

SIEMENS



Saving energy while ensuring an enhanced room climate

Lower operating costs without loss of room comfort, thanks to communicating room thermostats

Energy-efficient operation

The communicating room thermostats RDG and RDF increase your building's energy efficiency, irrespective of usage – private or commercial. This way, compliance with performance class A as per efficiency class EN 15232 can be attained. Thanks to the open communication standard KNX, the room operator units can be straight-forwardly and seamlessly integrated into existing or new building automation and control systems. Additional cost savings in terms of operation and energy consumption are made possible via the time programs, which ensure timely heating or cooling.

Ease of operation

The room thermostats excel in modern design and user-friendly operation. Thanks to their large displays and clear characters,

temperature and time of day are easy to read. Temperature can be displayed in degrees Celsius or Fahrenheit. The measured values acquired by the room thermostats can be monitored by the building automation and control system.

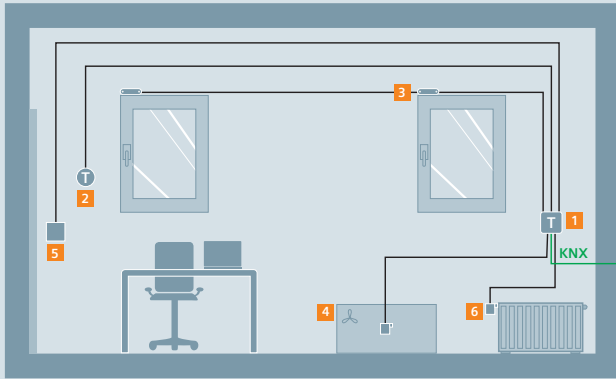
Very versatile – suited for heating and cooling

The communicating compact devices with built-in sensors are suited for a host of applications, such as fan coil units, VAV plants, chilled ceilings, heating systems or heat pumps. Consistent design and uniform operation can thus be implemented in buildings operating with different types of heating and cooling systems.

Highlights

- Energy-efficient and cost-saving temperature control
- Intuitive and user-friendly design ensuring ease of operation
- Great control accuracy for optimum room comfort
- Straightforward integration into building automation and control systems
- High level of functionality thanks to versatile connection facilities
- Applications of the RDG160KN may reach efficiency class AA according to eu.bac

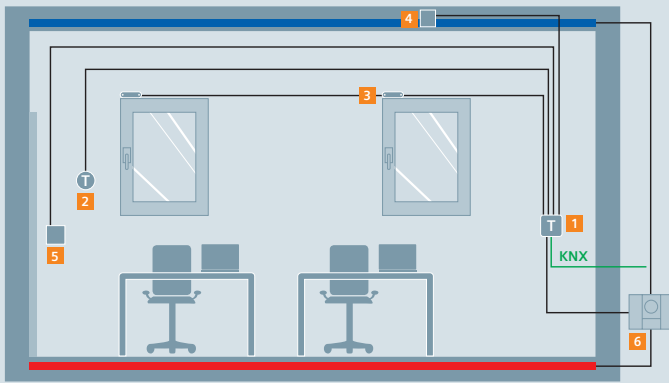
Fan coil unit



Legend:

- 1 Thermostat
- 2 External air temperature sensor
- 3 Window contact
- 4 Heating/cooling fan coil unit
- 5 Presence detector/Card reader
- 6 Radiator valve

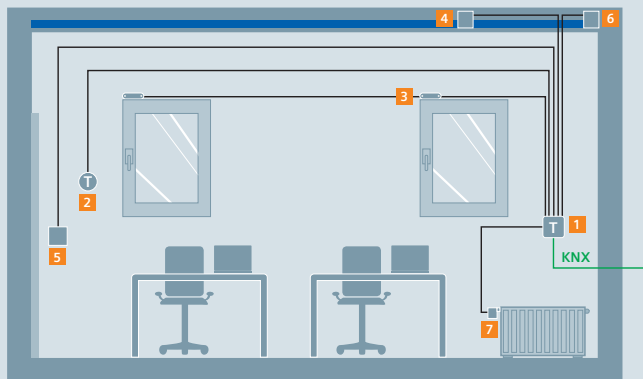
Heat pumps



Legend:

- 1 Thermostat
- 2 External air temperature sensor
- 3 Window contact
- 4 Dewpoint sensor
- 5 Presence detector/Card reader
- 6 Heat pumps

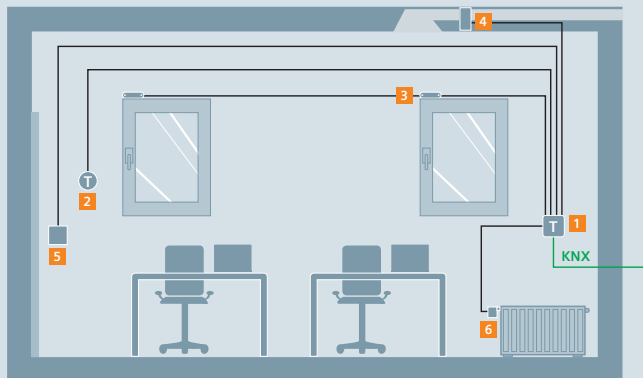
Universal applications



Legend:

- 1 Thermostat
- 2 External air temperature sensor
- 3 Window contact
- 4 Dewpoint sensor
- 5 Presence detector/Card reader
- 6 Refrigerant valve
- 7 Radiator valve

Variable air volume






Legend:

- 1 Thermostat
- 2 External air temperature sensor
- 3 Window contact
- 4 Damper actuator
- 5 Presence detector/Card reader
- 6 Radiator valve

Display and Operation Units



Room thermostats

Technical Specifications

Type	Description
	<p>RDG100KN Room thermostat with KNX communication Fan coil system and universal heating/cooling applications</p> <ul style="list-style-type: none"> • Operating modes: Comfort, Economy and Protection mode • On/Off, 3-positions or PWM control outputs • Fan automatic or manual for 1- or 3-speed fan • 3 multifunctional inputs for keycard contact, external room/return air sensors, heating/cooling switchover, switchover mode, window contact On/Off, dew point monitoring, electrical heater enable, faults, monitor input • Automatic or manual heating/cooling mode switchover • Adjustable commissioning and control parameters • Minimum and maximum limitation of setpoint • Backlit display • Selectable application: <ul style="list-style-type: none"> - 2-pipe systems - 2-pipe systems with electrical heating - 2-pipe systems with radiator/ floor heating - 4-pipe systems - 4-pipe systems with electrical heating - 2-pipe, 2-stage heating/cooling systems • Operating voltage: AC 230 V, 50/60 Hz • Power consumption: 8 VA • Control algorithm 2P/PI • Ambient temperature for operation: 0...50 °C • Setpoint setting range: 5...40 °C • Temperature measuring range: 0...49°C • Switching differential: heating: 0.5...6 K, cooling: 0.5...6 K • Communication: KNX (S-mode and LTE mode) • Bus current 20 mA • Integrated bus interface • Commissioning via tool (ETS, ACS) or HMI • Analog input signals: NTC 3k, switch • Digital input: 1 • Relay outputs: Fan: 1- or 3-speed • Relay outputs: 3 x AC 230 V, 5 (4) A • Triac outputs: valve, el. radiator, On/Off, PWM, 3-position • Number of Triac outputs: 3 x 230 V AC, max. 1 A • Wall mounted unit using screws • Degree of protection: IP30
	<p>RDG160KN Room thermostat with KNX communication Fan coil system, universal heating/cooling, heat pump applications</p> <ul style="list-style-type: none"> • Operating modes: Comfort, Economy and Protection mode • For applications with DC 0...10 V and On/Off control outputs and DC fan • For applications with DC 0...10 V control outputs and DC / 3-/ 1-speed fan • Fan automatic or manual • 3 multifunctional inputs for keycard contact, external room/return air sensors, heating/cooling switchover, switchover mode, window contact On/Off, dew point monitoring, electrical heater enable, faults, monitor input, supply air temperature sensor • Automatic or manual heating/cooling mode switchover • Adjustable commissioning and control parameters • Minimum and maximum limitation of setpoint • Supply air temperature limitation • Backlit display • Selectable application: <ul style="list-style-type: none"> - 2-pipe systems - 2-pipe systems with electrical heating - 2-pipe systems with radiator/ floor heating - 4-pipe systems - 2-pipe, 2-stage heating/cooling systems • Operating voltage: AC 24 V, 50/60 Hz • Power consumption: 2 VA • Control algorithm 2P/PI • Ambient temperature for operation: 0...50 °C • Setpoint setting range: 5...40 °C • Temperature measuring range: 0...49 °C • Switching differential: heating: 0.5...6 K, cooling: 0.5...6 K • Communication: KNX (S-mode and LTE mode) • Bus current 20 mA • Integrated bus interface • Commissioning via tool (ETS, ACS) or HMI • Analog input signals: NTC 3k, switch • Digital input: 1 • Relay outputs: fan: 1- or 3-speed, 2 x valve, electric radiator • Relay outputs: 3 x AC 24...230 V, 5 (4) A • Analog output: 2 x Valve, 1 x fan, 3 x DC 0...10 V, max. +/- 1 mA • Wall mounted unit using screws • Degree of protection: IP30
	<p>RDF800KN Flush-mount room thermostat with KNX communication and touch screen Fan coil system, universal heating/cooling, heat pumps</p> <ul style="list-style-type: none"> • Operating modes: Comfort, Economy and Protection mode • For heating and/or cooling applications • Outputs for On/Off, 3-positions signal • Outputs for conduit 1- or 3-speed fan • 2 multifunctional inputs for keycard contact, external room/return air sensors, heating/cooling switchover, presence detector, window contact On/Off, dew point monitoring, electrical heater enable, faults, monitor input • Automatic or manual heating/cooling mode switchover • Adjustable commissioning and control parameters • Minimum and maximum limitation of setpoint • Backlit display • Housing color: Ivory white • Selectable application: <ul style="list-style-type: none"> - 2-pipe systems - 2-pipe systems with electrical heating - 4-pipe systems • Operating voltage: AC 230 V, 50/60 Hz • Power consumption: 6 VA • Control algorithm 2P/PI • Ambient temperature for operation: 0... 50 °C • Setpoint setting range: 5...40 °C • Switching differential: heating: 0.5...6 K, cooling: 0.5...6 K • Temperature measuring range: 0...49 °C • Communication: KNX (S-mode and LTE mode) • Integrated bus interface • Commissioning via tool (ETS, ACS) or HMI • Analog input signals: NTC 3k, switch • Relay outputs: Fan: normally open contact, non-floating, Valve: normally open contacts, non-floating • Relay outputs: 5x AC 230 V, 5 (2) A • Degree of protection: IP30 • Bus current 5 mA • Mounting on round conduit boxes with min. 60 mm diameter, min. 40 mm depth an on rectangular conduit box ARG71 (BS4662), distance of fixing holes 60.3 mm


Display and Operation Units

Room thermostats

Type	Description
 <p>RDF600KN RDF301.50 RDF301.50H</p>	<p>RDF600KN, RDF301.50, RDF301.50H Flush-mount room thermostats with KNX communication Fan coil system and heat pump applications</p> <ul style="list-style-type: none"> Flush-mount room thermostat with LCD <ul style="list-style-type: none"> For heating and/or cooling applications Outputs for On/Off, 3-positions signal Outputs for 1- or 3-speed fan 2 multi-functional inputs for keycard contact, external room/return air sensors, heating/cooling switchover, switchover mode, window contact On/Off, dew point monitoring, electrical heater enable, faults, monitor input Operating modes: Comfort, Economy and Protection mode Automatic or manual heating/cooling mode switchover Adjustable commissioning and control parameters Minimum and maximum limitation of setpoint Backlit display Housing color : white (RAL 9003) Selectable application: <ul style="list-style-type: none"> 2-pipe systems 2-pipe systems with electrical heater 4-pipe systems Operating voltage: AC 230 V, 50/60 Hz Power consumption: 4 VA Control algorithm 2P/PI Ambient temperature for operation: 0...50 °C Setpoint setting range: 5...40 °C Temperature measuring range: 0... 49 °C Switching differential: 0.5...6 K Communication: KNX (S-mode and LTE mode) <ul style="list-style-type: none"> Integrated bus interface Commissioning via tool (ETS, ACS) or HMI Analog input signals: NTC 3k, switch Relay outputs: Fan: normally open contact, non-floating, Valve: normally open contacts, non-floating Relay outputs: 5 x AC 230 V, 5 (2) A Degree of protection: IP30 <p>RDF600KN Room thermostat</p> <ul style="list-style-type: none"> Bus current 5 mA Mounting on round conduit boxes with min 60 mm diameter, min. 40 mm depth Multifunctional input also for presence detector <p>RDF301.50 Room thermostat</p> <ul style="list-style-type: none"> Bus current 20 mA Mounting on rectangular conduit box ARG71 (BS4662), Distance of fixing holes 60.3 mm 4 buttons to control KNX actuators via KNX S-mode (Functions: switching, dimming, blinds, 8-bit-scene) <p>RDF301.50H Room thermostat</p> <ul style="list-style-type: none"> Bus current 20 mA Mounting on rectangular conduit box ARG71 (BS4662), Distance of fixing holes 60.3 mm 4 buttons to control KNX actuators via KNX S-mode (Hotel functions: Please do not disturb; Make Up Room)
 <p>RDG400KN</p>	<p>RDG400KN Room thermostat with KNX communication VAV heating and cooling systems</p> <ul style="list-style-type: none"> Operating modes: Comfort, Economy and Protection mode Control depending on the room or return air temperature Output DC 0...10 V VAV box/damper and additional output for On/Off, PWM or 3-position or output for 3-position VAV box/damper and additional output DC 0...10 V Automatic or manual heating/cooling mode switchover 1 multifunctional input for keycard contact, external room/return air sensor, heating/cooling switchover, switchover mode, window contact On/Off, dew point monitoring, electrical heater enable, faults, monitor input 1 input DC 0...10 V for damper position feedback Adjustable commissioning and control parameters Minimum and maximum limitation of setpoint Minimum and maximum limitation of air flow signal Output signal inversion (DC 10...0 V) as option Backlit display Selectable application: <ul style="list-style-type: none"> Single-duct systems Single-duct systems with electrical heating Single-duct systems and radiator/floor heating Single-duct systems with heating and cooling coil <ul style="list-style-type: none"> Operating voltage: AC 24 V, 50/60 Hz Power consumption: 2 VA Control algorithm P/PI Ambient temperature for operation: 0...50 °C Setpoint setting range: 5...40 °C Temperature measuring range: 0...49 °C Switching differential: heating: 0.5...6 K, cooling: 0.5...6 K Communication: KNX (S-mode and LTE mode) Bus current 20 mA Integrated bus interface Commissioning via tool (ETS, ACS) or HMI Analog inputs: NTC 3k, DC 0...10 V Analog output: VAV box/damper, electrical heater Analog output: 1 x DC 0...10 V, max. +/- 1 mA Digital input: 1 Triac output: VAV box/damper, valve, electrical heater, On/Off, PWM, 3-position Triac output: 1 x AC 24 V, max. 1A Wall mounted unit using screws Degree of protection: IP30

Display and Operation Units

Room thermostats

Type	Description
 RDU341	<p>RDU341 Flush-mount room thermostat with KNX communication VAV heating and cooling systems</p> <ul style="list-style-type: none"> • Flush-mount room thermostat with LCD <ul style="list-style-type: none"> - Modulating PI control - Room or return air temperature control - Outputs for a DC 0...10 V actuator and AC 230 V electrical heating (On/Off) - Automatic or manual heating/cooling mode switchover - Operating modes: Comfort, Economy and Protection function - 2 multifunctional inputs for keycard contact, external room / return air sensors, heating/cooling switchover, switchover mode, window contact On/Off, dew point monitoring, electrical heater enable, faults, monitor input - Adjustable commissioning and control parameters - Minimum and maximum limitation of setpoint - Minimum and maximum limitation of air flow signal - Output signal inversion (DC 10...0 V) as option • Selectable application: <ul style="list-style-type: none"> - Single-duct systems - Single-duct systems with electrical heating • Operating voltage: AC 24 V, 50/60 Hz • Power consumption: 4 VA <ul style="list-style-type: none"> • Control signal: DC 0...10 V • Control algorithm P/PI • Ambient temperature for operation: 0...50 °C • Setpoint setting range: 5...40 °C • Temperature measuring range: 0...49 °C • Switching differential: 0.5...6 K • Communication: KNX (S-mode and LTE mode) • Bus current 20 mA • Integrated bus interface • Commissioning via tool (ETS, ACS) or HMI • Analog input signals: NTC 3k, switch • Analog output: 1 x DC 0...10 V, max. 1 mA • Relay output: normally open contact, floating • Relay output: 1 x AC 230 V, max. 5 (2) A • Mounting on rectangular conduit box ARG71 (BS4662), distance of fixing holes 60.3 mm • Degree of protection: IP30

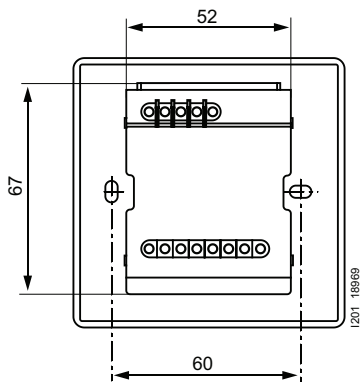
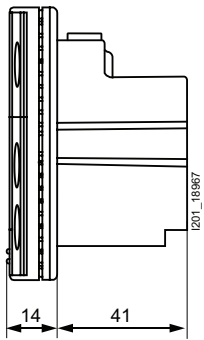
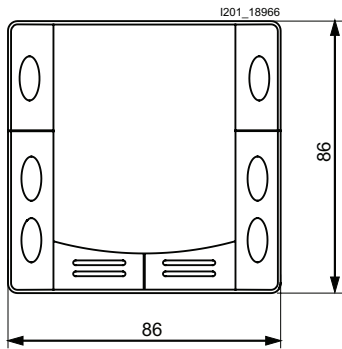
		RDF600KN	RDF301.50 RDF301.50H	RDG100KN RDG160KN RDG400KN	RDU341	RDF800KN
Dimensions						
• Height	mm	86	86	128	86	86
• Width	mm	86	86	93	86	86
• Depth	mm	46	57	30,8	57	47

Display and Operation Units

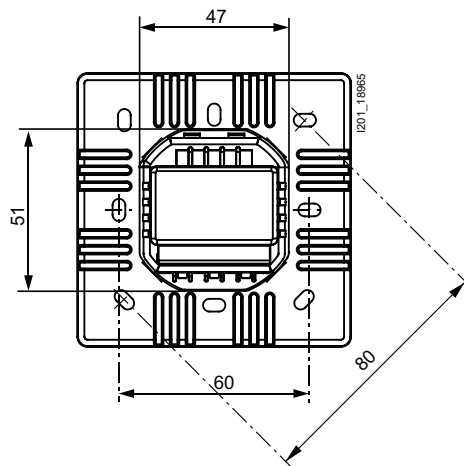
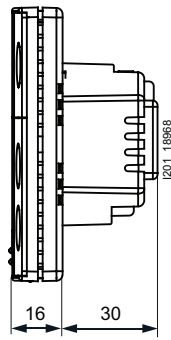
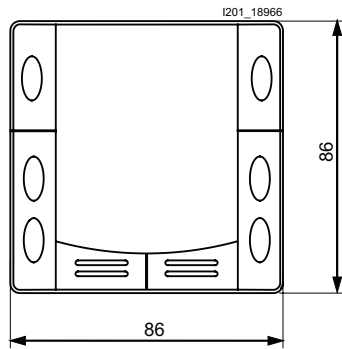
Room thermostats

Dimensional drawings

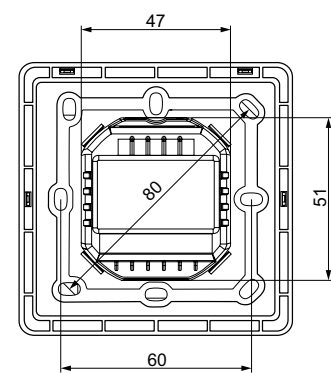
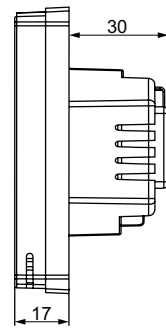
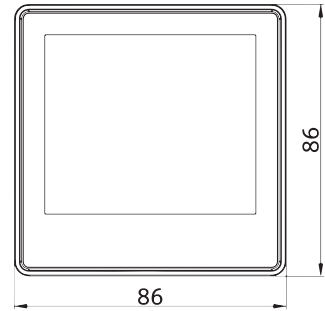
RDF301...



RDF600KN











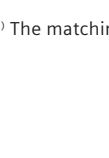
RDF800KN



Display and Operation Units

Room thermostats

Selection and ordering data

	Type	Version	DT	Order No.	PU (Unit, Set, M)	PS*/ P.unit	PG	Weight per PU approx. kg
 S55770-T163	RDG100KN	RDG100KN Room thermostat with KNX communication Fan coil system and universal applications	B	S55770-T163	1	1 Unit	A08	0,380
 S55770-T297	RDG160KN	RDG160KN Room thermostat with KNX communication Fan coil system, universal and heat pump applications	B	S55770-T297	1	1 Unit	A08	0,320
 S55770-T350	RDF800KN	RDF800KN Flush-mount room thermostat with KNX communication and touch screen Fan coil systems, universal heating/cooling and heat pump applications	B	S55770-T350	1	1 Unit	A08	0,320
 S55770-T293	RDF600KN	RDF600KN Flush-mount room thermostat with KNX communication Fan coil system and heat pump applications	B	S55770-T293	1	1 Unit	A08	0,220
 S55770-T105	RDF301.50	RDF301.50 Flush-mount room thermostat with KNX communication¹⁾ Fan coil system and heat pump applications, 4 buttons to control KNX actuators via KNX S-mode (switching, dimming, blinds, 8-byte scene)	B	S55770-T105	1	1 Unit	A08	0,320
 S55770-T334	RD301.50H	RDF301.50H Flush-mount room thermostat with KNX communication¹⁾ Fan coil system and heat pump applications, 4 buttons to control KNX actuators via KNX S-mode (hotel functions: Please do not disturb, Make up room)	B	S55770-T334	1	1 Unit	A08	0,320
 S55770-T165	RDG400KN	RDG400KN Room thermostat with KNX communication VAV heating and cooling systems	B	S55770-T165	1	1 Unit	A08	0,337
 S55770-T106	RDU341	RDU341 Flush-mount room thermostat with KNX communication¹⁾ VAV heating and cooling systems	B	S55770-T106	1	1 Unit	A08	0,243
 S55770-T137	ARG71	ARG71 Flush-mounting boxes For all RDU/RDF acc. to BS4662 Dimensions (H x W x D): 82 x 82 x 47 mm	B	S55770-T137	1	1 Unit	A08	0,081

¹⁾ The matching ARG71 conduit box must be ordered separately.

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The information in this document contains general descriptions of technical options available, which do not always have to be present in individual cases. The required features should therefore be specified in each individual case at the time of closing the contract. The document contains a general product overview. Availability can vary by country. For detailed product information, please contact the company office or authorized partners.

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Our world is undergoing changes that force us to think in new ways: demographic change, urbanization, global warming and resource shortages. Maximum efficiency has top priority – and not only where energy is concerned. In addition, we need to increase comfort for the well-being of users. Also, our need for safety and security is constantly growing. For our customers, success is defined by how well they manage these challenges. Siemens has the answers.

“We are the trusted technology partner for energy-efficient, safe and secure buildings and infrastructure.”