

## Touchscreen Thermostat

### DESCRIPTION



Raychem SENZ WIFI enabled programmable touchscreen thermostat for electrical underfloor heating. It combines app enabled remote control, voice control compatibility, ease of use and aesthetic design for maximum comfort from your underfloor heating.



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### PRODUCT PROPERTIES

#### Attractive design

- Flat front with full color capacitive touchscreen
- Unique Raychem look and feel
- Mountable as stand-alone thermostat or in single or multiple gang switch gear frames

#### Ease of use

- Swipe and touch navigation
- Big icons in the central menu
- Scroll for list selection
- Wheels for temperature selection

#### 7 Operating modes

- 3 Economic programs
- 1 Constant mode
- 1 Flexible Boost (flexible and temporary override of economic or constant mode)
- 1 Holiday mode
- 1 OFF mode

#### Energy efficient

- 3 Economic programs to suit everyone's needs
- Smart and precise adaptive function

- Calculates when to start heating to reach desired temperature when required
- Adapts to the environment
- Adapts to the floor construction
- Window open function
- Optimum heat management with 2 sensors (ambient & floor sensor)

#### Flexible

- Compatible with switch gear frames
- Compatible with a variety of floor sensors
- 3 Economic modes with flexible number of events per day

#### Wireless

- WiFi 802.11 b/g/n

#### REMOTE CONTROL

- Homeowners can monitor, control, and program their Raychem SENZ WIFI thermostat via the free SENZ-WIFI smartphone app (iOS and Android).
- Home owners can control their heating using the Amazon Alexa compatible smart speakers (for details on the setup also consult the document **EU1800**).

## PRODUCT PROPERTIES

- Home owners can control their heating using the Google Assistant compatible smart speakers (for details on the setup also consult the document **EU1801**).
- System integrators can use the Open RESTful API documentation to develop custom integration to existing BMS systems. Full RestAPI documentation available on: <https://api.senzthermostat.nvent.com/>

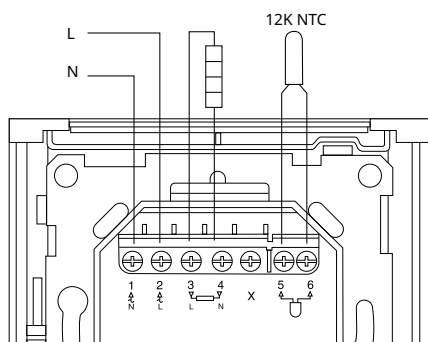
## TECHNICAL DATA

Supply voltage	230 VAC (+10%/–15%), 50Hz
Relay output	Heating cable 230 V, max 13A (max 100 m T2Red)
Temperature range floor sensor	+5°C to +40°C
Temperature range room sensor	+5°C to +40°C
Limitation of range	Low +5°C / High +40°C
Ambient temperature-operation	0°C to +60°C
Ambient temperature-transport	–20°C to +70°C
Accuracy floor sensor	0.2°C in a range 0°C to + 40°C
Temperature control method	Pulse width modulation with Proportional integral control loop
Accuracy room sensor	0.2°C in a range 0°C to + 40°C
Control modes	Floor sensing Room sensing Room sensing with floor limiter No sensor
7 Operating modes	3 Fully programmable economic modes <ul style="list-style-type: none"> <li>– 1 to 7 events/day</li> <li>– 7 days/week</li> <li>– 1 temperature per event</li> </ul> 1 Constant mode <ul style="list-style-type: none"> <li>– 1 set temperature</li> </ul> 1 Flexible boost mode (temporary override of the programmable or constant modes) <ul style="list-style-type: none"> <li>– Adjustable temperature</li> <li>– Adjustable duration</li> </ul> 1 Holiday mode <ul style="list-style-type: none"> <li>– Programmable in advance</li> <li>– Calendar based</li> <li>– Adaptable temperature</li> </ul> 1 OFF mode <ul style="list-style-type: none"> <li>– Including frost protection option</li> </ul>
Back-up for set values	Non-volatile memory
Back-up for time and date	Minimum 5 years of storage Minimum 10 years if powered 50% of the time
Protection class	IP21 Can be upgraded to IP44 using the accessory gasket (1244-017779 R-SENZ-ACC-IP44GASKET)
Wireless Standard	IEEE 802.11 b/g/n
Terminals	2,5 mm <sup>2</sup> Screw cage clamp
Floor sensor	12kΩ @ 25°C +/- 0.75°C (no:38165)
Max length of floor sensor	100 m, 2 x 1.5 mm <sup>2</sup> (230 VAC cable)
Diameter sensor cable	4.5 mm
Diameter sensor tip	5 mm
Compatibility with other sensors	2, 10, 12, 15, 33 & 100kΩ sensors
Dimension with Raychem frame	85.5 x 84.3 x 41.9 mm
Color Extra front	RAL9003
Approvals	CE, VDE

## WIRING DIAGRAM

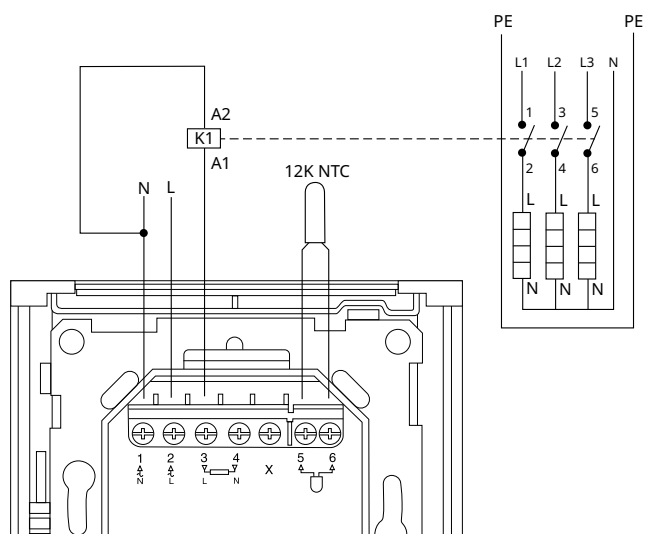
Direct connection (single heating circuit)

Heater circuit < 13 Amps constant wattage cable or  
maximum 100 meter of T2Red



Connection via contactor (multiple heating circuits)

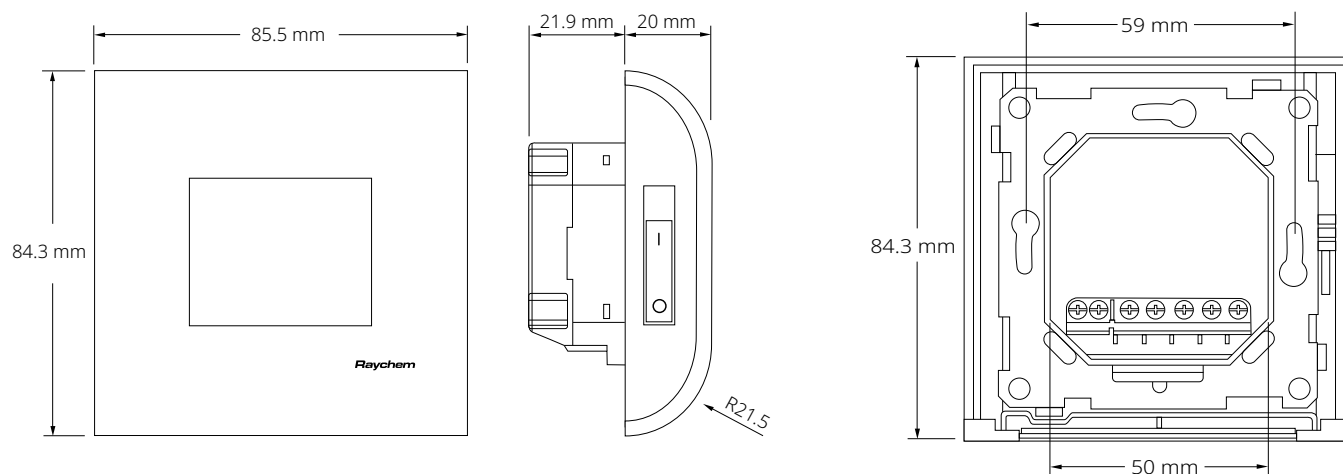
Total heating circuits > 13 Amps constant wattage cable or  
exceeding 100 meter of T2Red



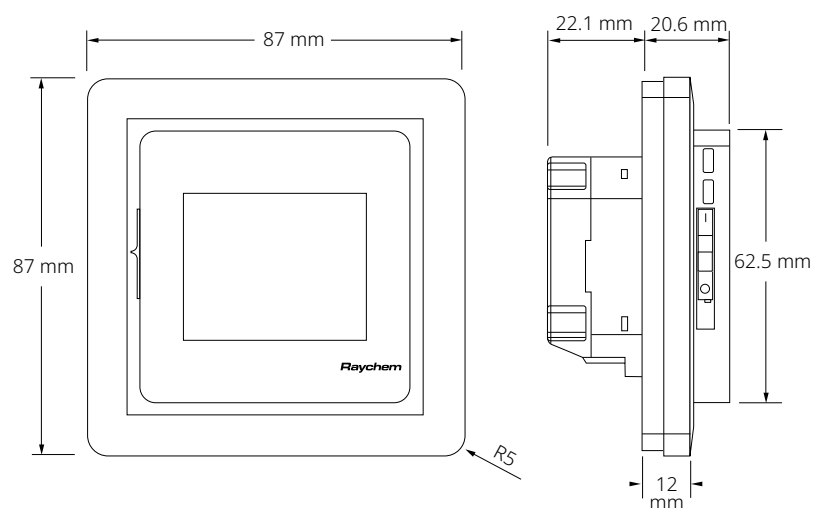
K1: contactor with integral suppression device

## DIMENSION DRAWINGS

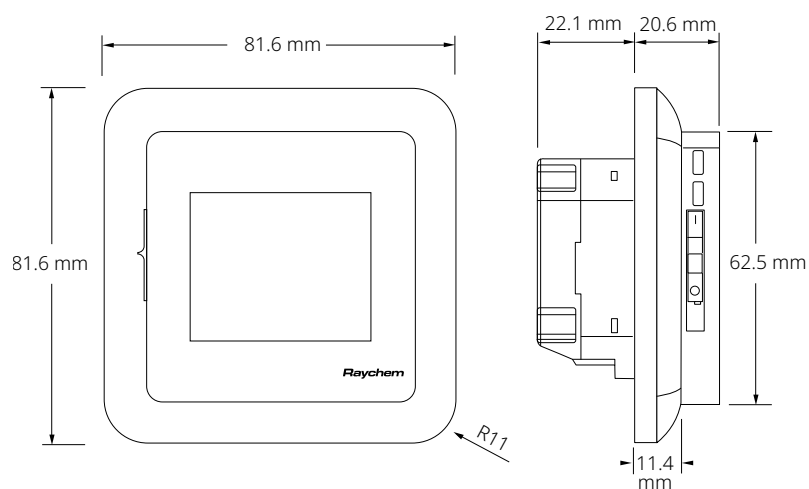
### Dimension Drawings – Raychem Frame



### Dimension Drawings – Square Frame



### Dimension Drawings – Round frame



## ORDERING INFORMATION

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Thermostat	R-SENZ-WIFI	1244-017778
IP44 Gasket	R-SENZ-ACC-IP44GASKET	1244-017779
Silver colored front and Schneider Exxact frame	R-SENZ-ACC-METALFRONT	1244-017780
Anthracite colored front and Schneider Exxact frame	R-SENZ-ACC-ANTHRACITEFRONT	1244-017781
Spare sensor	U-ACC-PP-14-SENSOR-N10K*	1244-002952
White Schneider Exxact frame	R-SENZ-ACC-WHITEFRAME	1244-018579
RAL9010 White colored front	R-SENZ-ACC-WHITE-RAL9010	1244-019771

\* If the 1244-002952 spare sensor is used, the sensor type needs to be set to 10kΩ in the sensor settings menu  
(Settings Menu / Settings / Advanced / Sensor Type)

### UK/Ireland

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**Raychem Tracer Pyrotenax Nuheat**