

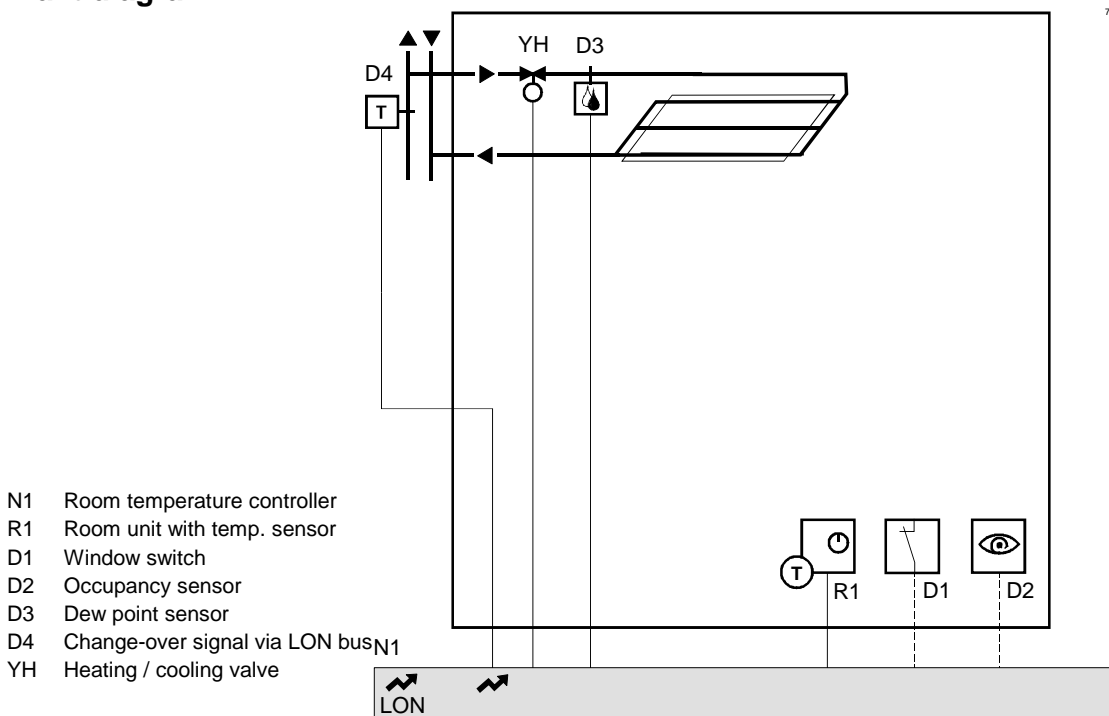
# Chilled/heated ceiling, 2-pipe system with change-over via LON bus

CLC06

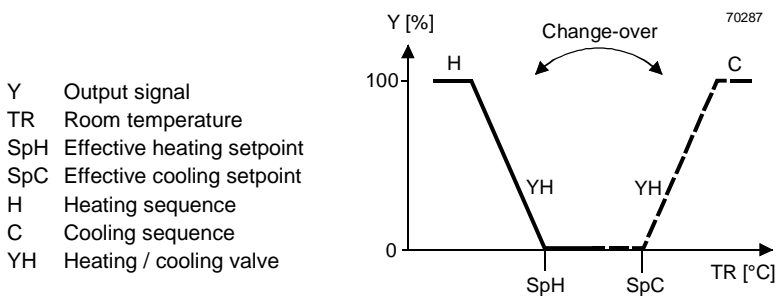


- Heating or cooling with heated/chilled ceiling
- Change-over via LON bus
- Modulating control of heating/cooling valve
- Dew point monitoring

## Plant diagram



## Sequence diagram



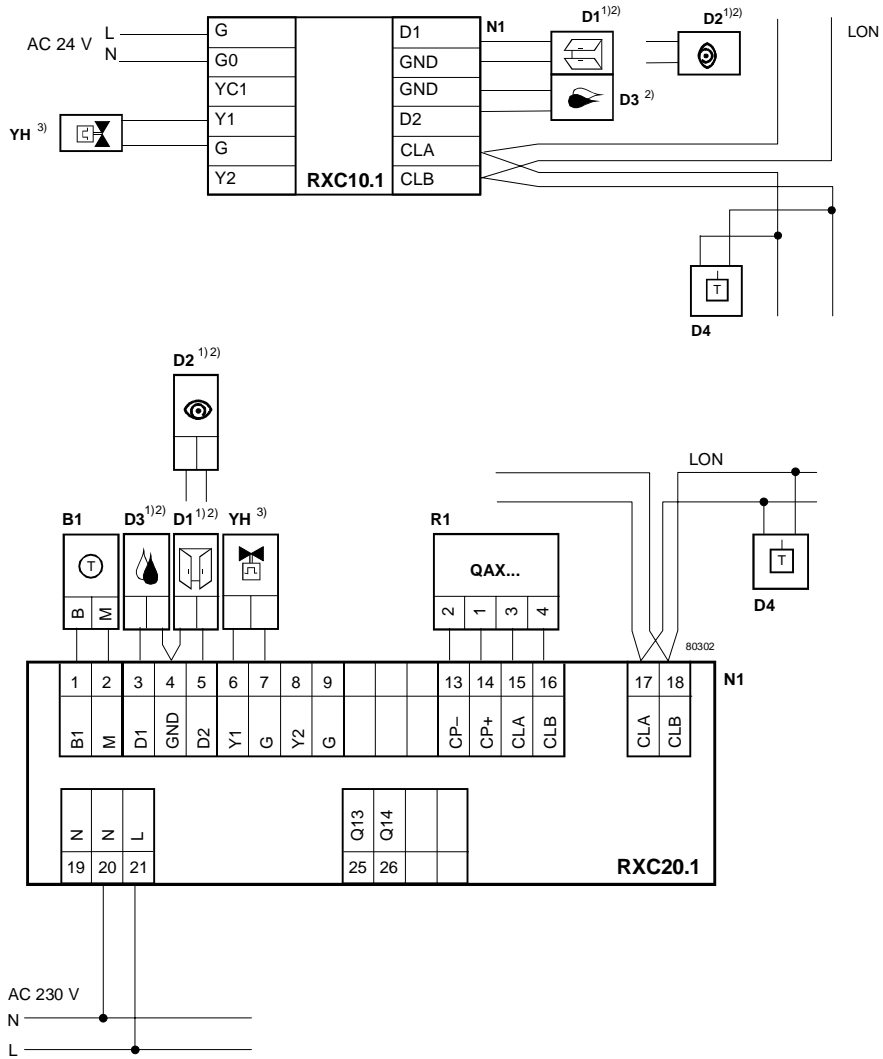
## Functions

For details refer to the “CLC” description of functions at the beginning of this section (CA2A3815E00). Application CLC06 includes the following functions:

Function	Brief description	See CA2A3815E00
Proportional heating or cooling sequence (2-pipe system with change-over)	<ul style="list-style-type: none"> <li>– PID control</li> <li>– Two proportional control sequences, heating and cooling</li> <li>– Change-over via LON bus</li> <li>– Control of thermic valve actuators (AC 24 V, PWM)</li> <li>– Valve exercising feature</li> </ul>	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"> <li>– <i>Comfort, Stand-by, Economy and Building protection</i></li> <li>– Change of operating mode via ⏻/Auto switch on room unit, occupancy sensor, window contact or central command</li> </ul>	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"> <li>– Occupancy sensor</li> <li>– Window switch</li> <li>– Master/slave operation</li> <li>– Boost, night cooling</li> <li>– etc.</li> </ul>	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	CLC06 can be used in conjunction with RXC10.1 and RXC20.1	

# Connection diagrams

00230



## List of equipment

Ref.	Description	Type	Data sheet
N1	Room temperature controller	RXC10.1	3830
		RXC20.1	3834
R1	Room unit	QAX30.1	1741
		QAX31.1	1741
		QAX32.1	1641
		QAX34.1	1645
R1	Wireless room unit Receiver	QAX39.1	1646
		QAX90.1, QAX91.1	1643
		RXZ90.1	1644
B1	Room temperature sensor	QAA24	1721
D1	Window contact <sup>1) 2)</sup>	Third-party device	–
D2	Occupancy sensor <sup>1) 2)</sup>	Third-party device	–
D3	Dew point sensor <sup>1)</sup> <b>Please provide AC24V supply!</b>	QFX21	1551
D4	Change-over signal via LON bus	–	–
YH	Thermic heating/cooling valve, 2-position (PWM) control <sup>3)</sup>	T3W..., T4W...	4829
		STE72	4873
		STE71.1	4874
		STA71	4877

- 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) Note the output load for Y1: max. 9.5 VA (see controller data sheets)

## Configuration

The parameters available with application CLC06 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	Control sequence	Only heating, only cooling or change-over.	Change-over	
	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	– STE71.1 – STE72	STE71.1	
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
		Room occupied: Contact open or closed		Closed
		Switch-off delay	0 ... 90 min	5 min
		Switch-on delay	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

**15 RXC20.1 individual room controllers with application CLC06 RXC20.1/CLC06**

#### Notes

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

### Example 2

**2 RXC20.1 room controllers RXC20.1 / 00020**

#### 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