

Wireless room unit

QMA230KT



Wireless room unit

- Wireless communication KNX IoT over Thread
- Frameless backlit LED display
- Built-in temperature sensor
- Battery-powered: 2 x alkaline batteries type AA, 1.5 V
- Temperature accuracy: $\pm 0.5 \text{ K}$ @ $25 \text{ }^{\circ}\text{C}$

Use

The wireless room unit QMA230KT is part of the Siemens IoT room solution ecosystem. It is used to control the room temperature in heating and cooling systems.

Typical applications:

- Office buildings
- Educational buildings
- Public infrastructure

QMA230KT exchanges data with controllers, room devices and tools via wireless communication KNX IoT over Thread.

Functions

- Room temperature control via HMI
- Built-in temperature sensor
- Setpoint override (manually on the local device or automatically on the controller through gateway)
- Display of current room temperature
- Limitation of minimum/maximum setpoint adjustments for heating and cooling
- Factory reset
- Wireless communication KNX IoT over Thread
- Firmware upgrade over the air
- Auto sleep function to save battery

Mechanical design

The wireless room unit is designed for wall and flush mounting. It is suitable for use with most commercially available recessed conduit boxes.

The wireless room unit consists of two parts:

- Front part incl. user interface and control unit
- Mounting bracket to fit onto a square conduit box with 60.3 mm fixing centers

Type summary

Product number	SSN NO.	Operating voltage
QMA230KT	S55720-S626	DC 3 V (2 x 1.5 V AA alkaline batteries)

Delivery

When ordering, specify name and product number, e.g.: Wireless room unit QMA230KT.

Included in box

Name	Quantity
Wireless room unit	1
Mounting bracket	1
Set of screws and plastic insert	1
Mounting instructions	1
Batteries	2 x 1.5 V AA alkaline batteries

Accessories

Type	Stock number	Description
ARG101	S55772-T112	Italian adapter plate for QMA230KT

Equipment combinations

Type of units	Product number	SSN NO.
KNX IoT to BACnet gateway	OCT200.KNBA	S55812-Y102
Thread mesh extender	OCT100.R	S55812-Y101
Wireless room sensors	QAA2890/WI	S55720-S550
	QFA2890/WI	S55720-S551
	QPA2892/WI	S55720-S552
Wireless radiator actuator	SSA911.02TH	S55181-A102

All documents can be downloaded from <http://siemens.com/bt/download>.

Product documentation



Title	Document ID
Mounting instruction	A6V15004458
Operation manual	A6V12905642
CE declarations	A5W00757582A
Environmental product declaration	A5W00753715A


Related documents such as the environmental declarations, declarations of conformity, etc., can be downloaded from the following Internet address:


www.siemens.com/bt/download

Notes

Safety

 CAUTION	
	<p>National safety regulations</p> <p>Failure to comply with national safety regulations may result in personal injury and property damage.</p> <ul style="list-style-type: none">Observe national provisions and comply with the appropriate safety regulations.

⚠ WARNING	
	Explosion due to fire or short-circuit, even with discharged batteries Risk of injury due to flying parts
	<ul style="list-style-type: none"> • Prevent the batteries from coming in contact with water. • Do not recharge batteries. • Do not damage or disassemble batteries. • Do not heat batteries over 85 °C. • Do not make batteries short-circuit.

⚠ WARNING	
	Risk of explosion Personal injury and property damage
	<ul style="list-style-type: none"> • Install the battery at the correct polarity (+/-) using the illustration in the battery compartment. • Install only the correct battery types according to the indication in the battery compartment. • In case of a leakage, avoid contact with skin, eyes and mucous membranes. • Remove leaking battery from the battery compartment with a cloth.

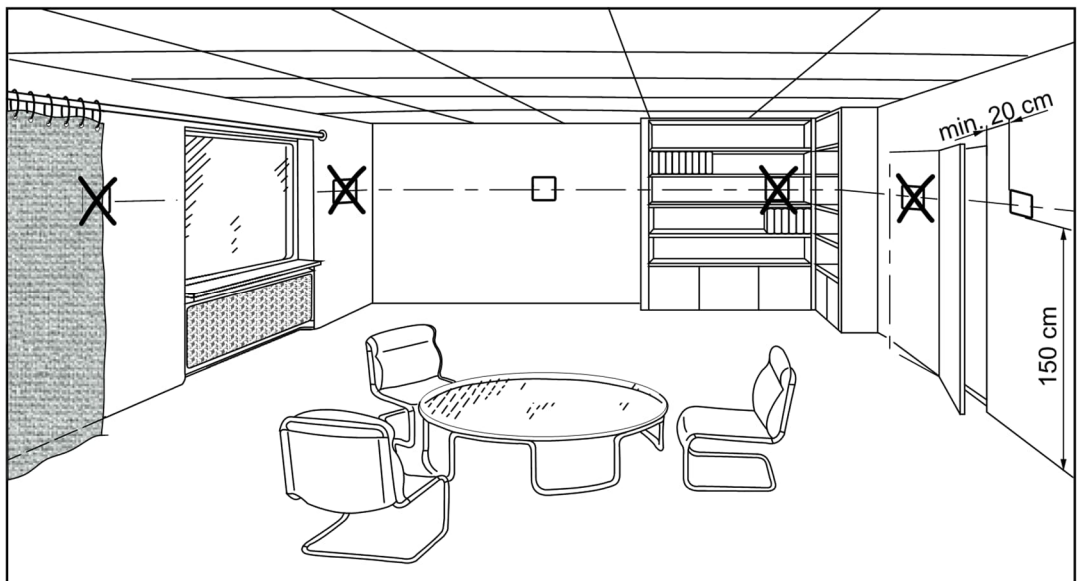
Observe the following:

- The batteries must be new and undamaged.
- Do not mix new and used batteries.
- Store, transport and dispose of the batteries in compliance with local requirements, regulations and laws and observe the instructions of the battery manufacturer.

NOTICE	
	Radio frequency energy Interference to radio communications
	<ul style="list-style-type: none"> • Install and use equipment in accordance with installation guide. • Read all regulatory compliance information.

Mounting

Location



- The device is designed for wall mounting and flush mounting.

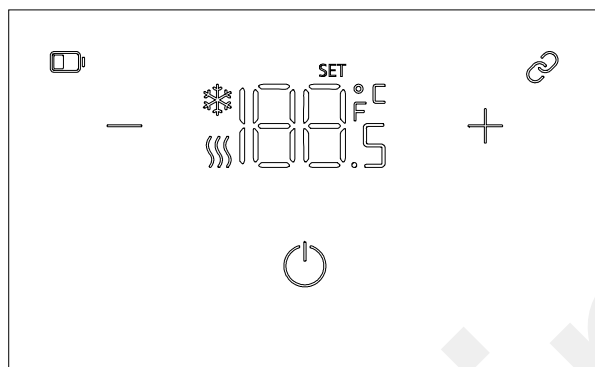
- Install in indoor environments (device is not suitable for outdoor use); do not install in recesses, behind curtains, above or close to heat sources or shelves and not on walls where a chimney is located. Do not expose the unit to spot lights or direct sunlight.
- Install the sensor in the occupied space about 1.5 m above the floor, at least 20 cm from the next wall.
- Do not mount the device on a metallic surface.
- Seal the conduit box or the installation tube if any, as air currents can affect sensor readings.
- Adhere to allowed ambient conditions.

Mounting
instructions

Mounting instructions are enclosed in the package.

Operation





Display





In the following table:

- Short press (<2 s)
- Long press (>20 s)
- Double press (press twice within 2 s)
- Flashing (0.25 s on / 1.75 s off)
- Fast flashing (0.1 s on / 0.1 s off)

State	Description
	Low battery level (flashing), almost empty (fast flashing)
	Ready to join the Thread network (flashing), or Thread network joined for first time or connection restore (constant on for 6 s), or connection lost (fast flashing and entering to sleep mode after 6 s)
	Demand for cooling
	Demand for heating
SET	<ul style="list-style-type: none"> • Setpoint is being adjusted. • Flashing during programming mode
	<ul style="list-style-type: none"> • Temperature (room temperature or setpoint) and unit switching between °C and °F • Relative setpoint setting and unit is °F, display value only • When the measured temperature is out of measuring range (0...50 °C/32...122 °F), flashing until temperature is within range.

Operation	Description
 	<ul style="list-style-type: none"> Short press to wake up device or turn on display Tap to decrease/increase temperature setpoint
	<ul style="list-style-type: none"> Short press to wake up device or turn on display During connection lost, short press to enter joining mode. (timeout 2 minutes) Note: Can only exit joining mode via gateway Connection, double press to enter programming mode. (timeout 4 minutes) Note: Can exit programming mode via HMI (short press the button ) or gateway Long press to factory reset (except during joining mode, programming mode, setpoint adjustment, sleep mode)

Note

- If setpoint exceeds range, tapping  or  cannot change any value during setpoint adjustment.

Error codes

Sensor error "E1" is displayed when the measured temperature is out of range, i.e. above 70 °C or below -10 °C.

For detailed operation info, see the [operation manual](#) for detailed information.

Maintenance

Change of batteries

Check the battery power on gateway web UI: <https://192.168.8.1>.

The batteries are almost empty if  (fast flashing: 0.1 s on / 0.1 s off) is displayed on the local screen and must be replaced within 2 weeks.

For optimal performance, we recommend using high performance alkaline batteries.

Note

Communication between wireless room unit and gateway becomes unstable when battery power is low.

Software update

Do not power off the device while updating. Do not update when battery is low, as device damage or data loss may occur.

Disposal



This symbol or any other national label indicate that the product, its packaging, and, where applicable, any batteries may not be disposed of as domestic waste. Delete all personal data and dispose of the item(s) at separate collection and recycling facilities in accordance with local and national legislation.
For additional details, refer to [Siemens information on disposal](#).

FCC Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. this device must accept any interference received, including interference that may cause undesired operation

FCC Caution: Changes or modifications not expressly approved by Siemens Switzerland Ltd. could void user authority to operate the equipment. United States representative <https://new.siemens.com/us/en/products/buildingtechnologies/home.html>

IC Statement

This device complies with Industry Canada license-exempt RSS standard(s).

Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence.

L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Radiofrequency radiation exposure statement

This equipment complies with FCC and IC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 cm between the radiator and your body.

This transmitter must not be co-located or operated in conjunction with any other antenna or transmitter.

Déclaration d'exposition aux rayonnements de radiofréquence

Cet équipement est conforme aux limites d'exposition aux rayonnements IC établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 20 cm de distance entre la source de rayonnement et votre corps.

Ce transmetteur ne doit pas être placé au même endroit ou utilisé simultanément avec un autre transmetteur ou antenne.

Radio equipment directive

Simplified EU Declaration of Conformity

Hereby, Siemens Switzerland Ltd declares that the radio equipment type QMA230KT is in compliance with Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following internet address: <https://siemens.com/bt/download>.

Warranty

Technical data on specific applications are valid only together with Siemens products listed under "Equipment combinations". Siemens rejects any and all warranties in the event that third-party products are used.

Technical data

Power supply

Operating voltage	DC 3 V (2 x 1.5 V AA alkaline batteries)
Battery lifetime	Up to 4 years*
Power consumption	Average 0.48 mW Max. 150 mW

*The battery lifetime is calculated based default settings and normal operation. Battery lifetime may change depending on environment conditions and device settings.

Radio communication

Frequency range	2400...2483.5 MHz
Maximum transmission power	7.73 dBm
Protocol	KNX IoT over Thread
MAC protocol	IEEE 802.15.4
Thread channels	11...26

Communication range *

Distance (line of sight)	
<ul style="list-style-type: none">Wireless room unit and gatewayWireless room unit and extender	<ul style="list-style-type: none">Max. 50 mMax. 50 m

* Results are tested in Siemens testing environment. The actual range depends on building structure and environment.

Functional data sensor	
Temperature sensor	
Measuring range	0...50 °C (32...122 °F)
Measuring accuracy at 25 °C	≤ ±0.5 K

Functional data room unit	
Setpoint setting range	<ul style="list-style-type: none"> • Relative • Absolute
	<ul style="list-style-type: none"> • -9.5...+10 K • 0...50 °C

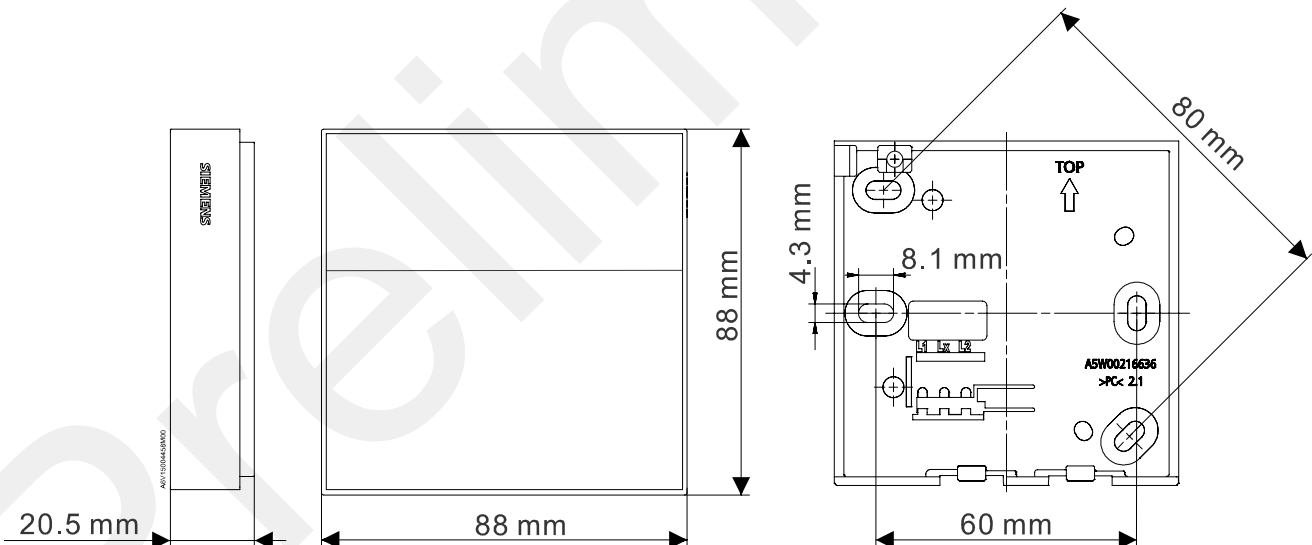
Ambient conditions and protection classification	
Protection degree of housing	IP30 as per EN 60529
Protection class	III as per EN 60730-1
Classification as per EN 60730-1 Function of automatic control devices Degree of pollution Overvoltage category Rated impulse voltage	Type 1 2 I 330 V
Environmental conditions	
Transport and storage (in packaging)	<ul style="list-style-type: none"> • Temperature: -25...+70 °C (-13...+158 °F) • Ambient humidity: < 95 % r.h. (non-condensing)
Operation	<ul style="list-style-type: none"> • Temperature: 0...50 °C (32...122 °F) • Ambient humidity: < 95 % r.h. (non-condensing)
Mechanical ambient conditions	
Transport (in transport packaging) as per IEC/EN 60721-3-2	Class 2M4
Operation as per IEC/EN 60721-3-3	Class 3M11

Standards, directives and approvals	
EU conformity (CE)	A5W00757582A *)
RoHS	Directive 2011/65/EU restriction of the use of certain hazardous substances in electronic equipment
Environmental compatibility	The product environmental declaration (A5W00753715A *) contains data on environmentally compatible product design and assessments (RoHS compliance, materials composition, packaging, environmental benefit, disposal).

General	
Material and color	Makrolon 6487, white RAL9003
Packaging	Corrugated cardboard
Weight	<ul style="list-style-type: none"> without package with package
	<ul style="list-style-type: none"> 148 g 200 g

*) The documents can be downloaded from <http://siemens.com/bt/download>.

Dimensions



Preliminary

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