

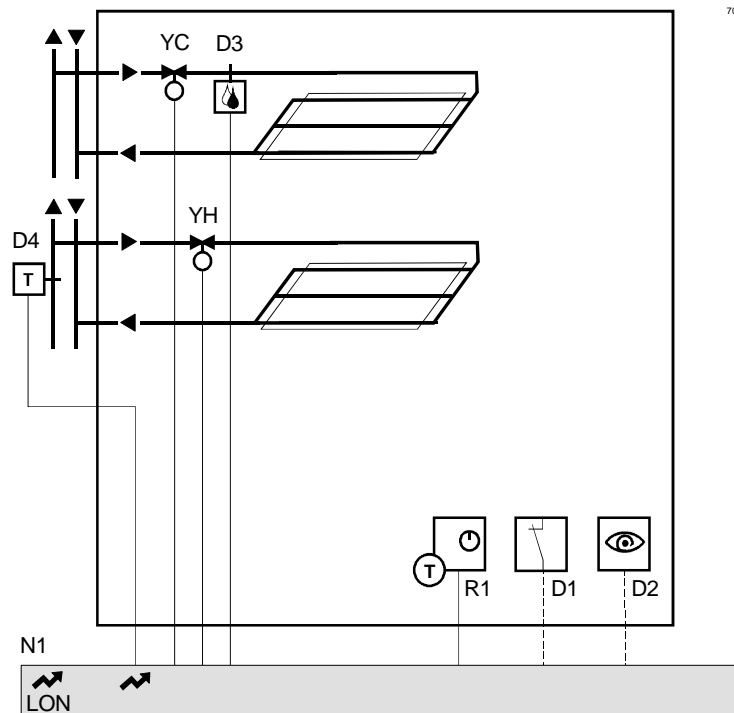
Divided chilled/heated ceiling: cooling only and cooling/heating with change-over via LON bus

CLC09



- Cooling with entire area of chilled/heated ceiling
- Heating with partial area
- Change-over via LON bus
- Modulating control of heating and cooling valve
- Dew point monitoring

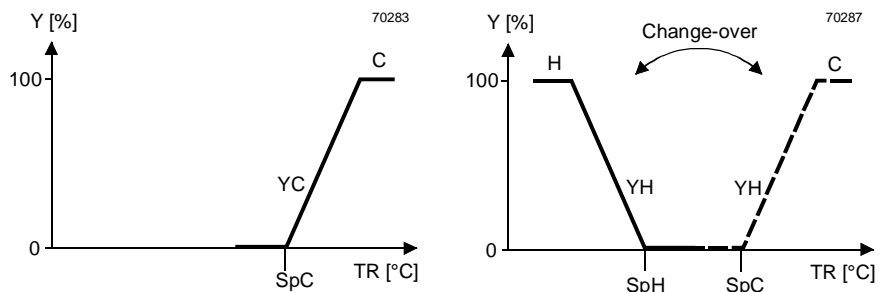
Plant diagram



- N1 Room temperature controller
- R1 Room unit with temp. sensor
- D1 Window switch
- D2 Occupancy sensor
- D3 Dew point sensor
- D4 Change-over signal via LON bus
- YC Cooling valve
- YH Cooling/heating valve

Operating diagrams

- Y Output signal
- TR Room temperature
- SpH Effective heating setpoint
- SpC Effective cooling setpoint
- H Heating sequence
- C Cooling sequence
- YC Cooling valve
- YH Cooling/heating valve

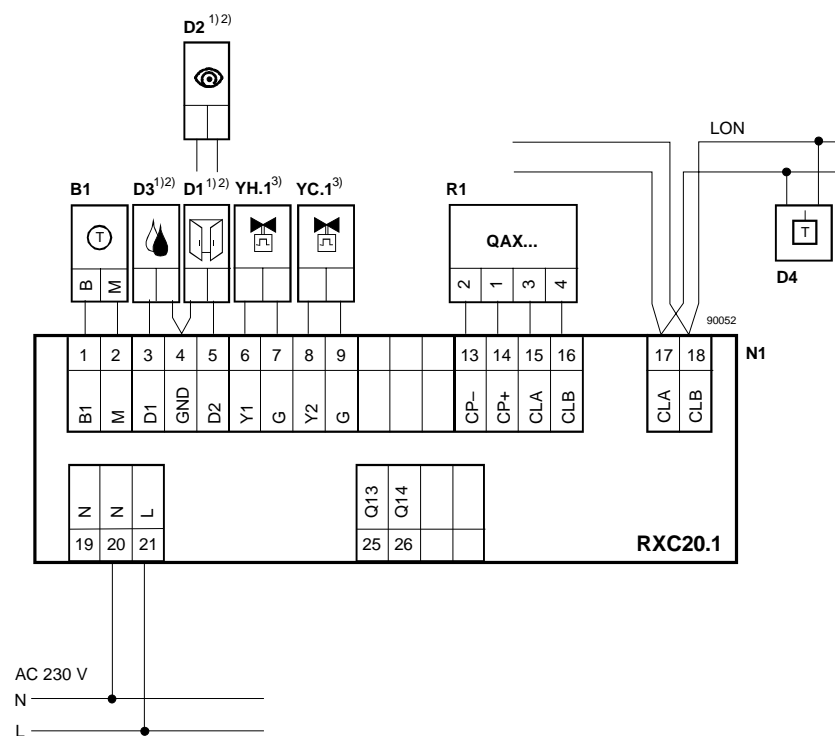


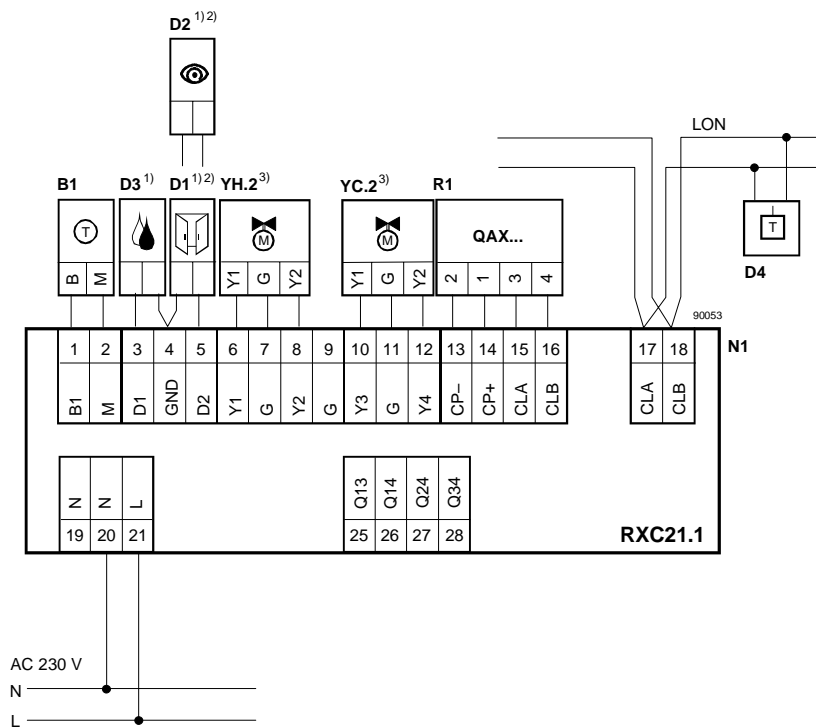
Functions

For details refer to the "CLC" description of functions at the beginning of this section (CA2A3815E00). Application CLC09 includes the following functions:

	Brief description	See CA2A3815E00
Proportional cooling sequence (2-pipe system) and proportional heating/cooling sequence (2-pipe system with change-over)	<ul style="list-style-type: none"> – PID control – Two proportional control sequences, heating and cooling – Change-over via LON bus – Control of thermic or motorised valve actuators (AC 24 V, PWM or AC 24 V, 3-position) – Valve exercising feature 	6.2 6.4 6.6
Dew point sensor	– Dew point sensor to prevent condensation formation	6.5
Operating modes	<ul style="list-style-type: none"> – <i>Comfort, Stand-by, Economy and Building protection</i> – Change of operating mode via ⏻/Auto switch on room unit, occupancy sensor, window contact or central command 	2, 3
Setpoint reset	– Locally via room unit or via central command	4
Temperature measurement	– Via room unit or passive temperature sensor	5
General functions	<ul style="list-style-type: none"> – Occupancy sensor – Window switch – Master/slave operation – Boost, night cooling – etc. 	2.2, 7.4 2.2, 7.4 7.2 7.6, 7.7
Room units	– Versions available with temperature sensor, setpoint adjuster, ⏻/Auto switch and LCD display	8
Compatible controllers	CLC09 can be used in conjunction with RXC20.1 and RXC21.1.	

Connection diagrams





- 1) Type of operation (N/O or N/C) can be selected
- 2) Only two of these devices are connectable (either D1 or D2)
- 3) Do not exceed the max. simultaneous load on outputs Y1 ... Y4: max. 9.5 VA (see data sheet 3834).

List of equipment

Ref.	Description	Type	Data sheet
N1	Room temperature controller	RXC20.1	3834
		RXC21.1	3834
R1	Room unit	QAX30.1	1741
		QAX31.1	1741
		QAX32.1	1641
		QAX34.1	1645
		QAX39.1	1646
	Wireless room unit Receiver	QAX90.1, 91.1	1643
		RXZ90.1	1644
B1	Room temperature sensor	QAA24	1721
D1	Window contact ^{1) 2)}	Third-party device	–
D2	Occupancy sensor ^{1) 2)}	Third-party device	–
D3	Dew point sensor ¹⁾ Please provide AC24V supply!	QFX21	1551
D4	Change-over signal via LON bus	–	–
YC.1	Thermic cooling valve, 2-position (PWM) control ³⁾	T3W..., T4W...	4829
		STE72	4873
		STE71.1	4874
		STA71	4877
YC.2	Cooling valve, motorised, 3-position control ³⁾	SSA81... SSB81... SQS81	4893 4891 4575
YH.1	Thermic cooling/heating valve, 2-position (PWM) control ³⁾	T3W..., T4W...	4829
		STE72	4873
		STE71.1	4874
		STA71	4877
YH.2	Cooling/heating valve, motorised, 2-position (PWM) control ³⁾	SSA81... SSB81... SQS81	4893 4891 4575

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Configuration

The parameters available with application CLC09 are shown below. They are set in the RXT10.1 commissioning and service tool in the **Device, Configure, Settings** menu option.

Menu	Parameter	Values/range	Basic setting	
Temperature setpoints	Comfort heating	10 ... 35 °C	21 °C	
	Comfort cooling	10 ... 35 °C	24 °C	
	Stand-by heating	10 ... 35 °C	19 °C	
	Stand-by cooling	10 ... 35 °C	28 °C	
	Economy heating	10 ... 35 °C	15 °C	
	Economy cooling	10 ... 35 °C	35 °C	
	Building protection heating	10 ... 40 °C	12 °C	
	Building protection cooling	10 ... 40 °C	40 °C	
Sequences	Valve type (heating and cooling valve)	– STE71.1 (with RXC20.1) – STE72	STE71.1	
		– SSA81 (with RXC21.1) – SSB81 – SQS81	SSA81	
Room unit	Sensor correction	– 3 ... 3 K	0 K	
	Setpoint reset range	± 0 ... 10 K	± 3 K	
	Display of heating/cooling symbol		Enabled	
	Temperature unit	°C or °F	°C	
	Temperature display in normal mode	None / room temp. / setpoint	room temp.	
	Temperature display in setpoint shift mode	Absolute or relative	Absolute	
General functions	Occupancy override time	0 ... 90 min	30 min	
	Receiver period	0 ... 105 min.	60 min.	
	Send interval (heartbeat)	0 ... 105 min.	45 min.	
	Occupancy sensor	Type of operation:	Digital input 1 or 2	No occ. sensor
		Switch-off delay	Room occupied: Contact open or closed	Closed
		Switch-on delay	0 ... 90 min	5 min
			0 ... 90 min	5 min
	Window switch	Type of operation:	Digital input 1 or 2	No window switch
			Window closed: Contact open or closed	Closed
	Dew point sensor	Type of operation:	Digital input 1 or 2	No dew point sensor
			Condensation: Contact open or closed	Closed
	Master/slave	Master or Slave	Master	
	Heating demand signal		Enabled	
	Cooling demand signal		Enabled	
	Morning boost		Enabled	
Night cooling		Enabled		
Service LED		Enabled		
Reset shift		Disabled		
LONMARK bindings	See the sections headed "LonMark network variables" and "LonMark binding templates"			

Ordering

Room controllers may be ordered either with the application described above or with the appropriate basic application. Please state the quantity, DESIGO RXC device name, type code and application.

Example 1

20 RXC21.1 individual room controllers with application CLC09 RXC21.1/CLC09

Notes

- The controllers will be delivered with the basic settings shown above.
- Minimum order quantity: 10 controllers

Example 2

2 RXC21.1 room controllers

RXC21.1 / 00021

Notes

- The controllers will be delivered with the basic application
- The application can be loaded into the controllers by means of the RXT10.1 tool
- Minimum order quantity: 1 controller