

TEC™

## Room Temperature Detectors

**QAA10**  
**QAA16**



QAA16



QAA10

**Room temperature detector with or without setpoint readjuster and connection facility for the commissioning and service tool TECIS.**

### Use

In the air retreatment section of ventilating and air conditioning plants. In rooms with individual room temperature control by means of TEC controllers with communication capability; for acquiring the room temperature and - when using the QAA16 - for remote operation of room temperature control.

### Type summary

Type reference	Name
<b>QAA10</b>	Room temperature detector
<b>QAA16</b>	Room temperature detector with setpoint readjuster

### Ordering

When ordering, please give name and type reference, for example: room temperature detector **QAA10**.

### Equipment combinations

The room temperature controllers must always be used in connection with the TEC controllers RCE91.1, RCE92.1 or RCE93.1.

### Mechanical design

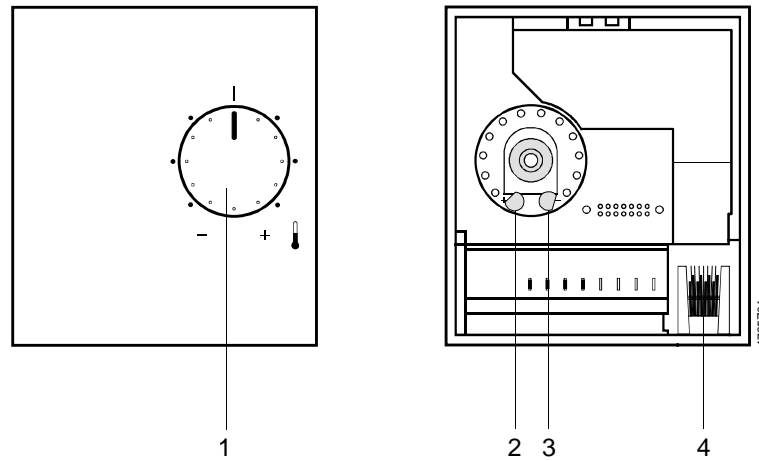
The room temperature detectors are designed for wall mounting. They are suitable for use with most commercially available recessed conduit boxes. The cables can be introduced either from the rear (concealed wiring) or from below or above (surface-run wires) through knockout openings.

The unit consists of two sections: casing and baseplate. Both snap together and can be detached again.

The casing accommodates the printed circuit board with the electronics, the room temperature sensing element, setpoint readjuster, connectors and connection facility for the TEC tool.

The baseplate carries the terminal block with the integrated connecting strip. Casing and baseplate are made of plastic.

## Operating and setting elements



### Legend

- 1 Setpoint readjuster - only with the QAA16 - for infinite readjustment of the setpoint
- 2 Pin - only with the QAA16 - for mechanical maximum limitation of the setpoint readjusting range
- 3 Pin - only with the QAA16 - for mechanical minimum limitation of the setpoint readjusting range
- 4 Connection facility for the TEC tool

### Disposal

The major plastic components bear the material references in compliance with ISO/DIS 11 469 to facilitate environment-friendly disposal.

### Accessories

(not included in standard delivery)

Name	Type reference
Commissioning and service tool TECIS (diskette)	<b>AZW90.3</b>
Application diskette	<b>AZW91.2/1001</b>
Software key (Sentinel)	<b>ARG90.2</b>
TEC tool connecting cable	<b>PRW1.7U28</b>

### Mounting notes

- The detector is suited for wall mounting or mounting on a recessed conduit box. It may not be mounted in recesses or shelves, not behind curtains or doors, and not above or near heat sources
- Direct solar radiation and draughts must be avoided
- The mounting location specified in the planning documentation must be observed
- The end of the conduit at the room unit must be sealed to prevent false measurements due to draughts through the conduit
- The permissible ambient climatic conditions must be observed

Mounting instructions are printed on the packing of the unit.

### Installation notes

- The local regulations for electrical installations must be observed. The cables must be laid in compliance with the regulations for safety extra low voltage
- The electrical connection between the QAA10 or QAA16 and the TEC controller RCE9... is made via a four-wire cable. The connections may not be interchanged
- The unit is not protected against false wiring

### Commissioning and service notes

All commissioning and service work required for the controller can be performed via the connection facility for the tool.

## Technical data

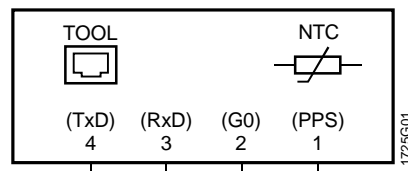
Power supply	Operating voltage	AC 13 V (supplied by the TEC controller)
Temperature detector	Sensing element	NTC resistor
	Range of use	0...40 °C
	Time constant	10 min
	Measuring accuracy at 5...30 °C	<±0.8 K
Readjustment of setpoint <sup>1)</sup>	Readjusting range	±5 K max.
	Accuracy	±0.5 K
Interface to TEC controller	Type of interface	PPS (point-to-point)
	Type of wire	copper wire or stranded wire
	Line resistance	2 Ω max.
	Line capacitance	5 nF max.
	Baud rate	4800 ±2 %
	Perm. line length with copper cable ≥0.8 mm <sup>2</sup>	50 m <sup>1)</sup>
	Connection terminals for cross-sectional areas of	0.5 mm min. 2 x 1.5 mm <sup>2</sup> max. or 1 x 2.5 mm <sup>2</sup>
Interface to commissioning and service tool TECIS	Type of interface	V.24 (RS232)
	Type of wire	prefabricated, 3-core
	Baud rate	4800 ±2 %
	Perm. line length	5 m
Safety class and degree of protection	Safety class	III to EN 60 730
	Degree of protection	IP 30 to EN 60 529
Environmental conditions	Operation	to IEC 721-3-3
	Climatic conditions	class 3K5
	Temperature	0...50 °C
	Humidity	<85 % r. h.
	Transport	to IEC 721-3-2
	Climatic conditions	class 2K3
	Temperature	-25...+65 °C
	Humidity	<95 % r. h.
Mechanical conditions	class 2M2	
Electromagnetic compatibility	Emissions	to EN 50 081-1
	Immunity	to EN 50 082-1
CE conformity	to EMC directive	89/336/EEC
Product standards	Automatic electrical controls for household and similar use	EN 60 730
Weight	QAA10	0.117 kg
	QAA16	0.124 kg

1) Only applicable to QAA16

2) The permissible single line length can be increased to 100 m if the commissioning and service tool TECIS is never connected to the room unit

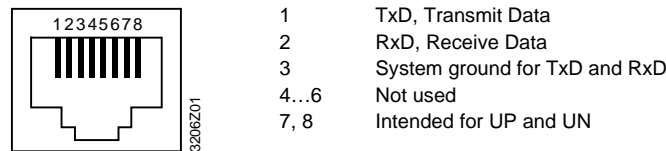
# Diagrams

## Connection terminals

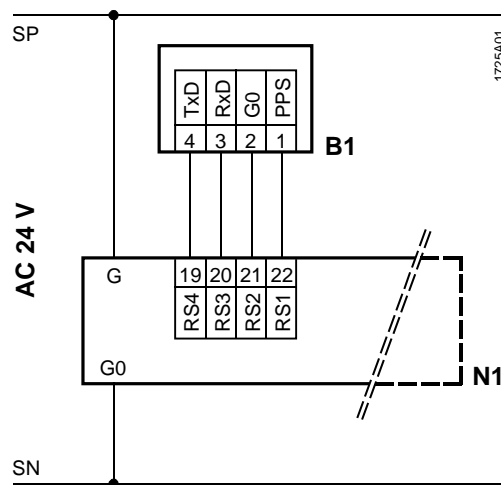


- 1 (PPS) Power supply and communication line (PPS interface) between detector and TEC controller
- 2 (G0) Ground for point-to-point interface (PPS) and RS-232-C (V.24) interface
- 3 (RxD) Receive Data from the controller (V.24 interface); can only be handled by the TECIS tool connected to the room unit
- 4 (TxD) Transmit Data to the controller (V.24 interface); only possible with the TECIS tool connected to the room unit

## Tool connection facility (type RJ45)



## Connection diagram



- B1 Room temperature detector QAA10 or QAA16
- N1 TEC controller RCE91.1, RCE92.1 or RCE93.1

## Dimensions

