

Room sensors

QAA211.., QAA212.., QAA213..



For temperature

- Passive sensors for acquiring room temperature
- Sensing element (depending on model): Pt 1000 (class B), Pt 1000 (class A), Pt 100 (class B), LG-Ni 1000 (class B), LG-Ni 1000 (class A), NTC 10k (type II)
- Mounting: Wall
- Measuring range: 0...50 °C for temperature
- Colors: White (RAL 9016) and black (RAL 9005)

Use

The passive sensors acquire room temperature for building automation and control systems in heating, ventilating, and air conditioning plants.

Example:

- Offices, meeting and conference rooms, classrooms and training rooms, hotel rooms, hospital rooms, lobbies and reception areas, event spaces, retail areas, restrooms and changing rooms, clinics, fitness and wellness centers, etc.

Functions

Temperature measurement

The sensor acquires the room temperature via a sensing element; the resistance changes as a function of temperature. The resistance value is used for further processing by a compatible controller.

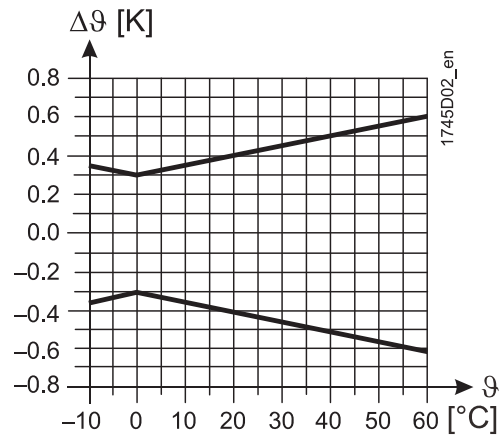
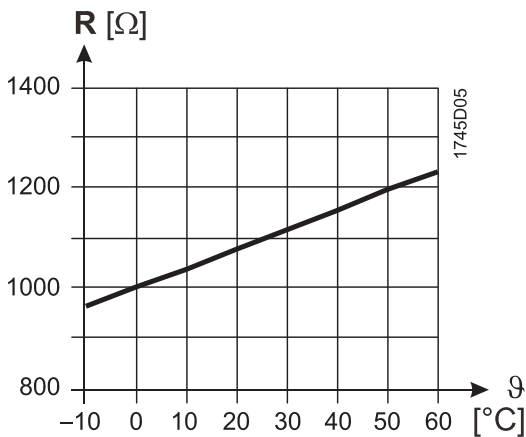
Sensing element

Pt 1000 (class B)

Characteristic:

Accuracy: $\pm(0.3 + 0.005|t|)^{\circ}\text{C}$

QAA2110, QAA2110/BK

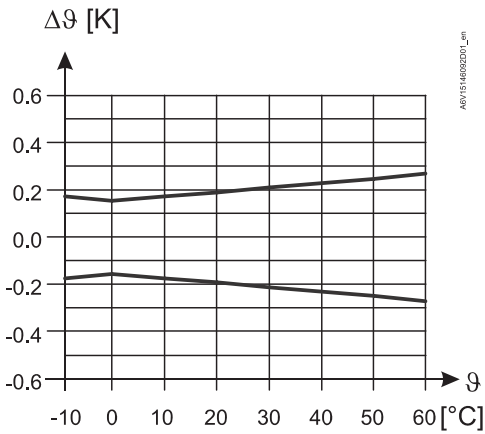
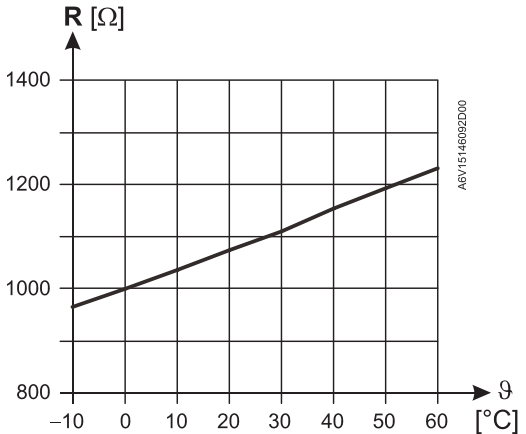


Pt 1000 (class A)

Characteristic:

Accuracy: $\pm(0.15 + 0.002|t|)^{\circ}\text{C}$

QAA2111, QAA2111/BK

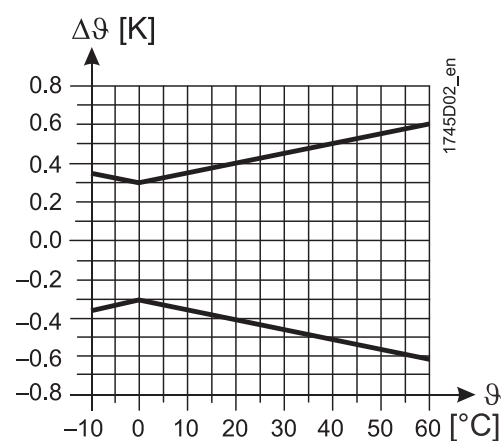
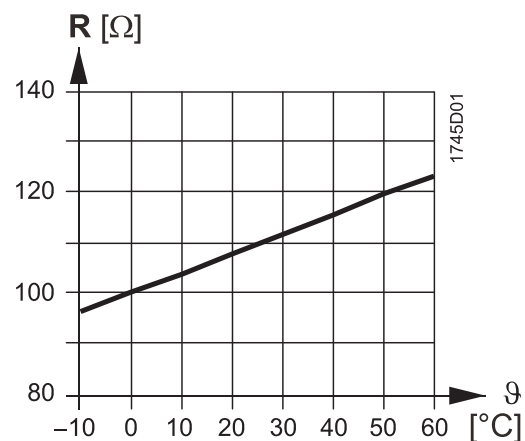


Pt 100 (class B)

Characteristic:

Accuracy: $\pm(0.3 + 0.005|t|)^{\circ}\text{C}$

QAA2112, QAA2112/BK

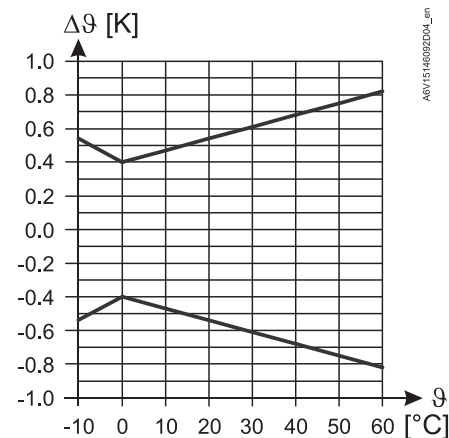
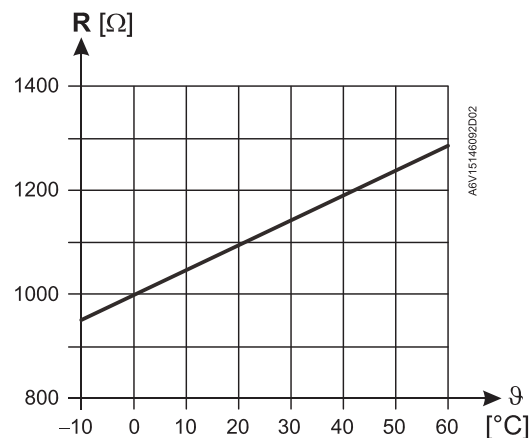


LG-Ni 1000 (class B)

Characteristic:

Accuracy: $\pm(0.4 + 0.007|t|)^{\circ}\text{C}$ @ $t \geq 0^{\circ}\text{C}$

QAA2120, QAA2120/BK

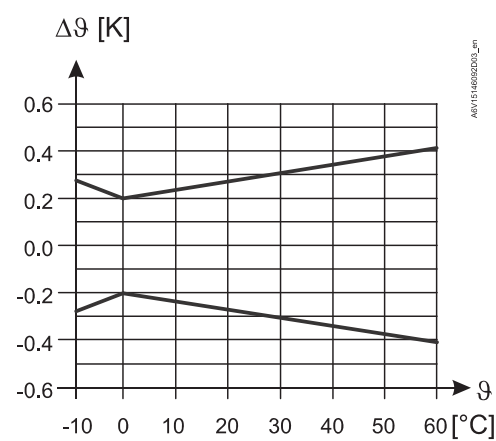
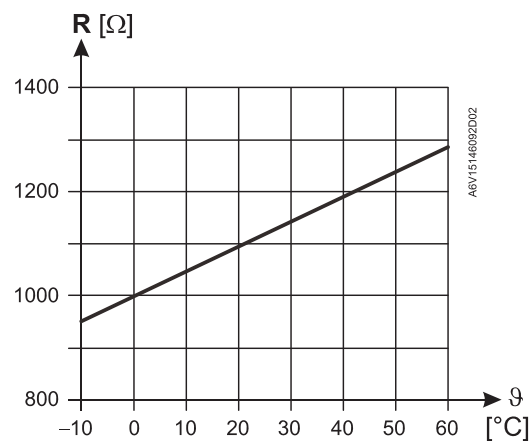


LG-Ni 1000 (class A)

Characteristic:

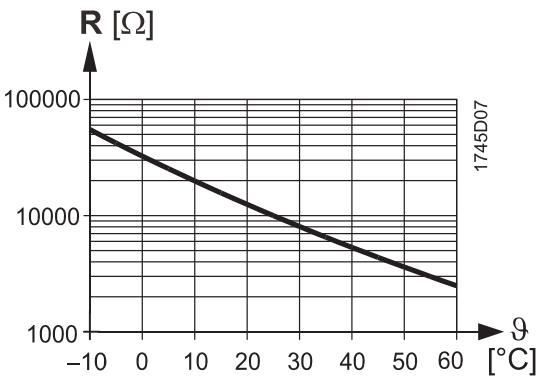
Accuracy: $\pm(0.2 + 0.0035|t|)^{\circ}\text{C}$ @ $t \geq 0^{\circ}\text{C}$

QAA2121, QAA2121/BK

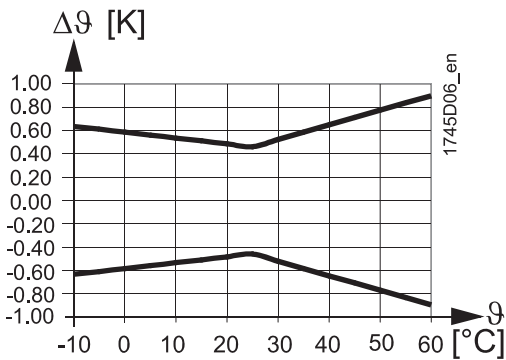


NTC 10k (type II)
QAA2130, QAA2130/BK

Characteristic:



Accuracy:



- Legend
- R

Resistance value in Ohm
- θ

Temperature in degrees Celsius
- Δθ

Temperature differential in Kelvin

Mechanical design

The sensors are designed for wall mounting. They are suitable for use with most commercially available square or round recessed conduit boxes or directly on the wall without a conduit box. The cables can be introduced from the rear (concealed wiring), or from the top and bottom.

The device has 2 parts:

- Sensor with electronic components
- Mounting plate with connecting terminals

Type summary

Product no.	Stock no.	Sensing element	Temperature measuring range	Max. measuring accuracy	Color
QAA2110	S55720-S759	Pt 1000 (class B)	0...50 °C	±0.3 K	White
QAA2110/BK	S55720-S760	Pt 1000 (class B)	0...50 °C		Black
QAA2111	S55720-S761	Pt 1000 (class A)	0...50 °C	±0.15 K	White
QAA2111/BK	S55720-S762	Pt 1000 (class A)	0...50 °C		Black
QAA2112	S55720-S763	Pt 100 (class B)	0...50 °C	±0.3 K	White
QAA2112/BK	S55720-S764	Pt 100 (class B)	0...50 °C		Black
QAA2120	S55720-S765	LG-Ni 1000 (class B)	0...50 °C	±0.4 K	White
QAA2120/BK	S55720-S766	LG-Ni 1000 (class B)	0...50 °C		Black
QAA2121	S55720-S767	LG-Ni 1000 (class A)	0...50 °C	±0.2 K	White
QAA2121/BK	S55720-S768	LG-Ni 1000 (class A)	0...50 °C		Black
QAA2130	S55720-S769	NTC 10k (type II)	0...50 °C	±0.46 K	White
QAA2130/BK	S55720-S770	NTC 10k (type II)	0...50 °C		Black

Ordering

When ordering, please provide the name and type reference, e.g.: Room sensor **QAA2110**

Equipment combinations

Equipment	Room sensor			
	QAA2110, QAA2110/BK, QAA2111, QAA2111/BK	QAA2112, QAA2112/BK	QAA2120, QAA2120/BK, QAA2121, QAA2121/BK	QAA2130, QAA2130/BK
PXC4/5/7..	✓	—	✓	✓
TXM1.8U	✓	—	✓	✓
TXM1.8X	✓	—	✓	✓
TXM1.8P	✓	✓*	✓	—
ELC.E14 + EM.8U/EM1.8U	✓	—	✓	✓
DXR2 / DXR1	✓	—	✓	✓
RDG2..	—	—	✓	—
RDF4..	—	—	—	✓
Other controllers with Pt100 (2-wire) inputs	—	✓	—	—

* Connected via 4 wires (2 on terminal B and 2 on terminal M)

Product documentation

Title	Document ID
Mounting instructions	A6V15146083
CE declarations	A5W03005404A
UKCA	A5W03005405A
Environmental product declaration	A5W02962874A

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	
	National safety regulations Failure to comply with national safety regulations may result in personal injury and property damage. • Observe national regulations and comply with the appropriate safety regulations.

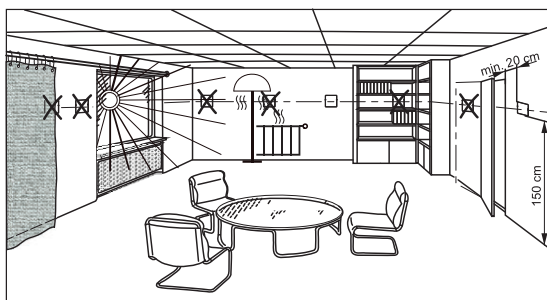
Engineering

Measuring accuracy is impacted by the following factors:

- Prevailing air flow
- Wall surface (rough, smooth)
- Wall texture (wood, plaster, concrete, brick)
- Wall type (interior, exterior).

The permissible cable length depends on the controller used with the sensor and is specified in the controller's data sheet.

Mounting



Location

- The devices are suitable for wall mounting.
- Recommended height: 1.5 m above the floor.
- Install the sensor in the occupied space at least 50 cm from the next wall.
- Do not mount the devices in recesses, shelves, behind curtains or doors, or above or near heat sources.
- Do not mount near lamps or above radiators.
- Avoid direct solar radiation and drafts.
- Avoid unheated (uncooled) building areas such as outside walls.
- The end of the conduit at the sensor must be sealed to prevent false measurements due to draughts through the conduit.
- Adhere to allowed ambient conditions.

Disposal



This symbol or any other national label indicates 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 regulations.

For additional details, refer to [Siemens information on disposal](#).

Warranty

Technical data on specific applications are only valid 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

Functional data of sensor	
Range of use	0...50 °C
Measuring range	0...50 °C
Sensing element • QAA2110, QAA2110/BK • QAA2111, QAA2111/BK • QAA2112, QAA2112/BK • QAA2120, QAA2120/BK • QAA2121, QAA2121/BK • QAA2130, QAA2130/BK	• Pt 1000 (class B) • Pt 1000 (class A) • Pt 100 (class B) • LG-Ni 1000 (class B) • LG-Ni 1000 (class A) • NTC 10k (type II)
Max. measuring accuracy • QAA2110, QAA2110/BK • QAA2111, QAA2111/BK • QAA2112, QAA2112/BK • QAA2120, QAA2120/BK • QAA2121, QAA2121/BK • QAA2130, QAA2130/BK	• ± 0.3 K • ± 0.15 K • ± 0.3 K • ± 0.4 K • ± 0.2 K • ± 0.46 K
Time constant t_{63}	≤ 7 min (depending on air movement and thermal coupling to the wall)
Output signal	Passive

Wiring connections	
Permissible cable lengths	See controller's data sheet
Screw terminals for electrical connections	1 × 1.5 mm ² (solid wire) or 1 × 2.5 mm ² (stranded wire) 2 × 0.5 mm ² (solid wire) or 2 × 0.75 mm ² (stranded wire)

Ambient conditions and protection classification	
Protection against electrical shock	Protection class III
Degree of protection of housing as per EN 60529	IP30

Ambient conditions Products in room applications	
Climatic ambient conditions - Transport and storage (in packaging) as per IEC/EN 60721-3-2 / -3-1 - Operation as per IEC/EN 60721-3-3	- Temperature -25...+70 °C (-13...+158 °F) Air humidity < 95 % r.h. - Temperature 0...50 °C (32...122 °F) Air humidity 0...95 % r.h. (non-condensing)
Mechanical ambient conditions - Transport (in transport packaging) as per IEC/EN 60721-3-2 - Operation as per IEC/EN 60721-3-3	- Class 2M4 - Class 3M11

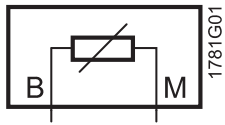
Standards, directives and approvals	
Product standard	IEC/EN 60730-1 Automatic electronic controls for household and similar use
EU conformity (CE)	A5W03005404A *)
UK conformity (UKCA)	A5W03005405A *)
UL certification	UL873, http://ul.com/database
Environmental compatibility	The product environmental declaration (A5W02962874A *) contains data on environmentally compatible product design and assessments (RoHS compliance, materials composition, packaging, environmental benefit, disposal).

General	
Materials and colors Material: Colors: - QAA211..., QAA212..., QAA213.. - QAA211../BK, QAA212../BK, QAA213../BK	Polycarbonates - White (RAL 9016) - Black (RAL 9005)
Housing flammability class as per UL94	V-0
Sensor (complete assembly)	Silicone-free
Packaging	Corrugated cardboard
Weight including package	142.23 g

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

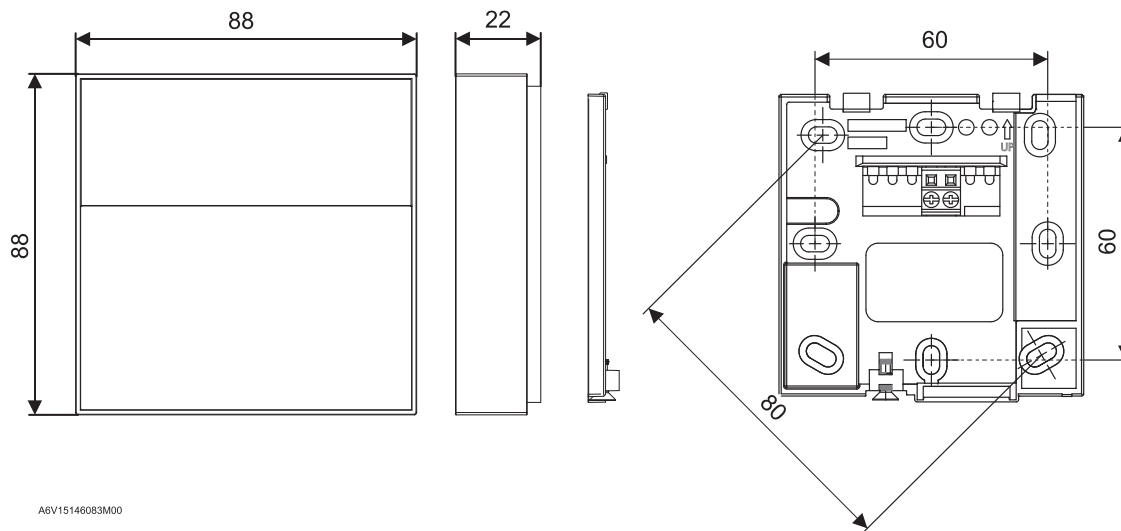
Diagrams

Internal diagram



The connecting wires are interchangeable.

Dimensions



A6V15146083M00

Dimensions in mm

Regulatory compliance information

European Union conformity

Contact for regulatory topics: (EU) Siemens AG, Berliner Ring 23, DE-76437 Rastatt

United Kingdom conformity assessed

Contact for regulatory topics: (GB) Siemens plc, Sir William Siemens House, Princess Road, Manchester, M20 2UR

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