

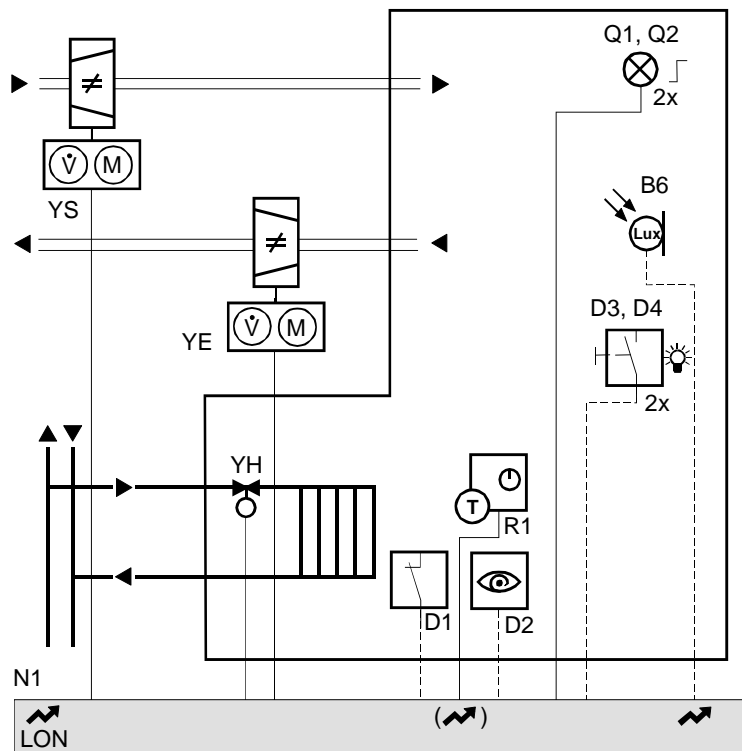
- **Single-duct supply and extract air system (VAV08)**
- **2 lighting groups on/off**



- Supply / extract air volume control
- Room temperature control
- Air quality control
- Radiator-type heating
- 2 lighting groups on/off
- Lighting operated with momentary-contact switches, or
- Lighting operated with flexible room unit via LON bus
- Option: Automatic lighting control based on occupancy and daylight level

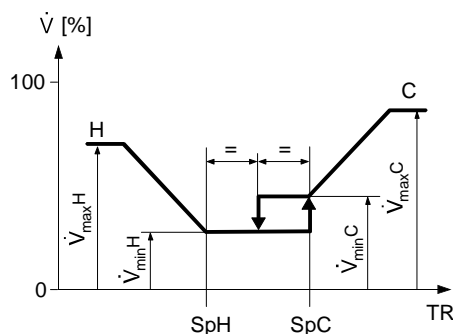
Plant diagram

- N1 Room controller
- R1 Room unit with temperature sensor
- D1 Window switch
- D2 Occupancy sensor
- D3, D4 Momentary-contact switches for 2 lighting groups on/off
- B6 Daylight sensor via LON bus
- Q1, Q2 2 lighting groups
- YE Extract air
- YS Supply air
- YH Heating valve

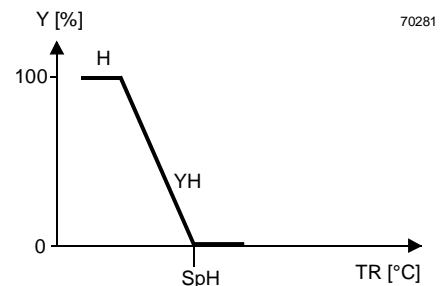


Sequence diagram

- V Air volume
- TR Room temperature
- SpH Effective heating setpoint
- SpC Effective cooling setpoint
- VmaxH Max. air volume, heating
- VminH Min. air volume, heating
- VmaxC Max. air volume, cooling
- VminC Min. air volume, cooling
- Y Output signal
- H Heating sequence
- YH Heating valve



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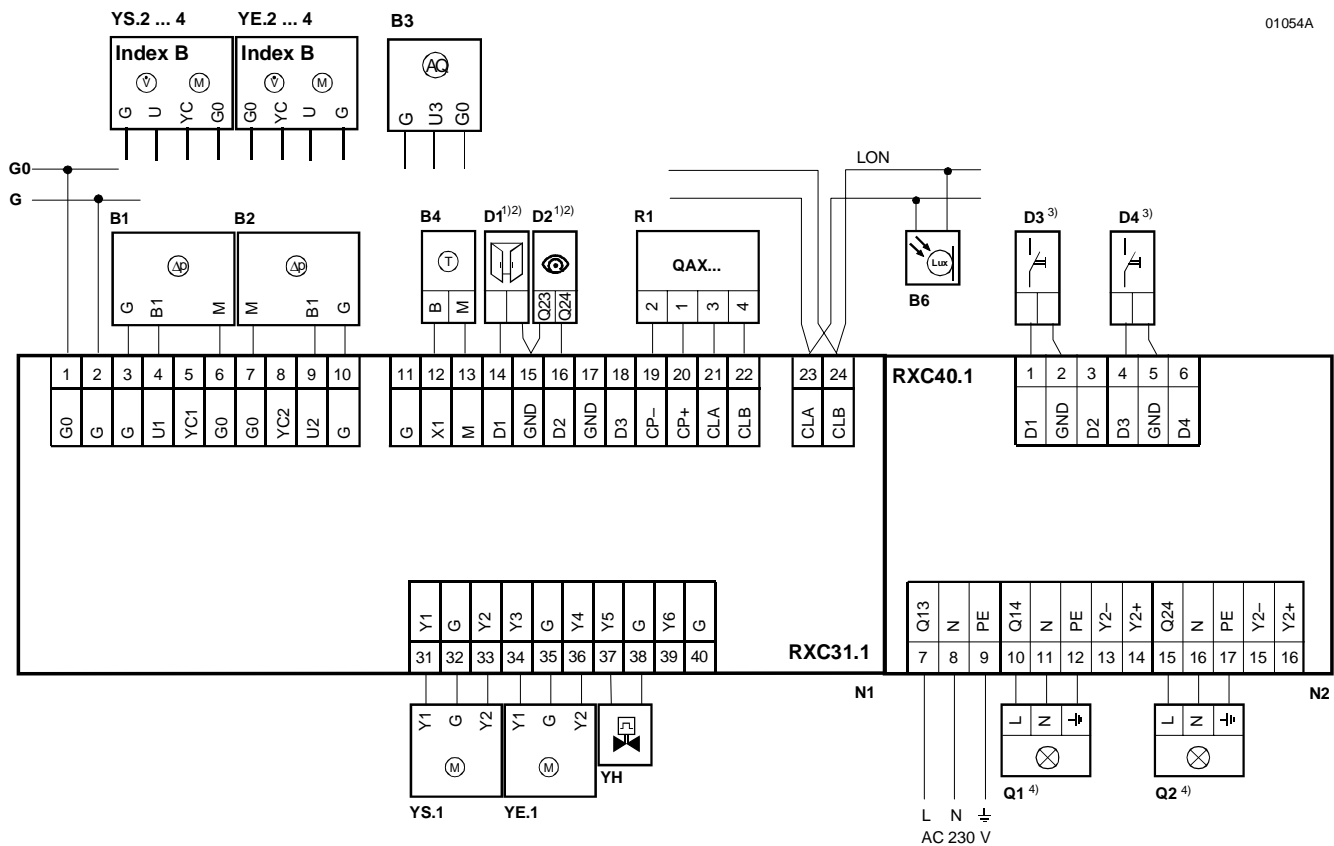
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Functions

A detailed description of the lighting and window-blind control functions will be found at the beginning of this section in document CA2A3825E00, "INT – Function description". The HVAC functions are described in CA2A3817E00, " VAV – Function description".

Function	Brief description	See CA2A3825E00
2 lighting groups On/Off	<ul style="list-style-type: none"> – Manual on/off operation with momentary-contact switches – Manual on/off operation via LON bus – Control signals – Daylight sensor 	3.2, 3.4 3.4, 3.6 3.6 3.6
Compatible controllers	INT10 requires the RXC31.1 basic controller with the RXC40.1 extension module	

Connection diagram



- 1) Type of operation (N/O or N/C) can be selected
- 2) **Either** an occupancy sensor **or** a window contact may be connected (but not both)
- 3) Momentary-contact switches (without mechanical lock)
- 4) Max. load per output: filament lamps: 2.5 kW, fluorescent lamps: 1.5 kVA

Momentary-contact switches

The table shows how the digital inputs for momentary-contact switches are assigned to the outputs. (The original assignments can be changed with the RXT10.1.)

Switch	Digital input	Output	Lighting group controlled
D3	D1 (RXC40.1)	Q14 (RXC40.1)	Q1
D4	D3 (RXC40.1)	Q24 (RXC40.1)	Q2

Equipment list

Ref.	Description	Type	Data sheet
B1, B2	Differential pressure sensor	QBM62.1...	1913
		QBM62.2...	1914
		QBM63/... ,	1912
		QBM64/...	1912
		QBM65-...	1916
		QBM65-.../C	1919
B3	Air quality sensor	QPA63	1958
B4	Room temperature sensor	QAA24	1721
B6	Daylight sensor via LON bus	Third-party device	–
D1	Window contact ^{1) 2)}	Third-party device	–
D2	Occupancy sensor ^{1) 2)}	Third-party device	–
D3, D4	Momentary-contact switches for on/off lighting ³⁾	Third-party	–
N1	Room temperature controller	RXC31.1	3844
N2	Extension module for lighting control	RXC40.1	3842
Q1, Q2	Lighting groups ⁴⁾	Third-party	–
R1	Room unit	QAX30.1, 31.1	1741
	(or flexible room unit via LON bus)	QAX32.1	1641
		QAX34.1	1645
		QAX39.1	1646
		QAX50.1	1648
	Wireless room unit Receiver	QAX90.1, 91.1	1643
		RXZ90.1	1644
YS.1, YE.1	Damper actuators (AC 24 V, 3-position) for supply air / exhaust air	GLB13...1E, GDB13...1E	4624
		GLB13...2E, GDB13...2E	4654
YS.2, YE.2	Damper actuators(0...10 V control signal) for supply air / exhaust air	GLB16...1E, GDB16...2E	4634
			4664
YS.3, YE.3	VAV compact controller (function type CON) for supply air / exhaust air	GDB181.1E/3, GLB181.1E/3	3544
YS.4, YE.4	VAV compact controller (function type 3-position) for supply air / exhaust air	GDB181.1E/3, GLB181.1E/3	3544
YH	Thermic heating valve (AC24V, 2-position PWM control)	STE71.1	4874

1) Type of operation (N/O or N/C) can be selected

2) **Either** an occupancy sensor **or** a window contact may be connected (but not both)

3) Momentary-contact switches (without mechanical lock)

4) Max. load per output: filament lamps: 2.5 kW, fluorescent lamps: 1.5 kVA

Configuration

Application INT10 incorporates the following parameters, set with the RXT10.1 commissioning and service tool (menu: **Device, Configuration, Settings**).

See CA2A3817E08 (application VAV08) for notes on setting the parameters for the HVAC functions.

Menu	Parameters	Values and Range	Default setting
Lighting	Automatic switch-on	Enabled / Disabled	Disabled
	<i>Building in use</i>	Enabled / Disabled	Disabled
	<i>Building not in use</i>	Enabled / Disabled	Disabled
	Automatic switch-off	Enabled / Disabled	Enabled
	Off timer	0 ... 90 min	0 min
	Manual off disable	Enabled / Disabled	Disabled
	State after power-up	On / Off / Last state	Last state
Daylight	Mode	Master / Slave	Master
	Off threshold (A)	On/Off hysteresis (B) ... 2500 Lux	750 Lux
	On/Off Hysteresis (B)	0 ... Off threshold (A)	100 Lux
	Switch-on delay	0 ... 60 min	5 min
	Switch-off delay	0 ... 60 min	5 min
LONMARK bindings	See "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	RXC31.1 room controllers with application INT10	RXC31.1/INT10
15	Extension modules for lighting control	RXC40.1

Notes

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

Example 2

2	RXC31.1 room controllers	RXC31.1 / 00031
2	Extension modules for lighting control	RXC40.1

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