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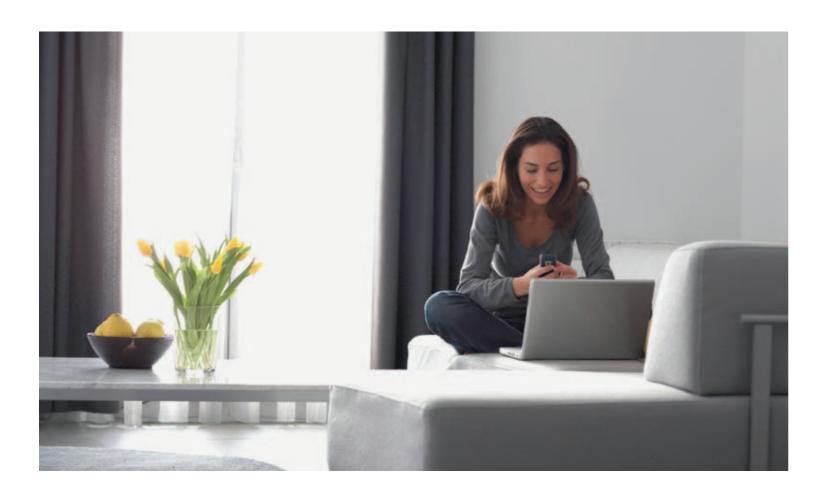
Room thermostats – for energy-efficient temperature control

Broad portfolio of room thermostats for heating, ventilation, and cooling applications

Answers for infrastructure.

Room thermostats –
choosing from a wide variety

With the comprehensive portfolio of room thermostats from Siemens, you can satisfy all customer requirements. From fan coils, variable air volume systems, chilled ceilings to radiators and heat pumps, the product range includes perfectly matched room thermostats for every application. Time programs enable individual rooms to be heated or cooled at predefined times and preset temperatures. This means that energy isn't wasted in rooms that are not in use. All thermostats are easy to install and to adjust. Help your customers enjoy a comfortable room climate – while saving energy, lowering costs, and reducing CO_2 emissions.

Everything needed for
efficient temperature control

Satisfying every need – with one product portfolio

With room thermostats from Siemens, you are optimally prepared to meet any requirements. The extensive product portfolio comprises simple as well as complex, communicating devices. The thermostats can be either stand-alone or networked with others to create tailored solutions for demanding applications. Your major benefit: You can cover a wide range of different heating, ventilation, and cooling applications while addressing individual customer needs – be it in homes, commercial buildings, hotels, or office buildings.

Efficient temperature control

Our room thermostats excel in high energy efficiency. Time programs adjust the room temperature to the desired comfort level at predefined times. What's more, the thermostats provide a wide choice of easy-to-set energy saving functions that help reduce energy consumption, like self-learning PID control, setpoint limitation, vacation function, or fan control. They can also be connected to external sensors or contact switches such as window contacts.

All of these functions offer energy savings of up to 30% – a convincing argument for your customers. And the fact that the room thermostats can also be used on applications with renewable energy sources, such as solar collectors and heat pumps, makes them a future-proof choice.

Enhancing comfort all the way

Easy-to-understand symbols, a backlit display with large lettering as well as large buttons and setting knobs are just a few of the features that ensure straightforward operation. The product range also includes wireless devices that allow remote control.

The room thermostats are easy to install. And thanks to the uniform product concept, you also benefit from fast and simple commissioning. Siemens' patented control technology ensures constant room temperatures.

Protecting the investment of your customers

The use of high-quality materials, careful manufacturing, and comprehensive quality management ensure that room thermostats from Siemens deliver the highest reliability and a long life. Also, conformance to international norms and standards is guaranteed.

Relying on an experienced partner

Siemens has been developing room thermostats for more than 70 years. So benefit from our in-depth application know-how and decades of experience.

Highlights

- Wide range of room thermostats to meet every requirement
- Energy-efficient and cost-saving room temperature control
- Simple operation and high control accuracy for optimal comfort and ease of use
- Fast and easy installation and commissioning
- Investment protection thanks to high-quality products conforming to norms and standards
- Benefit from long-term experience and in-depth know-how of Siemens

Perfect room temperature at all times

Intelligent temperature settings
A comfortable room environment means having the right temperature at the right time. This is why room thermostats from Siemens feature settable time programs. They enable users to heat or cool rooms only when needed, which is both cost- and energy-efficient. Also, the time pro- grams offer a choice of settings. If a room is used differently every day, the heating and cooling phases can be set individu- ally for each weekday. If room usage is always the same, the weekday/weekend program is the perfect choice.

Consistent product concept
Fan coils, variable air volume systems, chilled ceilings, radiators, or heat pumps – Siemens offers the ideal room thermo- stat for any type of application. All ther- mostats are based on the same product concept. This means for you: Fast, cost- efficient installation and commissioning. What's more, communicating thermo- stats can be seamlessly integrated into existing systems via KNX.

Saving energy and costs
External sensors and switches can be quickly connected to the room thermo- stats. This ensures significant energy savings for your customers. For example, room thermostats connected to a key card contact automatically lower the temperature to energy-saving mode the moment the user leaves the room. With window contacts, the setpoint is auto- matically adjusted when someone opens a window. It is also possible to connect manual switches or a telephone modem. And with the help of changeover sensors, some models can be automatically switched from heating to cooling, and vice versa.

Straightforward and ergonomic operating concept
Room thermostats from Siemens are extremely user-friendly. Intuitive opera- tion is ensured whether the thermostats have a touchscreen, large buttons, or a rotary knob. The menu is always self- explanatory. A large backlit display fur- ther facilitates operation.

Highlights

- Energy and cost savings thanks to time programs, absence function or sensors
- Maximum convenience through individual setting options
- Extensive range of thermostats to meet every requirement
- Fast and cost-efficient installa- tion and commissioning
- Seamless integration into exist- ing systems via KNX
- High level of user friendliness thanks to self-explanatory menu

Room thermostats for individual comfort

Perfect for heating and/or cooling
For living spaces and work areas, you can offer your customers all types of thermo- stats for heating and/or cooling. They are ideally suited for switching and control- ling hot water, electrical heaters, radia- tors, floor heating systems, and chilled ceilings in small zones. Whether ergo- nomic buttons, intuitive touchscreens, or large control knobs – all models are intui- tive to operate. They allow users to set the exact room temperatures and times for heating and energy-saving phases. Wireless models provide additional flexibility.

Ideal for heat pumps
Renewable energy becomes increasingly important. With heat pumps, you can extract energy either from the air, water or ground and supply it to buildings. With our thermostats for use with heat pumps, you can offer your customers a smart solution to save energy and reduce CO2 emissions.

Covering VAV/CAV applications
With our thermostat portfolio, you are best prepared to meet customer require- ments for demanding applications – like switching and controlling variable or con- stant air volume or ventilation systems. Our VAV/CAV thermostats are of modern design. A button lock ensures that set- tings cannot be accidentally changed. Remote control provides for convenient operation, for example, from a hotel bed.

Connection options for external sensors and switches, such as key cards, enhance flexibility and energy efficiency.

Controlling fan coils
Our thermostats for controlling fan coils are the perfect choice for small zones in commercial buildings, single- or multi- family houses, and hotel rooms. They are highly energy-efficient, user-friendly, and automatically adapt the fan speed. This means for your customers that they can save energy and thus money.

Constant control for enhanced comfort
Whatever the type of application, our thermostats set the temperature right down to the degree and minute. What's more, thanks to Siemens' patented con- trol technology, a perfectly even temper- ature is ensured throughout the room or the entire building – so your customers can enjoy the highest possible levels of well-being. And your benefit? You can equip buildings with different heating and cooling systems using the same design throughout, plus standardized operation.

Highlights

- Heating and/or cooling – offer your customers ideal solutions whatever their needs
- Thermostats for heat pumps – help your customers save energy and reduce CO2 emissions
- Thermostats for VAV/CAV appli- cations – can be used with external sensors and switches
- Thermostats for fan coils – highly energy-efficient and user-friendly
- Enhanced comfort thanks to constant room temperature

Offer your customers thermostats for heating and/or cooling, ... heat pump, ... VAV/CAV, ... and fan coil applications.

Room thermostats for an optimal climate

The right thermostat for any requirement

The portfolio of room thermostats covers a comprehensive range of HVAC applications – be it in homes, hotels, offices, or public buildings: From simple electro-mechanical ON/OFF and wireless thermostats to room thermostats with a continuous output signal to advanced touchscreen and efficient OpenTherm models – be it programmable with 24-hour or 7-day programs or non-programmable with or without display – the right product for any budget.

Covering a host of applications

With room thermostats from Siemens, you can cover a wide variety of applications:
– Fan coils
– Heat pumps
– VAV/CAV
– Domestic hot water
– Floor heating
– Radiators
– Electric heating
– Ventilation systems for heating/cooling
– Chilled ceilings

Highlights

- Thermostats for heating, ventilation, and cooling applications – meeting all requirements
- Suited for homes, hotels, offices, or public buildings
- Thermostats for every budget and every type of application

	Heating	Cooling	DHW	Heat pumps	VAV*/CAV**	Fan coils
Analog	RAA.., RAV..	RAA..	–	–	–	RAB..
Digital without display	RCU10, RCU20	RCU10, RCU20	–	–	RCU5..	RCC..
Digital with display, no time program	RDD.., RDG.., RDH.., RDU..	RDG.., RDH.., RDU..	RDD..	RDF.., RDG..	RDG.., RDU..	RDF.., RDG..
Digital with display and time program	RDE.., RDG.., RDJ.., REA.., REV..	RDG.., REA.., REV..	RDE..	RDF.., RDG.., RDX	–	RDF.., RDG..

* VAV = variable air volume, ** CAV = constant air volume

Room thermostats for heating and heat pump applications

Heating

Model	Control algorithm	Power supply	User interface / Remarks
Touchscreen operation			
REV100	PID	battery	B, LCD, touchscreen
REV300	PI	battery	B, LCD, touchscreen
Slide switch operation			
REV13	PID	battery	B, LCD
REV13DC	PID	battery	B, LCD
REV17	PID	battery	B, LCD
REV17DC	PID	battery	B, LCD
REV34	PI	battery	B, LCD
REV34DC	PI	battery	B, LCD
Analog operation			
RAV11.1	PID	battery	S, analog clock
RAV11.7	PID	battery	S, analog clock
Rotary knob operation			
REA23/1..	PID	battery	B, LCD
REA23M/1..	PID	battery	B, LCD
REA23R/ST/1..	PID	battery	B, LCD
Digital operation, slimline			
RDD10	2P	AC 230 V	B, LCD
RDD10.1	2P	battery	B, LCD
RDD10.1DHW	2P	battery	B, LCD
RDD310	2P	AC 230 V	B, LCD
RDE10	2P	AC 230 V	S, LCD
RDE10.1	2P	battery	S, LCD
RDE20.1	2P	battery	S, LCD
RDE10.1DHW	2P	battery	S, LCD
RDE410	2P	AC 230 V	B, LCD
Rotary knob/slide switch operation			
RDH10M	PID	battery	B, LCD
RDJ10	2P	battery	S, LCD
RDJ10RF/SET	2P	battery	S, LCD

Heat pumps

Model	Control algorithm	Outputs	Power supply	User interface / Remarks
RDX33.21	2P	(2)	battery	B, LCD, Manual CO button, time-prog. buttons
RDX43.2	2P	(3)	AC 230 V	B, LCD, Manual CO button, time-prog. buttons
RDG100 line [1]	2P/PI	(3)[2] (2)[2] (2)[2]	AC 230 V	B, LCD, Time-prog. buttons
RDF300/400 line [3]	2P/PI	(2)[2] (1)[2]	AC 230 V	B, LCD, Time-prog. buttons

(X): X = number of outputs   [1] RDG100 line (fan coil) thermostats are also suited for chilled ceiling and radiator applications. For detailed information, refer to the fan coil overview.
[2] Either ON/OFF, 3-position or PWM signal   [3] RDF300/400 line (fan coil) thermostats are also suited for heat pump applications.

Full column headings of the matrix table:

Applications: Heating only · Cooling only · Heating or cooling · Heating and cooling · 2-stage heating · 2-stage heating or cooling · Cooling or heating and electric heating · Heating and independent output/DHW · Control algorithm

Functionality: Semi flush-mounted unit · Automatic heating/cooling changeover · Manual heating/cooling changeover · Floor heating limitation · Dew point monitoring · Infrared remote control · Delay timer · 24-hour time program · 7-day/weekend program · 7-day program · Radio frequency · Modulating (OpenTherm)

Outputs: ON/OFF · PWM · 3-position · Output heating/cooling changeover

Inputs: Operating model Remote contact · heating/cooling changeover sensor · Remote or return air temperature sensor

Power supply: Power supply

User interfaces: Setpoint knob · Setpoint buttons · Operating mode button (B)/switch (S) · Digital display (LCD), indicator (LED) · Touchscreen operation · Programming knob and slider · Analog clock · Additional operation selector/remarks

Room thermostats for heating and/or cooling and VAV/CAV applications

	Applications										Functionality										Outputs				Inputs				Power supply	User interfaces						
	Heating only	Cooling only	Heating or cooling	Heating and cooling	2-stage heating	2-stage heating or cooling	Cooling or heating and electric heating	Heating and independent output/DHW	Cooling and independent output	Control algorithm	Semi flush-mounted unit	Automatic heating/cooling changeover	Manual heating/cooling changeover	Vmin, Vmax limitation of supply air	Floor heating limitation	Dew point monitoring	24-hour program	7-day program	Radio frequency	Communication interface KNX	ON/OFF	PWM	3-position	DC 0...10 V	Operating mode/Remote contact	Heating/cooling changeover sensor	Remote or return air temperature sensor	External setpoint shift	Power supply	Setpoint knob	Setpoint buttons	Operating mode button (B)/switch (S)	Digital display (LCD), indicator (LED)	Touchscreen operation	Programming knob and slider	Additional operation selector/remarks
Basic																																				
RAA11	■	■								2P											(1)								AC 24...250 V							
RAA21	■	■								2P											(1)								AC 24...250 V	■						
RAA200	■	■								2P											(1)								AC 24...250 V	■						Large setting knob
RAA31	■	■								2P											(1)								AC 24...250 V	■						ON/OFF switch
RAA31.16	■	■								2P											(1)								AC 230 V	■			LED			ON/OFF switch
RAA31.26	■	■						■	■	2P											(2)								AC 230 V	■			LED			ON/OFF switch
RAA41			■							2P			■								(1)								AC 24...250 V	■						Heat/OFF/cool switch
Modern																																				
RCU10				■	■		■			2P/PI											(2)1)	(2)1)			■				AC 230 V	■						
RCU10.1				■	■		■			2P/PI											(2)1)	(2)1)			■				AC 230 V	■		S				
RCU15				■	■					2P/PI											(2)1)	(2)1)			■		■		AC 24 V	■						
RCU20	■	■	■							PI	■												(1)		■	■			AC 230 V	■						
Communicating																																				
RDG100KN2)	■	■	■	■	■	■	■			2P/PI		■	■		■	■				■	(3)1)	(2)1)	(2)1)		■	■	■	■3)	AC 230 V			B	LCD			
Touchscreen operation																																				
REV200	■	■								PID							■	■			■								battery		■	B	LCD	■	■	
REV200RF/SET	■	■								PID							■	■	■		■								battery		■	B	LCD	■	■	
Slide switch operation																																				
REV24	■	■								PID							■	■			■				■				battery		■	B	LCD		■	
REV24DC	■	■								PID							■	■			■				■				battery		■	B	LCD		■	
REV24RF/SET	■	■								PID							■	■	■		■								battery		■	B	LCD		■	
REV24RFDC/SET	■	■								PID							■	■	■		■								battery		■	B	LCD		■	
REV26	■	■								PID							■	■			■								battery		■	S	LCD		■	
Rotary knob/ slide switch operation																																				
RDH10	■	■								2P											■								battery	■			LCD			
RDH10RF/SET	■	■								2P									■		■								battery	■			LCD			
Modern																																				
RCU50	■	■	■							P		■		■4)										(1)	■	■		■5)	AC 24 V	■						
RCU50.2	■	■	■							P			■											(1)					AC 24 V	■						Heat/OFF/cool switch
RLA162	■	■	■	■	■					PI				■4)										(2)				■6)	AC 24 V	■						
Advanced																																				
RDU340	■	■	■	■	■		■			P/PI	■	■	■	■		■					(1)			(1)	■	■	■		AC 24 V		■	B	LCD			
RDG400	■	■	■	■	■		■			P/PI		■	■	■	■	■					(1)1)	(1)1)	(1)1)	(1)	■	■	■		AC 24 V	■		B	LCD			
Communicating																																				
RDU341	■	■	■	■	■		■			P/PI	■	■	■	■		■				■	(1)			(1)	■	■	■	■3)	AC 24 V		■	B	LCD			
RDG400KN	■	■	■	■	■		■			P/PI		■	■	■	■	■				■	(1)1)	(1)1)	(1)1)	(1)	■	■	■	■3)	AC 24 V	■		B	LCD			

(X): X = number of outputs   1) Either ON/OFF, 3-position or PWM signal   2) RDG100 line (fan coil) thermostats are also suited for chilled ceiling and radiator applications. For detailed information, refer to the fan coil overview.   3) External setpoint shift via KNX
4) Only with Vmin limitation   5) External setpoint shift by DC 0...10 V input   6) External setpoint shift by outdoor temperature sensor

Room thermostats for fan coil applications

	Applications									Functionality													Outputs				Inputs				Power supply	User interfaces							
Fan coils	2-pipe/heating only	2-pipe/cooling only	2-pipe/heating or cooling	2-pipe with electric heater	2-pipe and radiator	4-pipe/cooling and heating	4-pipe with electric heater	2-stage/heating or cooling	Control algorithm	Semi flush-mounted unit	Manual heating/cooling changeover	Automatic heating/cooling changeover	Floor heating limitation	Manual fan speed off I/II/III	Automatic fan control	Ventilation function	Electronic commutated fan motor [1]	7-day program	Fan operation enable/disable	Infrared remote control	Light and blind control	Communication interface KNX	ON/OFF	PWM	3-position	DC 0...10 V	Multifunctional inputs	Operating mode changeover contact	Return air temperature sensor	Heating/cooling changeover sensor	Power supply	Setpoint knob	Setpoint buttons	Fan speed switch	Fan speed button	Operating mode button	Display (LCD), indicator (LED)	Backlight	Additional operation selector/remarks
Basic																																							
RAB11			■						2P		■			■									(1)								AC 24...250 V	■		■					Heat-cool CO switch
RAB11.1			■						2P		■			■		■							(1)								AC 24...250 V	■		■					Vent-heat-cool switch
RAB21	■	■	■						2P					■									(1)								AC 24...250 V	■		■					
RAB21.1	■	■	■						2P			■		■		■							(1)								AC 24...250 V	■		■					Heat/cool-vent switch
RAB31						■			2P		■			■									(2)								AC 24...250 V	■		■					Heat-cool CO switch
RAB31.1						■			2P		■			■		■							(1)								AC 24...250 V	■		■					Heat-vent-cool CO switch
RAB91									No					■																	AC 24...250 V			■					
Modern																																							
RCC10	■	■	■						2P			■		■									(1)					■	■	■	AC 230 V	■		■			LED		
RCC10.1	■	■	■						2P			■		■									(1)					■		■	AC 230 V	■		■			LED		
RCC20				■					2P			■		■									(2)					■	■	■	AC 230 V	■		■			LED		
RCC30					■	■			2P			■		■									(2)					■	■		AC 230 V	■		■			LED		
RCC50.1	■	■	■						PI			■		■												(1)		■		■	AC 24 V	■		■			LED		
RCC60.1	■	■	■						PI			■		■											(1)			■		■	AC 230 V	■		■			LED		
Advanced: semi flush-mounted																																							
RDF300	■	■	■	■		■			2P/PI	■	■	■	■	■	■				■				(2)[2]		(1)[2]		■	■	■	■	AC 230 V		■		■	■	LCD		
RDF300.02	■	■	■	■		■			2P/PI	■	■	■	■	■	■				■				(2)[2]		(1)[2]		■	■	■	■	AC 230 V		■		■	■	LCD	■	
RDF310.2	■	■	■						2P	■	■			■	■								(1)								AC 230 V		■		■		LCD		Heat-cool button
RDF310.21	■	■	■						2P	■	■			■	■					■			(1)								AC 230 V		■		■		LCD	■	Heat-cool button
RDF340	■	■	■	■		■			P/PI	■	■	■	■	■	■				■							(2)	■	■	■	■	AC 24 V		■		■	■	LCD		
RDF400.01	■	■	■	■		■			2P/PI	■	■	■	■	■	■			■	■	■			(2)[2]		(1)[2]		■	■	■	■	AC 230 V		■		■	■	LCD	■	Time-prog. buttons
RDF410.21	■	■	■						2P	■	■			■	■			■		■			(1)								AC 230 V		■		■	■	LCD	■	Heat-cool button, time-prog. buttons
Advanced: wall-mounted																																							
RDF110	■	■	■						2P			■		■	■						■[3]		(1)						■[4]	■[4]	AC 230 V		■		■		LCD		
RDF110.2			■						2P		■			■	■						■[3]		(1)								AC 230 V		■		■		LCD		Heat-cool button
RDF210	■	■	■						2P			■		■	■				■		■[3]		(1)						■[4]	■[4]	AC 230 V		■		■	■	LCD		Time-prog. buttons
RDF210.2			■						2P		■			■	■				■		■[3]		(1)								AC 230 V		■		■	■	LCD		Heat-cool button, time-prog. buttons
RDG100	■	■	■	■	■	■	■	■	2P/PI	■	■	■	■	■	■				■				(3)[2]	(2)[2]	(2)[2]		■	■	■	■	AC 230 V	■			■	■	LCD	■	
RDG100T	■	■	■	■	■	■	■	■	2P/PI	■	■	■	■	■	■			■	■	■			(3)[2]	(2)[2]	(2)[2]		■	■	■	■	AC 230 V	■			■	■	LCD	■	Time-prog. buttons
RDG110	■	■	■	■	■	■	■		2P	■	■	■	■	■	■				■				(2)				■	■	■	■	AC 230 V	■			■	■	LCD	■	
RDG140	■	■	■	■	■	■		■	P/PI	■	■	■	■	■					■							(2)	■	■	■	■	AC 24 V	■			■	■	LCD	■	
RDG160	■	■	■	■	■	■		■	P/PI	■	■	■	■	■		■			■							(2)	■	■	■	■	AC 24 V	■			■	■	LCD	■	
Communicating: semi flush-mounted																																							
RDF301	■	■	■	■		■			2P/PI	■	■	■	■	■	■				■			■	(2)[2]		(1)[2]		■	■	■	■	AC 230 V		■		■	■	LCD		
RDF301.50	■	■	■	■		■			2P/PI	■	■	■	■	■	■				■		■	■	(2)[2]		(1)[2]		■	■	■	■	AC 230 V		■		■	■	LCD		Light and blind buttons
Communicating: wall-mounted																																							
RDG100KN	■	■	■	■	■	■	■	■	2P/PI	■	■	■	■	■	■				■			■	(3)[2]	(2)[2]	(2)[2]		■	■	■	■	AC 230 V	■			■	■	LCD	■	

(X): X = number of outputs   [1] ECM DC 0...10 V fan control   [2] Either ON/OFF, 3-position or PWM signal   [3] Infrared remote control optional (...x10/IR)
[4] Either return air temp. sensor or heating/cooling changeover sensor

Answers for infrastructure.
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 preferred partner for energy-efficient, safe, and secure buildings and infrastructure."

www.siemens.com/thermostats