×30.5mm
Protection class	IP30

Article	Output signal	Display	Notes
HTRC10	Modbus	-	
HTRC10-D	Modbus	X	

Humidity/temperature transmitter

Transmitters for relative humidity and temperature measurement, resistant to contamination.

Technical data	
Supply voltage	24 V AC ±20% or 15...35 V DC
Output	0...10 V DC or 4...20 mA and passive PT1000 signal
Working range	Humidity: 10...95% RH. Temperature: 0...50°C.
Accuracy, humidity	±2.5% at 20°C
Accuracy, temperature	±0.3 K at 20°C
Mounting	Wall or duct mounting
Protection class	IP65

Article	Mounting	Output signal	Notes
HTRT2500	Wall	0...10 V DC + passive PT1000 signal	
HTRT2500-420	Wall	4...20 mA + passive PT1000 signal	
HTDT2500	Duct	0..10 V DC + passive PT1000 signal	
HTDT2500-420	Duct	4...20 mA + passive PT1000 signal	

Humidity/temperature transmitter for wall mounting

Transmitter for relative humidity and temperature measurement in climate and air handling installations. HTWT10(-420) has high accuracy (±2% RH) and excellent temperature compensation. It has very good protection against condensation and pollution, is easy to mount and has a robust sensor element.

Technical data	
Working range	Humidity: 0...100% RH. Temperature: -40...+60°C.
Accuracy, humidity	±2% RH (0...90% RH), ±3% RH (90...100% RH)
Accuracy, temperature	±0.2 K at 20°C
Mounting	Wall
Protection class	IP65

Article	Supply voltage	Output signal	Notes
HTWT10	15...29 V AC or 15...35 V DC	0...10 V DC	
HTWT10-420	20...30 V DC	4...20 mA	

6

NEWS!

Weather shield

Article	Description	Notes
HVS	Weather shield for outdoor mounting of HTWT10(-420)	

Temperature transmitter for duct mounting

Transmitter for relative humidity and temperature measurement in climate and air handling installations. HTDT10(-420) has high accuracy (±2% RH) and excellent temperature compensation. It has very good protection against condensation and pollution, is easy to mount and has a robust sensor element.

Technical data	
Working range	Humidity: 0...100% RH. Temperature: -40...+60°C.
Accuracy, humidity	±2% RH (0...90% RH), ±3% RH (90...100% RH)
Accuracy, temperature	±0.2 K at 20°C
Insertion length	60...230mm (adjustable)
Mounting	Duct
Protection class	IP65

Article	Supply voltage	Output signal	Notes
HTDT10	15...29 V AC or 15...35 V DC	0...10 V DC	
HTDT10-420	20...30 V DC	4...20 mA	

ACCESSORIES, HUMIDITY

Spare parts for humidstats

Article	Description	Length	Notes
HH1606	Hair element for HR1/HR2	107 mm	
HH1608	Hair element for HMH/HPH	182 mm	
SKYDDSRÖR-375	Protective plastic tube for use of HMH in high air velocity conditions	-	

Filters for humidity transmitters

Article	Description	Notes
HA010101	Dust filter made of Gore-Tex, standard on the humidity transmitters	
HA010102	Sintered brass filter, protection in demanding environments	
HA010103	Sintered stainless steel filter, protection in demanding environments	
HA010105	Teflon filter	
HA010106	Metal filter	

Calibration accessories

Article	Description	Notes
HA010401	Calibration device for sensor probes, horizontal mounting	
HA010402	Calibration device for sensor probes, vertical mounting	
HA010410	5 ampoules, 10 % RH, incl. 5 textile discs	
HA010435	5 ampoules, 35 % RH, incl. 5 textile discs	
HA010450	5 ampoules, 50 % RH, incl. 5 textile discs	
HA010480	5 ampoules, 80 % RH, incl. 5 textile discs	
HA010495	5 ampoules, 50 % RH, incl. 5 textile discs	

PRESSURE

NEWS!

Differential pressure switch for air and non-corrosive gases

Differential pressure switches with excellent long-term stability.

Technical data	
Max. overload pressure	5000 Pa
Relay output	Max. 1A (0,4) 250 V AC
Ambient temperature	-20...+85°C
Protection class	IP54

Article	Working range	Notes
DTV300X	20...300 Pa	
DTV500X	50...500 Pa	
DTV1000X	200...1000 Pa	
DTV2500X	500...2500 Pa	
DTV5000X	1000...5000 Pa	

Accessories

Article	Description	Notes
ANS-1	2m plastic tube and two pressure outlets	
DBZ-14A	Set with mounting bracket and screws (S-shaped)	
DBZ-14B	Set with mounting bracket and screws (L-shaped)	

Differential pressure switch for air and non-corrosive gases

Differential pressure switches with excellent long-term stability.

Technical data	
Max. overload pressure	5000 Pa
Relay output	5 A (0.8 A) 250 V AC, NO/NC
Ambient temperature	-20...+85°C
Protection class	IP54

Article	Working range	Notes
DTV200	20...300 Pa	
DTV500	50...500 Pa	
DTV1000	100...1000 Pa	
DTV2000	500...2000 Pa	
DTV5000	1000...5000 Pa	

Accessories

Article	Description	Notes
ANS-1	2m plastic tube and two pressure outlets	

Pressure transmitters with communication

Pressure transmitters with two universal inputs and communication via EXOline or Modbus.

Technical data	
Supply voltage	24 V AC/DC ±15%
Overall accuracy pressure	≤ 1% full scale
Power consumption	2 VA (rms)
Operating temperature	-10…+50°C *
Communication	EXOline / Modbus
Protection class	IP54
Universal inputs (UI1, UI2) to be configured as PT1000, Ni1000 (6180 ppm/K), digital or 0...10 V inputs	
PT1000 input	-40…+60°C / -40…+140°F, accuracy ±1 K (-25…0°C), ±0.5 K (0…50°C)
Ni1000 input	-40…+60°C / -40…+140°F, accuracy ±1 K (-25…0°C), ±0.5 K (0…50°C)
Digital input	Potential-free contacts on/off (closed=on)
0...10 V input	±1% full scale accuracy

Article	Working range	Number of sensors	Notes
PDT12C	0…1250 Pa	1	
PDT25C	0…2500 Pa	1	
PDT75C	0…7500 Pa	1	
PDT12C-2	PS1: 0…1250 Pa / PS2: 0…1250 Pa	2	
PDT25C-2	PS1: 0…2500 Pa / PS2: 0…2500 Pa	2	
PDT12S25C-2	PS1: 0…1250 Pa / PS2: 0…2500 Pa	2	
PDT12S75C-2	PS1: 0…1250 Pa / PS2: 0…7500 Pa	2	

* Beginning October 2016, the extended temperature range (-25 till +50° C) will be gradually implemented on all models. The actual range can be found on the inside of the Presigo PDT...C(2) cover.

NEWS!

Pressure transmitters with analogue outputs

Single or dual port pressure transmitters with one or two analogue outputs. The transmitter can be configured for 0-10 V or 4-20 mA output signal. Selectable working range.

Technical data	
Supply voltage	24 V AC/DC ±15%
Overall accuracy pressure	≤ 1% full scale
Power consumption	0…10 V mode : 2 VA (rms)4…20 mA mode : 2.7 VA (rms)
Operating temperature	-25…+50°C
Protection class	IP54

Article	Working range	Number of sensors	Notes
PDT12	0…1250 Pa	1	
PDT25	0…2500 Pa	1	
PDT75	0…7500 Pa	1	
PDT12S25-2	PS1: 0…1250 Pa / PS2: 0…2500 Pa	2	
PDT12S75-2	PS1: 0…1250 Pa / PS2: 0…7500 Pa	2	

Differential pressure transmitter for air and non-corrosive gases (multi-range)

Transmitters with a high level of accuracy and stability. Quick and easy mounting.

Technical data	
Supply voltage	24 V AC (24 V DC, two-wire for 4...20 mA), 0.24 VA
Accuracy	±1% full scale
Ambient temperature	0...70 °C
Protection class	IP54

Article	Working range	Output signal	Description	Notes
DTL150	100 / 300 / 500 Pa	0...10 V DC	Differential pressure transmitter	
DTL150-420	100 / 300 / 500 Pa	4...20 mA	Differential pressure transmitter	
DTL310	300 / 500 / 1000 Pa	0...10 V DC	Differential pressure transmitter	
DTL310-420	300 / 500 / 1000 Pa	4...20 mA	Differential pressure transmitter	
DTL516	500 / 1000 / 1600 Pa	0...10 V DC	Differential pressure transmitter	
DTL516-420	500 / 1000 / 1600 Pa	4...20 mA	Differential pressure transmitter	
DTL1650	1600 / 2500 / 5000 Pa	0...10 V DC	Differential pressure transmitter	
DTL1650-420	1600 / 2500 / 5000 Pa	4...20 mA	Differential pressure transmitter	
DTL...-D/-D-420	See type	See type	Transmitter (all types above) in display version (LCD). Note: Non-stock item.	

Accessories

Article	Description	Notes
ANS-1	2m plastic tube and two pressure outlets	
CCERT-H	Calibration certificate for the DTL series, when certified calibration is demanded.	

Differential pressure transmitter for air

Transmitter for differential pressure measurement of air and non-corrosive gases in air handling units, etc. A common application area is pressure control in ventilation systems.

Supply voltage	24 V AC +15/-10% or 18…33 V DC. (4…20 mA only 18…33 V DC)
Measuring range	-100…+100 Pa
Protection class	IP54
Accuracy, linearity	< ±0.7% full scale
Accuracy, hysteresis	< ±1.0% full scale
Ambient temperature	0…70 °C

Article	Display	Output signal	Notes
DTL10/10	-	0…10 V DC	
DTL10/10-D	X	0…10 V DC (settable to 4…20 mA via DIP-switch)	

Accessories

Article	Description	Notes
ANS	2m plastic tube and two pressure outlets	
ANS-1	2m plastic tube and two pressure outlets	
CCERT-H	Calibration certificate for the DTL series, when certified calibration is demanded.	

Differential pressure transmitter for air, with display

Microprocessor-controlled differential pressure transmitter for measurement of air and neutral gases. This transmitter has four different measuring ranges in the same unit. The range is selected by means of buttons under the cover. Other functions are zero-point adjustment and electronic damping of the signal.

Supplied with 2m plastic tube and two pressure outlets.

Selectable working range and output signal. Adjustable damping of the measuring signal.

Technical data	
Supply voltage	24 V AC or DC, 5 VA
Output signal	0...10 V DC or 4...20 mA
Working range	0...100 Pa, 0...300 Pa, 0...500 Pa and 0...1000 Pa
Accuracy	Better than ±1% at 20°C
Electronic damping	0...20 s
Display	LED, 3 digits
Protection class	IP54

Article	Description	Notes
DMD	Differential pressure transmitter with display	

Differential pressure transmitter with built-in controller, with display

Microprocessor-controlled differential pressure transmitter with built-in controller for control of dampers, frequency converters, VAV systems, gases etc. It has four separate measurement ranges in the same unit. The range is selected by means of buttons under the cover.

Supplied with 2m plastic tube and two pressure outlets.

Selectable working range. Adjustable damping of the measuring signal.

Technical data	
Supply voltage	24 V AC or DC, 5 VA
Output signal, pressure	0...10 V DC or 4...20 mA
Output signal, controller	0...10 V DC
Working range	0...100 Pa, 0...300 Pa, 0...500 Pa and 0...1000 Pa
Accuracy	±1% at 20°C
P-band	0...300%
I-time	0...999 s
D-factor	0...999 s
Electronic damping	0...20 s
Display	LED, 3 digits
Mounting	Wall
Protection class	IP54

Article	Description	Notes
DMD-C	Differential pressure transmitter with built-in controller, with display	

Differential pressure transmitter for liquids and gases

Differential pressure transmitter for measurement of liquids (also glycol-mixed) and gases (not ammonia). The measuring element is made of ceramic material.

Technical data	
Supply voltage	24 V AC / 18...33 V DC (output signal 0...10 V DC), 0.1 VA 11...33 V DC, two-wire (output signal 4...20 mA), 0.5 VA
Output signal	0...10 V DC or 4...20 mA (two-wire)
Ambient temperature	-15...+80 °C
Connection	Screw fitting for Ø 6 mm pipe included
Protection class	IP65

Article	Working range	Output signal	Max. overload pressure (one side)	Accuracy	Notes
DTK10	0...10 kPa	0...10 V DC	60 kPa	±1.3% fs	
DTK10-420	0...10 kPa	4...20 mA	60 kPa	±1.3% fs	
DTK20	0...20 kPa	0...10 V DC	120 kPa	±1.3% fs	
DTK20-420	0...20 kPa	4...20 mA	120 kPa	±1.3% fs	
DTK40	0...40 kPa	0...10 V DC	200 kPa	±1.3% fs	
DTK40-420	0...40 kPa	4...20 mA	200 kPa	±1.3% fs	
DTK100	0...100 kPa	0...10 V DC	500 kPa	±1.3% fs	
DTK100-420	0...100 kPa	4...20 mA	500 kPa	±1.3% fs	
DTK250	0...250 kPa	0...10 V DC	1200 kPa	±1.3% fs	
DTK250-420	0...250 kPa	4...20 mA	1200 kPa	±1.3% fs	
DTK400	0...400 kPa	0...10 V DC	1200 kPa	±0.8% fs	
DTK400-420	0...400 kPa	4...20 mA	1200 kPa	±0.8% fs	
DTK600	0...600 kPa	0...10 V DC	1200 kPa	±0.5% fs	
DTK600-420	0...600 kPa	4...20 mA	1200 kPa	±0.5% fs	
DTK1000	0...1000 kPa	0...10 V DC	2000 kPa	±0.5% fs	
DTK1000-420	0...1000 kPa	4...20 mA	2000 kPa	±0.5% fs	
DTK1600	0...1600 kPa	0...10 V DC	3200 kPa	±0.5% fs	
DTK1600-420	0...1600 kPa	4...20 mA	3200 kPa	±0.5% fs	

Accessories

Article	Description	Notes
DTK-NIPPEL	Nipple (R=1/8" 27NPT) for connection of Ø 6 mm copper pipe	
DTK-R	Copper pipe, Ø 6 mm, length 30 cm	

NEWS!

Pressure transmitter for liquids and gases

Pressure transmitter for measurement of liquids and gases.

Technical data	
Output signal	0...10 V DC (three-wire) or 4...20 mA (two-wire)
Pressure connection	G 1/4" (outside thread)
Dynamic response time	< 2 ms, 1 ms typically
Tolerable overload	≤ 4 bar 3.0×full scale, > 4 bar 2.5×full scale
Media temperature	-15…+125°C
Ambient temperature	-30...+85°C
Storage temperature	-50...+100°C
Accuracy, characteristic line	±0.3% full scale *
Accuracy, resolution	0.1% full scale *
Accuracy, thermal characteristic	Max. ±0.2% full scale / 10 K *
Accuracy, long-term stability according to IEC EN 60770-1	Max. ±0.25% full scale *
Sealing	FPM
Weight	90 g
Cable length	1.5m
Protection class	IP67

*Test conditions: 25°C, 45% RH, 24V DC supply voltage

Models

Article	Working range	Output signal	Supply voltage	Power consumption	Notes
TTKN1	0...100 kPa (1 bar)	0...10 V DC	12...33 V DC / 24 V AC ±15%	< 7 mA	
TTKN1-420	0...100 kPa (1 bar)	4...20 mA	7...33 V DC	< 23 mA	
TTKN2.5	0...250 kPa (2.5 bar)	0...10 V DC	12...33 V DC / 24 V AC ±15%	< 7 mA	
TTKN2.5-420	0...250 kPa (2.5 bar)	4...20 mA	7...33 V DC	< 23 mA	
TTKN6	0...600 kPa (6 bar)	0...10 V DC	12...33 V DC / 24 V AC ±15%	< 7 mA	
TTKN6-420	0...600 kPa (6 bar)	4...20 mA	7...33 V DC	< 23 mA	
TTKN10	0...1000 kPa (10 bar)	0...10 V DC	12...33 V DC / 24 V AC ±15%	< 7 mA	
TTKN10-420	0...1000 kPa (10 bar)	4...20 mA	7...33 V DC	< 23 mA	
TTKN16	0...1600 kPa (16 bar)	0...10 V DC	12...33 V DC / 24 V AC ±15%	< 7 mA	
TTKN16-420	0...1600 kPa (16 bar)	4...20 mA	7...33 V DC	< 23 mA	
TTKN25	0...2500 kPa (25 bar)	0...10 V DC	12...33 V DC / 24 V AC ±15%	< 7 mA	
TTKN25-420	0...2500 kPa (25 bar)	4...20 mA	7...33 V DC	< 23 mA	
TTKN40	0...4000 kPa (40 bar)	0...10 V DC	12...33 V DC / 24 V AC ±15%	< 7 mA	
TTKN40-420	0...4000 kPa (40 bar)	4...20 mA	7...33 V DC	< 23 mA	

Accessories

Article	Description	Notes
105074	Mounting spacer which lowers the temperature at higher media temperatures than the sensor can handle.	
ADAPTER	Adapter 1/4" to 1/2". For mounting immersion sensors in 1/2".	

FLOW

Air velocity transmitter

For air velocity measurement in ventilation ducts.

Technical data	
Supply voltage	24 V AC ±20%, 4 VA
Working range	0...10 m/s, 0...15 m/s, 0...20 m/s
Output signal	0...10 V (max. 1 mA), 4...20 mA
Time constant	1.5 s at 10 m/s
Accuracy	±(0.3 m/s + 3% of the value) at 0...10 m/s ±(0.3 m/s + 3% of the value) at 0...15 m/s ±(0.3 m/s + 4% of the value) at 0...20 m/s
Damping	0.2 or 2 s
Ambient temperature	-10...+50°C
Insertion length	50...200mm - adjustable
Mounting	Duct
Protection class	IP65

Article	Description	Notes
AVDT25	Air velocity transmitter	

Air flow switch

Air or non-aggressive gas flow control. Alarm signal for flow shortage. Well-suited for air ducts, air conditioning and air handling systems.

Technical data	
Contacts	Dust-tight microswitch with SPDT contacts (NC/NO)
Switch capacity	15 (8) A, 24…250 V AC
Ambient temperature	-40...+85°C
Ambient humidity	10…90% RH (non-condensing)
Media temperature	-10…+85°C
Paddles	Stainless steel AISI 301
Material, casing cover	Transparent PC
Material, casing base	ABS
Dimensions	265.5×140×102mm
Protection class	IP65

Article	Cut out	Cut in	Max. air temperature	Notes
AFS1	min. 1.0 m/s - max. 8.0 m/s	min. 2.5 m/s - max. 9.2 m/s	85°C	

Liquid flow switch

A series of electromechanical flow switches, suited for pipes of industrial plants: heating and air conditioning, refrigeration systems and heat pumps. Available in brass (suitable for normal media), and stainless steel AISI 316L (compatible with certain aggressive media).

Each model can be ordered with a 1" NPT thread on request.

Technical data	
Contacts	Dust-tight microswitch with switching contacts SPDT
Switch capacity	15 (8) A, 24...250 V AC
Ambient temperature	-40...+85°C
Ambient humidity	10...90% RH (non-condensing)
Media temperature	-40...+120°C
Paddles	Stainless steel AISI 316L
Material, casing cover	Transparent Polycarbonate (PC)
Dimensions	140×62×65mm
Protection class	IP65 class I

Article	For pipes (diameter)	Flow	Max. pressure	Media	"T" pipe fitting	Notes
FLS304X	1...8"	0.6…90.8 m^3/h	1100 kPa (11 bar)	Normal (body in brass)	-	
FLS304XT	1...8"	0.6…90.8 m^3/h	1100 kPa (11 bar)	Normal (body in brass)	-	
FLS304XRE	1...8"	0.2…55.3 m^3/h	1100 kPa (11 bar)	Normal (body in brass)	-	
FLS305XT	1...8"	0.6…90.8 m^3/h	30100 kPa (30 bar)	Corrosive (AISI 316L compatibility)	-	
FLS305XRE	1...8"	0.2…55.3 m^3/h	3000 kPa (30 bar)	Corrosive (AISI 316L compatibility)	-	
FLS306X	1/2"	0.174…0.846 m^3/h	1100 kPa (11 bar)	Normal (body in brass)	X	
FLS307X	3/4"	0.138…0.768 m^3/h	1100 kPa (11 bar)	Normal (body in brass)	X	
FLS308X	1"	0.124…1.0 m^3/h	1100 kPa (11 bar)	Normal (body in brass)	X	

Accessories

Article	Description	Notes
FLZ-09	Stainless steel Aisi 316L paddles for liquid flow switch	

CO_2/CO/NO_2 CONTROLLERS AND TRANSMITTERS

CO_2 and temperature transmitter, room mounting

Technical data	
Supply voltage	24 V AC ±10%, 50...60 Hz / 15...35 V DC
Working range, CO_2	0…2000 ppm
Accuracy, CO_2	< ± (50 ppm + 2% of the measured value)
Working range, temperature	0…50°C (32…122°F)
Power consumption	< 2.5 W
Energy consumption	< 0.5 Wh
Transformer power	5 VA
Mounting	Room
Dimensions	100×85×30.5mm
Protection class	IP30

Article	Accuracy, temperature	Output temperature	Output CO_2	Display	Notes
CTRT2A	± 0.4°C (0…10 V), ± 0.3°C (PT1000)	0...10 V DC + PT1000	0...10 V DC	-	
CTRT2A-D	± 0.4°C (0…10 V), ± 0.3°C (PT1000)	0...10 V DC + PT1000	0...10 V DC	X	

CO_2 and temperature transmitter for Modbus communication, room mounting

Technical data	
Output signal	Modbus
Supply voltage	24 V AC ±10%, 50...60 Hz / 15...35 V DC
Working range, CO_2	0…2000 ppm
Accuracy, CO_2	< ± (50 ppm + 2% of the measured value) (25 °C)
Working range, temperature	0…50°C (32…122°F)
Mounting	Room
Dimensions	100×85×30.5mm
Protection class	IP30

Article	Display	Accuracy, temperature	Notes
CTRC2	-	± 0.2°C	
CTRC2-D	X	± 0.2°C	

CO_2 transmitter with relay, room mounting

The CO2RT series measures CO_2 level. Models are available with or without display.

Technical data	
Supply voltage	24 V AC ±10% / 15...35 V DC
Working range, CO_2	0…2000 ppm
Accuracy, CO_2	< ± (50 ppm + 2% of the measured value) (25 °C)
Relay output	Max. 1 A at 50 V AC, min. 1 mA at 5 V DC
Mounting	Room
Protection class	IP30

Article	Display	Notes
CO2RT-R	-	
CO2RT-R-D	X	

CO_2, humidity and temperature transmitter, room mounting

Technical data	
Supply voltage	24 V AC ±10%, 50...60 Hz / 15...35 V DC
Working range, CO_2	0…2000 ppm
Accuracy, CO_2	< ± (50 ppm + 2% of the measured value)
Working range, temperature	0…50°C (32…122°F)
Working range, humidity	10...90% RH (non-condensing)
Accuracy, humidity	±3% at 20°C
Power consumption	< 2.5 W
Energy consumption	< 0.5 Wh
Transformer power	5 VA
Mounting	Room
Dimensions	100×85×30.5mm
Protection class	IP30

Article	Accuracy, temperature	Output CO_2	Output humidity	Output temperature	Display	Notes
CTHR2	± 0.3°C	0...10 V DC	0...10 V DC	PT1000	-	
CTHR2-D	± 0.3°C	0...10 V DC	0...10 V DC	PT1000	X	
CTHR2A	± 0.4°C	0...10 V DC	0...10 V DC	0...10 V DC	-	
CTHR2A-D	± 0.4°C	0...10 V DC	0...10 V DC	0...10 V DC	X	

CO_2, humidity and temperature transmitter for Modbus communication, room mounting

Technical data	
Output signal	Modbus
Supply voltage	24 V AC ±10%, 50...60 Hz / 15...35 V DC
Working range, CO_2	0…2000 ppm
Accuracy, CO_2	< ± (50 ppm + 2% of the measured value) (25 °C)
Working range, temperature	0…50°C (32…122°F)
Working range, humidity	10...90% RH (non-condensing)
Accuracy, humidity	±2% at 20°C
Mounting	Room
Dimensions	100×85×30.5mm
Protection class	IP30

Article	Display	Accuracy, temperature	Notes
CTHRC2	-	± 0.2°C	
CTHRC2-D	X	± 0.2°C	

CO_2 and temperature transmitter for duct mounting

Transmitter for measuring carbon dioxide concentration and temperature in air. Passive PT1000 output and 0...10 V DC for temperature.

Technical data	
Output signal	0...10 V DC or 4...20 mA (settable)
Supply voltage	24 V AC ±20%, 50…60 Hz, 2 VA, 15…35 V DC
Working range, CO_2	0…2000 ppm
Accuracy, CO_2	< ± (50 ppm + 2% of the measured value)
Working range, temperature	0…50 °C
Accuracy, temperature	±0.3°C
Mounting	Duct
Protection class	IP65 with probe downwards, otherwise IP20

Article	Description	Notes
CTDT2	CO_2 and temperature transmitter for duct mounting	

Carbon dioxide transmitter, duct mounting

Measures the concentration of carbon dioxide in ducts.

Technical data	
Supply voltage	24 V AC ±20%, 50...60 Hz or 15...35 V DC, 3 VA
Working range	0...2000 ppm
Accuracy	±(50 ppm + 2% of the measured value)
Relay output	Max. 1 A at 50 V AC, min. 1 mA at 5 V DC
Mounting	Duct
Protection class	IP65

Article	Description	Notes
CO2DT-R	CO_2 transmitter with relay	

On request also available with 0...5000 ppm working range.

Carbon monoxide transmitter

This device measures the carbon monoxide concentration using an electrochemical method of measurement characterised by high selectivity even in low concentrations. It is installed for both safety and energy-saving reasons. The output signals are linear representations of the gas concentration.

The transmitter is TÜV-approved in accordance with VDI 2053.

Technical data	
Supply voltage	12...28 V DC
Measuring range	0...300 ppm
Outputs	4...20 mA, two-wire / 0...10 V DC, three-wire
Calibration	Automatic zero adjustment
Protection class	IP56

Article	Description	Notes
COF	CO transmitter	

Nitrogen dioxide transmitter

NO2F measures the nitrogen dioxide concentration using an electrochemical method of measurement characterised by high selectivity even in low concentrations. The output signals are linear representations of the gas concentration.

The transmitter is TÜV-approved in accordance with VDI 2053.

Technical data	
Supply voltage	12...28 V DC
Measuring range	0...20 ppm
Outputs	4...20 mA, two-wire 0...10 V DC, three-wire
Calibration	Automatic zero adjustment
Protection class	IP56

Article	Description	Notes
NO2F	NO_2transmitter	

Room controller, temperature and CO_2

Temperature and CO_2 controller for control of e.g. an EC fan or a damper in air handling or demand-controlled ventilation applications.

Technical data	
Supply voltage	85…230 V AC, 50/60 Hz
Temperature range	5…30 °C
Working range, CO_2	0…2000 ppm
Outputs	1 analogue output 0...10 V (RL > 10 K)
Mounting	Room
Protection class	IP30

Article	Description	Notes
ALC230A	Temperature and CO_2controller	

LUX TRANSMITTER

NEWS!

Lux transmitter

In- or outdoor lux transmitter with a passive PT1000 temperature sensor as well as DIP-switches for scaling the output signal.

Technical data	
Supply voltage	16…36 V DC, 24 V AC
Analogue output	0...10 V. Min. load resistance 10 kΩ.
Accuracy, lux	±10%
Operating temperature	-30…+70°C
Relative humidity	0…98%, non-condensing
Connection	Screw clamps 1.5 mm²
Measuring range	0...1000 / 0...10000 / 0...50000 / 0...100000 lux
Weight	107 g
Dimensions (W×H×D)	59×65×37.5mm
Protection class	IP65

Models

Article	Description	Notes
LTWT10/PT1000	Lux transmitter	

7 DETECTORS

DETECTORS

Smoke detector for duct mounting, ionisation

Single-tube detector including 600mm venturi tube.

Technical data	
Supply voltage	9...33 V DC (via ABV control unit). 24 V AC ±15% for RAC(M) models.
Power consumption, incl. end resistor (not RAC(M))	Normal operation: 11 mA at 24 V DC. Alarm condition: 50 mA at 24 V DC. Service alarm condition: 20 mA at 24 V DC.
Mounting	Duct
Protection class	IP54

Article	Description	Notes
SDD-S65	Ionisation detector	
SDD-S50	Ionisation detector with service alarm	
SDD-S65-RAC	Ionisation detector with AC power supply and relay output only	
SDD-S65-RACM	Ionisation detector with AC power supply and relay output only. With auxiliary fan.	
SDD-S65-M	Ionisation detector with auxiliary fan	
SDD-S50-M	Ionisation detector with auxiliary fan and service alarm	

Accessories

Article	Description	Notes
TDS	Mounting spacer for insulated pipe ducts	
VR600	Venturi tube, 600mm length (standard)	
VR2000	Venturi tube, 2000mm length	

Smoke detector for duct mounting, optical

Single-tube detector, including 600mm Venturi tube.

Technical data	
Supply voltagev	9...33 V DC (via ABV control unit). 24 V AC ±15% for RAC(M) models.
Power consumption, incl. end resistor (not RAC(M))	Normal operation: 11 mA at 24 V DC. Alarm condition: 50 mA at 24 V DC. Service alarm condition: 20 mA at 24 V DC.
Mounting	Duct
Protection class	IP54

Article	Description	Notes
SDD-OE65	Optical detector	
SDD-OE50	Optical detector with service alarm	
SDD-OE65-RAC	Optical detector with AC power supply and relay output only	
SDD-OE65-RACM	Optical detector with AC power supply and relay output only. With auxillary fan.	
SDD-OE50-M	Optical detector with auxiliary fan and service alarm	

Accessories

Article	Description	Notes
TDS	Mounting spacer for insulated pipe ducts	

Smoke detector for ceiling mounting

Technical data	
Supply voltage	15...30 V DC (via ABV control unit)
Current consumption	0.14 mA (50 mA if an alarm occurs)
Mounting	Ceiling
Protection class	IP43

Article	Description	Service alarm	Notes
S65-OE	Optical detector	-	
S50-OE-GA4	Optical detector with service alarm	X	
S65	Ionisation detector	-	
S50	Ionisation detector with service alarm	X	

Accessories

Article	Description	Notes
S-BP	Socket for SSDC50 and SSDC65 detectors	
S-BPR-S50	Socket for SSDC50 detectors with built-in NO/NC relay (24 V AC)	
S-BPR-S65	Socket for SSDC65 detectors with built-in NO/NC relay (24 V AC)	

Control units for smoke detectors

Control unit for smoke detectors. Provides power supply and alarm handling for smoke detectors, with or without service alarm. Two relay contacts for alarm handling.

Technical data	
Current consumption	30 mA (70 mA if an alarm occurs)
Mounting	DIN-rail
Number of modules	3
Protection class	IP20

Article	Supply voltage	Alarm outputs	Service alarm	Notes
ABV24-300/D	24 V AC/DC	Two NO/NC contacts (smoke alarms)	-	
ABV24-S-300/D	24 V AC/DC	One NO/NC contact (smoke), one closing contact (smoke), one closing contact (service)	X	
ABV-300/D	230 V AC	Two NO/NC contacts (smoke alarms)	-	
ABV-S-300/D	230 V AC	One NO/NC contact (smoke), one closing contact (smoke), one closing contact (service)	X	

Smoke spray

Gas for control of smoke detectors. Suitable for control of ionisation or optical smoke detectors.

Article	Description	Notes
SS-260	Smoke spray, 260 ml	

IR24-P

IR24-PC

Presence detector

Detector providing a signal when someone enters the room. The detector has a pulse-detecting function that minimizes the risk of false alarms. Settable on/off delays and change-over relay.

Technical data	
Supply voltage	24 AC/DC
Alarm relay	200 mA, 24 V AC/DC, potential-free, NO/NC
Current consumption	5 mA
Temperature range	-20…+50 °C
Ambient humidity	Max. 95% RH
Protection class	IP20

Article	Mounting	Detection area	Notes
IR24-P	Wall	15 m, 110° angle	
IR24-PC	Ceiling	Height×2.5 = coverage diameter, 25° angle	

8

WIRELESS

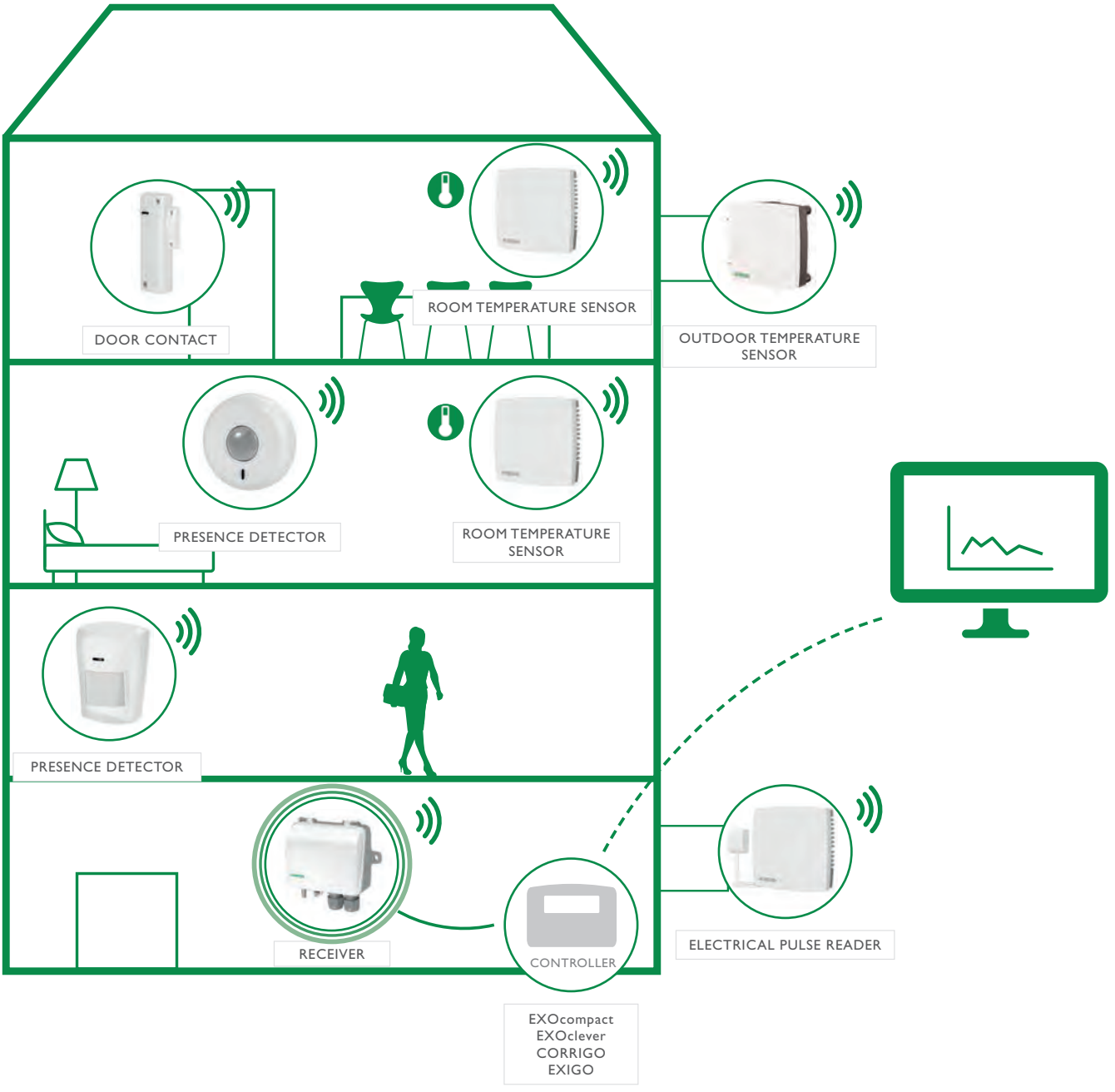
GO WIRELESS

WITH RELIABILITY IN FOCUS

- ✓ Install products on surfaces where you couldn't before, e.g. in heritage listed buildings with restrictions.
- ✓ The simple solution for flexible, module based offices – easy to move or add as needed. Easy to move when refurnishing.

SHORT FACTS

- ✓ Extensive communication range and high reliability
- ✓ Wireless = low installation costs + great timesaver
- ✓ Easy to integrate with Modbus based systems



GO WIRELESS READY STEADY GO Modbus

NEWS!

Wireless receiver with Modbus communication

Handles up to 16 sensors.

Technical data	
Power supply	24 V AC
Frequency	868 MHz
Protection class	IP54
Ambient temperature	-10...+50 °C
Ambient humidity	up to 85% RH non-condensing

Article	Description	Notes
RCW-M	Wireless receiver with Modbus communication	

NEWS!

Wireless room temperature sensor

For room temperature measurement.

Technical data	
Power supply	AA 1.5 V L91 battery×2
Frequency	868 MHz
Protection class	IP30
Temperature range	-10...+50 °C
Ambient humidity	up to 85% RH non-condensing

Article	Description	Notes
TG-R5W	Wireless room temperature sensor	

NEWS!

Wireless outdoor temperature sensor

For outdoor temperature measurement.

Technical data	
Power supply	CR123A 3V lithium battery×2
Frequency	868 MHz
Protection class	IP54
Temperature range	-30...+50 °C
Ambient humidity	up to 85% RH non-condensing

Article	Description	Notes
TG-R6W	Wireless outdoor temperature sensor	

NEWS!

Wireless optical pulse reader

Counts electrical pulses from an electricity meter.

Technical data	
Power supply	AA 1.5 V L91 battery×2
Frequency	868 MHz
Protection class	IP30
Ambient temperature	-10...+50°C
Ambient humidity	up to 85% RH non-condensing

Article	Description	Notes
EPRW	Wireless electric pulse reader	

NEWS!

Wireless ceiling mounted presence detector

Detector providing a signal when someone enters the room. 360° detection area with a diameter of eight meters.

Technical data	
Power supply	CR123A 3V lithium battery
Frequency	868 MHz
Protection class	IP20
Ambient temperature	-10...+45°C
Ambient humidity	up to 85% RH non-condensing

Article	Description	Notes
IRCW	Wireless ceiling mount IR motion sensor	

NEWS!

Wireless presence detector

Detector providing a signal when someone enters the room.

Technical data	
Power supply	CR123A 3V lithium battery
Frequency	868 MHz
Protection class	IP20
Ambient temperature	-10...+50°C
Ambient humidity	up to 85% RH non-condensing

Article	Description	Notes
IRW	Wireless IR detector	

NEWS!

Wireless door contact

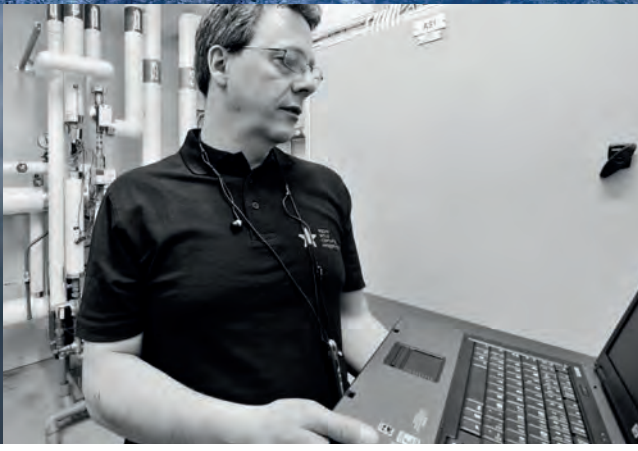
Door contact detecting opening of door or window.

Technical data	
Power supply	CR2 3V lithium battery
Frequency	868 MHz
Protection class	IP30
Ambient temperature	-10...+50 °C
Ambient humidity	up to 85% RH non-condensing

Article	Description	Notes
DCW	Wireless door contact	

9

ENERGY METERS



Energy meter with coaxial multi-jet flow meter

Externally threaded, compact energy meters with coaxial multi-jet flow meter, intended for heating or cooling.

Technical data, calculator	
Power supply	3 V lithium battery, min. 6 + 1 years
Temperature range	1...150 °C
Protection class	IP54
Technical data, flow meter	
Connection	Threaded according to ISO 228/1
Pressure rating	PN16
Media	Water (contact Regin if other media are needed, e.g. glycol-mixed water)
Mounting position	Horizontal or vertical
Technical data, temperature sensor	
Cable length	1.5m (the other temperature sensor is integrated into the flow meter)
Sensor element	PT500; separately approved type as per EN60751, unshielded
Diameter, sensor	5mm

Article	Description	Notes
MSH	Energy meter with coaxial multi-jet flow meter. See ordering code selection table for more information on each model.	

Ordering code selection table

Options	MSH						
Flow (thread on meter body) (DN) (length of flow meter)	0.6 m³/h (G3/4") (DN15) (110 mm)	15-0.6					
	1.5 m³/h (G3/4")(DN15) (110 mm)	15-1.5					
	2.5 m³/h (G1") (DN20) (130 mm)	20-2.5					
Type of measurement and installation point	Heating installation of flow meter in return pipe (MID approval)		-	HR			
	Cooling[1], installation of flow meter in return pipe		-	CR			
	Heating and cooling in combination[2], installation of flow meter in return pipe.		-	HCR			
Communication interface	M-Bus				-	M	
	M-Bus with 2 pulse inputs				-	MPI	
	Pulse output for energy				-	PO	

[1] TÜV approval. [2] MID approval for heating, not for cooling.

If any further requirements or options are needed, or for pricing questions, please contact Regin.

Accessories

VSR

Threaded fitting with coupling ring and gasket *

Article	Connection A	Connection B	Compatible with	Meter DN	Notes
VSR-1/2	G¾	R½	q_p0.6/1.5 m³/h	15	
VSR-3/4	G1	R¾	q_p2.5/3.5 m³/h	20	

KH

Ball valve with coupling ring and gasket *

Article	Connection A	Connection B	Compatible with	Meter DN	Notes
KH-3/4	Rp¾	G¾	q_p0.6/1.5 m³/h	15	
KH-1	Rp1	G1	q_p2.5/3.5 m³/h	20	

KH-S

Ball valve with installation point for a temperature sensor (socket M10x1)

Article	Connection A	Compatible with	Meter DN	Notes
KH-S-3/4	G¾	q_p0.6/1.5 m³/h	15	
KH-S-1	G1	q_p2.5/3.5 m³/h	20	

VAD

Supply flow adapter with gasket, for direct mounting of a temperature sensor in a T-piece

Article	Connection A	Notes
VAD-1/2	G½, M10x1	
VAD-3/8	G3/8, M10x1	

PS

Threaded adapter to replace a flow meter temporarily or permanently

Article	Connection A	Compatible with	Installation length	Meter DN	Notes
PS-110-3/4	G¾	q_p0.6/1.5 m³/h	110mm	15	
PS-130-1	G1	q_p2.5 m³/h	130mm	20	

OPTO-CABLE-USB

Optical interface and read-out software

Article	Description	Notes
OPTO-CABLE-USB	Optocoupler with USB interface	
OPTO-TOOL	Software device monitor	

* Either the brass threaded fittings or the ball valves are to be used on each side of the flow meter. 2 pcs are required for each meter.

9

Ultrasonic energy meters

Externally threaded, compact energy meters with built-in ultrasonic flow meter, intended for heating or cooling.

Technical data, calculator	
Power supply	3 V lithium battery, min. 6 + 1 years
Temperature range	1...105 °C
Protection class	IP54
Technical data, flow meter	
Connection	Threaded according to ISO 228/1
Pressure rating	PN16
Media	Water
Mounting position	Horizontal or vertical
Technical data, temperature sensor	
Cable length	1.5m (the other temperature sensor is integrated into the flow meter)
Sensor element	PT1000, DIN IEC 60751
Diameter, sensor	5mm

Article	Description	Notes
SS2U	Energy meter with ultrasonic flow meter. See ordering code selection table for more information on each model.	

Ordering code selection table

Options	SS2U					
Flow (thread on meter body) (DN) (length of flow meter)	0.6 m³/h (G3/4") (DN15) (110 mm)	15-0.6[3]				
	1.5 m³/h (G3/4")(DN15) (110 mm)	15-1.5				
	2.5 m³/h (G1") (DN20) (130 mm)	20-2.5				
	3.5 m³/h (G1") (DN20) (130 mm)	20-3.5				
	3.5 m³/h (G1 1/4") (DN25) (150 mm)	25-3.5				
	6.0 m3/h (G1 1/4") (DN25) (150 mm)	25-6.0				
Type of measurement and installation point	Heating installation of flow meter in return pipe (MID approval)		-	HR		
	Cooling[1], installation of flow meter in return pipe		-	CR		
	Heating and cooling in combination[2], installation of flow meter in return pipe.		-	HCR		
Communication interface	M-Bus				-	M
	M-Bus with 2 pulse inputs				-	MPI
	Pulse output for energy				-	PO

[1] TÜV approval. [2] MID approval for heating, not for cooling.
[3] 0.6 is only available for heating, not for cooling.

If any further requirements or options are needed, or for pricing questions, please contact Regin.

Accessories

VSR

Threaded fitting with coupling ring and gasket *

Article	Connection A	Connection B	Compatible with	Meter DN	Notes
VSR-1/2	G¾	R½	q_p0.6/1.5 m³/h	15	
VSR-3/4	G1	R¾	q_p2.5/3.5 m³/h	20	
VSR-1	G1¼	R1	q_p3.5/6.0 m³/h	25	

KH

Ball valve with coupling ring and gasket *

Article	Connection A	Connection B	Compatible with	Meter DN	Notes
KH-3/4	Rp¾	G¾	q_p0.6/1.5 m³/h	15	
KH-1	Rp1	G1	q_p2.5/3.5 m³/h	20	
KH-1 1/4	Rp1¼	G1¼	q_p3.5/6.0 m³/h	25	

KH-S

Ball valve with installation point for a temperature sensor (socket M10x1)

Article	Connection A	Compatible with	Meter DN	Notes
KH-S-3/4	G¾	q_p0.6/1.5 m³/h	15	
KH-S-1	G1	q_p2.5/3.5 m³/h	20	
KH-S-1 1/4	G1¼	q_p3.5/6.0 m³/h	25	

VAD

Supply flow adapter with gasket, for direct mounting of a temperature sensor in a T-piece

Article	Connection A	Notes
VAD-1/2	G½, M10x1	
VAD-3/8	G3/8, M10x1	

PS

Threaded adapter to replace a flow meter temporarily or permanently

Article	Connection A	Compatible with	Installation length	Meter DN	Notes
PS-110-3/4	G¾	q_p0.6/1.5 m³/h	110mm	15	
PS-130-1	G1	q_p2.5 m³/h	130mm	20	
PS-150-1 1/4	G1¼	qp 3.5/6 m³/h	150mm	25	

OPTO-CABLE-USB

Optical interface and read-out software

Article	Description	Notes
OPTO-CABLE-USB	Optocoupler with USB interface	
OPTO-TOOL	Software device monitor	

* Either the brass threaded fittings or the ball valves are to be used on each side of the flow meter. 2 pcs are required for each meter.

9

Ultrasonic energy meters

Externally threaded ultrasonic energy meters, intended for heating or cooling.

Technical data, calculator	
Power supply	3.6 V lithium battery, min. 6+1 years
Temperature range	1...150°C
Protection class	IP54 (heating), IP65 (cooling)
Technical data, flow meter	
Connection	Threaded according to ISO 228/1
Pressure rating	PN16
Media	Water
Mounting position	Horizontal or vertical
Technical data, temperature sensor	
Cable length	3m (the other temperature sensor is integrated into the flow meter)
Sensor element	PT500; separately approved type as per EN60751, unshielded
Diameter, sensor	5mm

Article	Description	Notes
US-WV	Ultrasonic energy meter. See ordering code selection table for more information on each model.	

Ordering code selection table

Options	US-WV					
Flow (thread on meter body) (DN) (length of flow meter)	1.5 m³/h (G3/4")(DN15) (110 mm)	15-1.5				
	1.5 m³/h (G1") (DN20) (190 mm)	20-1.5				
	2.5 m³/h (G1") (DN20) (190 mm)	20-2.5				
	3.5 m³/h (G1 1/4") (DN25) (260 mm)	25-3.5				
	6.0 m³/h (G1 1/4") (DN25) (260 mm)	25-6.0				
	10 m³/h (G2) (DN40") (300 mm)	40-10				
Type of measurement and installation point	Heating installation of flow meter in return pipe (MID approval)		-	HR		
	Cooling[1], installation of flow meter in return pipe		-	CR		
	Heating and cooling in combination[2], installation of flow meter in return pipe.		-	HCR		
Communication interface	M-Bus with power supply				-	M
	M-Bus with 2 pulse inputs				-	MPI
	Pulse output for energy				-	PO

[1] TÜV approval. [2] MID approval for heating, not for cooling.

If any further requirements or options are needed, or for pricing questions, please contact Regin.

Accessories

VSR

Threaded fitting with coupling ring and gasket *

Article	Connection A	Connection B	Compatible with	Meter DN	Notes
VSR-1/2	G¾	R½	q_p0.6/1.5 m³/h	15	
VSR-3/4	G1	R¾	q_p2.5/3.5 m³/h	20	
VSR-1	G1¼	R1	q_p3.5/6.0 m³/h	25	
VSR-1 1/2	G2	R1½	q_p10 m³/h	40	

KH

Ball valve with coupling ring and gasket *

Article	Connection A	Connection B	Compatible with	Meter DN	Notes
KH-3/4	Rp¾	G¾	q_p0.6/1.5 m³/h	15	
KH-1	Rp1	G1	q_p2.5/3.5 m³/h	20	
KH-1 1/4	Rp1¼	G1¼	q_p3.5/6.0 m³/h	25	
KH-2	Rp2	G2	q_p10 m³/h	40	

KH-S

Ball valve with installation point for a temperature sensor (socket M10x1)

Article	Connection A	Compatible with	Meter DN	Notes
KH-S-3/4	G¾	q_p0.6/1.5 m³/h	15	
KH-S-1	G1	q_p2.5/3.5 m³/h	20	
KH-S-1 1/4	G1¼	q_p3.5/6.0 m³/h	25	
KH-S-2	G2	q_p10 m³/h	40	

VAD

Supply flow adapter with gasket, for direct mounting of a temperature sensor in a T-piece

Article	Connection A	Notes
VAD-1/2	G½, M10x1	
VAD-3/8	G3/8, M10x1	

PS

Threaded adapter to replace a flow meter temporarily or permanently

Article	Connection A	Compatible with	Installation length	Meter DN	Notes
PS-110-3/4	G¾	q_p0.6/1.5 m³/h	110 mm	15	
PS-190-1	G1	qp 1.5/2.5 m³/h	190 mm	20	
PS-260-1 1/4	G1¼	qp 3.5/6 m³/h	260 mm	25	
PS-300-2	G2	qp 10 m³/h	300 mm	40	

OPTO-CABLE-USB

Optical interface and read-out software

Article	Description	Notes
OPTO-CABLE-USB	Optocoupler with USB interface	
OPTO-TOOL	Software device monitor	

*Either the brass threaded fittings or the ball valves are to be used on each side of the flow meter. 2 pcs are required for each meter.

9

Ultrasonic energy meters

Flanged ultrasonic energy meters, intended for heating or cooling.

Technical data, calculator	
Power supply	3.6 V lithium battery, min. 6+1 years
Temperature range	1...150 °C
Protection class	IP54 (heating), IP65 (cooling)
Technical data, flow meter	
Connection	Flanged according to EN 1092-3
Pressure rating	PN25
Media	Water
Mounting position	Horizontal or vertical
Technical data, temperature sensor	
Cable length	3 m
Sensor element	PT500; separately approved type as per EN60751, unshielded
Diameter, sensor	6 mm

Article	Description	Notes
US-S/FFL	Ultrasonic energy meter. See ordering code selection table for more information on each model.	

Ordering code selection table

Options	US-S/FFL					
Flow select m³/h (DN) (Length in mm) (Flange)	3.5 m³/h (DN25) (260 mm) (PN25 flange with 4 bolt holes)	25-3.5				
	6.0 m³/h (DN25) (260 mm) (PN25 flange with 4 bolt holes)	25-6.0				
	10 m³/h (DN40) (300 mm) (PN25 flange with 4 bolt holes)	40-10				
	15 m³/h (DN50) (270 mm) (PN25 flange with 4 bolt holes)	50-15				
	25 m³/h (DN65) (300 mm) (PN25 flange with 8 bolt holes)	65-25				
	40 m³/h (DN80) (300 mm) (PN25 flange with 8 bolt holes)	80-40				
	60 m³/h (DN100) (360 mm) (PN25 flange with 8 bolt holes)	100-60				
Type of measurement and installation point	Heating installation of flow meter in return pipe (MID approval)		-	HR		
	Cooling[1], installation of flow meter in return pipe		-	CR		
	Heating and cooling in combination[2], installation of flow meter in return pipe.		-	HCR		
Communication interface	M-Bus with power supply				-	M
	M-Bus with 2 pulse inputs				-	MPI
	Pulse output for energy				-	PO

[1] TÜV approval. [2] MID approval for heating, not for cooling.

If any further requirements or options are needed, or for pricing questions, please contact Regin.

Accessories

TH-85

Temperature sensor pocket for installation of universal temperature sensor with 6mm sheath diameter

Article	Connection A	Compatible with	Installation length	Notes
TH-85-1/2	G½	q_p3.5…10 m³/h	85mm	
TH-120-1/2	G½	q_p15…100 m³/h	120mm	

OPTO-CABLE-USB

Optical interface and read-out software

Article	Description	Notes
OPTO-CABLE-USB	Optocoupler with USB interface	
OPTO-TOOL	Software device monitor	

Woltmann type combined energy meter

Flanged Woltmann flow meters for large nominal flows, intended for flow measurements in large plants, such as those found in district heating systems.

Technical data, calculator	
Power supply	3 V lithium AA battery, replaceable, min. 6+1 years
Temperature range	1...150 °C
Protection class	IP65
Technical data, flow meter	
Connection	Flanged according to EN 1092-2
Pressure rating	PN16
Media	Water (contact Regin if other media are needed, e.g. glycol-mixed water)
Mounting position	WSTH horizontal only, WPTH horizontal or vertical
Technical data, temperature sensor	
Cable length	3 m
Sensor element	PT500; separately approved type as per EN60751, unshielded
Diameter, sensor	6 mm

Article	Description	Notes
WSTH	Woltmann type combined energy meter for horizontal mounting. See ordering code selection table for more information on each model.	
WPTH	Woltmann type combined energy meter for horizontal or vertical mounting. See ordering code selection table for more information on each model.	

Ordering code selection table

Options	WSTH					
Flow select m³/h (DN) (flange) (length of meter)	15 m³/h (DN50) (PN16 flange with 4 bolt holes) (270 mm)	50-15				
	25 m³/h (DN65) (PN16 flange with 4 bolt holes) (300 mm)	65-25				
	40 m³/h (DN80) (PN16 flange with 8 bolt holes) (300 mm)	80-40				
	60 m³/h (DN100) (PN16 flange with 8 bolt holes) (360 mm)	100-60				
	150 m³/h (DN150) (PN16 flange with 8 bolt holes) (500 mm)	150-150				
Type of measurement and installation point	Heating installation of flow meter in return pipe (MID approval)		-	HR		
	Cooling[1], installation of flow meter in return pipe		-	CR		
	Heating and cooling in combination[2], installation of flow meter in return pipe.		-	HCR		
Communication interface	M-Bus				-	M
	M-Bus with 2 pulse inputs				-	MPI
	Pulse output for energy				-	PO

[1] TÜV approval. [2] MID approval for heating, not for cooling.

Ordering code selection table

Options	WPTH					
Flow select m³/h (DN) (flange) (length of meter)	15 m³/h (DN50) (PN16 flange with 4 bolt holes) (200 mm)	50-15				
	25 m³/h (DN65) (PN16 flange with 4 bolt holes) (200 mm)	65-25				
	32 m³/h (DN80) (PN16 flange with 8 bolt holes) (225 mm)	80-32				
	60 m³/h (DN100) (PN16 flange with 8 bolt holes) (250 mm)	100-60				
	100 m³/h (DN125) (PN16 flange with 8 bolt holes) (250 mm)	125-100				
	200 m³/h (DN150) (PN16 flange with 8 bolt holes) (300 mm)	150-200				
	250 m³/h (DN200) (PN16 flange with 12 bolt holes) (350 mm)	200-250				
	400 m³/h (DN250) (PN16 flange with 12 bolt holes) (450 mm)	250-400				
	600 m³/h (DN300) (PN16 flange with 12 bolt holes) (500 mm)	300-600				
Type of measurement and installation point	Heating installation of flow meter in return pipe (MID approval)		-	HR		
	Cooling[1], installation of flow meter in return pipe		-	CR		
	Heating and cooling in combination[2], installation of flow meter in return pipe.		-	HCR		
Communication interface	M-Bus				-	M
	M-Bus with 2 pulse inputs				-	MPI
	Pulse output for energy				-	PO

[1] TÜV approval. [2] MID approval for heating, not for cooling.

If any further requirements or options are needed, or for pricing questions, please contact Regin.

9

Accessories

TH-120

TH-210

Temperature sensor pocket for installation of universal temperature sensor with 6mm sheath diameter

Article	Connection A	Compatible with	Installation length	Notes
TH-120-1/2	G½	q_p15...100 m³/h	120mm	
TH-210-1/2	G½	≥ qp 150 m³/h	210mm	

TH-210

Optical interface and read-out software

Article	Description	Notes
OPTO-CABLE-USB	Optocoupler with USB interface	
OPTO-TOOL	Software device monitor	

10

VALVES

✓ Recommended choise | ◆ Other possible alternative

					RTAN	
					RTAN...	RTAN140...
					100 N	140 N
VALVE	TYPE	NOMINAL DIAMETER	KVS	STROKE		
RTV	2-way	DN10–15		1,7 mm		
VHR	2-way	DN25		1,7 mm		
FVR	2-way	DN10–20		1,7 mm		
CTV	2-way	DN10–20		3,5 mm		

EXTERNALLY THREADED VALVES

VTTV	2-way	DN15–20	0,25–2,5	2,5 mm	✓	
		DN20	4,0–6,0	2,5 mm		✓
VTTR	3-way	DN15–20	0,25–2,5	2,5 mm	✓	
		DN20	4,0–6,0	2,5 mm		✓
VTTB	3-way with bypass	DN15–20	0,25–2,5	2,5 mm	✓	
		DN20	4,0–6,0	2,5 mm		✓
ZTV	2-way	DN15–25		5,5 mm		
ZTR	3-way	DN15–25		5,5 mm		
ZMD	2- & 3-way	DN15–40		5,5 mm		
ETVS	2-way	DN15–50		20 mm		
ETRS	3-way	DN15–50		20 mm		

NEWS!

INTERNALLY THREADED VALVES

ZTVB	2-way	DN25–40		5 mm		
ZTRB	3-way	DN25–40		5 mm		
BTV	2-way	DN15–50		20 mm		
MTVS	2-way	DN15–50		20 mm		
MTRS	3-way	DN15–50		20 mm		

PRESSURE INDEPENDENT CONTROL VALVES

PCTVS	2-way	DN15–20		2,7 mm		
PCMTV	2-way	DN15–25		2,7 mm		
		DN20–32		6 mm		
		DN32–50		90°		

FLANGED VALVES

GF2/GF3	2- & 3-way (DIN-standard)	DN25–40		20 mm		
		DN50–65		20 mm		
		DN80–100		40 mm		
		DN125–200		40 mm		
NTVS	2-way (DIN-standard)	DN15–50		20 mm		
		DN65–80		20 mm		
		DN100		38 mm		
		DN125–150		40 mm		
FRS	2-way (TAC STL)	DN15–25		20 mm		
		DN32–65	0,6–6,3	20 mm		
		DN32–65	10–20	20 mm		





RTA(O)M				RVAZ4	RVAPC...	RVAN				RVASN08...
RTAM100...	RTAM125...	RTAOM...	RTAOM125...	RVAZ4...	RVAPC...	RVAN5...	RVAN10...	RVAN18...	RVAN25...	RVASN08...
100 N	125 N	100 N	125 N	400 N	120 N	500 N	1000 N	1800 N	2500 N	8 Nm
✓		◆								
✓		◆								
✓		◆								
✓		◆								
◆		✓			✓					
	◆		✓							
◆		✓			✓					
	◆		✓							
◆		✓			✓					
	◆		✓							
				✓						
				✓						
				✓						
						✓	◆			
						✓	◆			
				✓						
				✓						
						✓	◆			
						✓	◆			
✓		◆			✓					
✓		◆			✓					
	✓		◆		✓					
										✓
						◆	✓			
						◆ with art. 02133005		✓	◆	
								✓	◆	
								◆	✓	
						✓	◆			
							✓			
								✓	◆	
									✓	
						✓	◆			
						✓	◆			
								✓		

10

ZONE VALVES

2-way zone valve

Range of zone valves for control in aftertreatment systems. The valve can control water flow to cooling and heating batteries, radiators, convectors, chilled ceilings etc. and is intended to be used in conjunction with the RTA(O)M100 thermal actuators.

Technical data	
Pressure rating	PN10
Connection, actuator	M28×1.5
Max. leakage	0% of the kvs value
Media temperature	5…100 °C
Stroke	1.7 mm
Material	
Body	Chromed brass CW614N
Seat	Brass CW614N
Stem	Stainless steel 1.4305
O-rings	EPDM
Bonnet	Brass CW614N
Seat packing	NBR

Models

Article	Nominal diameter	Connection, internal thread	Connection, external thread	Kvs	ΔPmax	ΔPs	Actuator	Notes
RTV10	DN10	G3/8" (inlet)	M22×1.5 (outlet)	1.2	30 kPa	150 kPa	RTA(O)M	
RTV15	DN15	G1/2" (inlet)	M26×1.5 (outlet)	1.4	30 kPa	150 kPa	RTA(O)M	

ΔPs constitutes the max. permitted differential pressure at which the valve actuator can safely close against the pressure.

ΔPmax constitutes the max. permitted differential pressure over the flow path of the valve for the entire actuating range of the actuator (i.e. open valve).

2-way zone valve

The zone valve is intended for zone control systems together with the thermal actuators in the RTA(O)M100 series. The valve can control water flow to cooling as well as heating batteries, such as radiators, convectors, chilled ceilings etc.

Technical data	
Pressure rating	PN10
Connection, actuator	M28×1.5
Max. leakage	0% of the kvs value
Media temperature	5…100°C
Stroke	1.7mm
Kvs	4.8
Max. diff. pressure	50 kPa
Material	
Body	Brass CW614N
Seat	Brass CW614N
Stem	Stainless steel 1.4305
Packing box	EPDM
Bonnet	Brass CW614N

Models

Article	Nominal diameter	Connection, internal thread	Connection, external thread	Actuator	Notes
VHR25	DN25	G1" (inlet)	M40×2.0 (outlet)	RTA(O)M	

2-way zone valve

The zone valve is intended for zone control systems together with the thermal actuators in the RTA(O) M100 series. The valve can control water flow to cooling as well as heating batteries, such as convectors, cooling ceilings etc.

Technical data	
Pressure rating	PN10
Connection, actuator	M28×1.5
Max. leakage	0% of the kvs value
Media temperature	2…90°C
Stroke	1.7mm
Material	
Body	Chromed brass CW614N
Seat	Brass CW614N
Stem	Stainless steel 1.4305
Packing box	EPDM
Bonnet	Brass CW614N

Models

Article	Nominal diameter	Connection, internal thread	Connection, external thread	Kvs (adjustable)	ΔPmax	ΔPs	Actuator	Notes
FVR10	DN10	G3/8" (inlet)	M22×1.5 (outlet)	0.01…0.9	30 kPa	150 kPa	RTA(O)M100	
FVR15	DN15	G1/2" (inlet)	M26×1.5 (outlet)	0.01…0.9	30 kPa	150 kPa	RTA(O)M100	
FVR20	DN20	G3/4" (inlet)	M34×1.5 (outlet)	0.01…1.1	30 kPa	150 kPa	RTA(O)M100	

ΔPs constitutes the max. permitted differential pressure at which the valve actuator can safely close against the pressure.

ΔPmax constitutes the max. permitted differential pressure over the flow path of the valve for the entire actuating range of the actuator (i.e. open valve).

Externally threaded 2-way zone valve

The valve range is intended to be used together with the RTA(O)M100 thermal actuators for temperature control in heating and cooling systems, such as radiators, convectors, chilled ceilings etc.

Technical data	
Pressure rating	PN10
Connection, actuator	M28×1.5
Max. leakage	0.0% of the kvs value
Media temperature	2…90°C
Stroke	3.5mm
Max. diff. pressure	150 kPa
Material	
Body	Chromed brass CW614N
Seat	Brass CW614N
Stem	Stainless steel 1.4305
O-rings	EPDM
Bonnet	Brass CW614N
Seat packing	NBR

Models

Article	Nominal diameter	Connection, external thread	Kvs (adjustable)	Actuator	Notes
CTV10	DN10	G1/2”	0.12…1.14	RTA(O)M100	
CTV15-1,9	DN15	G3/4”	0.17…1.9	RTA(O)M100	
CTV20	DN20	G1”	0.15…1.55	RTA(O)M100	

2-, 3-way and 3-way (bypass) zone valves

Valves for control of heating and cooling in fan-coil or chilled beams applications. The valves are intended to be used together with the thermal RTAN and RTAOM actuators. They are available as 2- and 3-way versions, as well as bypass versions. The valves have linear flow characteristics.

Technical data	
Pressure rating	PN16
Connection	BSP externally threaded according to ISO 228/1
Flow characteristics	Linear
Max. leakage	0% of the kvs value
Media temperature	2…95°C
Media	Hot water, cold water, glycol-mixed water (max. 40% glycol)
Stroke	2.5mm
Adapter	Included for RTAOM…actuators. No adapter is needed for RTAN… actuators.
Material	
Body	Brass CW614N
O-rings	FKM

2-way valves

Article	Nominal diameter	Connection	Kvs, A-AB	Kvs, B-AB	Max. diff. pressure	Actuator	Notes
VTTV15-0,25	DN15	G1/2”	0.25	-	250 kPa	RTAN, RTAOM100	
VTTV15-0,4	DN15	G1/2”	0.4	-	250 kPa	RTAN, RTAOM100	
VTTV15-0,6	DN15	G1/2”	0.6	-	250 kPa	RTAN, RTAOM100	
VTTV15-1,0	DN15	G1/2”	1.0	-	250 kPa	RTAN, RTAOM100	
VTTV15-1,6	DN15	G1/2”	1.6	-	250 kPa	RTAN, RTAOM100	
VTTV20-2,5	DN20	G3/4”	2.5	-	250 kPa	RTAN, RTAOM100	
VTTV20-4,0	DN20	G3/4”	4.0	-	80 kPa	RTAN140, RTAOM125	
VTTV20-6,0	DN20	G3/4”	6.0	-	80 kPa	RTAN140, RTAOM125	

3-way valves

Article	Nominal diameter	Connection	Kvs, A-AB	Kvs, B-AB	Max. diff. pressure	Actuator	Notes
VTTR15-0,25	DN15	G1/2”	0.25	0.25	250 kPa	RTAN, RTAOM100	
VTTR15-0,4	DN15	G1/2”	0.4	0.4	250 kPa	RTAN, RTAOM100	
VTTR15-0,6	DN15	G1/2”	0.6	0.6	250 kPa	RTAN, RTAOM100	
VTTR15-1,0	DN15	G1/2”	1.0	0.8	250 kPa	RTAN, RTAOM100	
VTTR15-1,6	DN15	G1/2”	1.6	1.0	250 kPa	RTAN, RTAOM100	
VTTR20-2,5	DN20	G3/4”	2.5	1.6	250 kPa	RTAN, RTAOM100	
VTTR20-4,0	DN20	G3/4”	4.0	2.5	80 kPa	RTAN140, RTAOM125	
VTTR20-6,0	DN20	G3/4”	6.0	4.0	80 kPa	RTAN140, RTAOM125	

3-way valves with bypass

Article	Nominal diameter	Connection	Kvs, A-AB	Kvs, B-AB	Max. diff. pressure	Actuator	Notes
VTTB15-0,25	DN15	G1/2”	0.25	0.25	250 kPa	RTAN, RTAOM100	
VTTB15-0,4	DN15	G1/2”	0.4	0.4	250 kPa	RTAN, RTAOM100	
VTTB15-0,6	DN15	G1/2”	0.6	0.6	250 kPa	RTAN, RTAOM100	
VTTB15-1,0	DN15	G1/2”	1.0	0.8	250 kPa	RTAN, RTAOM100	
VTTB15-1,6	DN15	G1/2”	1.6	1.0	250 kPa	RTAN, RTAOM100	
VTTB20-2,5	DN20	G3/4”	2.5	1.6	250 kPa	RTAN, RTAOM100	
VTTB20-4,0	DN20	G3/4”	4.0	2.5	80 kPa	RTAN140, RTAOM125	
VTTB20-6,0	DN20	G3/4”	6.0	4.0	80 kPa	RTAN140, RTAOM125	

ACCESSORIES FOR ZONE VALVES

Valve connections, outlet (FVR, RTV and VHR)

Tail and nut, for valve outlet (external metric thread on the valve).

Article	Connection	Valve	Notes
4161201	3/8" (M22×1.5)	RTV10, FVR10	
4161202	1/2" (M26×1.5)	RTV15, FVR15	
4161203	3/4" (M34×1.5)	FVR20	
4161204	1" (M40×2)	VHR25	

Valve connections, outlet (FVR and RTV), copper tubing

Nut and olive, for valve outlet (external metric thread on the valve).

Article	Connection	Valve	Notes
4161841	3/8" (M22×1.5), K12	RTV10, FVR10	
4160801	1/2" (M26×1.5), K15	RTV15, FVR15	

Valve connection, inlet (FVR, RTV), copper tubing

Nut and olive, for valve inlet (internal pipe thread on the valve).

Article	Connection	Valve	Notes
4161402	3/8', K10	RTV10, FVR10	
4161403	3/8', K12	RTV10, FVR10	
4161101	1/2", K10	RTV15, FVR15	
4161102	1/2", K12	RTV15, FVR15	
4161103	1/2", K15	RTV15, FVR15	

Pre-set tooling for FVR valves

Article	Description	Notes
FV5	Pre-set tooling, key and scale (FVR valves)	
FN2	Pre-set tooling, basic key (FVR valves)	

Valve connections for copper tubing

Nut and olive for CTV, ZTV, ZTR, VTTV, VTTR and VTTB.

Article	Connection	Valve	Notes
1885136	1/2", K12	CTV10, ZTV15, ZTR15, VTTV15, VTTR15, VTTB	
1886274	3/4", K15	CTV15, ZTV20 (kvs 2.0-2.5), ZTR (kvs 2.0-2.5), VTTV20 (kvs 2.5), VTTR20 (kvs 2.5), VTTB20 (kvs 2.5)	
1884709	3/4", K18	CTV15, ZTV20, ZTR20, VTTV20, VTTR20, VTTB20	
1886282	1", K22	CTV20, ZTV25, ZTR25	

Steel pipe connection for VTTV/VTTR/VTTB and ZTV/ZTR valves

Article	Connection	Valve	Notes
OVC-Z15	½" (DN15)	VTTV/VTTR/VTTB, ZTV/ZTR (DN15)	
OVC-Z20	¾" (DN20)	VTTV/VTTR/VTTB, ZTV/ZTR (DN20)	
OVC-Z25	1" (DN25)	ZTV/ZTR (DN25)	

EXTERNALLY THREADED VALVES

NEWS!

0%

Externally threaded 2- and 3-way control valves

Externally threaded control valves intended for use in heating and cooling systems together with the RVAZ4… series of electromechanical actuators.

Technical data	
Application	Heating systems, cooling systems, fan-coil units, ventilation systems
Pressure rating	PN16
Connection	BSP externally threaded according to ISO 228/1
Flow characteristics	Linear
Max. leakage	0.0% of kvs
Media	Hot water, cold water, glycol-mixed water (max. 50% glycol)
Media temperature	2…110°C
Rangeability	50:1
Stroke	5.5mm
Material	
Body	Brass CW614N
Seat	Brass CW614N
Plug	Brass CW614N
Stem	Stainless steel 1.4305
Seat packing	EPDM
O-rings	EPDM
Material, connections	
Nut	Malleable cast iron, galvanized
Nipple	Dezincification resistant brass CW 602N
Fitting seal	Novatec Premium 2, Nitrile bonded aramid fibre with graphite
Cover lid	Dezincification resistant brass CW 602N

2-way valves

Article	Nominal diameter	Kvs	Max. diff. pressure	Actuator	Notes
ZMD215-1.6	DN15	1.6	400 kPa	RVAZ4	
ZMD215-2.5	DN15	2.5	400 kPa	RVAZ4	
ZMD215-4.0	DN15	4.0	400 kPa	RVAZ4	
ZMD220-6.3	DN20	6.3	350 kPa	RVAZ4	
ZMD225-10	DN25	10	200 kPa	RVAZ4	
ZMD232-16	DN32	16	130 kPa	RVAZ4	
ZMD240-25	DN40	25	60 kPa	RVAZ4	

3-way valves

Article	Nominal diameter	Kvs	Max. diff. pressure	Actuator	Notes
ZMD315-1.6	DN15	1.6	400 kPa	RVAZ4	
ZMD315-2.5	DN15	2.5	400 kPa	RVAZ4	
ZMD315-4.0	DN15	4.0	400 kPa	RVAZ4	
ZMD320-6.3	DN20	6.3	350 kPa	RVAZ4	
ZMD325-10	DN25	10	200 kPa	RVAZ4	
ZMD332-16	DN32	16	130 kPa	RVAZ4	
ZMD340-25	DN40	25	60 kPa	RVAZ4	

Externally threaded 2- and 3-way zone valves

Valves used for control of hot and cold water in climate, heating and ventilation systems. They can also control glycol-mixed water in for example liquid connected recovery systems. Intended to be used together with the RVAZ4 actuators.

Technical data	
Pressure rating	PN16
Connection, actuator	M30×1.5
Connection	BSP externally threaded according to ISO 228/1
Flow characteristics	Equal percentage
Max. leakage	0% of the kvs value
Media temperature	1…110°C (the valve has a max. temperature of 140°C, the RVAZ4 actuators have a max. temperature of 110°C)
Media	Hot water, cold water, glycol-mixed water (max. 30% glycol)
Rangeability	50:1
Stroke	5.5mm
Material	
Body	Brass CW614N
Seat	Brass CW614N
Plug	Brass CW614N
Stem	Stainless steel 1.4305
Seat packing	EPDM
O-rings	EPDM

2-way valves

Article	Nominal diameter	Connection	Kvs	Max. diff. pressure	Actuator	Notes
ZTV15-0,25	DN15	G1/2”	0.25	350 kPa	RVAZ4	
ZTV15-0,4	DN15	G1/2”	0.4	350 kPa	RVAZ4	
ZTV15-0,6	DN15	G1/2”	0.6	350 kPa	RVAZ4	
ZTV15-1,0	DN15	G1/2”	1.0	350 kPa	RVAZ4	
ZTV15-1,6	DN15	G1/2”	1.6	350 kPa	RVAZ4	
ZTV20-2,0	DN20	G3/4”	2.0	250 kPa	RVAZ4	
ZTV20-2,5	DN20	G3/4”	2.5	250 kPa	RVAZ4	
ZTV20-4,0	DN20	G3/4”	4.0	150 kPa	RVAZ4	
ZTV20-6,0	DN20	G3/4”	6.0	150 kPa	RVAZ4	
ZTV25-7,0	DN25	G1”	7.0	70 kPa	RVAZ4	

3-way valves

Article	Nominal diameter	Connection	Kvs	Max. diff. pressure	Actuator	Notes
ZTR15-0,25	DN15	G1/2”	0.25	350 kPa	RVAZ4	
ZTR15-0,4	DN15	G1/2”	0.4	350 kPa	RVAZ4	
ZTR15-0,6	DN15	G1/2”	0.6	350 kPa	RVAZ4	
ZTR15-1,0	DN15	G1/2”	1.0	350 kPa	RVAZ4	
ZTR15-1,6	DN15	G1/2”	1.6	350 kPa	RVAZ4	
ZTR20-2,0	DN20	G3/4”	2.0	250 kPa	RVAZ4	
ZTR20-2,5	DN20	G3/4”	2.5	250 kPa	RVAZ4	
ZTR20-4,0	DN20	G3/4”	4.0	100 kPa	RVAZ4	
ZTR20-6,0	DN20	G3/4”	6.0	100 kPa	RVAZ4	
ZTR25-7,0	DN25	G1”	7.0	70 kPa	RVAZ4	

Externally threaded 2-way valve

2-way valves designed for control of cold, hot or glycol-mixed water, for use in domestic water systems or district heating within the temperature range -5°C...+150°C. They are pressure balanced (from DN20-50, not DN15) and can therefore handle high differential pressure with low force. The valves are intended to be used together with Regin's RVAN5 actuators. We also offer adapters for actuators of other brands.

Technical data	
Pressure rating	PN16
Connection	BSP externally threaded according to ISO 228/1; supplied with threaded connections
Flow characteristics	Equal percentage
Max. leakage	0.0% of the Kvs value (PTFE gasket, carbon-filled 25%, no leakage)
Media temperature	-5...+150°C
Media	Hot water, cold water, glycol-mixed water (max. 50% glycol)
Rangeability	100:1
Stroke	20mm
Max. diff. pressure	1600 kPa
Material	
Body	Gunmetal CC491K (RG5)
Seat	Stainless steel 1.4301
Plug	Stainless steel 1.4305
Stem	Stainless steel 1.4305
Seat packing	PTFE with 25% carbon
Packing box	Dezincification resistant brass CW 602N, self-adjusting teflon
O-rings	Viton
Material, connections	
Nut	Malleable cast iron, galvanized
Nipple	Dezincification resistant brass CW 602N
Fitting seal	Novatec Premium 2, Nitrile bonded aramid fibre with graphite

Models

Article	Nominal diameter	Kvs	Actuator	Notes
ETVS15-0,63	DN15	0.63	RVAN5	
ETVS15-1,25	DN15	1.25	RVAN5	
ETVS15-1,6	DN15	1.6	RVAN5	
ETVS15-2,5	DN15	2.5	RVAN5	
ETVS15-4,0	DN15	4	RVAN5	
ETVS20-5,0	DN20	5	RVAN5	
ETVS20-6,3	DN20	6.3	RVAN5	
ETVS25-8,0	DN25	8	RVAN5	
ETVS25-10	DN25	10	RVAN5	
ETVS32-12,5	DN32	12.5	RVAN5	
ETVS32-16	DN32	16	RVAN5	
ETVS40-20	DN40	20	RVAN5	
ETVS40-25	DN40	25	RVAN5	
ETVS50-31,5	DN50	31.5	RVAN5	
ETVS50-40	DN50	40	RVAN5	

Accessories

Article	Description	Notes
S0603080300	Spare parts kit, packing box	

Externally threaded control valve, manually convertible to either 2-way or 3-way (selectable)

Valves intended for control of cold, hot and glycol-mixed water in heating, ventilation and domestic water systems. The valves are intended to be used together with Regin's RVAN5 actuators. Valves with DN32-50 may also be used with RVAN10 if a larger actuating force is required. The valve is supplied with a cover lid for converting the 3-way valve into a 2-way valve.

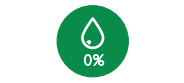
Technical data	
Pressure rating	PN16
Connection	BSP externally threaded according to ISO 228/1; supplied with threaded connections
Flow characteristics	Equal percentage
Max. leakage	0.1% of the kvs value
Media temperature	-5…+185°C
Media	Hot water, cold water, glycol-mixed water (max. 50% glycol)
Rangeability	100:1
Stroke	20mm
Material	
Body	Gunmetal CC491K (RG5)
Seat	Gunmetal CC491K (RG5)
Plug	Gunmetal CC491K (RG5)
Stem	Stainless steel 1.4305
Packing box	Dezincification resistant brass CW 602N, self-adjusting teflon
O-rings	Viton
Material, connections	
Nut	Malleable cast iron, galvanized
Nipple	Dezincification resistant brass CW 602N
Fitting seal	Novatec Premium 2, Nitrile bonded aramid fibre with graphite
Cover lid	Dezincification resistant brass CW 602N

Article	Nominal diameter	Max. diff. pressure	Kvs	Actuator	Notes
ETRS15-0,63	DN15	1600 kPa	0.63	RVAN5	
ETRS15-1,0	DN15	1600 kPa	1	RVAN5	
ETRS15-1,25	DN15	1600 kPa	1.25	RVAN5	
ETRS15-1,6	DN15	1600 kPa	1.6	RVAN5	
ETRS15-2,5	DN15	1600 kPa	2.5	RVAN5	
ETRS15-4,0	DN15	1600 kPa	4	RVAN5	
ETRS20-4,0	DN20	1600 kPa	4	RVAN5	
ETRS20-5,0	DN20	1600 kPa	5	RVAN5	
ETRS20-6,3	DN20	1600 kPa	6.3	RVAN5	
ETRS25-6,3	DN25	1000 kPa	6,3	RVAN5	
ETRS25-8,0	DN25	1000 kPa	8	RVAN5	
ETRS25-10	DN25	1000 kPa	10	RVAN5	
ETRS32-10	DN32	600 kPa	10	RVAN5, RVAN10	
ETRS32-12,5	DN32	600 kPa	12.5	RVAN5, RVAN10	
ETRS32-16	DN32	600 kPa	16	RVAN5, RVAN10	
ETRS40-16	DN40	400 kPa	16	RVAN5, RVAN10	
ETRS40-20	DN40	400 kPa	20	RVAN5, RVAN10	
ETRS40-25	DN40	400 kPa	25	RVAN5, RVAN10	
ETRS50-25	DN50	250 kPa	25	RVAN5, RVAN10	
ETRS50-31,5	DN50	250 kPa	31.5	RVAN5, RVAN10	
ETRS50-40	DN50	250 kPa	40	RVAN5, RVAN10	

Accessories

Article	Description	Notes
S0603080300	Spare parts kit, packing box	

INTERNALLY THREADED VALVES



Internally threaded 2- and 3-way control valves

Valves for control of heating and cooling in climate, heating and ventilation systems. They can also control glycol-mixed water in for example liquid recovery systems. The valves are intended to be used together with the RVAZ4 actuators.

Technical data	
Pressure rating	PN16
Connection, actuator	M30×1.5
Connection	BSP internally threaded according to ISO 228/1
Flow characteristics	Linear
Max. leakage	0% of the kvs value
Media temperature	1…110°C
Rangeability	50:1
Stroke	5.5mm
Media	Hot, cold or glycol-mixed water (max. 50% glycol)
Material	
Body	Brass CW614N
Seat	Brass CW614N
Plug	Brass CW614N
Stem	Stainless steel 1.4305
Seat packing	EPDM
O-rings	EPDM

2-way valves

Article	Nominal diameter	Connection	Kvs	Max. diff. pressure	Actuator	Notes
ZTVB25-8	DN25	G1”	8	200 kPa	RVAZ4	
ZTVB32-15	DN32	G1 ¼”	15	150 kPa	RVAZ4	
ZTVB40-20	DN40	G1 ½”	20	100 kPa	RVAZ4	

3-way valves

Article	Nominal diameter	Connection	Kvs	Max. diff. pressure	Actuator	Notes
ZTRB25-8	DN25	G1”	8	200 kPa	RVAZ4	
ZTRB32-15	DN32	G1 ¼”	15	150 kPa	RVAZ4	
ZTRB40-20	DN40	G1 ½”	20	100 kPa	RVAZ4	

Internally threaded 2-way control valve

The valves are designed for control of hot, cold or glycol-mixed water in heating and ventilation systems. They are pressure balanced (from DN20-50, not DN15) and can therefore handle high differential pressure with low force. The valves are intended to be used together with Regin's RVAN5 actuators. They should not be used in domestic water systems.

Technical data	
Pressure rating	PN16
Connection	BSP internally threaded according to ISO 228/1
Flow characteristics	Equal percentage
Max. leakage	0.0% of the kvs value (PTFE gasket, carbon-filled 25%, no leakage)
Max. diff. pressure	1600 kPa
Media temperature	-5…+140°C
Media	Hot water, cold water, glycol-mixed water (max. 50% glycol)
Rangeability	100:1
Stroke	20mm
Material	
Body	Brass CW614N
Seat	Brass CW614N
Plug	Stainless steel 1.4301
Stem	Stainless steel 1.4305
Seat packing	PTFE with 25% carbon
O-rings	EPDM

Models

Article	Nominal diameter	Connection	Kvs	Actuator	Notes
BTV15-0,6	DN15	G½"	0.6	RVAN5	
BTV15-1,0	DN15	G½"	1.0	RVAN5	
BTV15-1,6	DN15	G½"	1.6	RVAN5	
BTV15-2,5	DN15	G½"	2.5	RVAN5	
BTV20-1,6	DN20	G¾"	1.6	RVAN5	
BTV20-2,7	DN20	G¾"	2.7	RVAN5	
BTV20-3,9	DN20	G¾"	3.9	RVAN5	
BTV25-6,3	DN25	G1"	6.3	RVAN5	
BTV25-10	DN25	G1"	10	RVAN5	
BTV32-10	DN32	G1¼"	10	RVAN5	
BTV32-16	DN32	G1¼"	16	RVAN5	
BTV40-16	DN40	G1½"	16	RVAN5	
BTV40-27	DN40	G1½"	27	RVAN5	
BTV50-27	DN50	G2"	27	RVAN5	
BTV50-39	DN50	G2"	39	RVAN5	

Accessories

Article	Description	Notes
S02420001	Spare parts kit, O-ring kit for BTV valves from DN15 to DN25	
S6321457301	Spare parts kit, packing box	

Internally threaded 2- and 3-way control valves

Valves designed for control of hot, cold or glycol-mixed water in heating and ventilation systems. They also function very well in domestic water systems. The valves are intended for use together with Regin's RVAN5 actuators. Valves with DN32-50 may also be used with RVAN10 if a larger actuating force is required.

Technical data	
Pressure rating	PN16
Connection	BSP internally threaded according to ISO 228/1
Flow characteristics	Equal percentage
Max. leakage	0.1% of Kvs
Media temperature	-5…+185°C
Media	Hot water, cold water, glycol-mixed water (max. 50% glycol)
Rangeability	100:1
Stroke	20mm
Material	
Body	Gunmetal CC491K (RG5)
Seat	Gunmetal CC491K (RG5)
Plug	Gunmetal CC491K (RG5)
Stem	Stainless steel 1.4305
Packing box	Dezincification resistant brass CW 602N, self-adjusting teflon
O-rings	Viton

2-way valves

Article	Nominal diameter	Connection	Max. diff. pressure	Kvs	Actuator	Notes
MTVS15-0,63	DN15	G½"	1600 kPa	0.63	RVAN5	
MTVS15-1,0	DN15	G½"	1600 kPa	1.0	RVAN5	
MTVS15-1,6	DN15	G½"	1600 kPa	1.6	RVAN5	
MTVS15-2,1	DN15	G½"	1600 kPa	2.1	RVAN5	
MTVS15-2,7	DN15	G½"	1600 kPa	2.7	RVAN5	
MTVS20-4,2	DN20	G¾"	1600 kPa	4.2	RVAN5	
MTVS20-5,6	DN20	G¾"	1600 kPa	5.6	RVAN5	
MTVS25-10	DN25	G1"	1000 kPa	10	RVAN5	
MTVS32-16	DN32	G1¼"	600 kPa	16	RVAN5, RVAN10	
MTVS40-27	DN40	G1½"	400 kPa	27	RVAN5, RVAN10	
MTVS50-39	DN50	G2"	250 kPa	39	RVAN5, RVAN10	

3-way valves

Article	Nominal diameter	Connection	Max. diff. pressure	Kvs	Actuator	Notes
MTRS15-0,63	DN15	G½"	1600 kPa	0.63	RVAN5	
MTRS15-1,0	DN15	G½"	1600 kPa	1.0	RVAN5	
MTRS15-1,6	DN15	G½"	1600 kPa	1.6	RVAN5	
MTRS15-2,1	DN15	G½"	1600 kPa	2.1	RVAN5	
MTRS15-2,7	DN15	G½"	1600 kPa	2.7	RVAN5	
MTRS20-4,2	DN20	G¾"	1600 kPa	4.2	RVAN5	
MTRS20-5,6	DN20	G¾"	1600 kPa	5.6	RVAN5	
MTRS25-10	DN25	G1"	1000 kPa	10	RVAN5	
MTRS32-16	DN32	G1¼"	600 kPa	16	RVAN5, RVAN10	
MTRS40-27	DN40	G1½"	400 kPa	27	RVAN5, RVAN10	
MTRS50-39	DN50	G2"	250 kPa	39	RVAN5, RVAN10	

Accessories

Article	Description	Notes
S0603080300	Spare parts kit, packing box	

Internally threaded 2- and 3-way valves

Valves intended for on/off control of hot or cold water in heating or cooling systems. The valves can only be used together with Regin's RVAFC actuators. The valves are available as both 2- and 3-way models.

Technical data	
Application	Heating systems, cooling systems, fan-coil units, ventilation systems
Media	Hot water, cold water, glycol-mixed water (max. 50% glycol)
Media temperature	2…94 °C
Pressure rating	PN16 (240 psi)
Connection	Internal thread BSP according to ISO 228/1
Material	
Body	Brass CW614N
Ball	EPDM
O-rings	EPDM

2-way valves

Article	Nominal diameter	Connection	Kvs	Max. diff. pressure	Actuator	Notes
ZFCM-215X	DN15	G1/2"	3.2	200 kPa	RVAFC-2302	
ZFCM-220X	DN20	G3/4"	4.6	150 kPa	RVAFC-2302	
ZFCM-225X	DN25	G1"	5.7	100 kPa	RVAFC-2302	
ZFCM-232X	DN32	G1 1/4"	10	80 kPa	RVAFC-2302	

3-way valves

Article	Nominal diameter	Connection	Kvs	Max. diff. pressure	Actuator	Notes
ZFCM-315X	DN15	G1/2"	3.2	150 kPa	RVAFC-2303	
ZFCM-320X	DN20	G3/4"	4.6	100 kPa	RVAFC-2303	
ZFCM-325X	DN25	G1"	5.7	100 kPa	RVAFC-2303	
ZFCM-332X	DN32	G1 1/4"	8.4	80 kPa	RVAFC-2303	

FLANGED VALVES

2- and 3-way DIN-standard flanged valve

Control valves for use in heating, cooling and ventilation systems. They are intended to be used together with Regin's RVAN actuators. The valves have DIN-standard lengths.

Technical data	
Pressure rating	PN16
Connection	Flanged according to EN 1092-2
Flow characteristics	A - AB = equal percentage, B - AB = linear
Max. leakage	0% of Kvs
Media	Hot water, cold water, glycol-mixed water (max. 50% glycol)
Media temperature	-5…+120°C
Rangeability	100:1
Max. diff. pressure	If a smaller actuator than the suggested one is used, the max. differential pressure may be different. More information is available in the product sheet.
Material	
Body	Cast iron Grade 250
Plug	Brass CW614N (DN25…DN40), Gunmetal 1400 LG2 (DN50…DN200)
Seat	Cast iron grade 250 (DN25…DN40), Gunmetal 1400 LG2 (DN50…DN200)
Stem	Stainless steel 303S31
Packing box	Brass CW614N
Bonnet	Brass CW614N
O-rings	EPDM
Packing	Aramid reinforced rubber

2-way valves

NEWS!

NEW SIZES:
DN25
DN32
DN40

Article	Kvs	Nominal diameter	Max. diff. pressure	Actuator	Notes
GF225-6.3	6.3	DN25	400 kPa	RVAN5, RVAN10	
GF225-10	10	DN25	400 kPa	RVAN5, RVAN10	
GF232-10	10	DN32	350 kPa	RVAN5, RVAN10	
GF240-16	16	DN40	300 kPa	RVAN5, RVAN10	
GF240-25	25	DN40	300 kPa	RVAN5, RVAN10	
GF250-31,5	31.5	DN50	450 kPa	RVAN18	
GF250-40	40	DN50	450 kPa	RVAN18	
GF265-50	50	DN65	350 kPa	RVAN18	
GF265-63	63	DN65	350 kPa	RVAN18	
GF280-80	80	DN80	300 kPa	RVAN18	
GF280-100	100	DN80	300 kPa	RVAN18	
GF2100-125	125	DN100	200 kPa	RVAN18	
GF2100-160	160	DN100	200 kPa	RVAN18	
GF2125-215	215	DN125	120 kPa	RVAN25	
GF2150-310	310	DN150	100 kPa	RVAN25	
GF2200-550	550	DN200	200 kPa	RVAN25	

NEWS!

NEW SIZES:
DN25
DN32
DN40

3-way valves

Article	Kvs	Nominal diameter	Max. diff. pressure	Actuator	Notes
GF325-6.3	6.3	DN25	400 kPa	RVAN5, RVAN10	
GF325-10	10	DN25	400 kPa	RVAN5, RVAN10	
GF332-10	10	DN32	350 kPa	RVAN5, RVAN10	
GF340-16	16	DN40	300 kPa	RVAN5, RVAN10	
GF340-25	25	DN40	300 kPa	RVAN5, RVAN10	
GF350-31,5	31.5	DN50	450 kPa	RVAN18	
GF350-40	40	DN50	450 kPa	RVAN18	
GF365-50	50	DN65	350 kPa	RVAN18	
GF365-63	63	DN65	350 kPa	RVAN18	
GF380-80	80	DN80	300 kPa	RVAN18	
GF380-100	100	DN80	300 kPa	RVAN18	
GF3100-125	125	DN100	200 kPa	RVAN18	
GF3100-160	160	DN100	200 kPa	RVAN18	
GF3125-215	215	DN125	120 kPa	RVAN25	
GF3150-310	310	DN150	100 kPa	RVAN25	
GF3200-550	550	DN200	70 kPa	RVAN25	

Flanged 2-way DIN-standard valve for district heating

Pressure balanced 2-way valve intended for control of hot, cold or glycol-mixed water or district heating within the temperature range -5...+185°C. Intended for use with the RVAN... actuators.

Technical data	
Pressure rating	PN16
Connection	Flanges according to EN 1092-2
Flow characteristics	Equal percentage
Max. leakage	0.0% of the kvs value (PTFE gasket, carbon-filled 25%, no leakage) / 0.05% of kvs for NTVS...-...M models with metal packing
Media temperature	-5…+185°C
Media	Hot water, cold water, glycol-mixed water (max. 50% glycol)
Rangeability	100:1
Max. diff. pressure	1600 kPa
Material	
Body	Nodular cast iron (GJS) EN-JS1050
Seat	Stainless steel 1.4301 or gunmetal CC491K (RG5)
Plug	Stainless steel 1.4305 (DN15…DN100) or gunmetal CC491K (RG5) (DN125…DN150)
Stem	Stainless steel 1.4305
Lining	Stainless steel 1.4301
Seat packing, soft seal	PTFE with 25% carbon
Seat packing, metal seal	Stainless steel 1.4057
Packing box	Dezincification resistant brass CW 602N, self-adjusting teflon
O-rings	Viton

For steam applications or at pressure drops of 7 bar or higher, we recommend using a metal packing (stainless steel). Use the extra letter M at the end of the reference type when ordering a valve with metal packing, for example NTVS50-27M instead of the usual NTVS50-27. For valves with metal packing, the maximum leakage is 0.05% of kvs.

The NTVS valves meet the requirements of DIN-standard DIN 3202/F1 and ISO 5752 table 1.

Models

Article	Nominal diameter	Kvs	Stroke	Actuator	Notes
NTVS15-0,4	DN15	0.4	20 mm	RVAN5	
NTVS15-1,0	DN15	1.0	20 mm	RVAN5	
NTVS15-1,6	DN15	1.6	20 mm	RVAN5	
NTVS15-2,7	DN15	2.7	20 mm	RVAN5	
NTVS20-0,8	DN20	0.8	20 mm	RVAN5	
NTVS20-1,6	DN20	1.6	20 mm	RVAN5	
NTVS20-2,7	DN20	2.7	20 mm	RVAN5	
NTVS20-3,9	DN20	3.9	20 mm	RVAN5	
NTVS20-6,3	DN20	6.3	20 mm	RVAN5	
NTVS25-1,6	DN25	1.6	20 mm	RVAN5	
NTVS25-2,5	DN25	2.5	20 mm	RVAN5	
NTVS25-4,0	DN25	4	20 mm	RVAN5	
NTVS25-6,3	DN25	6.3	20 mm	RVAN5	
NTVS25-10	DN25	10	20 mm	RVAN5	
NTVS32-4,0	DN32	4	20 mm	RVAN5	
NTVS32-6,3	DN32	6.3	20 mm	RVAN5	
NTVS32-10	DN32	10	20 mm	RVAN5	
NTVS32-16	DN32	16	20 mm	RVAN5	
NTVS40-6,3	DN40	6.3	20 mm	RVAN5	
NTVS40-10	DN40	10	20 mm	RVAN5	
NTVS40-16	DN40	16	20 mm	RVAN5	
NTVS40-27	DN40	27	20 mm	RVAN5	
NTVS50-6,3	DN50	6.3	20 mm	RVAN5	
NTVS50-10	DN50	10	20 mm	RVAN5	
NTVS50-16	DN50	16	20 mm	RVAN5	
NTVS50-27	DN50	27	20 mm	RVAN5	
NTVS50-39	DN50	39	20 mm	RVAN5	
NTVS65-16	DN65	16	20 mm	RVAN10	
NTVS65-27	DN65	27	20 mm	RVAN10	
NTVS65-39	DN65	39	20 mm	RVAN10	
NTVS65-63	DN65	63	20 mm	RVAN10	
NTVS80-100	DN80	100	20 mm	RVAN10	
NTVS100-160	DN100	160	38 mm	RVAN18	
NTVS125-215	DN125	215	40 mm	RVAN25	
NTVS150-310	DN150	310	40 mm	RVAN25	

Accessories

Article	Description	Notes
S0603080300	Spare parts kit, packing box	

Flanged 2-way district heating valve

Flanged valves for heating, district heating and air handling systems. The valves are intended for use together with Regin's RVAN actuators. Adapters are also available for adaptation to actuators of other brands. The valves are mainly intended for district heating and were primarily developed to replace the TAC valve STL. The valves (DN20…DN40 with kvs 0.6-4.0) are available in DIN-standard lengths as well and are then called FRSD…, for instance FRSD32-1,6. Standard FRS valve DN15 is already in DIN-standard.

Technical data	
Pressure rating	PN16
Connection	Flanges according to ISO 7005-2
Flow characteristics	Equal percentage
Max. leakage	0.0% of the kvs value (PTFE gasket, carbon-filled 25%, no leakage)
Media temperature	-5…+150°C
Media	Hot water, cold water, glycol-mixed water (max. 50% glycol)
Rangeability	100:1
Stroke	20mm
Max. diff. pressure	1600 kPa
Material	
Body	Gunmetal CC491K (RG5)
Seat	Stainless steel 1.4305
Plug	Stainless steel 1.4305
Stem	Stainless steel 1.4305
Seat packing	PTFE with 25% carbon
Packing box	Dezincification resistant brass CW 602N
O-rings	Viton
Flanges	Epoxy-coated steel
Flange hub	Epoxy coated steel (DN20…DN40), gunmetal 1400 LG2 (DN50…DN65)

Models

Article	Nominal diameter	Kvs	Actuator	Notes
FRS15-0,6	DN15	0.6	RVAN5	
FRS15-1,0	DN15	1.0	RVAN5	
FRS15-1,6	DN15	1.6	RVAN5	
FRS15-2,5	DN15	2.5	RVAN5	
FRS20-0,6	DN20	0.6	RVAN5	
FRS20-1,0	DN20	1.0	RVAN5	
FRS20-1,6	DN20	1.6	RVAN5	
FRS20-2,5	DN20	2.5	RVAN5	
FRS20-4,0	DN20	4.0	RVAN5	
FRS25-0,6	DN25	0.6	RVAN5	
FRS25-1,0	DN25	1.0	RVAN5	
FRS25-1,6	DN25	1.6	RVAN5	
FRS25-2,5	DN25	2.5	RVAN5	
FRS25-4,0	DN25	4.0	RVAN5	
FRS32-0,6	DN32	0.6	RVAN5	
FRS32-1,0	DN32	1.0	RVAN5	
FRS32-1,6	DN32	1.6	RVAN5	
FRS32-2,5	DN32	2.5	RVAN5	
FRS32-4,0	DN32	4.0	RVAN5	
FRS32-6,3	DN32	6.3	RVAN5	
FRS32-10	DN32	10	RVAN18	
FRS32-16	DN32	16	RVAN18	
FRS40-0,6	DN40	0.6	RVAN5	
FRS40-1,0	DN40	1.0	RVAN5	
FRS40-1,6	DN40	1.6	RVAN5	
FRS40-2,5	DN40	2.5	RVAN5	
FRS40-4,0	DN40	4.0	RVAN5	
FRS40-6,3	DN40	6.3	RVAN5	
FRS40-10	DN40	10	RVAN18	
FRS40-16	DN40	16	RVAN18	
FRS40-20	DN40	20	RVAN18	
FRS50-2,7	DN50	2.7	RVAN5	
FRS50-6,3	DN50	6.3	RVAN5	
FRS50-10	DN50	10	RVAN18	
FRS50-16	DN50	16	RVAN18	
FRS50-20	DN50	20	RVAN18	
FRS65-2,7	DN65	2.7	RVAN5	
FRS65-6,3	DN65	6.3	RVAN5	
FRS65-10	DN65	10	RVAN18	
FRS65-16	DN65	16	RVAN18	
FRS65-20	DN65	20	RVAN18	

Accessories

Article	Description	Notes
S6321457301	Spare parts kit, packing box	

PRESSURE INDEPENDENT CONTROL VALVES

Pressure independent control valves

The valve is a combined differential pressure regulator, flow limiter and equal percentage control valve with full stroke and authority. The pressure independent control valves are suitable for constant or variable temperature systems and can be used as constant flow limiters in constant volume systems (with no actuators), or as pressure independent control valves in variable volume systems (with actuators).

Technical data	
Pressure class	25 bar
Flow characteristics	Equal percentage
Max. diff. pressure	600 kPa
Media	Hot water, cold water, glycol-mixed water (max. 50% glycol)
Max. leakage	0.01% of maximum flow, Class IV IEC 60534-4
Media temperature	-10…+120°C
Material	
Body	Brass CW602N (CZ121)
Plug parabol	Brass CW614N (CZ132)
Stem	Stainless steel
O-rings	EPDM
Pressure controller	EPDM, stainless steel and high resistance polymer

Models without measuring port connectors

Article	Nominal diameter	Connection	Max. flow rate	Max. start up pressure	Rangeability	Stroke	Actuator	Notes
PCTVS15-F150	DN15	G½"	150 l/h	20 kPa	50 ~ 100 : 1	2.7mm	RTAM100, RVAPC	
PCTVS15-F600	DN15	G½"	600 l/h	25 kPa	50 ~ 100 : 1	2.7mm	RTAM100, RVAPC	
PCTVS15-F900	DN15	G½"	900 l/h	30 kPa	50 ~ 100 : 1	2.7mm	RTAM100, RVAPC	
PCTVS20-F600	DN20	G¾"	600 l/h	25 kPa	50 ~ 100 : 1	2.7mm	RTAM100, RVAPC	
PCTVS20-F900	DN20	G¾"	900 l/h	30 kPa	50 ~ 100 : 1	2.7mm	RTAM100, RVAPC	

Models with measuring ports

Article	Nominal diameter	Connection	Max. flow rate	Max. start up pressure	Rangeability	Stroke	Actuator	Notes
PCMTV15-F150	DN15	G1/2"	150 l/h	20 kPa	50 ~ 100 : 1	2.7mm	RTAM100, RVAPC	
PCMTV15-F600	DN15	G1/2"	600 l/h	25 kPa	50 ~ 100 : 1	2.7mm	RTAM100, RVAPC	
PCMTV15-F780	DN15	G1/2"	780 l/h	35 kPa	50 ~ 100 : 1	2.7mm	RTAM100, RVAPC	
PCMTV20-F1000	DN20	G3/4"	1000 l/h	30 kPa	50 ~ 100 : 1	2.7mm	RTAM100, RVAPC	
PCMTV20-F1500	DN20	G3/4"	1500 l/h	35 kPa	50 ~ 100 : 1	2.7mm	RTAM100, RVAPC	
PCMTV25-F1500	DN25	G1"	1500 l/h	35 kPa	50 ~ 100 : 1	2.7mm	RTAM100, RVAPC	

Models with measuring ports

Article	Nominal diameter	Connection	Max. flow rate	Max. start up pressure	Rangeability	Stroke	Actuator	Notes
PCMTV20-F2200	DN20	Rc ¾"	2200 l/h	25 kPa	100 ~ 150 : 1	6mm	RTAM125, RVAPC	
PCMTV20-2700	DN20	Rc ¾"	2700 l/h	30 kPa	100 ~ 150 : 1	6mm	RTAM125, RVAPC	
PCMTV25-F2200	DN25	Rc1"	2200 l/h	25 kPa	100 ~ 150 : 1	6mm	RTAM125, RVAPC	
PCMTV25-F2700	DN25	Rc1"	2700 l/h	30 kPa	100 ~ 150 : 1	6mm	RTAM125, RVAPC	
PCMTV32-F2700	DN32	Rc1¼"	2700 l/h	30 kPa	100 ~ 150 : 1	6mm	RTAM125, RVAPC	
PCMTV32-F3000	DN32	Rc1¼"	3000 l/h	35 kPa	100 ~ 150 : 1	6mm	RTAM125, RVAPC	

Accessories

Article	Description	Actuator	Notes
VA64	Adapter for valve with 2.7 or 6mm stroke (to be ordered separately)	RTAM	
VA7010	Adapter for valve with 2.7mm stroke (to be ordered separately)	RVAPC…	
VA748X	Adapter for valve with 6mm stroke (to be ordered separately)	RVAPC…	

Pressure independent control valve with measuring ports, DN32-50

Valves intended for systems with multiple or large fan-coil units, chilled beams or air handling units etc., in which pressure independent control valves are preferred. They can be used as constant flow limiters in constant volume systems (without an actuator) or as true PICVs (pressure independent control valves) in variable volume systems (with an actuator).

Technical data	
Application	Heating systems, cooling systems, fan-coil units, ventilation systems
Pressure class	16 bar
Flow characteristics	Equal percentage
Rangeability	> 100 : 1
Max. diff. pressure	600 kPa
Stroke (°)	90 °
Media	Hot water, cold water, glycol-mixed water (max 50% glycol)
Max. leakage	0.01% of maximum flow, Class IV IEC 60534-4
Media temperature	-10…+120°C
Material	
Body	Ductile iron EN-JS1030
Regulating valve	Brass CW614N
Pressure controller	EPDM, stainless steel 1.4305
Pre-setting	Brass CW617N
Stem	Stainless steel 1.4305
O-rings	EPDM

Article	Nominal diameter	Connection	Max. flow rate	Max. start up pressure	Actuator	Notes
PCMTV32-F6	DN32	Rc 1 1/4"	6000 l/h	30 kPa	RVASN08	
PCMTV40-F9	DN40	Rc 1 1/2"	9000 l/h	35 kPa	RVASN08	
PCMTV50-F12	DN50	Rc 2"	12000 l/h	35 kPa	RVASN08	
PCMTV50-F18	DN50	Rc 2"	18000 l/h	35 kPa	RVASN08	

Pressure independent control valves, DN50-150, with integrated flow limiter (setting via actuator) and differential pressure regulator for thermal emitters

Valves intended for control of heating, cooling and air handling in larger-scale heating and cooling applications where pressure independent control valves are preferred, such as high-rise buildings, supermarkets, factories, etc. The valve has a built-in actuator.

Technical data	
Pressure class	16 bar
Flow characteristics	Equal percentage or linear (setting through actuator)
Rangeability	100 : 1
Max. diff. pressure	400 kPa
Media	Hot water, cold water
Max. leakage	0.01% of maximum flow, Class IV IEC 60534-4
Media temperature	-10…+120°C
Material	
Body	Ductile iron EN-JS1030
Plug	Gunmetal CC491K
Seat	Gunmetal CC491K
Stem	Stainless steel 1.4305
Stuffing box	Stainless steel 1.4305
Gaskets	EPDM
O-rings	EPDM
Diaphragm	EPDM
Actuator	
Supply voltage	24 V AC/DC
Opening time	170 s
Torque	5 Nm
Ambient temperature	-20…+65°C
Protection class	IP54 (class II)

Article	Nominal diameter	Max. flow rate	Max. start up pressure	Notes
PCMTV50-F20	DN50	20000 l/h	30 kPa	
PCMTV65-F30	DN65	30000 l/h	30 kPa	
PCMTV80-F30	DN80	30000 l/h	30 kPa	
PCMTV100-F55	DN100	55000 l/h	30 kPa	
PCMTV125-F90	DN125	90000 l/h	35 kPa	
PCMTV150-F90	DN150	90000 l/h	50 kPa	
PCMTV150-F150	DN150	150000 l/h	50 kPa	

ADAPTER KIT FOR ADAPTING ACTUATORS OF OTHER BRANDS TO REGIN'S VALVES

Adapter kits for adapting actuators from other suppliers to Regin's series of valves. Adapter and stem extension are included in the kit.

Article	Actuator supplier	Actuator model	Compatible valves and dimensions	Notes
OVA-B1	Belimo	NV...-R	MTRS, MTVS, ETRS, ETVS, FRS, FRSD, MRT, 2SAS (DN15), 2SBS (DN20-80), NTVS (DN15-80), GTRS (DN32-40), GTVS (DN32-40)	
OVA-B2	Belimo	AV...-R	GTVS (DN50-150), GTRS (DN50-150), 2SBS (DN100), NTVS (DN100-150)	
OVA-B3	Belimo	AV...-R	Old OAB 3/8" UNF thread on the stem: 2SB (DN100), GTV (DN50-150), GTR (DN50-150)	
OVA-B4	Belimo	NV...-R	BTV, BTR	
OVA-B5	Belimo	NV...-R	Old OAB 3/8" UNF thread on the stem: MTV, MTR, 2SA (DN15), 2SB (DN20-80), GTV (DN25-40), GTR (DN25-40)	
OVA-B6	Belimo	EV...	GTVS (DN50-150), GTRS (DN50-150), 2SBS (DN80-100), NTVS (DN80-150)	
OVA-B7	Belimo	NV...-TPC	MTRS, MTVS, ETRS, ETVS, FRS, FRSD, MRT, 2SAS (DN15), 2SBS (DN20-80), NTVS (DN15-80), GTRS (DN32-40), GTVS (DN32-40)	
OVA-RS1	R+S	HM...	MTRS, MTVS, ETRS, ETVS, FRS, FRSD, MRT, 2SAS, 2SBS, NTVS, GTRS, GTVS	
OVA-RS2	R+S	HM...	BTV	
OVA-T1	TAC Forta	M400/M800	MTRS, MTVS, ETRS, ETVS, FRS, FRSD, MRT, 2SAS (DN15), 2SBS (DN20-80), NTVS (DN15-80), GTRS (DN32-50), GTVS (DN32-50), CVFS	
OVA-T2	TAC Forta	M400/M800	Old OAB 3/8" UNF thread on the stem: MTV, MTR, 2SA (DN15), 2SB (DN20-80), GTV (DN25-50), GTR (DN25-50), CFV	
OVA-S1	Siemens	All	MTRS, MTVS, ETRS, ETVS, FRS, FRSD, MRT, 2SAS, 2SBS, NTVS, GTRS, GTVS	
OVA-AVM	Sauter	AVM234	2SBS (DN50-100), NTVS (DN50-150), GTVS (DN50-150), GTRS (50-150)	
VAR-AVM	Sauter	AVM324SF132	GF2 (DN50…DN200), GF3 (DN50…DN200)	
VAR-B2	Belimo	NV…-TPC	GF2 (DN50…DN65), GF3 (DN50…DN65)	
VAR-B3	Belimo	EV…-TPC	GF2 (DN80…DN200), GF3 (DN80…DN200)	
VAR-S2	Siemens	All with 10mm stem connection	GF2 (DN50…DN200), GF3 (DN50…DN200)	
VAR-T2	TAC/Schneider	M400/M800/ M1500	GF2 (DN50…DN200), GF3 (DN50…DN200)	

VALVE ACTUATORS

Thermal actuator

Thermal actuator with position indicator for control of valves in heating or cooling systems. The actuator can be used to control radiator circuits, solar heating systems, heating or cooling coils, floor heating etc. To be combined with the VTTV/VTTR/VTTB range of valves.

Technical data	
Stroke	2.5mm
Ambient temperature	0…50°C
Connection	M30×1.5 metal ring
Dimensions	Ø 40×61mm
Protection class	IP40 (IP44 when vertically mounted)

Models

Article	Supply voltage	Control signal	Force	Power consumption	Stroke time	Notes
RTAN-24	24 V AC ± 10%, 50/60 Hz	On/Off	100 N	3.0 VA	4.5 min	
RTAN-230	230 V AC ± 10%, 50/60 Hz	On/Off	100 N	3.0 VA	3.5 min	
RTAN-24A	24 V AC ± 10%, 50/60 Hz	0...10 V DC	100 N	3.5 VA	4.5 min	
RTAN140-24	24 V AC ± 10%, 50/60 Hz	On/Off	140 N	3.0 VA	4.5 min	
RTAN140-230	230 V AC ± 10%, 50/60 Hz	On/Off	140 N	3.0 VA	3.5 min	
RTAN140-24A	24 V AC ± 10%, 50/60 Hz	0...10 V DC	140 N	3.5 VA	3.5 min	

Thermal actuator

Thermal actuators with position indication for control of valves in heating or cooling systems. The actuator can be used to control radiator circuits, solar heating systems, heating or cooling coils, floor heating, etc. The VA54 adapter is included upon delivery (does not apply to the 125 N variants).

Technical data	
Ambient temperature	0…60°C
Protection class	IP54
Cable length	2m

Article	Supply voltage	Control signal	Power consumption	Stroke time	Force	Stroke	Notes
RTAM100-24	24 V AC/DC	On/off, NC	1 W. Max. inrush current < 300 mA during max. 2 min.	3.5 min	100 N	4mm	
RTAOM100-24	24 V AC/DC	On/off, NO		3.5 min	100 N	4mm	
RTAM100-24A	24 V AC	0...10 V DC, NC		30 s/mm	100 N	4mm	
RTAOM100-24A	24 V AC	0...10 V DC, NO		30 s/mm	100 N	4mm	
RTAM100-230	230 V AC	On/off, NC	1 W. Max. inrush current < 550 mA during max. 100 ms.	3.5 min	100 N	4mm	
RTAOM100-230	230 V AC	On/off, NO		3.5 min	100 N	4mm	
RTAM125-24	24 V AC/DC	On/off, NC	1.2 W. Max. inrush current < 300 mA during max. 2 min.	4.5 min	125 N	6.5mm	
RTAOM125-24	24 V AC/DC	On/off, NO		4.5 min	125 N	6.5mm	
RTAM125-24A	24 V AC	0...10 V DC, NC		30 s/mm	125 N	6.5mm	
RTAM125-230	230 V AC	On/off, NC	1.2 W. Max. inrush current < 550 mA during max. 100 ms.	4.5 min	125 N	6.5mm	
RTAOM125-230	230 V AC	On/off, NO		4.5 min	125 N	6.5mm	

Accessories

Article	Description	Notes
RTA-CASE	Adapter case containing an assortment of adapters for testing on site	

Adapters for the RTA(O)M actuators

Adapters for adjusting the RTA(O)M actuators to valves of other brands.

Article	Valve supplier	Connection, valve	Colour	Notes
VA02	LK/Uponor	M30×1.5	Grey with red stem	
VA10	Siemens/Oventrop	M30×1.5	Light grey	
VA13H	Controlli	M30×1.5	White with black stem	
VA16H	Herz	M28×1.5	Grey with red stem	
VA17	MMA	M28×1.5	White	
VA18	Honeywell	M30×1.5	Light blue	
VA26	Giacomini	Clamping ring	Grey	
VA32	TA	M28×1.5	Green	
VA39	Oventrop	M30×1.0	White	
VA41	Danfoss AB-QM	M30×1.5	Dark green	
VA44H	Cazzaniga	M32×1.5	Grey	
VA50	Honeywell	M30×1.5	Dark grey	
VA54	MMA	M28×1.5	Dark blue	
VA59	Danfoss RAV/L	Clamping ring	Light grey	
VA64	Pettinaroli	M28×1.5	Grey	
VA66	Industrietechnik	M30×1.5	Grey	
VA72	Danfoss RAV	Grub screw	Light grey	
VA78	Danfoss RA	Grub screw	White	
VA80	TA	M30×1.5	White/grey	
VA90	Valsir	M30×1.5	Red	

Valve actuator for 0...10 V or 3-position control

The RVAZ4 series of valve actuators are easy to mount and have a clear position indication which shows the position of the actuator. The actuator has manual manoeuvring.

The RVAZ4 models are intended for use together with Regin's valve ranges ZMD, ZTV/ZTR and ZTVB/ZTRB. The RVAZ4L1 models can be used for Regin's valve range or different brands of valves in combination with the OVA-L1 adapter.

Technical data	
Force	400 N
Stroke	5.5 mm
Ambient temperature	0…50 °C
Storage temperature	-10…+80 °C
Media temperature	1…110 °C
Ambient humidity	Max. 95% RH
Protection class	IP44
Connection	M30×1.5

Actuators for Regin's valve ranges ZTV/ZTR and ZTVB/ZTRB

Article	Supply voltage	Power consumption	Control signal	Stroke time	Notes
RVAZ4-24	24 V AC ±15%	0.6 VA	3-point	150 s	
RVAZ4-24A	24 V AC ±15%	6 VA	0…10 V DC	30 s	
RVAZ4-230	230 V AC ±15%, 50/60 Hz	6 VA	3-point	150 s	

Actuators for valves of different brands in combination with the OVA-L1 adapter

Article	Supply voltage	Power consumption	Control signal	Stroke time	Notes
RVAZ4L1-24	24 V AC ±15%	0.6 VA	3-position	150 s	
RVAZ4L1-24A	24 V AC ±15%	6 VA	0…10 V DC	30 s	
RVAZ4L1-230	230 V AC ±15%, 50/60 Hz	6 VA	3-position	150 s	

Electromechanical actuators for the PCTV, PCTVM and PCTVS valves

Technical data	
Max. media temperature	95 °C
Ambient temperature	0…50 °C
Protection class	IP43
Force	120 N +30% -20%
Stroke time	8 s/mm

Models

Article	Control signal	Stroke	Supply voltage	Power consumption	Notes
RVAPC-24	3-point	6 mm (max.)	24 V AC	1.5 W / 2.5 VA	
RVAPC-230	3-point	6 mm (max.)	230 V AC	2.2 W / 6.5 VA	
RVAPC-24A	0…10 V	6 / 3.2 mm	24 V AC	1.5 W / 2.5 VA	

Accessories

Article	Description	Actuator	Notes
VA7010	Adapter for valve with 2.7 mm stroke (to be ordered separately)	RVAPC…	
VA748X	Adapter for valve with 6 mm stroke (to be ordered separately)	RVAPC…	

Valve actuator, 24 V supply voltage and 0(2)...10 V DC control

Valve actuator with automatic stroke adjustment for control of Regin's range of valves. Available in models with actuator force of 500, 1000, 1800 or 2500 N. The actuators can be operated manually with the manual override mechanism on the lid. Using an adapter kit, the actuator can also be adapted for use with other valves on the market.

Technical data	
Supply voltage	24 V AC/DC
Control signal	0...10 V DC or 2...10 V DC
Ambient temperature	0…50 °C
Storage temperature	-40...80 °C
Ambient humidity	10...90% RH
Protection class	IP54

Models

Article	Max. power consumption	Force	Stroke	Stroke time	Notes
RVAN5-24A	4.5 VA	500 N	10…30 mm	1.5 s/mm	
RVAN10-24A	8 VA	1000 N	10…30 mm	3 s/mm	
RVAN18-24A	8 VA	1800 N	10…52 mm	3 s/mm	
RVAN25-24A	12 VA	2500 N	10…52 mm	3 s/mm	

Valve actuator, 24 V supply voltage and 3-position control

Valve actuator for control of Regin's range of valves. Available in models with actuator force of 500, 1000, 1800 or 2500 N. The actuators can be operated manually with the manual override mechanism on the lid. Using an adapter kit, the actuator can also be adapted for use with other valves on the market.

Technical data	
Supply voltage	24 V AC
Control signal	3-point
Stroke time	3 s/mm
Ambient temperature	0...50 °C
Storage temperature	-40...80 °C
Ambient humidity	10...90% RH
Protection class	IP54

Models

Article	Max. power consumption	Force	Stroke	Notes
RVAN5-24	4.5 VA	500 N	10…30 mm	
RVAN10-24	8 VA	1000 N	10…30 mm	
RVAN18-24	8 VA	1800 N	10…52 mm	
RVAN25-24	12 VA	2500 N	10…52 mm	

Valve actuator, 230 V supply voltage and 3-position control

Valve actuator for control of Regin's range of valves. Available in models with actuator force of 500, 1000, 1800 or 2500 N. The actuators can be operated manually with the manual override mechanism on the lid. Using an adapter kit, the actuator can also be adapted for use with other valves on the market.

Technical data	
Supply voltage	230 V AC ±15%, 50 Hz
Control signal	3-point
Power consumption	12 W
Stroke time	3 s/mm
Ambient temperature	0...50 °C
Storage temperature	-40...+80 °C
Ambient humidity	10...90% RH
Protection class	IP54

Models

Article	Force	Stroke	Notes
RVAN5-230	500 N	10…30mm	
RVAN10-230	1000 N	10…30mm	
RVAN18-230	1800 N	10…52mm	
RVAN25-230	2500 N	10…52mm	

Valve actuator for 3-point control signal. Force 500 N.

Actuator intended for control of Regin's former MMV and MMR valves, as well as other valves. The actuator can be operated manually.

Technical data	
Max. power consumption	4.5 W
Force	500 N
Stroke	10...30mm
Ambient temperature	0...50 °C
Ambient humidity	10...90% RH
Storage temperature	-40...80 °C
Protection class	IP54

Models

Article	Supply voltage	Control signal	Stroke time	Notes
RVAR5-24A	24 V AC/DC	0...10 V DC or 2...10 V DC	1.5 s/mm	

Actuators for internally threaded 2- and 3-way valves

Actuator intended for on/off control of hot or cold water in heating or cooling systems. The actuator has a synchronous motor and spring return mechanism. It is intended for use together with Regin's ZFCM valves.

Technical data	
Supply voltage	230 V AC, 50…60 Hz
Control signal	On/off
Power consumption	6 VA
Opening time	Approx. 15 s
Closing time, spring	4…5 s
Ambient temperature	0…60 °C
Material	ABS
Dimensions	91×68×65 mm
Protection class	IP44

Models

Article	Valve	Notes
RVAFC-2302	ZFCM-2...	
RVAFC-2303	ZFCM-3...	

Rotating valve actuator, 24 V AC/DC or 230 V AC

Valve actuators intended for control of Regin's pressure independent PCMTV32-50 range of valves. Compact design for simple installation and maintenance. Clear position indication and DIP-switches for setting of rotational direction.

Technical data	
Max. stroke (rotation)	0…90 °
Stroke time	30 s /90º
Torque	8 Nm
Angle limitation	5…85° (in increments of 5°)
Ambient temperature	-20...+50 °C
Media temperature	Max. 120 °C
Storage temperature	-40…+70 °C
Ambient humidity	5…95% RH
Protection class	IP54

Article	Supply voltage	Control signal	Power consumption	Notes
RVASN08-24	24 V AC, 50/60 Hz alt. 24 V DC ±20%	On/Off (2-position) and 3-position	3.9 W (0.4 W/6.5 VA in standby mode)	
RVASN08-24A	24 V AC, 50/60 Hz alt. 24 V DC ±20%	0...10 V DC	4.8 W (1.2 W/6.5 VA in standby mode)	
RVASN08-230	230 V AC, 50/60 Hz	On/Off (2-position) and 3-position	4.8 W (1.2 W/6.5 VA in standby mode)	

Adapter kit for adapting Regin's actuators to valves of other brands

ABS, VADSTENA, VM (Shuntmaster)

Valve	DN min.-max.	Stroke	Actuator	Adapter type	Notes
SV...25	25mm	20mm	RVAN5...	OVA-131	
SV...27	25mm	20mm	RVAN5...	OVA-131	
SV...33	32mm	20mm	RVAN5...	OVA-131	
SV...35	32mm	20mm	RVAN5...	OVA-131	
SV...36	32mm	20mm	RVAN5...	OVA-131	
SV...47	40mm	20mm	RVAN5...	OVA-131	
SV...54	50mm	40mm	RVAN18...	OVA-031	
SV...55	50mm	40mm	RVAN18...	OVA-031	
SV...56	50mm	40mm	RVAN18...	OVA-031	
SV...62	65mm	40mm	RVAN18...	OVA-031	
SV...65	65mm	40mm	RVAN18...	OVA-031	
SV...66	65mm	40mm	RVAN18...	OVA-031	
SV...67	65mm	40mm	RVAN18...	OVA-031	

ARI Armaturen

Valve	DN min.-max.	Stroke	Actuator	Adapter type	Notes
485-489	15 - 50mm	14mm	RVAN5.../RVAN10...	OVA-A1	
485-489	65 - 100mm	20 - 30mm	RVAN18.../RVNA25...	OVA-A2	
485-489	40 - 50mm	14mm	RVAN18	OVA-A3	

Controlli

Valve	DN min.-max.	Stroke	Actuator	Adapter type	Notes
VSB	15 - 50mm	16.5mm	RVAN5.../RVAN10...	OVA-141	
VMB	15 - 50mm	16.5mm	RVAN5.../RVAN10...	OVA-141	

Danfoss

Valve	DN min.-max.	Stroke	Actuator	Adapter type	Notes
AB-QM	10 - 20mm	2,3mm	RVAPC...	N/A	
AB-QM	25 - 32mm	4,5mm	RVAPC...	N/A	

ESBE

Valve	DN min.-max.	Stroke	Actuator	Adapter type	Notes
VLF125	15 - 50mm	20mm	RVAN5.../RVAN10...	OVA-131	
VLF135	15 - 50mm	20mm	RVAN5.../RVAN10...	OVA-131	
VLF335	65 - 80mm	20mm	RVAN18.../RVAN25...	OVA-F4	
VLA121	15 - 50mm	20mm	RVAN5.../RVAN10...	OVA-131	
VLA221	15 - 50mm	20mm	RVAN5.../RVAN10...	OVA-131	
VLA131	15 - 50mm	20mm	RVAN5.../RVAN10...	OVA-131	
VLA325	15 - 50mm	20mm	RVAN5.../RVAN10...	OVA-131	
VLA325	65 - 150mm	40mm	RVAN18.../RVAN25...	OVA-F4	
VLB225	15 - 50mm	20mm	RVAN5.../RVAN10...	OVA-131	
VLB225	65 - 150mm	40mm	RVAN18.../RVAN25...	OVA-F4	
VLA335	15 - 50mm	20mm	RVAN5.../RVAN10...	OVA-131	
VLA335	65 - 150mm	40mm	RVAN18.../RVAN25...	OVA-F4	
VLB235	15 - 50mm	20mm	RVAN5.../RVAN10...	OVA-131	
VLB235	65 - 150mm	40mm	RVAN18.../RVAN25...	OVA-F4	
VLA425	25 - 50mm	20mm	RVAN5.../RVAN10...	OVA-131	
VLE122	15 - 50mm	20mm	RVAN5.../RVAN10...	OVA-131	
VLE132	15 - 50mm	20mm	RVAN.../RVAN10...	OVA-131	
VLE222	25 - 50mm	20mm	RVAN5.../RVAN10...	OVA-131	
VLE325	20 - 40mm	20mm	RVAN5.../RVAN10...	OVA-131	
VLC125	15 - 50mm	20mm	RVAN5.../RVAN10...	OVA-131	
VLC225	25 - 50mm	20mm	RVAN5.../RVAN10...	OVA-131	
VLC325	15 - 50mm	20mm	RVAN5.../RVAN10...	OVA-131	
VLC425	25 - 50mm	20mm	RVAN5.../RVAN10...	OVA-131	
VL2FC	15 - 50mm	20mm	RVAN5.../RVAN10...	OVA-131	
VL3FC	15 - 50mm	20mm	RVAN5.../RVAN10...	OVA-131	
VL2TA	15 - 50mm	20mm	RVAN5.../RVAN10...	OVA-131	
VL2TAA	25 - 50mm	20mm	RVAN5.../RVAN10...	OVA-131	
VL3TA	15 - 50mm	20mm	RVAN5.../RVAN10...	OVA-131	
VL2FA	15 - 50mm	20mm	RVAN5.../RVAN10...	OVA-131	
VL2FAA	25 - 50mm	20mm	RVAN5.../RVAN10...	OVA-131	
VL3FA	15 - 50mm	20mm	RVAN5.../RVAN10...	OVA-131	
VL2TB	15 - 50mm	20mm	RVAN5.../RVAN10...	OVA-131	
VL2TBA	25 - 50mm	20mm	RVAN5.../RVAN10...	OVA-131	
VL3TB	15 - 50mm	20mm	RVAN5.../RVAN10...	OVA-131	
VL2FD	15 - 50mm	20mm	RVAN5.../RVAN10...	OVA-131	
VL2FDA	25 - 50mm	20mm	RVAN5.../RVAN10...	OVA-131	

Geamatic

Valve	DN min.-max.	Stroke	Actuator	Adapter type	Notes
V121G (M6 threaded stem)	15 - 50mm	20mm	RVAN5…/RVAN10…	OVA-161	

Honeywell

Valve	DN min.-max.	Stroke	Actuator	Adapter type	Notes
V5011R	15 - 50mm	20mm	RVAN5.../RVAN10...	OVA-011	
V5013A	15 - 50mm	20mm	RVAN5.../RVAN10...	OVA-011	
V5013F	15 - 50mm	20mm	RVAN5.../RVAN10...	OVA-011	
V5013R	15 - 50mm	20mm	RVAN5.../RVAN10...	OVA-011	
V5015A	100 - 150mm	38mm	RVAN18.../RVAN25...	OVA-013	
V5329C	15 - 80mm	20mm	RVAN5.../RVAN10...	OVA-011	
V5329A	15 - 80mm	20mm	RVAN5.../RVAN10...	OVA-011	
V5016A	15 - 80mm	20mm	RVAN5.../RVAN10...	OVA-011	
V5016A	100 - 150mm	38mm	RVAN18.../RVAN25...	OVA-013	
V5025A	15 - 80mm	20mm	RVAN5.../RVAN10...	OVA-011	
V5025A	100 - 150mm	38mm	RVAN18.../RVAN25...	OVA-013	
V5050A	15 - 80mm	20mm	RVAN5.../RVAN10...	OVA-011	
V5050A	100 - 150mm	38mm	RVAN18.../RVAN25...	OVA-013	
V5328A	15 - 80mm	20mm	RVAN5.../RVAN10...	OVA-011	
V176A	15mm	20mm	RVAN5.../RVAN10...	OVA-011	
V176B	20 - 80mm	20mm	RVAN5.../RVAN10...	OVA-011	
V176B	100mm	38mm	RVAN18.../RVAN25...	OVA-013	
V538C6xxx	50 - 150mm	27 - 40mm	RVAN18.../RVAN25...	OVA-013	
V538C3xxx	15 - 50mm	20mm	RVAN5.../RVAN10...	OVA-011	
V186	15mm	20mm	RVAN5.../RVAN10...	OVA-011	
V186	20 - 80mm	20mm	RVAN5.../RVAN10...	OVA-011	
V186	100mm	38mm	RVAN18.../RVAN25...	OVA-013	

Industrietechnik

Valve	DN min.-max.	Stroke	Actuator	Adapter type	Notes
VFX	15 - 20mm (up to kvs 2.5)	2,5mm	RVAPC...	N/A	

Johnson

Valve	DN min.-max.	Stroke	Actuator	Adapter type	Notes
VG7201/VG7203	25 - 32mm	13mm	RVAN5.../RVAN10...	OVA-J1	
VG7201/VG7203	40 - 50mm	19mm	RVAN5.../RVAN10...	OVA-J1	
VG7401/VG7403	25 - 32mm	13mm	RVAN5.../RVAN10...	OVA-J1	
VG7401/VG7403	40 - 50mm	19mm	RVAN5.../RVAN10...	OVA-J1	
VG7802/VG7804	25 - 32mm	13mm	RVAN5.../RVAN10...	OVA-J1	
VG7802/VG7804	40 - 50mm	19mm	RVAN5.../RVAN10...	OVA-J1	
BM-2xx2	15 - 50mm	19mm	RVAN5.../RVAN10...	OVA-J1	
BM-2xx8	15 - 50mm	19mm	RVAN5.../RVAN10...	OVA-J1	
VG6210	15 - 25mm	2,5mm	RVAPC...	N/A	
VG6510	15 - 25mm	2,5mm	RVAPC...	N/A	
VG6810	15 - 25mm	2,5mm	RVAPC...	N/A	
V5210	10 - 20mm	4mm	RVAPC...	N/A	
V5510	10 - 20mm	3,7mm	RVAPC...	N/A	
V5810	10 - 20mm	3,7mm	RVAPC...	N/A	

The OVA-J1 adapter applies to valves with a M28x1,5 neck and a 1/4" UNF-28 threaded stem.

Kieback und Peter

Valve	DN min.-max.	Stroke	Actuator	Adapter type	Notes
RF	15 - 50mm	14mm	RVAN5.../RVAN10...	OVA-A1	
RF	65 - 100mm	20 - 30mm	RVAN18.../RVAN25...	OVA-A2	
RK	15 - 50mm	14mm	RVAN5.../RVAN10...	OVA-A1	
RK	65 - 100mm	20 - 30mm	RVAN18.../RVAN25...	OVA-A2	

L&G, L&S, Siemens valves

Valve	DN min.-max.	Stroke	Actuator	Adapter type	Notes
VFF33 (VARISHUNT)	65mm	40mm	RVAN18.../RVAN25...	OVA-031	
VFF34 (VARISHUNT)	65mm	40mm	RVAN18.../RVAN25...	OVA-031	
VFF35 (VARISHUNT)	65mm	40mm	RVAN18.../RVAN25...	OVA-031	
VFF36 (VARISHUNT)	65mm	40mm	RVAN18.../RVAN25...	OVA-031	
VFG33 (VARISHUNT)	25 - 40mm	20mm	RVAN5.../RVAN10...	OVA-134	
VFG34 (VARISHUNT)	25 - 40mm	20mm	RVAN5.../RVAN10...	OVA-134	
VFG35 (VARISHUNT)	25 - 40mm	20mm	RVAN5.../RVAN10...	OVA-134	
VFG36 (VARISHUNT)	25 - 40mm	20mm	RVAN5.../RVAN10...	OVA-134	
VPF52E	15 - 40mm	20mm	RVAN5.../RVAN10...	OVA-081	
VPF52F	15 - 40mm	20mm	RVAN5.../RVAN10...	OVA-081	
VVF21	15 - 80mm	20mm	RVAN5.../RVAN10...	OVA-081	
VVF21	100mm	40mm	RVAN18.../RVAN25...	OVA-082	
VVF31	25 - 80mm	20mm	RVAN5.../RVAN10...	OVA-081	
VVF31	100 - 150mm	40mm	RVAN18.../RVAN25...	OVA-082	
VVF40	15 - 80mm	20mm	RVAN5.../RVAN10...	OVA-081	
VVF40	100 - 150mm	40mm	RVAN18.../RVAN25...	OVA-082	
VVF41	50 - 150mm	20/40mm	RVAN18.../RVAN25...	OVA-082	
VVF45	50 - 150mm	20/40mm	RVAN18.../RVAN25...	OVA-082	
VVF51/52	15 - 40mm	20mm	RVAN5.../RVAN10...	OVA-081	
VVF53	15- 50mm	20mm	RVAN5.../RVAN10...	OVA-081	
VVF61	15 - 25mm	20mm	RVAN5.../RVAN10...	OVA-081	
VVF61	40 - 150mm	20/40mm	RVAN18.../RVAN25...	OVA-082	
VVG11 (VARIVALVE)	15mm	5.5mm	RVAZ4L1...	OVA-L1	
VVG11	20 - 40mm	20mm	RVAN5.../RVAN10...	OVA-134	
VVG12 (VARIVALVE)	25 - 40mm	20mm	RVAN5.../RVAN10...	OVA-134	
VXF21	25 - 80mm	20mm	RVAN5.../RVAN10...	OVA-081	
VXF21	100mm	40mm	RVAN18.../RVAN25...	OVA-082	
VXF31	25 - 80mm	20mm	RVAN5.../RVAN10...	OVA-081	
VXF31	100 - 150mm	40mm	RVAN18.../RVAN25...	OVA-082	
VXF40	15 - 80mm	20mm	RVAN5.../RVAN10...	OVA-081	
VXF40	100 - 150mm	10mm	RVAN18.../RVAN25...	OVA-082	
VXF41	15 - 40mm	20mm	RVAN5.../RVAN10...	OVA-081	
VXF41	50 - 150mm	40mm	RVAN18.../RVAN25...	OVA-082	
VXF53	15- 50mm	20mm	RVAN5.../RVAN10...	OVA-081	
VXF61	15 - 25mm	20mm	RVAN5.../RVAN10...	OVA-081	
VXF61	40 - 150mm	20/40mm	RVAN18.../RVAN25...	OVA-082	
VVG41	15 - 50mm	20mm	RVAN5.../RVAN10...	OVA-081	
VXG11 (VARIVALVE)	15mm	5.5mm	RVAZ4L1...	OVA-L1	
VXG11	20 - 40mm	20mm	RVAN5.../RVAN10...	OVA-134	
VXG12 (VARIVALVE)	25 - 40mm	20mm	RVAN5.../RVAN10...	OVA-134	
VXG41	15 - 50mm	20mm	RVAN5.../RVAN10...	OVA-081	
VXG44	15 - 50mm	5.5mm	RVAZ4L1	OVA-L1	
VVG44	15 - 40mm	5.5mm	RVAZ4L1...	OVA-L1	
VVG549	15 - 25mm	5.5mm	RVAZ4L1...	OVA-L1	
VVI52	15mm	5.5mm	RVAZ4L1...	OVA-L1	
VVG55	15 - 25mm	5.5mm	RVAZ4L1...	OVA-L1	
VVP45	10 - 40mm	5,5mm	RVAZ4L1...	OVA-L1	
VXP45	10 - 40mm	5,5mm	RVAZ4L1...	OVA-L1	
VMP45	10 - 40mm	5,5mm	RVAZ4L1...	OVA-L1	

Valve	DN min.-max.	Stroke	Actuator	Adapter type	Notes
VVI46	15 - 25mm	2,5mm	RVAPC...	N/A	
VXI46	15 - 25mm	2,5mm	RVAPC...	N/A	
VVS46	15 - 25mm	2,5mm	RVAPC...	N/A	
VXS46	15 - 25mm	2,5mm	RVAPC...	N/A	
VVP47	10 - 20mm	2,5mm	RVAPC...	N/A	
VXP47	10 - 20mm	2,5mm	RVAPC...	N/A	
VMP47	10 - 20mm	2,5mm	RVAPC...	N/A	

LDM

Valve	DN min.-max.	Stroke	Actuator	Adapter type	Notes
RV 111/T	15 - 40mm	5.5mm	RVAZ4L1...	OVA-L1	
RV 111/W	15 - 40mm	5.5mm	RVAZ4L1...	OVA-L1	
RV 111/F	15 - 40mm	5.5mm	RVAZ4L1...	OVA-L1	

Osby valves (OAB)

Valve	DN min.-max.	Stroke	Actuator	Adapter type	Notes
2SAS, 2SBS, 2SAM, 2SBM	15 - 80mm	20mm	RVAN5.../RVAN10...	OVA-F1	
2SBS, 2SBM	100mm	38mm	RVAN18…	OVA-F2	
NTVS	15 - 80mm	20mm	RVAN5…/RVAN10…	OVA-F1	
NTVS	100 - 150mm	38, 40mm	RVAN18…/RVAN25…	OVA-F2	
CVFS	20 - 65mm	32mm	RVAN18…	OVA-F2	
GTVS, GTRS	32 - 40mm	20mm	RVAN5…/RVAN10…	OVA-F1	
GTVS, GTRS	50 - 150mm	24 - 40mm	RVAN18…/RVAN25…	OVA-F2	
ETVS, ETVSU, ETRS, ETRSU	15 - 50mm	20mm	RVAN5…/RVAN10…	OVA-F1	
FRS, FRSD	15 - 65mm (kvs 0.6 - 6.3)	20mm	RVAN5…/RVAN10…	OVA-F1	
FRS	32 - 65mm (kvs 10 - 20)	20mm	RVAN18…	OVA-F2	
MRT	20 - 25mm	20mm	RVAN5…/RVAN10…	OVA-F1	
MTVS, MTRS	15 - 50mm	20mm	RVAN5…/RVAN10…	OVA-F1	
STR, STV	15 - 50mm	15mm	RVAN5…/RVAN10…	OVA-121	
MMV, MMR	15 - 50mm	20mm	RVAN5.../RVAN10...	OVA-134	
BTV	15 - 50mm	20mm	RVAN5…/RVAN10…	OVA-F3 + 2921451401	
BTR	15 - 50mm	20mm	RVAN5…/RVAN10…	OVA-F3	
MMVA	15 - 50mm	20mm	RVAN5…/RVAN10…	OVA-F3	

Old Osby valves with 3/8" UNF thread on the stem

Valve	DN min.-max.	Stroke	Actuator	Adapter type	Notes
2SA/2SB	15 - 80mm	20mm	RVAN5…/RVAN10…	OVA-132	
2SB	100mm	38mm	RVAN18...	OVA-133	
CVF	20 - 65mm	32mm	RVAN18...	OVA-133	
GTR/GTV	25 - 50mm	20 - 24mm	RVAN5.../RVAN10...	OVA-132	
GTR/GTV	65 - 150mm	40mm	RVAN18.../RVAN25...	OVA-133	
MTR/MTV	15 - 50mm	20mm	RVAN5.../RVAN10...	OVA-132	

Oventrop

Valve	DN min.-max.	Stroke	Actuator	Adapter type	Notes
Cocon 2TZ	15 - 20mm	2,5mm	RVAPC...	N/A	
Cocon QTZ	10 - 32mm	2,8/3,5/4mm	RVAPC...	N/A	
Tri-M Plus	15mm	2,5mm	RVAPC...	N/A	

Pettinaroli

Valve	DN min.-max.	Stroke	Actuator	Adapter type	Notes
91-series	15 - 25mm	3mm	RVAPC...	VA7010	
93-series	20 - 32mm	6mm	RVAPC...	VA748X	

Regin

Valve	DN min.-max.	Stroke	Actuator	Adapter type	Notes
VTTV/VTTR/VTTB	15 - 20mm (up to kvs 2.5)	2,5mm	RVAPC...	N/A	

Riccius + Sohn

Valve	DN min.-max.	Stroke	Actuator	Adapter type	Notes
RGV2	15 - 50mm	14mm	RVAN5.../RVAN10...	OVA-H1	
RGV3	15 - 50mm	14mm	RVAN5.../RVAN10...	OVA-H1	
HMVF2	15 - 50mm	14mm	RVAN5.../RVAN10...	OVA-H1	
HMVF2	65 - 100mm	20 - 30mm	RVAN18.../RVAN25...	OVA-H2	
HMVF3	15 - 50mm	14mm	RVAN5.../RVAN10...	OVA-H1	
HMVF3	65 - 100mm	20 - 30mm	RVAN18.../RVAN25...	OVA-H2	
RGVA2	15 - 50mm	14mm	RVAN5.../RVAN10...	OVA-A1	
RGVA3	15 - 50mm	14mm	RVAN5.../RVAN10...	OVA-A1	
HMVFA2	15 - 50mm	14mm	RVAN5.../RVAN10...	OVA-A1	
HMVFA2	65 - 100mm	20 - 30mm	RVAN18.../RVAN25...	OVA-A2	
HMVFA3	15 - 50mm	14mm	RVAN5.../RVAN10...	OVA-A1	
HMVFA3	65 - 100mm	20 - 30mm	RVAN18.../RVAN25...	OVA-A2	

Satchwell

Valve	DN min.-max.	Stroke	Actuator	Adapter type	Notes
SVB-XXX-F3	50 - 150mm	23 - 40mm	RVAN18.../RVAN25...	OVA-133	
SVG-XXX-F3	50 - 150mm	23 - 40mm	RVAN18.../RVAN25...	OVA-133	
SVR-XXX-F3	50 - 150mm	23 - 40mm	RVAN18.../RVAN25...	OVA-133	
SVR-G2	15 - 50mm	20mm	RVAN5.../RVAN10...	OVA-132	
SVR-G3	15 - 50mm	20mm	RVAN5.../RVAN10...	OVA-132	
VZ, MVZ	15 - 50mm	20mm	RVAN5.../RVAN10...	OVA-132	
VZF, MVZF	65 - 150mm	27 - 40mm	RVAN18.../RVAN25...	OVA-133	

Sauter

Valve	DN min.-max.	Stroke	Actuator	Adapter type	Notes
V6R	15 - 50mm	14mm	RVAN5.../RVAN10...	OVA-151	
B6R	15 - 50mm	14mm	RVAN5.../RVAN10...	OVA-151	
VXD	15 - 50mm	14mm	RVAN5.../RVAN10...	OVA-151	
VXE	15 - 50mm	14mm	RVAN5.../RVAN10...	OVA-151	
BXD	15 - 50mm	14mm	RVAN5.../RVAN10...	OVA-151	
BXE	15 - 50mm	14mm	RVAN5.../RVAN10...	OVA-151	
V6F	15 - 50mm	14mm	RVAN5.../RVAN10...	OVA-151	
V6G	15 - 50mm	14mm	RVAN5.../RVAN10...	OVA-151	
V6S	15 - 50mm	14mm	RVAN5.../RVAN10...	OVA-151	
B6F	15 - 50mm	14mm	RVAN5.../RVAN10...	OVA-151	
B6G	15 - 50mm	14mm	RVAN5.../RVAN10...	OVA-151	
B6S	15 - 50mm	14mm	RVAN5.../RVAN10...	OVA-151	
VUL	10 - 20mm	4mm	RVAPC...	N/A	
BUL	10 - 20mm	3,7mm	RVAPC...	N/A	
VUT	10 - 20mm	3/4mm	RVAPC...	N/A	
BUT	10 - 20mm	3mm	RVAPC...	N/A	
VXL	10 - 20mm	2,5mm	RVAPC...	N/A	
BXL	25 - 40mm	2,9mm	RVAPC...	N/A	
VCL	10 - 32mm	2,8 / 3,5 / 4mm	RVAPC...	N/A	

TAC + Schneider

Valve	DN min.-max.	Stroke	Actuator	Adapter type	Notes
STL	20 - 65mm	31.5mm	RVAN18...	OVA-031	
STL-SR	20 - 65mm	22mm	RVAN5.../RVAN10...	OVA-131	
V241	15 - 50mm	20mm	RVAN5.../RVAN10...	OVA-131	
V341	15 - 50mm	20mm	RVAN5.../RVAN10...	OVA-131	
V353	15 - 50mm	20mm	RVAN5.../RVAN10...	OVA-131	
V231	15 - 50mm	20mm	RVAN5.../RVAN10...	OVA-131	
V232	25 - 50mm	20mm	RVAN5.../RVAN10...	OVA-131	
V298	20 - 40mm	22mm	RVAN5.../RVAN10...	OVA-131	
V211	15 - 50mm	20mm	RVAN5.../RVAN10...	OVA-131	
V211T	15 - 50mm	20mm	RVAN5.../RVAN10...	OVA-131	
V282	20 - 32mm	22mm	RVAN5.../RVAN10...	OVA-131	
V282	40 - 50mm	31.5mm	RVAN18...	OVA-031	
VG211	15 - 50mm	16.5/25mm	RVAN5.../RVAN10...	OVA-131	
VG221F	65mm	25mm	RVAN10...	OVA-131	
VG221F	80 - 150mm	45mm	RVAN18.../RVAN25...	OVA-031	
VG222	65 - 150mm	25/45mm	RVAN18.../RVAN25...	OVA-031	
VG321	65 - 150mm	25 - 45mm	RVAN18.../RVAN25...	OVA-031	
V311	15 - 50mm	20mm	RVAN5.../RVAN10...	OVA-131	
V311T	15 - 50mm	20mm	RVAN5.../RVAN10...	OVA-131	
V212	25 - 50mm	20mm	RVAN5.../RVAN10...	OVA-131	
V212T	25 - 50mm	20mm	RVAN5.../RVAN10...	OVA-131	
V395	40 - 50mm	20mm	RVAN5.../RVAN10...	OVA-131	
V395	65 - 100mm	30/39.5mm	RVAN18.../RVAN25...	OVA-031	
V265	40 - 100mm	31.5/40.9/50.3mm	RVAN18.../RVAN25...	OVA-031	
V221	65 - 100mm	30/39.5mm	RVAN18.../RVAN25...	OVA-031	
V384	20 - 32mm	22mm	RVAN5.../RVAN10...	OVA-131	
V384	40 - 50mm	31.5mm	RVAN18...	OVA-031	
V386	20 - 32mm	22mm	RVAN5.../RVAN10...	OVA-131	
V386	40 - 50mm	31.5mm	RVAN18...	OVA-031	
V392	20 - 32mm	22mm	RVAN5.../RVAN10...	OVA-131	
V392	40 - 50mm	31.5mm	RVAN18...	OVA-031	
V394	20 - 50mm	20mm	RVAN5.../RVAN10...	OVA-131	
V292	20 - 32mm	22mm	RVAN5.../RVAN10...	OVA-131	
V292	40 - 100mm	31.5/40.9/50.3mm	RVAN18.../RVAN25...	OVA-031	
V294	20 - 32mm	22mm	RVAN5.../RVAN10...	OVA-131	
V295	20 - 32mm	22mm	RVAN5.../RVAN10...	OVA-131	
V295	40 - 100mm	31.5/40.9/50.3mm	RVAN18.../RVAN25...	OVA-031	
V222	65 - 100mm	30mm	RVAN18...	OVA-031	
V321	65 - 100mm	30mm	RVAN18...	OVA-031	
VZ28/VZ28C	15 - 20mm	2,5mm	RVAPC...	N/A	
VZ38/VZ38C	15 - 20mm	2,5mm	RVAPC...	N/A	
VZ48/VZ48C	15 - 20mm	2,5mm	RVAPC...	N/A	

Watts Industries

Valve	DN min.-max.	Stroke	Actuator	Adapter type	Notes
2131	15 - 25mm	2,5mm	RVAPC...	N/A	
3131	15 - 25mm	2,5mm	RVAPC...	N/A	
4131	15 - 25mm	2,5mm	RVAPC...	N/A	

WSE/Norshunt

Valve	DN min.-max.	Stroke	Actuator	Adapter type	Notes
FM25	25mm	23.5mm	RVAN5.../RVAN10...	OVA-FM25	
FM50	50mm	37.5mm	RVAN18...	OVA-FM50	

12

DAMPER ACTUATORS

DAMPER ACTUATORS WITH SPRING RETURN

4 Nm

4 Nm damper actuator with spring return

Technical data	
Mounting	Directly on jack shaft
For jack shaft	8...16mm Ø (round shaft), 8...12mm (square shaft)
Max. damper size	0.8 m²
Torque	4 Nm
Running time, spring return	20 s, -20...+50°C, max. 60 s at -30°C
Protection class	IP54

Article	Control signal	Supply voltage	Running time, actuator	Auxiliary switch	Notes
RDAB5S-24	On/off	24 V AC/DC, 7 VA	40...75 s (0...4 Nm)	-	
RDAB5S-24S	On/off	24 V AC/DC, 7 VA	40...75 s (0...4 Nm)	1×SPDT, 6 (1.5) A, 250 V AC. Switching point: adjustable 0...100%.	
RDAB5S-230	On/off	230 V AC, 7 VA	40...75 s (0...4 Nm)	-	
RDAB5S-230S	On/off	230 V AC, 7 VA	40...75 s (0...4 Nm)	1×SPDT, 6 (1.5) A, 250 V AC. Switching point: adjustable 0...100%.	
RDAB5S-24A	0...10 V DC (working range 2...10 V)	24 V AC/DC, 7 VA	150 s	-	

10 Nm

10 Nm damper actuator with spring return

Technical data	
Mounting	Directly on jack shaft
For jack shaft	10...22mm Ø (round shaft), 14...25.4mm (square shaft)
Max. damper size	2 m²
Torque	10 Nm
Running time, spring return	20 s
Protection class	IP54

Article	Control signal	Supply voltage	Power consumption	Running time, actuator	Auxiliary switch	Notes
RDAB10S	On/off	24...240 V AC, 50/60 Hz, 24...125 V DC	10 VA (24 V) / 11 VA (230 V)	75 s	-	
RDAB10S-S	On/off	24...240 V AC, 50/60 Hz, 24...125 V DC	10 VA (24 V) / 11 VA (230 V)	75 s	2×SPDT, 1 mA ... 3 (0.5) A, 250 V AC. Switching points: fixed 10%, adjustable 10...90%.	
RDAB10S-24A	0...10 V DC (working range 2...10 V, 24 V AC only)	24 V AC, 50/60 Hz, 24 V DC	8 VA	150 s	-	

20 Nm

20 Nm damper actuator with spring return

Technical data	
Mounting	Directly on jack shaft
For jack shaft	10...22 mm Ø (round shaft), 14...25.4 mm (square shaft)
Max. damper size	4 m^2
Torque	20 Nm
Running time, spring return	20 s
Protection class	IP54

Article	Control signal	Supply voltage	Power consumption	Running time, actuator	Auxiliary switch	Notes
RDAB20S	On/off	24...240 V AC, 50/60 Hz, 24...125 V DC	7 VA (24 V) / 18 VA (230 V)	75 s	-	
RDAB20S-S	On/off	24...240 V AC, 50/60 Hz, 24...125 V DC	7 VA (24 V) / 18 VA (230 V)	75 s	2×SPDT, 1 mA ... 3 (0.5) A, 250 V AC. Switching points: fixed 10%, adjustable 10...90%.	
RDAB20S-24A	0...10 V DC (working range 2...10 V, 24 V AC only)	24 V AC, 50/60 Hz, 24 V DC	8.5 VA	150 s	-	

DAMPER ACTUATORS WITHOUT SPRING RETURN

5 Nm

5 Nm damper actuator without spring return

Technical data	
Mounting	Directly on jack shaft
For jack shaft	6...16 mm Ø (round shaft), 4...11 mm (square shaft)
Max. damper size	1.0 m^2
Torque	5 Nm
Protection class	IP54
Running time, actuator	150 s

Article	Control signal	Supply voltage	Auxiliary switch	Notes
RDAB5-24	On/off, 3-point	24 V AC/DC, 2 VA	-	
RDAB5-24S	On/off, 3-point	24 V AC/DC, 2 VA	1 mA ... 3 (0.5) A, 250 V AC	
RDAB5-230	On/off, 3-point	230 V AC, 4 VA	-	
RDAB5-230S	On/off, 3-point	230 V AC, 4 VA	1 mA ... 3 (0.5) A, 250 V AC	
RDAB5-24A	0...10 V DC (working range 2...10 V)	24 V AC/DC, 2 VA	-	

10 Nm

10 Nm damper actuator without spring return

Technical data	
Mounting	Directly on jack shaft
For jack shaft	8...20 mm Ø (round shaft), 10...16 mm (square shaft)
Max. damper size	2 m^2
Torque	10 Nm
Protection class	IP54
Running time, actuator	150 s

Article	Control signal	Supply voltage	Auxiliary switch	Notes
RDAB10-24	On/off, 3-point	24 V AC/DC, 3.5 VA	-	
RDAB10-24S	On/off, 3-point	24 V AC/DC, 3.5 VA	1 mA ... 3 (0.5) A, 250 V AC	
RDAB10-230	On/off, 3-point	230 V AC, 6 VA	-	
RDAB10-230S	On/off, 3-point	230 V AC, 6 VA	1 mA ... 3 (0.5) A, 250 V AC	
RDAB10-24A	0...10 V DC (working range 2...10 V)	24 V AC/DC, 3.5 VA	-	

20 Nm

20 Nm damper actuator without spring return

Technical data	
Mounting	Directly on jack shaft
For jack shaft	10...20mm Ø (round shaft), 10...20mm (square shaft)
Max. damper size	4 m^2
Torque	20 Nm
Protection class	IP54
Running time, actuator	150 s

Article	Control signal	Supply voltage	Auxiliary switch	Notes
RDAB20-24	On/off, 3-point	24 V AC/DC, 4 VA	-	
RDAB20-24S	On/off, 3-point	24 V AC/DC, 4 VA	1 mA ... 3 (0.5) A, 250 V AC	
RDAB20-230	On/off, 3-point	230 V AC, 6 VA	-	
RDAB20-230S	On/off, 3-point	230 V AC, 6 VA	1 mA ... 3 (0.5) A, 250 V AC	
RDAB20-24A	0...10 V DC (working range 2...10 V)	24 V AC/DC, 4 VA	-	
RDAB20-230A	0...10 V DC (working range 2...10 V)	230 V AC, 6 VA	-	

40 Nm

40 Nm damper actuator without spring return

Technical data	
Mounting	Directly on jack shaft
For jack shaft	12...20mm Ø (round shaft), 9...16mm (square shaft)
Max. damper size	8 m^2
Torque	40 Nm
Protection class	IP54
Running time, actuator	150 s

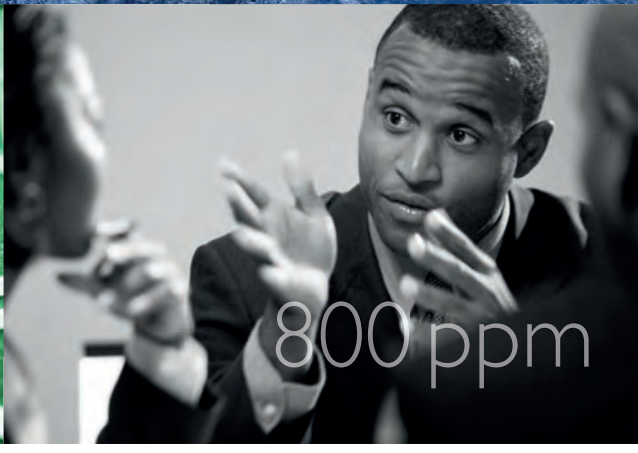
Article	Control signal	Supply voltage	Notes
RDAB40-24	On/off	24 V AC/DC, 7 VA	
RDAB40-230	On/off	230 V AC, 7 VA	
RDAB40-24A	0...10 V DC (working range 2...10 V)	24 V AC/DC, 7 VA	

DAMPER ACTUATOR ACCESSORIES

Article	Description	Notes
KH8	Damper crank arm, universal, for Ø 10...18 mm or □ 10...14 mm	
AH-20	Damper crank arm for RDAB20	
AH-25	Damper crank arm for RDAB10	
AV10-18	Shaft extension, 250 mm, Ø 10...18 mm, □ 10...14 mm	
ZG-LF1	Mounting kit for RDAB5S, for axial movement	
ZG-NMA	Mounting kit for RDAB10, for axial movement	
ZG-SMA	Mounting kit for RDAB20, for axial movement	
K6-1	Spindle clamp for RDAB5S, round shaft, 16...20 mm	
S1A	1-pole add-on auxiliary switch for RDAB5 and RDAB40	
S2A	2-pole add-on auxiliary switch for RDAB5 and RDAB40	
Z-SMA	Ground plate extension for RDAB20	
ZA-LM	Adapter 8x8 mm to Ø 16 mm	
Z-AF	Ground plate extension for RDAB20S	
K7-3	Reversible universal spindle clamp for RDAB10S and RDAB20S	
DPTW	Positioner 0...100 % for modulating actuators (0…10 V), wall mounting	
DPTF	Positioner 0...100 % for modulating actuators (0…10 V), panel mounting	

13

MISCELLANEOUS PRODUCTS & ACCESSORIES



Thermometer

Thermometer for duct mounting. Can be adjusted to fit different duct sizes by means of a moveable fastening flange. A rubber seal prevents air leakage.

Technical data	
Diameter	65mm
Total length	162mm

Article	Temperature range	Notes
T40	-40...+40°C	
T60	0...60°C	
T100	0...100°C	
T40:25	-40...+40°C	

Differential pressure manometer

Simple, compact, easy-to-use filter manometer. MINI1200 is supplied with measuring fluid, pressure outlets and an adhesive label for noting down the filter type and the initial and final pressure drop.

Technical data	
Pressure range	0...1200 Pa
Dimensions	180×30mm

Article	Description	Notes
MINI1200	Manometer	
MINI1200:25	Manometer, 25 units	

Differential pressure manometer

Device for high accuracy measurements. The manometer measures up to 600 Pa differential pressure with enhanced resolution between 0...200 Pa. Equipped with blow-out protection and a knob for zero-point adjustment. Max. total pressure 100 kPa.

MV600 is supplied with measuring fluid, pressure outlets, tubing, screws and an adhesive label for noting down the initial and final pressure drop.

Technical data	
Pressure range	0...600 Pa
Accuracy	±3%
Ambient temperature	-45...+65°C
Dimensions	210×140×33mm

Article	Description	Notes
MV600	Manometer	

Manometer accessories

Article	Description	Notes
MM-F2	Blue measuring fluid (MINI1200) 1.05 g/cm³, 500 ml	
MM-F3	Red measuring fluid (MV600) 0.786 g/cm³, 30 ml	
MTU:25	Pressure outlet, black plastic. For 6mm tubing, 25 pcs	
MTU:100	Pressure outlet, black plastic. For 6mm tubing, 100 pcs	
MM-P:25	Plastic tubing Ø 6 mm. Transparent, 25 m.	
MM-P:100	Plastic tubing Ø 6 mm. Transparent, 100 m.	
IPP8:1000	Expansion plug, grey plastic, 8 mm, 1000 pcs	
IPP10:1000	Expansion plug, grey plastic, 10 mm, 1000 pcs	
IPP12:250	Expansion plug, black plastic, 12 mm, 250 pcs	
T-ROR:100	Plastic T-branch joining piece, for 6mm tubing, 100 pcs	

Rotation sentinel

SPINN/D is an electronic rotation sentinel, primarily intended for supervision of rotating heat-exchanger wheels. It has a change-over alarm relay and a function for blocking the alarm output at intentional stops.

Technical data	
Supply voltage	230 V AC, 5 VA
Alarm relay	5 A, 250 V AC, NO/NC
Mounting	DIN-rail
Number of modules	3
Protection class	IP20

Article	Description	Notes
SPINN/D	Rotation sentinel	

Accessories

Article	Description	Notes
RR-G3	Sensor including magnet	
MAGNET-424	Extra magnet	

NEWS!

3G/4G router

3G/4G router between TCP/IP connected controllers and a wireless, mobile 3G/4G/GPRS network.

Technical data	
Connections	RJ45 (3 LAN, 1 WAN), WiFi
Communication	TCP/IP
Mobile network	GSM/GPRS/EDGE
WiFi	IEEE 802,11 b/g/n WiFi standard
Software	Open VPN, IPsec, GRE, L2TP, PPTP, Dynamic DNS and DHCP server
SIM card	2
Dimensions (W×H×D mm)	106x80x46
Weight	250 g
Power supply	9 - 30 V DC. Wall adapter included.
Power consumption	< 7 W
Operating temperature	-40 to +75°C

Article	Description	Notes
M3G900	3G router	
M4G950	4G router	

Accessories

Article	Description	Notes
MXGDIN	DIN-rail kit for M3G900 and M4G950	

GSM modem

GSM modem for EXOflex

GSM modem for DIN-rail mounting, 24 V DC supply voltage. The modem is delivered with an external antenna and a cable for connection to EXOflex port 3 (RS232).

Article	Description	Notes
GSM-MAESTROM1002G	Base modem*	
GSM100L-EXOFLEX	EXOflex kit	

* A base modem is required for each kit.

Graphic touch display for Corrigo

For operation of a Corrigo ventilation with two ports. Intended for supervision and control of an air handling system.

Technical data	
Protection class	IP30
Power supply	24 V DC via terminal 4 (+C) and G0 on the Corrigo
Power consumption	50 mA
Connection cable	Twisted pair, 0.25 mm^2
Display	TFT-LCD (resistive), backlit LED
Language	Swedish or English, set automatically depending on the language used in the Corrigo
Aspect ratio	4:3
Resolution	320×240
Dimensions (W×H×D)	120×90×27 mm
Mounting	Room or device box
Communication	EXOline

Article	Description	Notes
ED-TCV	External graphic touch display	

External display unit for Corrigo, Exigo, EXOclever, EXOcompact, EXOdos and EXOflex

ED9200 is an external, independent display and configuration unit for EXOflex, Corrigo, EXOcompact, Exigo, EXOdos or EXOclever. EXOdos, Exigo, EXOcompact C...-3 and Corrigo E...-3 supports use of ED9200 and an internal display at the same time. Earlier versions support either only an external or an internal display.

When connected to an EXOflex system, it acts as a free-standing PIFA which can be connected to a processor housing via the EFX channel. The display can be connected in two ways, either temporarily via a quick cable connection in the front panel of the Power PIFA, or permanently via screw connectors. ED9200 can be connected to an EXOflex system configured for EP9040 (LOT).

Technical data	
Power supply	With Corrigo, Exigo, EXOdos, EXOclever or EXOcompact: Internal supply, via communication cable With EXOflex: 24 V DC, via the EFX channel
Cabling	With Corrigo E...-S or EXOcompact C...-S: EK12 (3 m), EK14 (10 m) With Corrigo E...-3, EXOcompact C...-3, Exigo, EXOdos or EXOclever: EDSP-K3 (3 m), EDSP-K10 (10 m) or self-made With EXOflex: Cat 5
Cable type when self-made	With Corrigo, Exigo, EXOdos, EXOclever or EXOcompact: 26AWG With EXOflex: Cat 5
Quick connection when self-made	With Corrigo E...-3, EXOcompact C...-3, Exigo, EXOdos or EXOclever: 4P4C With EXOflex: USB type A male connector
Tolerance	With Corrigo, Exigo, EXOdos, EXOclever or EXOcompact: N/A With EXOflex: 18...30 V DC
Power consumption	With Corrigo, Exigo, EXOdos, EXOclever or EXOcompact: N/A With EXOflex: 50 mA
Communication port	With Corrigo, Exigo, EXOdos, EXOclever or EXOcompact: Serial, special With EXOflex: The EFX channel
Max. cable length	With Corrigo E…-S or EXOcompact C…-S: 10 m With Corrigo E...-3, EXOcompact C...-3, Exigo, EXOdos or EXOclever: 100 m With EXOflex: 200 m
Software requirements	With Corrigo, Exigo, EXOdos, EXOclever or EXOcompact: EXOreal 2.8-1-29 or later With EXOflex: EXOreal 2.8-1-26 or later

Article	Protection class	Notes
ED9200	IP41	
ED9200IP65	IP65	

Accessories

Article	Description	Cable length	Notes
EK10	Cable for connecting ED9200 to an EXOflex system	1.5 m	
EK10-3	Cable for connecting ED9200 to an EXOflex system	3 m	
EK12	Cable for connecting ED9200 to a Corrigo E...-S, EXOcompact C...-S, Exigo, EXOdos or EXOclever	3 m	
EK14	Cable for connecting ED9200 to a Corrigo E...-S EXOcompact C...-S, Exigo, EXOdos or EXOclever	10 m	
EDSP-K3	3m cable for connecting E3-DSP or ED9200 to a Corrigo E...-3, EXOcompact C...-3, Exigo, EXOdos or EXOclever	3 m	
EDSP-K10	10m cable for connecting E3-DSP or ED9200 to a Corrigo E...-3, EXOcompact C...-3, Exigo, EXOdos or EXOclever.	10 m	

External display unit for Corrigo E...-3, Exigo, EXOclever, EXOcompact C...-3 and EXOdos

Display for operation of a EXOcompact C...-3, Corrigo E...-3, EXOdos or Exigo. E3-DSP can be connected to controllers with or without a built-in display. The external display and the built-in display can be used simultaneously.

Technical data	
Protection class	IP30
Connection cable	3 m, 10 m or user-supplied cable, max. 100 m

Article	Description	Notes
E3-DSP	External display	

Cable must be ordered separately.

Accessories

Article	Description	Notes
EDSP-K3	3 m cable for connecting E3-DSP or ED9200 to a Corrigo E...-3, EXOcompact C...-3, Exigo, EXOdos or EXOclever	
EDSP-K10	10 m cable for connecting E3-DSP or ED9200 to a Corrigo E...-3, EXOcompact C...-3, Exigo, EXOdos or EXOclever	

Displays for panel mounting

Panel computers intended for mounting in, for example, a cabinet door. They can easily be connected to Regin's EXOscada system and to controllers with integrated web server.

Technical data	
CPU type	Intel®Atom™ E3845 (2M Cache, 1.91 GHz)
RAM	4 GB, DDR3L on-board
Supply voltage	Power supply unit for 12 V DC (2.5 A) included in the delivery
Protection class	IP65
Mounting	Cabinet mounting (screws included), VESA 75 / 100 (ordered separately)
Ports	4×COM ports (RS232), 4×USB ports, 2×LAN ports (Intel GbE)

Article	Monitor size	Resolution	Description	Notes
DP102N	10.2"	1024×600	Display for panel mounting	
DP156N	15.6"	1366×768	Display for panel mounting	
DP102N-BSD	10.2"	1024×600	Display for panel mounting, EXOscada is pre-installed (EXOscada Base with max. 200 I/O:s)	
DP156N-BSD	15.6"	1366×768	Display for panel mounting, EXOscada is pre-installed (EXOscada Base with max. 200 I/O:s)	

ED-RU-O

ED-RU-FO

ED-RU-DO

ED-RU-DFO

ED-RU-DOS

External room unit

The ED-RU units are primarily intended for control of an air handling unit via a Corrigo controller running a ventilation application. They can be used to change fan speed, set temperature, extended running, etc. at a distance of up to 300 m. Their stylish design is suitable for all environments.

The units have a built-in temperature sensor. An external PT1000-sensor can also be connected.

Technical data	
Supply voltage	24 V AC
Power consumption	25 mA
Protection class	IP20
Ambient humidity	Max. 90% RH
Storage temperature	-20…+70 °C
Mounting	Room or device box
Dimensions (W×H×D)	95×95×28 mm
Communication	EXOline

Article	Occupancy button	3-step fan control	Setpoint knob	Multi-function button	Hidden setpoint	Display	Notes
ED-RU-O	X	-	X	-	-	-	
ED-RU-FO	X	X	X	-	-	-	
ED-RU-DO	X	-	-	-	-	X	
ED-RU-DFO	X	X	-	-	-	X	
ED-RU-DOS	X	-	-	X	-	X	

The ED-RU range can also be used together with EXOcompact, EXOdos and EXOflex. If so, the room units must first be configured by a competent system integrator via Project Builder.

Display repeater for E3-DSP

Repeater for handling distances of up to 1200m between Corrigo E...-3, EXOcompact C...-3, Exigo, EXOdos, EXOclever and the external display unit E3-DSP.

Article	Power supply	Protection class	Mounting	Notes
E0R-3	24 V AC	IP20	DIN-rail	
E0R230K-3	230 V AC	IP65	Wall	

Step controller, 1- or 2-stage

Step controllers suitable for heating/cooling or alarm applications. They convert a 0...10 V DC input signal to a relay output. The controllers are suitable for DIN-rail or cabinet mounting and have adjustable switching points. The step controller with 2 relays can be set to either binary or sequential control. Individually settable on/off levels

Technical data	
Supply voltage	24 V AC, 2 VA
Input signal	0…10 V DC
Settings	0...10 V DC
Mounting	DIN-rail
Number of modules	3
Protection class	IP20

Article	Description	Output	Step differential	Notes
SC1/D	Step controller with 1 relay (NO/NC)	One relay, NO/NC, 10 A, 250 V AC	-	
SC2/D	Step controller with 2 relays (NO/NC)	Two relays, closing, 10 A, 250 V AC	0...2 V DC	

Step controller, 4- or 6-stage

Controllers intended for control of electric heating coils, four or six relays. They can be used with any controller with a 0...10 V DC or 10...2 V DC output signal. The step controllers also have an analogue output (0…10 V) for control of an electric heating controller to give proportional heating between steps.

Technical data	
Supply voltage	24 V AC, 6 VA
Output	4 alt. 6 relays (closing), binary or sequential control
Input signal	0...10 V DC
Output signal	0…10 V DC
Mounting	DIN-rail
Number of modules	6
Protection class	IP20

Article	Description	Run-on time	Notes
TT-S4/D	Step controller with 4 relays	-	
TT-S6/D	Step controller with 6 relays	3 min	

Relay module

Relay module with six relays, intended for use together with Regin's Corrigo, EXOcompact, Exigo, EXOdos controllers. The relay module can be used for control of objects with higher voltage loads or larger current drain than the controller outputs can handle. RM6H-24/D has manual switches for manual control of each object.

Technical data	
Supply voltage	24 V AC ±15%, 5 VA
Inputs	Six 24 V AC
Output	Six potential-free NO/NC contacts, 230 V AC, 10 A
Mounting	DIN-rail
Number of modules	6 (105×112×58)
Protection class	IP20

Article	Description	Notes
RM6-24/D	Relay module	
RM6H-24/D	Relay module with manual switches	

Frost protection unit

The electronic frost protection unit is mainly intended for use in air handling systems. If the temperature falls below the setpoint, the relays will fall and an alarm LED lights up. The unit should be connected to an NTC sensor placed on the heating coil or return water pipe. The frost protection unit has two alarm relays and manual or automatic reset. The sensor must have 0...30°C temperature range.

When there is frost risk, the device has a 0...10 V DC control output that can be used to override the valve.

Technical data	
Supply voltage	24 V AC
Power consumption	2 VA
Setpoint	0…15°C
P-band, control signal override	5 K (fixed)
Inputs	
Sensor inputs	One, 0...30°C (NTC sensor)
Control signal	0...10 V DC (from the controller)
Outputs	
Relays	24 V AC, 1 A, NO/NC and 230 V AC, 1 A, breaking contact
Output signal	0...10 V DC
Mounting	DIN-rail
Number of modules	3
Protection class	IP20

Article	Description	Notes
FV1/D	Frost protection unit (delivered without a sensor)	

Signal converter

Signal converter which selects the highest and lowest signal of up to six connected inputs and transforms them into two separate max. and min. output signals. If fewer than six inputs are used, unused inputs are left open. Both outputs can be used simultaneously. No settings are necessary.

Technical data	
Supply voltage	24 V AC, 3 VA
Input signal	Six, 0...10 V DC
Output signal	One max. signal 0...10 V DC and one min. signal 0...10 V DC
Accuracy	±3% of the input signal
Mounting	DIN-rail
Number of modules	3
Protection class	IP20

Article	Description	Notes
MM6-24/D	Signal converter	

Transient protection for RS485 (EXOline) and hIEXOline

DIN-rail mounting.

Article	Number of modules	Notes
X1804	2.7	

Relay module

Coupling module which serves as electrical separation between controller and load. Equipped with screw-type terminal blocks (lift system) providing an easy and rapid wiring. The module has manual control function, LED indication and integral protective circuit.

Technical data	
Nominal voltage UN	24 V AC/DC
Output contact	One NO/NC contact (SPDT)
Max. switching voltage	250 V AC/DC
Max. making current	8 A
Continuous current	6 A
Ambient temperature	-20...+55°C
Dimensions (WxHxL)	11.2×60×60mm

Article	Description	Notes
KR24-1W-S	Relay module, 1 relay, on/off/auto switch	

Relay modules

Relay modules with potential-free high load change-over contact. The modules have secure isolation according to DIN VDE 0106-101 and DIN VDE 0160.

KRAC24-2WAU is especially suitable for use with microsensors.

Technical data	
Output voltage	250 V AC
Nominal current	8 A
Ambient temperature	-40…+70 °C
Mounting	On DIN-rail 35 mm
Number of modules	1
Dimensions (W×H×D)	15.6×61×75 mm
Protection class	IP20
NO/NC relays	2

Article	Description	Supply voltage	LED	Notes
KRAC24-2WAU	Relay module, suitable for DDC technology	24 V AC	X	
KRAC230-2W	Relay module	230 V AC	X	

Power supply unit

230 V AC / 24 V DC, stabilised.

Article	Max. current	Mounting	Number of modules	Notes
X1111	0.6 A	DIN-rail or panel	1.3	
X1312	2.1 A	DIN-rail	2.3	
X1314	4.2 A	DIN-rail	2.9	

Transformer, 15 VA

With built-in thermal overload-limiting device.

Technical data	
Supply voltage	230 V AC
Output voltage	24 V AC
Max. load	15 VA
Mounting	DIN-rail
Number of modules	3
Protection class	IP20

Article	Description	Notes
TRAFO15/D	Transformer	

Transformer, 40 VA

Transformer with built-in PTC fuse. Overload and short-circuit proof.

Technical data	
Supply voltage	230 V AC
Output voltage	12 V AC and 24 V AC
Max. load	40 VA
Dimensions (W×H×D)	53×90×60 mm
Mounting	DIN-rail
Number of modules	3
Protection class	IP20

Article	Description	Notes
TRAFO40N3/D	Transformer	

Transformer, 60 VA

With replaceable fuses on both poles of the secondary side. Overload and short-circuit proof.

Technical data	
Supply voltage	230 V AC
Output voltage	24 V AC
Max. load	60 VA
Dimensions (W×H×D)	73×124×67 mm
Mounting	Wall
Protection class	IP44

Article	Description	Notes
TRAFO60	Transformer	

Transformer, 75 VA

With replaceable fuses on both poles of the secondary side. Delivered with pre-installed wire and plug.

Technical data	
Supply voltage	230 V AC
Output voltage	24 V AC
Max. load	75 VA
Dimensions (W×H×D)	81×110×80 mm
Mounting	Wall
Protection class	IP23

Article	Description	Notes
TRAFO75S	Transformer with pre-installed wire and plug	

Push-button

Push-button for extended running. Contact is closing or breaking. PB can be chosen with or without spring return.

Technical data	
Current rating	16 A
Voltage rating	230 V
Mounting	Flush mounting
Protection class	IP20

Article	Description	Notes
PB	Push-button for flush-mounting	

Push-button with indicator bulb

Push-button for extended running. Pressing PBI results in an instantaneous closed contact, which will activate extended running for the connected system. The push-button has a light bulb which, if desired, can be connected to the system for run indication. Bulbs for 230 V AC and 24 V AC are supplied.

Technical data	
Current rating	16 A
Voltage rating	230 V
Mounting	Flush mounting
Protection class	IP20

Article	Description	Notes
PBI	Push-button with indicator bulb for flush mounting	

Industry standard casing

Plastic industry standard casing with transparent lid for DIN-rail mounting.

Technical data	
Protection class	IP65

Article	Width	Number of modules	Notes
EK54	54 mm	3	
EK108	108 mm	6	
EK216	216 mm	12	
EK324	324 mm	18	
EK432	216 mm	24	

Front mounting kit

For front mounting of products intended for DIN-rail mounting. Including DIN-rail, nuts and bolts.

Technical data	
Protection class	IP55

Article	Description	Notes
FMK2	Front mounting kit, 12 modules	

FMCO

Front mounting kit

Mounting kit for easier mounting of controllers in a control panel or cabinet door.

Technical data	
Protection class	IP40

Article	Description	Notes
FMCE	Front mounting kit, room for one EXOcompact/Corrigo unit	
FMCO	Front mounting kit, room for one Optigo unit	

PLTCE

Plug-in terminal blocks for controllers

A set of angled plug-in terminal blocks for simple wiring of controllers when using the relative front mounting kits. The terminal blocks enable easy access to the clamping screws even after cabinet mounting.

Article	Description	Notes
PLTCE	Plug-in terminal blocks for EXOcompact, Optigo, Corrigo	

Cooling spray

For control of frost protection. Cools down to -50°C.

Article	Description	Notes
CS-260	Cooling spray, 200 ml	

INDEX

E

F

G

H

I

K

L

M

N

O

P

R

S

T

U

V

W

X

Z

READ ABOUT OUR TERMS AND CONDITIONS OF SALES

Visit our website:
www.regincontrols.com/sales-conditions

NOTES

NOTES

NOTES

NOTES

CONVERSION CHARTS

	Unit	Factor	Unit	Factor	Unit
Length	Inches Feet	x 25.4 x 0.3048	= mm = m	x 0.03937 x 3.208	= inches = feet
Area	Square inches Square feet	x 645.16 x 0.0929	= mm^2 = m^2	0.00155 x 10.764	= in^2 = ft^2
Volume	Cubic inches Cubic feet Cubic feet Pints Imp.gal Imp.gal	x 16387 x 0.02832 x 28.32 x 0.56825 x 4.546 x 0.004546	= mm^3 = m^3 = litre = litre = litre = m^3	0.000061 x 35.31 x 0.0353 x 1.7598 x 0.22 x 220	= in^3 = ft^3 = ft^3 = Pints = Imp.gal = Imp.gal
Mass	lb (pounds)	x 0.4536	= kg	x 2.2046	= lb
Force	lb (pounds)	x 4.448	= N	x 0.22482	= lb
Speed	ft/min	x 0.00508	= m/s	x 196.85	= ft/m
Flow	imp.gal/min Imp.gal/h ft^3/min	x 0.07577 x 0.000126 x 0.000472	= l/s = m^3/s = m^3/s	x 13.2 x 7936.51 x 2118.64	= imp.gal/min = imp.gal/h = ft^3/min
Heating power	kcal/h	x 1.163	= W	x 0.8598	= kcal/h
Pressure	lb/in^2 lb/in^2 kg/cm^2	x 0.0689 x 0.0703 x 0.9807	= bar = kg/cm^2 = bar	x 14.5 x 14.22 x 1.020	= lb/in^2 = ib/in^2 = kg/cm^2

	kPa	Pa	bar	mmWC	mWC	MPa	kp/cm^2	psi
1 kPa		1000	0.01	100	0.1	0.001	0.01	0.15
1 Pa	0.001		0.00001	0.1	0.0001	0.000001	0.00001	0.00015
1 bar	100	100000		10000	10	0.1	1	15
1 mmWC	0.01	10	0.0001		0.001	0.00001	0.0001	0.0015
1 mWC	10	10000	0.1	1000		0.01	0.1	1.5
1 Mpa	1000	1000000	10	100000	100		10	150
1 kp/cm^2	100	100000	1	10000	10	0.1		15
1 psi	6.666667	6666.667	0.066667	666.6667	0.666667	0.006667	0.066667	

bar	x 14.50377	= psi
bar	x 100	= kPa
kg/cm^2	x 14.22334	= psi
inches Hg	x 0.4912	= psi
N/m^2	x 1.0	= Pa
mbar	x 100	= Pa
°C	x (1.8x°C)+32	= °F
kgcm	x 0.098	= Nm
litre	x 1000	= m^3
gal (IMP)	x 4.5460	= litre
gal (US)	x 3.7854	= litre
gal (IMP)	x 1.20095	= gal (US)

REGIN
THE CHALLENGER

HEAD OFFICE AB Regin, Box 116, SE-428 22 Kållered • Visiting adress: Bangårdsvägen 35, SE-428 36 Kållered
Phone: +46 (0)31 720 02 00 • Fax: +46 (0)31 720 02 50 • info@regincontrols.com • www.regincontrols.com

PRODCAT2017:1-EN