

**SIEMENS**



The worldwide  
standard for  
home and  
building control



# Symaro sensors for flush mounting, innovative and energy-efficient

Energy-saving sensors of flexible design with  
standardized communication

Answers for infrastructure and cities.



## Symaro range for flush mounting – operating efficiently and with style

Thanks to low power consumption and their fast and highly accurate acquisition of measured variables, Symaro™ sensors for flush mounting ensure energy- and cost-efficient control of entire HVAC plants. The new sensors feature communication and have an LED to indicate the state of indoor air quality. Also, they can be used for direct control of heating and ventilation plants.

What's more, their design meets all requirements: Symaro sensors for flush mounting are not only compatible with all types of frames of the DELTA switch program from Siemens, but also with the switch frames marketed by other suppliers. So the sensors are very versatile and blend perfectly into different room surroundings.

# Innovative technology for versatile applications

## Broad range of flush-mounted sensors for all types of applications

The Symaro range for flush mounting includes not only sensors for temperature, humidity and indoor air quality but also multisensors for the simultaneous acquisition of up to three measured variables. In addition, the sensors can be matched to specific requirements, thanks to their wide choice of configuration options, such as active and passive output signals.

In KNX S-/LTE-Mode and KNX PL-Link, the communicating sensors for flush mounting can be integrated in the building automation from Siemens – Desigo™ Total Room Automation (TRA), Synco™ or GAMMA. When using KNX S-Mode, they can also be used in connection with third-party systems.

## All in harmony – thanks to uniform room design

Symaro sensors blend perfectly into any room surroundings: They can be fitted into all types of commercially available recessed conduit boxes – worldwide – and be freely used with the frames of the DELTA switch programs or with third-party products. This way, the sensors can be matched to different types of rooms or frame designs.

## Enjoying a perfect feeling of comfort while saving energy

Accurate and meaningful measured variables ensure energy-efficient room control and enhanced comfort. The sensors'

optimized design enables them to acquire the measured variables quickly and accurately. At the same time, disturbances like the temperature of the wall only have a small impact. Hence, Symaro sensors for flush mounting are the ideal basis for saving energy and costs.

## Functionality that pays off

The communicating Symaro sensors are products that can also be used as room temperature or ventilation controllers or for lighting and shading control.

## Demand-controlled ventilation indicated by LED

The room users' ability to concentrate and their well-being are ensured by ventilation that maintains the CO<sub>2</sub> concentration of the air at an optimum level. To save energy in the process, the amount of outside air supplied to the room should not exceed the amount actually required. Symaro indoor air quality sensors acquire the exact amount of CO<sub>2</sub> contained in the room air or the amount of mixed gases, which are, for example, emitted by certain materials. The fan's speed is controlled depending on the measured variables, thus saving energy. And the sensors' multicolor LED indicates whether the indoor air quality is good, average, or poor.

## Ease of handling

Thanks to their snap-on catches, Symaro sensors for flush mounting are easy to install. Only one sensor is needed to acquire several measured variables, thus reducing the effort for installation.

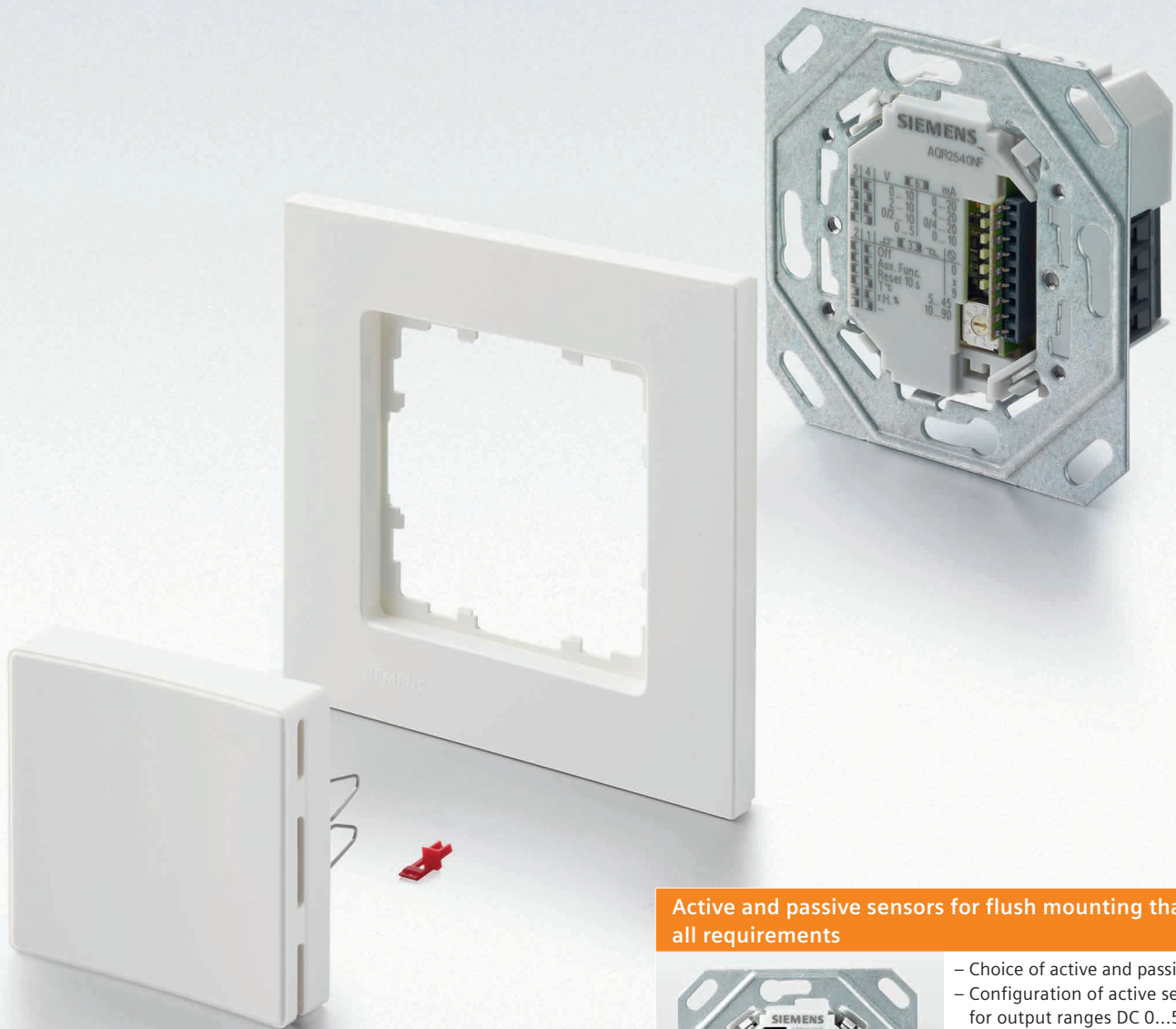
## Highlights

- Significant energy savings thanks to fast, highly accurate measurements and low internal power consumption
- Sensors of elegant design for flush mounting, suited for any type of room
- Extensive choice of colors and designs of frames of the DELTA switch program and third-party products
- Multisensor with several measuring parameters in one device, ensuring lower installation and wiring costs
- Adaptation to specific requirements thanks to configurable outputs
- KNX bus communication for seamless integration

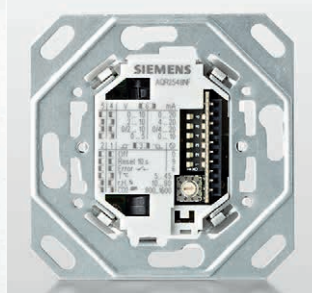


Symaro sensors in DELTA switch design for flush mounting blend perfectly into any surroundings.

# The benefits at a glance



## Active and passive sensors for flush mounting that meet all requirements



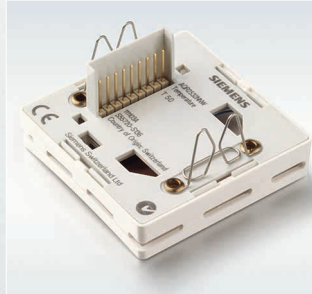
- Choice of active and passive sensors
- Configuration of active sensors for output ranges DC 0...5 V, 0...10 V, 0...20 mA, 4...20 mA and 0/4...20 mA
- One relay output for measured variable-dependent single-stage control (e.g. for switching ventilation in connection with humidity measurements)
- Optimum adaptation to individual needs

## Matching sensors for every type of application

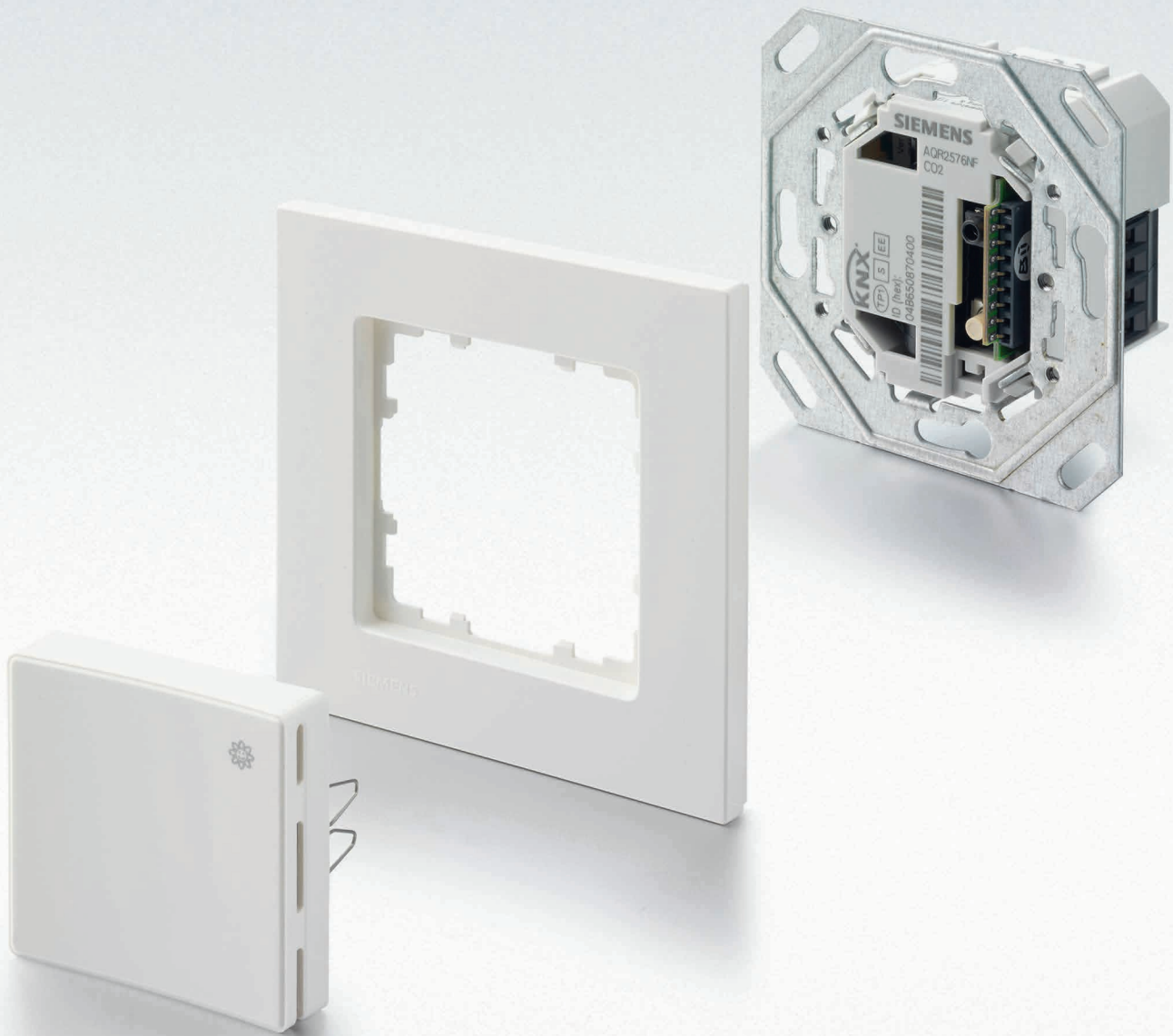


- Sensors for flush mounting for individual measured variables
- Multisensor acquires several measured variables concurrently
- Measured variables: carbon dioxide (CO<sub>2</sub>), volatile organic compounds (VOC), temperature and humidity
- Housings without operating elements for universal use, ideally suited for public buildings, such as schools

## Straightforward and secure installation and operation



- Easy and error-free installation of front modules on the base modules with snap-on catches (patent pending)
- Reliable anti-theft protection by studs, which prevent unauthorized removal of the front module (patent pending)



### Flexibility in design

- Compatible with DELTA switches from Siemens as well as third-party products
- Freedom of design with a variety in colors and forms – from classic to exclusiv
- Suitable for all international standards: VDE/CEE, British Standard, Italian Standard and UL



### Communicating sensors for flush mounting offer comprehensive functionality

- Straightforward integration in superior systems thanks to KNX communication (S-/LTE-Mode, KNX PL-Link)
- Room temperature (PID controller) and ventilation control in KNX S-Mode
- Lighting and shading control via two binary inputs
- Input for an additional passive temperature sensor



# Active and passive sensors

Active sensors			Measured variables					Display
Base module	+	Front module	CO <sub>2</sub>	VOC	Relative humidity	Active temperature	Passive temperature	CO <sub>2</sub> indicator
AQR2540Nx	+	AQR2532NNW				■		
AQR2540Nx	+	AQR2533NNW			■			
AQR2540Nx	+	AQR2535NNW			■	■		
AQR2540Nx	+	AQR2534ANW			■	■	LG-Ni1000	
AQR2540Nx	+	AQR2534FNW			■	■	NTC 10k	
AQR2546Nx	+	AQR2530NNW	■					
AQR2546Nx	+	AQR2532NNW	■			■		
AQR2546Nx	+	AQR2533NNW	■		■			
AQR2546Nx	+	AQR2535NNW	■		■	■ <sup>2)</sup>		
AQR2546Nx	+	AQR2535NNWQ	■		■	■ <sup>2)</sup>		■
AQR2546Nx	+	AQR2534ANW	■		■	■ <sup>2)</sup>	LG-Ni1000	
AQR2546Nx	+	AQR2534FNW	■		■	■ <sup>2)</sup>	NTC 10k	
AQR2547Nx	+	AQR2530NNW		■				
AQR2547Nx	+	AQR2532NNW		■		■		
AQR2547Nx	+	AQR2533NNW		■	■			
AQR2547Nx	+	AQR2535NNW		■	■	■ <sup>2)</sup>		
AQR2547Nx	+	AQR2534ANW		■	■	■ <sup>2)</sup>	LG-Ni1000	
AQR2547Nx	+	AQR2534FNW		■	■	■ <sup>2)</sup>	NTC 10k	
AQR2548Nx	+	AQR2530NNW	■	■ <sup>1)</sup>				
AQR2548Nx	+	AQR2532NNW	■	■ <sup>1)</sup>		■		
AQR2548Nx	+	AQR2533NNW	■	■ <sup>1)</sup>	■			
AQR2548Nx	+	AQR2535NNW	■	■ <sup>1)</sup>	■	■ <sup>2)</sup>		
AQR2548Nx	+	AQR2535NNWQ	■	■ <sup>1)</sup>	■	■ <sup>2)</sup>		■
AQR2548Nx	+	AQR2534ANW	■	■ <sup>1)</sup>	■	■ <sup>2)</sup>	LG-Ni1000	
AQR2548Nx	+	AQR2534FNW	■	■ <sup>1)</sup>	■	■ <sup>2)</sup>	NTC 10k	

Passive sensors								
Mounting plate	+	Front module						
AQR2500Nx	+	AQR2531ANW					LG-Ni1000	
AQR2500Nx	+	AQR2531BNW					Pt1000	
AQR2500Nx	+	AQR2531FNW					NTC 10k	

<sup>1)</sup> Here, the indoor air quality is calculated, representing the result of maximum selection of the measured variables of CO<sub>2</sub> and VOC. VOC is not available as a direct measured variable.

<sup>2)</sup> Measured variable is solely available as a switching output.

#### Replace x by:

- F for VDE/CEE (70x70 mm)
- H for British Standard (83x83 mm)
- G for Italian Standard 3 modular (110x64 mm)
- J for UL Standard 2"x4" (64x110 mm)

Power supply: AC 24 V, DC 15...36 V

Signal ranges of active sensors: DC 0...5 V, DC 0...10 V, DC 0...20 mA, DC 4...20 mA and DC 0/4...20 mA

Freely selectable switching contact is available for every measured variable.

# Communicating sensors

Communicating sensors			Measured variables			Inputs		Display
Base module	+	Front module	CO <sub>2</sub>	Relative humidity	Temperature	Temperature passive NTC 10k	Two potential-free contacts	CO <sub>2</sub> indicator
AQR2570Nx	+	AQR2532NNW			■	■	■	
AQR2570Nx	+	AQR2533NNW		■		■	■	
AQR2570Nx	+	AQR2535NNW		■	■	■	■	
AQR2576Nx	+	AQR2530NNW	■			■	■	
AQR2576Nx	+	AQR2532NNW	■		■	■	■	
AQR2576Nx	+	AQR2533NNW	■	■		■	■	
AQR2576Nx	+	AQR2535NNW	■	■	■	■	■	
AQR2576Nx	+	AQR2535NNWQ	■	■	■	■	■	■

Replace x by:

- F for VDE/CEE (70x70 mm)
- H for British Standard (83x83 mm)
- G for Italian Standard 3 modular (110x64 mm)
- J for UL Standard 2" x 4" (64x110 mm)

The room sensors are KNX-certified and can be used in conjunction with all devices capable of communicating over KNX.

In addition, the sensors can be used with the following systems from Siemens:

- Synco 700 building automation and control system (KNX LTE-Mode)
- GAMMA building control (KNX S-Mode)
- Desigo TRA (KNX PL-Link)

Siemens Switzerland Ltd  
Infrastructure & Cities Sector  
Building Technologies Division  
International Headquarters  
Gubelstrasse 22  
6301 Zug  
Switzerland  
Tel +41 41 724 24 24

Siemens Building Technologies  
Infrastructure & Cities Sector  
Brunel House  
Sir William Siemens Square, Frimley  
Camberley  
Surrey, GU16 8QD  
United Kingdom  
Tel +44 1276 696000

Siemens Ltd  
Infrastructure & Cities Sector  
Building Technologies Division  
22/F, AIA Kowloon Tower, Landmark East  
100 How Ming Street  
Kwun Tong, Hong Kong  
Tel +852 2870 7888

The information in this document contains general descriptions of technical options available, which do not always have to be present in individual cases. The required features should therefore be specified in each individual case at the time of closing the contract.

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#### **Answers for infrastructure and cities.**

Our world is undergoing changes that force us to think in new ways: demographic change, urbanization, global warming and resource shortages. Maximum efficiency has top priority – and not only where energy is concerned. In addition, we need to increase comfort for the well-being of users. Also, our need for safety and security is constantly growing. For our customers, success is defined by how well they manage these challenges. Siemens has the answers.

**“We are the trusted technology partner for energy-efficient, safe and secure buildings and infrastructure.”**