

Room thermostat

RDD50.1



Room thermostat for heating applications

- Two-position control with On / Off relay output for heating
- Operating modes: Comfort and Economy mode
- Battery-powered (2 AAA Alkaline batteries)

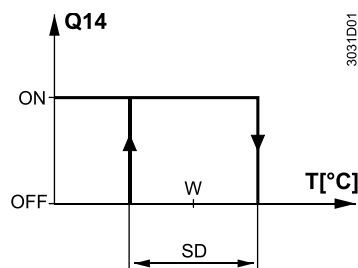
Use

The thermostat is used for the control of the room temperature in heating systems. For the control of the following pieces of equipment:

- Wall hung boilers
- Thermic valves or zone valves
- Gas or oil burners
- Fans
- Pumps

Functions

The thermostat acquires the room temperature with its integrated sensor and maintains the setpoint by delivering control commands. The switching differential is 0.5 K.



T: Room temperature

SD: Switching differential

W: Room temperature setpoint

Q14: Output signal for heating

Type summary

Product no.	Stock no.	Operating voltage	Description
RDD50.1	S55770-T497	DC 3 V (2 x 1.5 V AAA Alkaline batteries)	Room thermostat for heating applications

Ordering

When ordering, specify both product number / stock number and name: e.g. **RDD50.1 / S55770-T497 Room thermostat**

Product documentation

Title	Document ID
Mounting instructions	A6V13156953
Operating instructions	A6V13156980
CE declaration	A5W00248943A
UKCA	A5W00248944A
Environmental product declaration	A5W00244894A

Related documents such as environmental declarations, CE declarations, etc., can also be downloaded at the following Internet address:

www.siemens.com/bt/download

Safety

⚠ CAUTION**National safety regulations**

Failure to comply with national safety regulations may result in personal injury and property damage.

- 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

- 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.

⚠ WARNING**Risk of explosion**

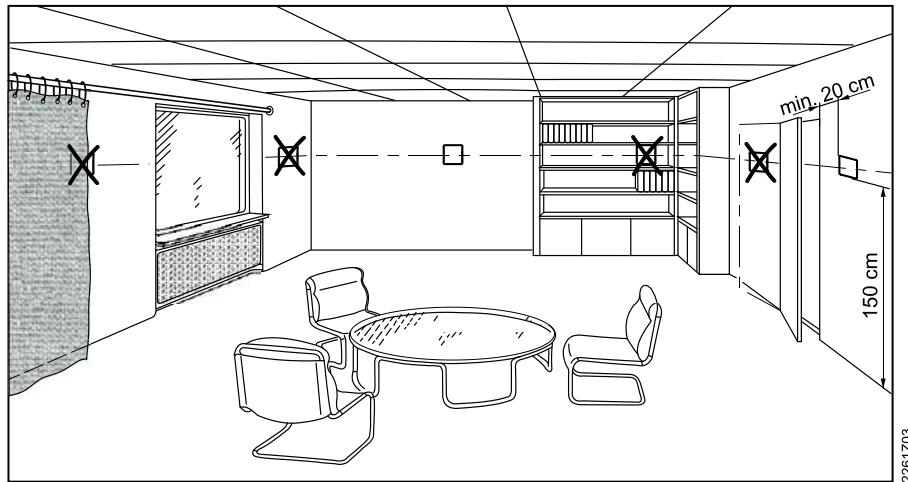
Personal injury and property damage

- 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.

Mounting



- Recommended height: 1.5 m above the floor.
- Do not mount the devices in recesses, shelves, behind curtains or doors, or above or near heat sources.
- Avoid direct solar radiation and drafts.
- Avoid unheated (uncooled) building area such as outside walls.
- The device can be fitted to a recessed conduit box or directly on the wall.
- Seal the conduit box or the installation tube if any, as air currents can affect sensor readings.
- Adhere to allowed ambient conditions.

When mounting the unit, fix the baseplate first. Then, make the electrical connections and fit and secure the cover (see Mounting Instructions A6V13156953).

The thermostat must be mounted on a flat wall and in compliance with local regulations.

If there are thermostatic radiator valves in the reference room, they must be set to their fully open position.


Operating modes

The thermostat provides Comfort mode and, optionally, Economy mode. The difference between Comfort and Economy mode is only the room temperature setpoint. The changeover from Comfort to Economy mode, and vice versa, is made by pressing a button.

Comfort mode

When Comfort mode is activated, symbol  appears on the display. The setpoint can be readjusted by pressing buttons "+" and "-".

Economy mode

When Economy mode is activated, symbol  appears on the display. The setpoint can be readjusted by pressing buttons "+" and "-".

Maintenance

The thermostat is maintenance-free.

Change of batteries

Before the batteries are exhausted, the symbol for changing the batteries appears. In that case, there are 5 days left to change the batteries.

Disposal



The device is considered an electronic device for disposal in accordance with European Directive and may not be disposed of as domestic waste.

- Use only designated channels for disposing the devices.
- Comply with all local and currently applicable laws and regulations.
- Dispose of empty batteries at designated collection points.

Power supply	
Operating voltage	DC 3 V (2 x 1.5 V AAA Alkaline batteries)
Battery life	> 1 year (AAA Alkaline batteries)

Control outputs	
Control output No. 2 (N.O. contact) Voltage Current	AC 24...230 V Max. 5(2) A
External protection for incoming cable	Max. 10 A
Circuit breaker Circuit breaker tripping characteristic	Type B, C or D to EN60898 and EN60947

Functional data	
Switching differential SD	0.5 K
Setpoint setting range Comfort operation Economy mode Increments	4...35 °C (Default:20 °C) 4...35 °C (Default:16 °C) 0.5 °C
Resolution of settings and displays Setpoint Actual value displays	0.5 °C 0.5 °C

Ambient conditions and protection classification	
Safety class	II to EN60730
Pollution degree	2
Degree of protection of housing	IP30 to EN60529
Climatic ambient conditions - Storage as per IEC60721-3 Climatic conditions Temperature Humidity Mechanical conditions - Transport as per IEC60721-3 Climatic conditions Temperature Humidity Mechanical conditions - Operation as per IEC60721-3 Climatic conditions Temperature Humidity	Class 2K3 -25...+70 °C < 93 % r.h. Class 2M2 Class 2K3 -25...+70 °C < 93 % r.h. Class 2M2 Class 3K3 0...45 °C < 85 % r.h.

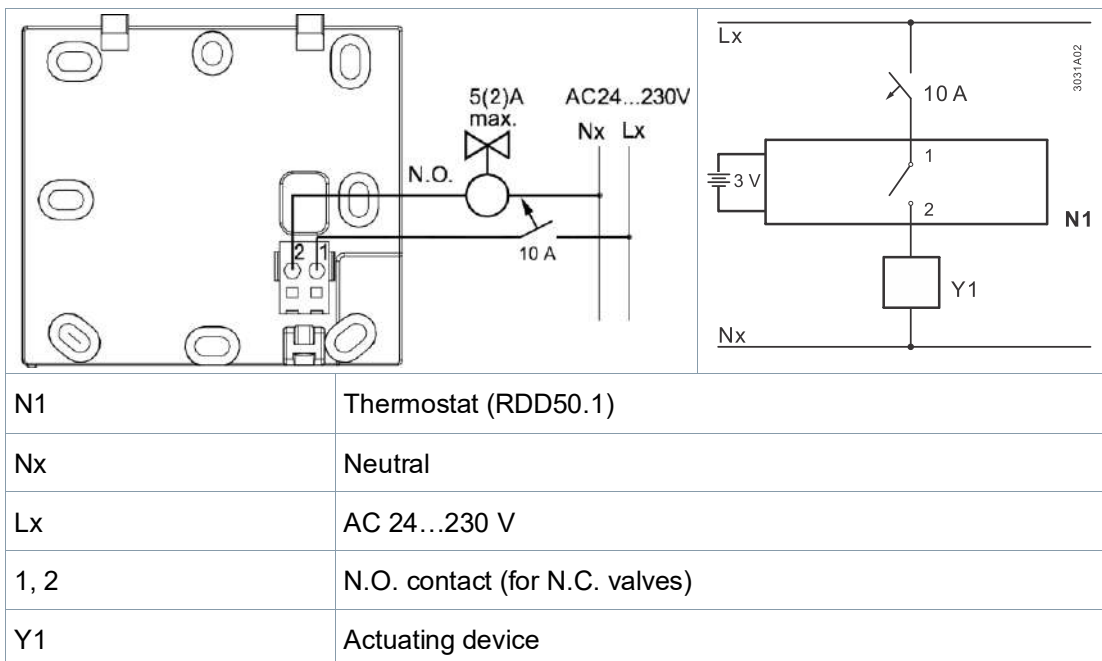
Standards, directives and approvals	
EU conformity (CE)	A5W00248943A *)
UKCA	A5W00248944A *)
Eco design and labeling directives	Based on EU Regulation 813/2013 (Eco design directive) and 811/2013 (Labeling directive) concerning space heaters, combination heaters, the following class apply: Application with On/Off operation of a heater Class I Value 1%
Environmental compatibility	The product environmental declaration (A5W00244894A *) contains data on environmentally compatible product design and assessments (RoHS compliance, materials composition, packaging, environmental benefit, disposal).

General	
Electrical connections Connection terminals For solid wires For stranded wires	Screw terminals 2 x 1.5 mm ² 1 x 2.5 mm ²
Weight without/with package	131 g / 199.2 g

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

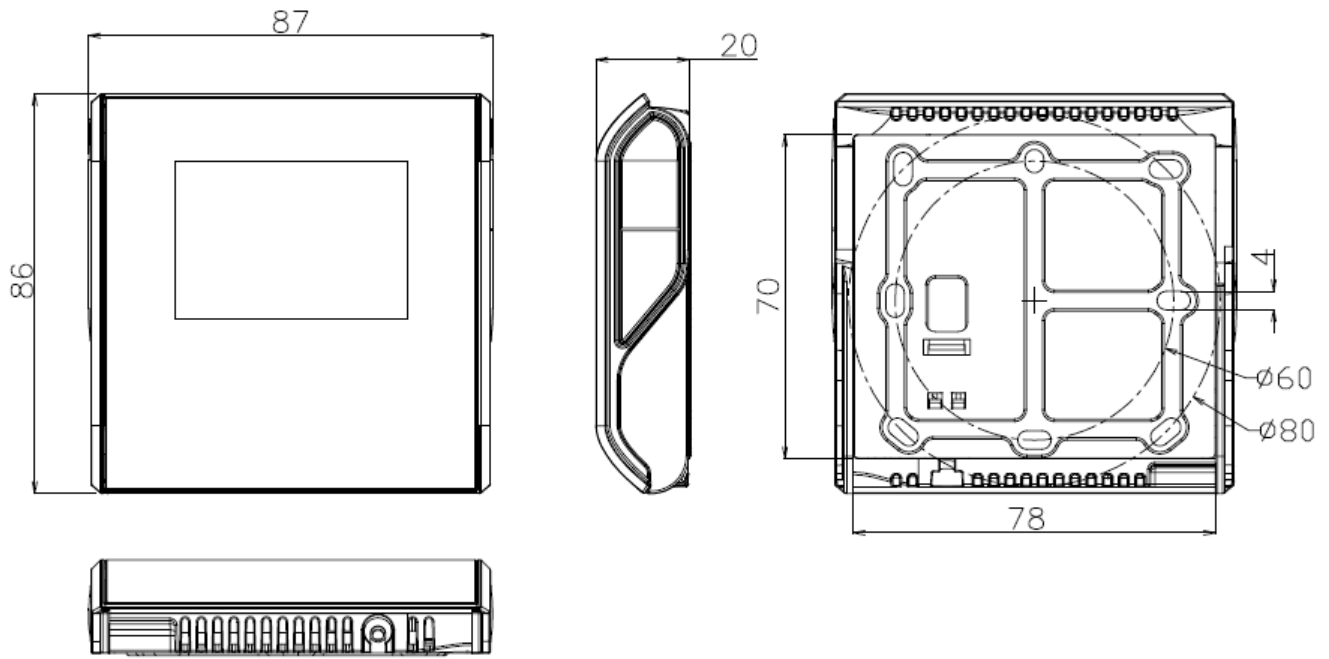
Diagrams

Connection diagrams



<p style="text-align: right; font-size: small;">2222S01</p>	<p style="text-align: right; font-size: small;">2222S02</p>
<p>Room thermostat with direct control of a gas-fired wall-hung boiler</p>	<p>Room thermostat with direct control of a gas-fired floor-standing boiler</p>
<p style="text-align: right; font-size: small;">2222S03</p>	
<p>Room thermostat with direct control of a heating circuit pump (pre-control by manual mixing valve)</p>	
<p>F1 Thermal reset limit thermostat F2 Safety limit thermostat M1 Circulating pump</p>	<p>N1 Room thermostat RDD50.1 Y1 3-port valve with manual adjustment Y2 Magnetic valve</p>

Dimensions



Dimensions in mm

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Siemens Switzerland Ltd
Smart Infrastructure
Global Headquarters
Theilerstrasse 1a
CH-6300 Zug
+41 58 724 2424
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