SIEMENS

Building Technologies

# Desigo™ RXC
# Room automation system
## System description

**Version 5 and later**

# Contents




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# Comfort and well-being in every room

*Most people in the industrial world spend some 90% of their time indoors. About one third of this time is spent at work. Against this background, it is clear that good indoor air quality, the right temperature and draught-free air renewal are vital prerequisites for motivation and a sense of well-being.*

The Desigo RXC room automation system provides individual demand-based comfort for the users of public buildings, offices, schools, hotels, etc.

The room controllers and room units in the Desigo RXC range control and monitor comfort conditions in rooms and self-contained zones.
These functions are finely tuned to the specific requirements of the area concerned (room or zone).

This makes it possible to satisfy individual comfort requirements and create a sense of well-being while at the same time saving energy.

**Easy control of HVAC, lighting and blinds**

The modular design of the Desigo RXC range means that if required, the operation of lighting and blinds can be combined with HVAC control. Using just one operator unit, room users can adjust all the room functions to suit their requirements.

**Stand-alone operation at field level, or integration into the building automation and control system**

The devices in the Desigo RXC range communicate with each other and with other LONMARK-compatible devices using a standard protocol (LONMARK® over LON bus). If required, devices at the field level can be integrated seamlessly into the Desigo building automation and control system. This is where all the higher-level control and coordination tasks, such as time scheduling or energy optimization activities are performed.


Integrated operation of HVAC, lighting and blinds

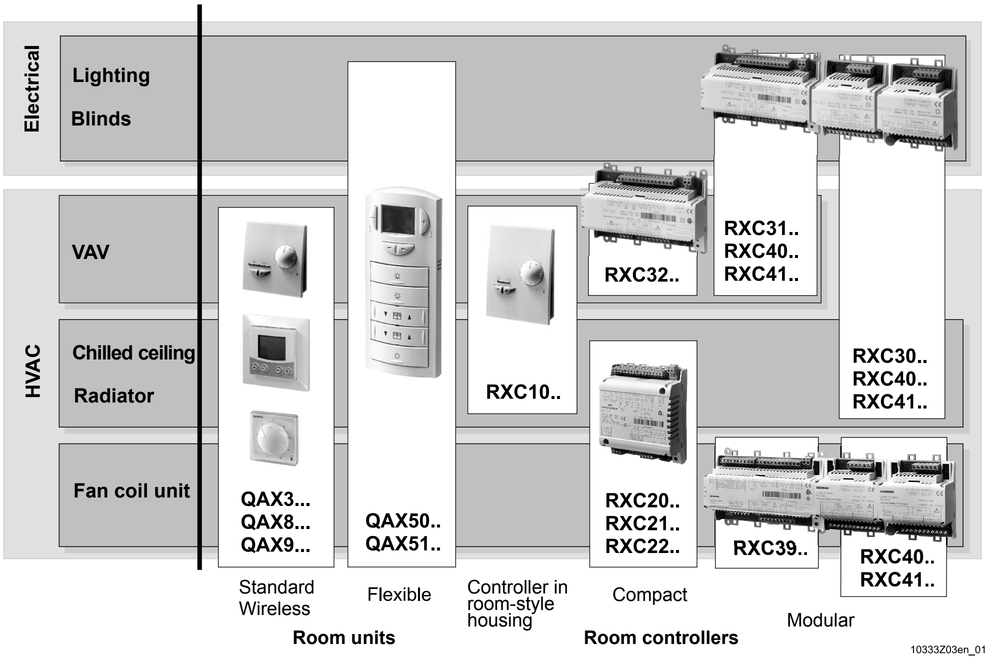
# Range overview

Desigo RXC is an innovative range of room controllers, extension modules and room units. Data communications are based on LONWORKS technology.

### The Desigo RXC hardware

The range comprises *compact* and *modular* room controllers, easy-to-operate room units and controllers in room-style housings. The input and output configurations of the controllers, and the style of housing are optimized for each specific field of application. The modular room controllers include basic modules for HVAC control, which can be combined with extension modules for lighting and blind control.

The HVAC functions are operated via standard room units or controllers in a room-style housing. A configurable flexible room unit is available for combined operation (HVAC, lighting, blinds).




### The Desigo RXC software

All the room controllers, and the flexible room unit, are loaded with application software (referred to here simply as the "application") which contains the control program for the associated room or area. The devices are pre-programmed with the required application before they leave the factory.

Siemens Building Automation maintains a comprehensive library of applications covering a wide range of HVAC and electrical applications (see the overview on page 10).

The RXT10 commissioning and service tool is used for the engineering and commissioning of a network incorporating the Desigo RXC range. This tool also supports the creation of communications bindings between LONMARK-compatible devices (Desigo RXC or third-party devices).

# The room controllers

### RXC10, the room controller in a room-style housing:

This controller is a cost-effective combination of a room unit and an HVAC controller. It is particularly suitable for radiator-and-chilled-ceiling applications, and for simple VAV systems.

### RXC20, RXC21, RXC22 and RXC39 compact room controllers

The input / output configuration and mounting options of these controllers make them ideal for fan coil applications. They can be installed in the fan coil unit, in control panels or on ducting.

Applications for radiators and chilled ceilings are also available.

### RXC32 compact room controller

The RXC32 controller is particularly suitable for standard single-duct VAV systems. It comes with a built-in volume sensor.

### RXC30 and RXC31 modular room controllers

The RXC30 basic module is fully optimized for radiator and chilled-ceiling control as well as the control of two rows of lights.

The RXC31 basic module provides flexible control solutions for VAV supply and extract air systems. A configurable interface (DC 0 ... 10 V) permits the connection of compact volume controllers.

The RXC31 basic module is designed for special applications.

### RXC40 and RXC41 extension modules for lighting and blinds

The modular room controllers RXC30 / 31 / 38 can be combined with either one or two extension modules, type RXC40 and / or RXC41. These are simply plugged into the basic module. As a result, only the basic module needs to be loaded with an application and connected to the LON bus.

The RXC40 extension module allows two additional rows of lights to be switched and dimmed; the RXC41 module permits the switching of two drive motors for blinds.

### Free scope for mounting

Apart from the RXC10, the room controllers can be mounted wherever preferred (e.g. in ceiling voids, under floors, in VAV boxes, ducting etc.).

### Inputs and outputs

The range of functions of the inputs and outputs is determined by the particular application and its parameters. For example, the AC 24 V outputs can be configured for thermic valve actuators or for 3-position actuators (depending on the application).

| **Connections / functions** | **RXC.10** | **RXC20** | **RXC21** | **RXC22** | **RXC30** | **RXC31** | **RXC32** | **RXC39** | **RXC40** | **RXC41** |
|---|---|---|---|---|---|---|---|---|---|---|
| Power supply | AC 24 V | AC 230 V | AC 230 V | AC 230 V | AC 230 V | AC 24 V | AC 24 V | AC 24 V | Via RXC3... | |
| LON bus (LONMARK compatible) | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| PPS2 interface for standard room unit (PPS2) | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| Socket for commissioning and service tool | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| Plug-in connection between basic module and extension modules | | | | | ✓ | ✓ | | ✓ | ✓ | ✓ |
| Digital inputs [1)] | 2 | 2 | 2 | 2 | 4 | 3 | 2 | 4 | 4 | 4 |
| Analog input for LG-Ni 1000 temp. sensor | | 1 | 1 | 1 | | 1 [4)] | 1 | 2 [4)] | | |
| DC 0 ..10 V analog inputs | | | | | | 3 [4)] | | 1 [4)] | | |
| AC 24 V outputs [2)] | 2 | 2 | 4 | 2 | 2 | 6 | 4 | 2 | | |
| Volt-free relay outputs [3)] | | 1 | 3 | 4 [7)] | 2 | | | 2 | 2 | 4 |
| Output DC 1 ... 10 V for dimming | | | | | | | | | 2 | |
| DC 0 ..10 V outputs [5)] | 1 | | | | | 2 | | 4 | | |
| Built-in volume sensor | | | | | | | ✓ | | | |
| Built-in room temperature sensor | ✓ | | | | | | | | | |
| Room temperature setpoint adjustment | ✓ | | | | | | | | | |
| Selection of operating mode (⏻ / Auto) [6)] | ✓ | | | | | | | | | |

1) For window switches, presence detectors, dew point sensors, thermostats, or switches for lighting and blinds
2) To drive valve actuators or external contactors for electric heating coils (for details refer to the applications library CA110300)
3) For control of fans, lights or blind drives (not for RXC20 / RXC21 and RXC22)
4) One of the DC 0 ... 10 V inputs can be selected for LG-Ni1000 sensors
5) Outputs for compact volume controller DC 0 ... 10 V
6) Operating mode Auto: *Comfort* mode
⏻: *PreComfort (Standby)* or *Economy*, depending on control from the building automation and control system (see page 17)
7) One relay output for electric re-heater

# The room units: the key to individual comfort

The room units in the Desigo RXC range cover a wide variety of needs represented by the various room occupants. When designing these stylish room units, the designers also paid special attention to ergonomic factors.

The HVAC system, lighting and blinds can be operated in various ways:

- In the conventional manner, with standard room units for HVAC, and electric switches to control lighting and blinds
- With the integrated room unit, which combines the operation of HVAC, lighting and blinds in a single device.
- With wireless room units, which offer scope for location anywhere in the room, and permit averaging.

### Conventional room units

The standard room units, types QAX30.1 ... QAX39.1, are available for HVAC applications. They are connected to the room controller via a special (PPS2) interface. In addition to the built-in temperature sensor, all room units incorporate a socket for the RXT10 commissioning and service tool.

For applications involving the control of lighting and blinds, conventional switches can be used. This option is primarily of interest in systems retrofitted with Desigo RXC.

### Integrated room units

The QAX50 and QAX51 flexible room units combine the operation of HVAC, lighting and blinds in a single device. The functions of each room unit are defined with application software in accordance with the room configuration. The room units are then fitted accordingly with the appropriately labeled pushbuttons. These integrated room units communicate with the room controllers via the LON bus.

### Flush mounting room units with elegant design

The QAX84.1/PPS2room unit can be used in connection with standard switches and for in-wall mounting. It is delivered with a Siemens Delta-I bezel, but can also be ordered in separate components to fit in bezels from various manufacturers:
Operator unit (QAZ84.1) and PPS2 flush mounting bus coupling unit (RXZ80.1 / PPS2).

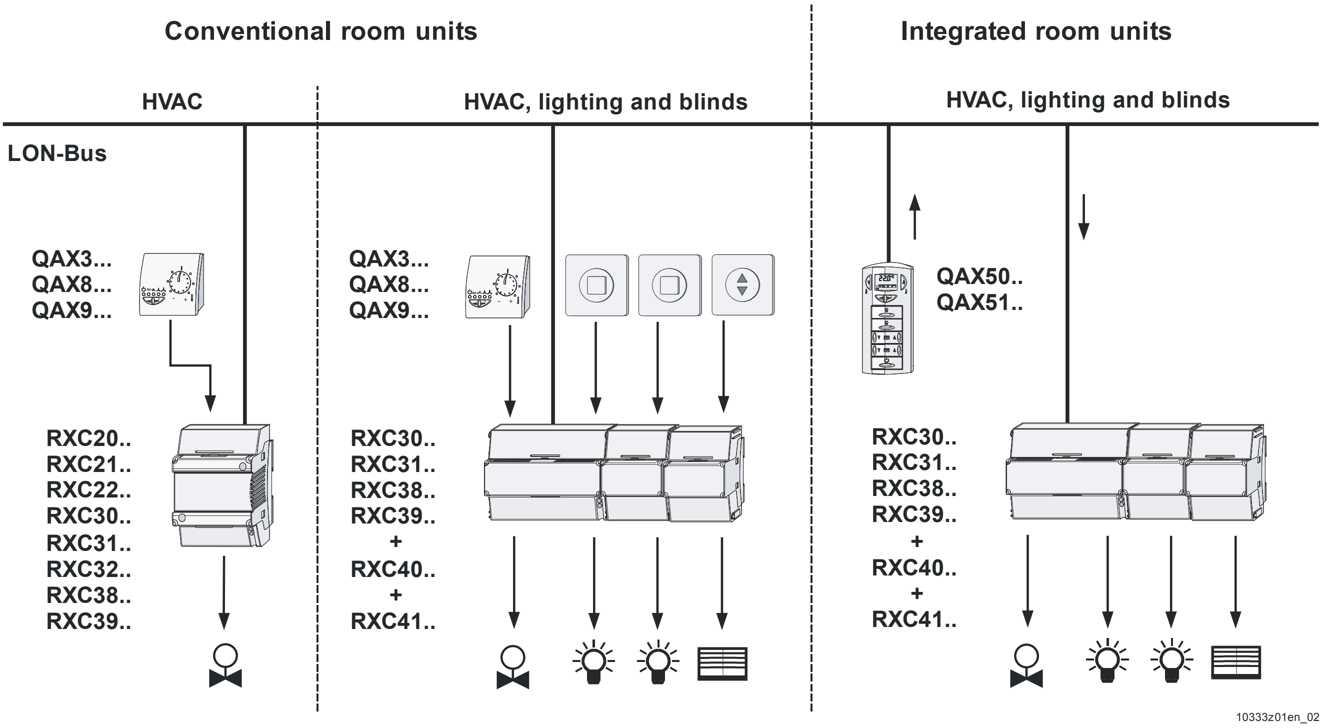
### Wireless room operation

The wireless room units, types QAX90.1 and QAX91.1 are used in conjunction with the RXZ90.1 receiver (PPS2). They are ideal for:

- Use in renovation projects (no wiring required)
- Rooms with flexible partitioning and furnishing
- Simple derivation of average temperature values (max. 5 sensors)

### EnOcean room units

The batteryless and wireless room units, types QAX95.1 and QAX96.1 are used in conjunction with a gatewaRXZ95.1 (LONWORKS).




| Room unit functions | QAX30.1, QAX31.1 | QAX32.1 | QAX33.1 | QAX34.1 | QAX84.1/ PPS2 | QAX39.1 | QAX50.., QAX51.. | QAX9x.4 |
|---|---|---|---|---|---|---|---|---|
| |   |  |  |  |  |  |  |   |
| Built-in room temperature sensor | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ |
| Room temperature setpoint adjustment | QAX 31.1 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | QAX 96.4 97.4 98.4 |
| Selection of operating mode (⏻/Auto)[1] | | ✓ | ✓ | ✓ | ✓ | | ✓ | 97.4 98.4 |
| Selection of operating mode (⏻/Auto)[1] and fan speed | | | ✓ | ✓ | ✓ | | ✓ | 98.4 |
| LCD display for room temperature, operating mode and fan speed | | | | ✓ | ✓ | | ✓ | |
| Exchangeable pushbuttons for control of lighting and blinds | | | | | | | ✓ | |
| Downloadable application software for operation of lighting and blinds | | | | | | | ✓ | ✓ |
| PPS2 interface to room controller | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ |
| LonMark-compatible bus communication | | | | | | | ✓ | ✓ |
| Wireless room units [2] | | | | | | | | |
| Batteryless EnOcean technology [3] | | | | | | | | |

1) Operating mode Auto: *Comfort* mode
⏻: *PreComfort (Standby)* or *Economy*, depending on control from the building automation and control system (see page 17)

2) The RXZ90.1 receiver is the PPS2 interface for the QAX90.1 / 91.1 room units

3) The RXZ95.1 gateway is the LonWorks interface to the QAX95.1 / 96.1 room units

# Applications

The scope of the Desigo RXC range is defined by the pre-programmed application software. The next pages provide an overview of the options available and the devices required.

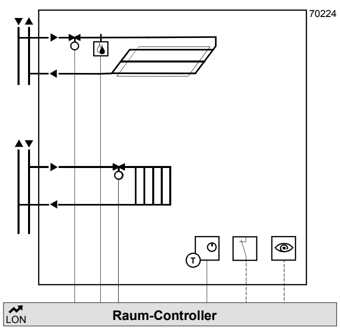
The applications can be downloaded with the RXT10 commissioning and service tool, which contains the complete applications library.

Due to intelligently defined default values in the applications, engineering involves simply determining a small number of parameters, e.g.:

- 2-position or 3-position control of valves and actuators
- Temperature setpoints
- Manual or automatic fan control

For the complete list of applications, refer to the currently valid compatibility list (Valid Version Set) in the applications library, document CA110300.

### Fan coil systems (examples)



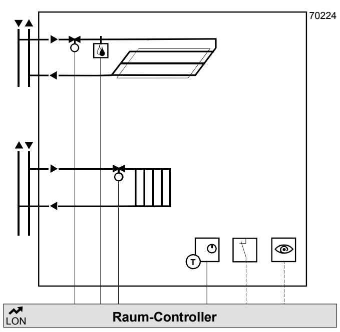

| Appl. | Description | Controller |
|---|---|---|
| FNC02 | Two-pipe system with change-over | RXC20 / RXC21 / RXC39 |
| FNC03 | Two-pipe system with change-over and electric re-heater | RXC20 / RXC21 / RXC22 / RXC39 |
| FNC04 | Four-pipe system | RXC20 / RXC21 / RXC39 |
| FNC08 | Four-pipe system with room supply air cascade control | RXC21 / RXC39 |
| FNC10 | Two-pipe system with change-over and outside air damper | RXC21 |
| FNC12 | Four-pipe system with outside air damper | RXC21 |

etc.

Common functions

- Window contact, occupancy sensor, four operating modes
- Manual fan control via room unit
- Automatic fan control
  (RXC20 single-speed, RXC21, RXC22 three-speed)
- Options with 2-pipe systems: heating only, cooling only or change-over, via LON bus

### Heated / chilled ceilings and radiators (examples)



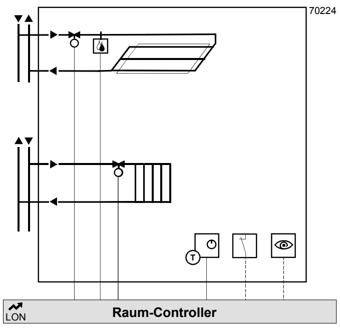

| Appl. | Description | Controller |
|---|---|---|
| CLC01 | Chilled ceiling | RXC20 / RXC10 |
| CLC02 | Chilled ceiling and radiator | RXC20 / RXC10 |
| CLC03 | Chilled ceiling and electric radiator | RXC20 |
| CLC06 | Chilled / heated ceiling, two-pipe system with change-over via LON bus | RXC20 / RXC10 |
| CLC07 | Chilled / heated ceiling and radiator, two-pipe system with change-over via LON bus | RXC20 |
| RAD01 | LTHW radiator | RXC20 / RXC10 |
| RAD03 | Electric radiator | RXC20 |

etc.

Common functions

- Window contact, occupancy sensor, four operating modes
- Dew point sensor

## VAV systems (examples)



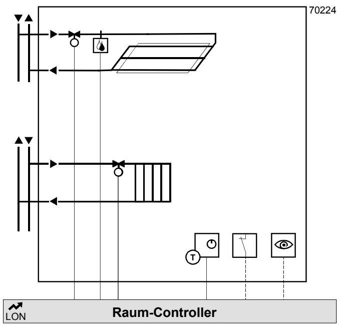

| Appl. | Description | Controller |
|---|---|---|
| VAV01 | Single duct supply or extract air system | RXC10 / RXC32 |
| VAV02 | Single-duct supply air system with re-heater / cooler | RXC32 |
| VAV03 | Single-duct supply air system with electric re-heater | RXC32 |
| VAV04 | Single duct supply and extract air system | RXC31 |
| VAV05 | Single duct supply and extract air system with re-heater / cooler | RXC31 |
| VAV06 | Single duct supply and extract air system with electric re-heater | RXC31 |

etc.

Common functions

- Window contact, occupancy sensor, four operating modes
- Built-in volume sensor (RXC32)
- DC 0 … 10 V inputs for external pressure / volume sensors (RXC31)
- Control of compact volume controllers with DC 0 ... 10 V (RXC10, RXC32)
- Direct control of damper actuators (RXC31, RXC32)

## Fan powered box systems (example)




| Appl. | Description | Controller |
|---|---|---|
| FPB05 | Fan powered Box (Fan-assisted VAV unit) with series fan and electric reheater | RXC31 |

Common functions

- Window contact, occupancy sensor, four operating modes
- DC 0 … 10 V inputs for external pressure / volume sensors
- Control of compact volume controllers with DC 0 ... 10 V
- Direct control of damper actuators
- DC 0 ... 10 V output for proportional control of fan

## Basic applications

With the basic application software every room controller can also be used as an I/O module. The RXT10 commissioning and service tool can be used to view the signals at the hardware inputs or to process them further at the automation level or on the management station. Similarly, the outputs of the room controllers can be controlled directly via inputs.

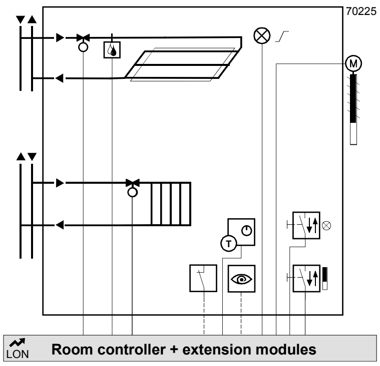
If a room controller is ordered without an application being specified, it will be programmed in the factory with the appropriate basic application before delivery.

| Appl. | Description |
|---|---|
| 00010 | Basic application for RXC10 |
| 00020 | Basic application for RXC20 |
| 00021 | Basic application for RXC21 |
| 00022 | Basic application for RXC22 |
| 00030 | Basic application for RXC30 |
| 00031 | Basic application for RXC31 |
| 00032 | Basic application for RXC32 |
| 00034 | Basic application for RXC34.1 (NOT for RXC34.1/ALG) |
| 00038 | Basic application for RXC38 |
| 00039 | Basic application for RXC39 |

## Combined applications

The HVAC applications covered by the modular RXC30, RXC31 and RXC39 controllers can be combined with lighting and blind control (extension modules RXC40 and RXC41).

The combined application consists of an HVAC application and one or more electrical functions.




**Examples:**

| Appl. | HVAC Appl. | Electrical function | | | Controller | | | |
|---|---|---|---|---|---|---|---|---|
| | | Lighting on/off[1] | Lighting dimming | Blind up/down[2] | RXC30 | RXC31 | RXC40 | RXC41 |
| INT01 | CLC02[3] | 2 x | | | 1 | | | |
| INT02 | CLC02[3] | 4 x | | | 1 | | 1 | |
| INT03 | CLC02[3] | 2 x | 2 x | | 1 | | 1 | |
| INT04 | CLC02[3] | 2 x | | 2 x | 1 | | | 1 |
| INT05 | CLC02[3] | 2 x | | 4 x | 1 | | | 2 |
| etc. | | | | | | | | |
| INT10 | VAV08[4] | 2 x | | | | 1 | 1 | |
| INT11 | VAV08[4] | 4 x | | | | 1 | 2 | |
| INT12 | VAV08[4] | | 2 x | | | 1 | 1 | |
| INT15 | VAV08[4] | 2 x | | 2 x | | 1 | 1 | 1 |
| etc. | | | | | | | | |

1) With or without daylight sensor via LON bus, as required
2) With or without slat adjustment, as required
3) CLC02: Chilled ceiling and radiator-type heating
4) VAV08: Single duct supply and extract air system with radiator

## The flexible room unit for made-to-measure operation


The flexible room unit was designed specifically for the operation of combined applications (see pages 8 and 9).
The unit is loaded with an application for operation of lighting and blinds, and fitted with the appropriate pushbuttons.

The available applications are described in the Desigo RXC application library (CA110300).

The flexible room unit can be ordered as follows:

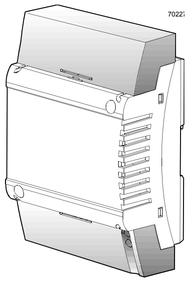
**QAX50:** with pushbuttons for HVAC, on / off control of lighting and control of blinds
**QAX51:** with pushbuttons for HVAC, dimming control of lights and control of blinds

The appropriate application is downloaded by means of the RXT10 commissioning and service tool.

## Special applications

If the existing Desigo RXC standard applications do not meet the client's requirements concerning functionality and combination of functions, HQ can realize special applications. Please write a service request, using the request form on the intranet.

# Installation

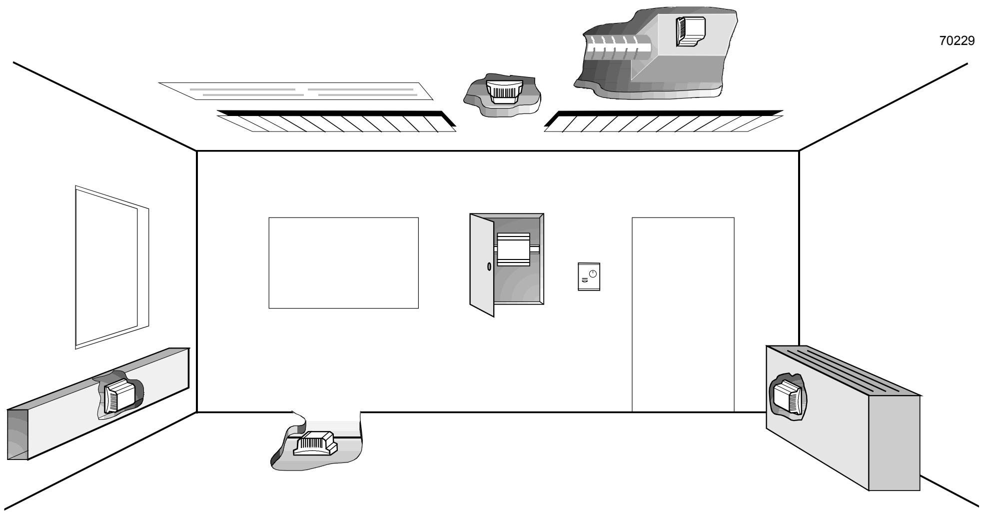


Example: RXC20
with terminal covers

The room controllers in the Desigo RXC range are designed for various types of installation:

- In fan coil units (mounted with screws or on DIN rails)
- In control panels (on DIN rail)
- In ceiling voids
- Under floors
- In sill or floor ducting
- On VAV boxes
- On flush-mounting boxes (RXC10, QAX.50 / 51)

Terminal covers are required when mounting the controllers outside control panels or fan coil units (see page 21, accessories).




Various options for installation

# Engineering and commissioning

In the engineering phase, the number of devices, their application and the LONMARK bindings between devices, and between these devices and any third-party equipment are determined according to the distribution of rooms and zones in the building.

The network structure defined at the engineering stage (applications, parameters, LONMARK bindings etc.) is mapped to the devices in the commissioning phase.

### RXT10 commissioning and service tool

The RXT10 commissioning and service tool provides efficient support both for engineering in the office and for commissioning on site.
(In Desigo V5 we also admit the use of standard LNS tools, e.g. NL220, LonMaker).

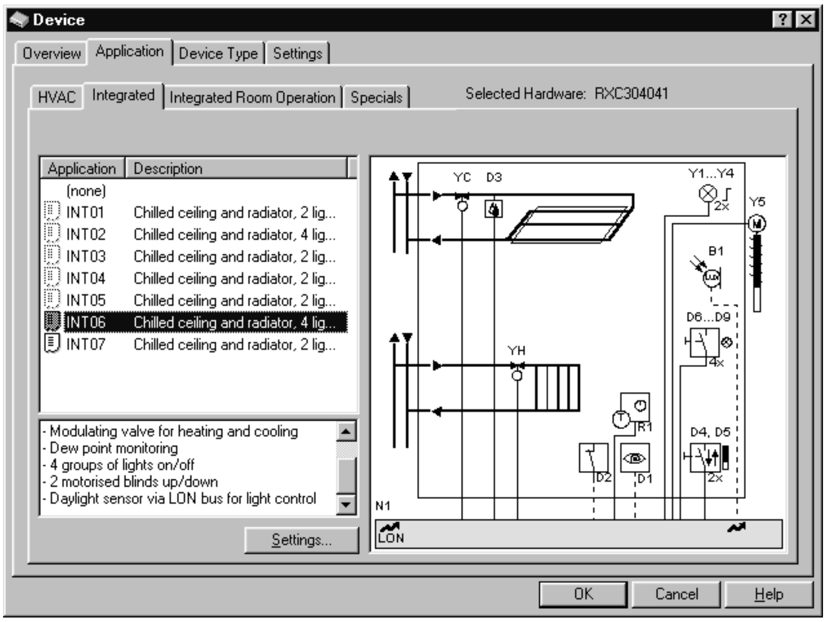
The RXT10 software is designed for use on a PC running on Windows 7 and Windows 8.1.

The commissioning and service tool is used for the following:

- Selecting the application for each room
- Determining the required room controllers and setting their parameters
- Integrating LONMARK-compatible third-party devices (e.g. LNS plug-ins)
- Creating the LONMARK bindings
- Dividing the network into segments and adding routers
- Addressing the controllers
- Loading the network structure (including applications) into the devices
- Commissioning support
- Project documentation
- Graphics-based network view
- etc.

### Selecting the application and controllers

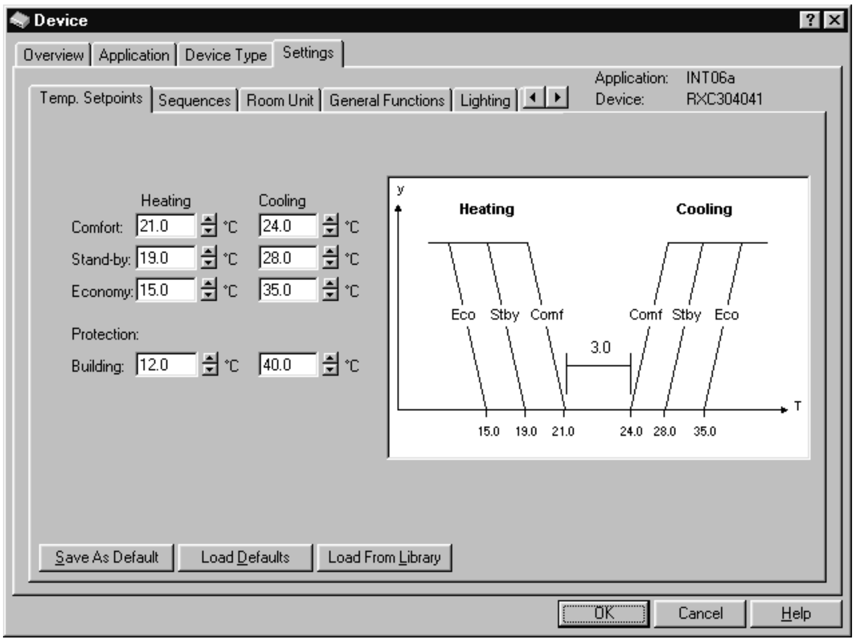
From the comprehensive application library, first the appropriate application is selected and then the appropriate devices (in the example below, this means application INT06 and the RXC30 basic module with extension modules RXC40 and RXC41).




Selecting the application

### Parameter setting

Each application has a number of parameters, such as temperature setpoints, type of output sequence (2-position or 3-position), type of fan control etc. These parameters are now adjusted according to requirements. In most cases, however, the factory default settings can be retained.



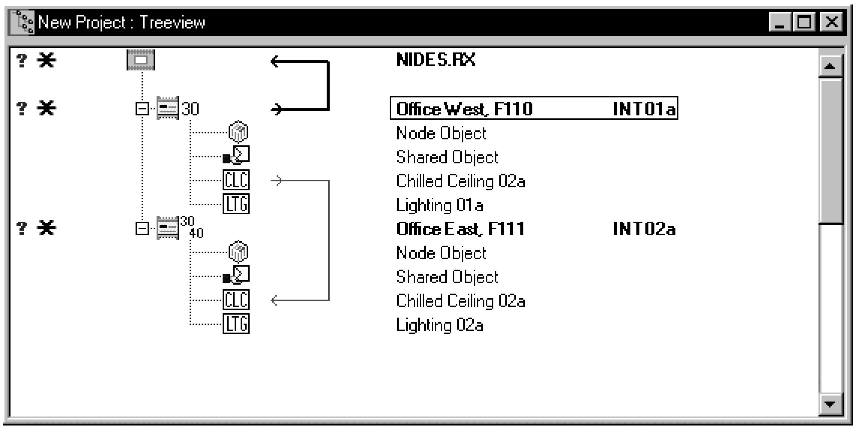

Setting the temperature setpoints

### Communication bindings

The bus communications in the Desigo RXC range are based on LONWORKS technology. This allows devices to communicate with each other and with LONMARK-compatible devices from other manufacturers. So, for example, an outside temperature sensor can be connected to a number of room controllers via the LON bus.

Changes in building use can also be accommodated without the need for rewiring, simply by changing the bindings, e.g. master / slave.

The graphical user interface of the RXT10 tool can be used to create these LONMARK bindings with a convenient "drag and drop" operation.




Example: Creating bindings

## Addressing

The physical identification number (neuron ID) of each device (Desigo RXC or a LONMARK-compatible third-party device) must be modified to match the logical address (e.g. location) in the network structure. The RXT10 tool offers various options for efficient addressing.

## Loading the network structure

The network structure (applications, parameters, LONMARK bindings) must now be mapped in the individual devices:
On site, this can be carried out from any point on the LON bus.
It is also possible, however, to address the devices individually and download them with the network structure prior to installing them on site.

## Connection of the RXT10 commissioning and service tool

For commissioning on site, a laptop running the RXT10 tool software is connected to the LON bus. All the Desigo RXC devices on the LON bus can be addressed from this point. If the room controllers are installed in a location where they cannot be seen, a room unit can also be used for access to the LON bus: all the room units also incorporate a tool socket.

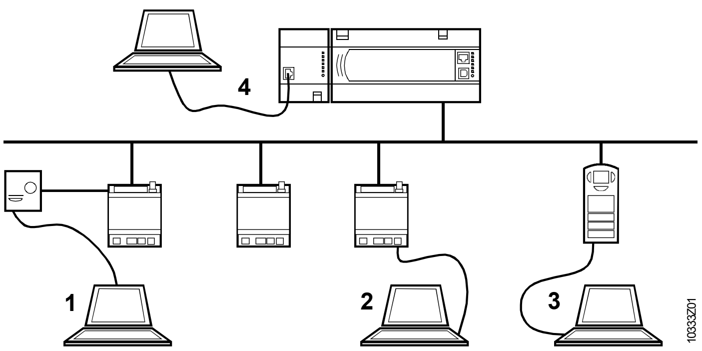
## Adjusting the parameters

If necessary, parameters such as temperature setpoints can be adjusted during commissioning or later when servicing the system.

## Commissioning support

The RXT10 tool includes convenient functions to support commissioning and service, for example:

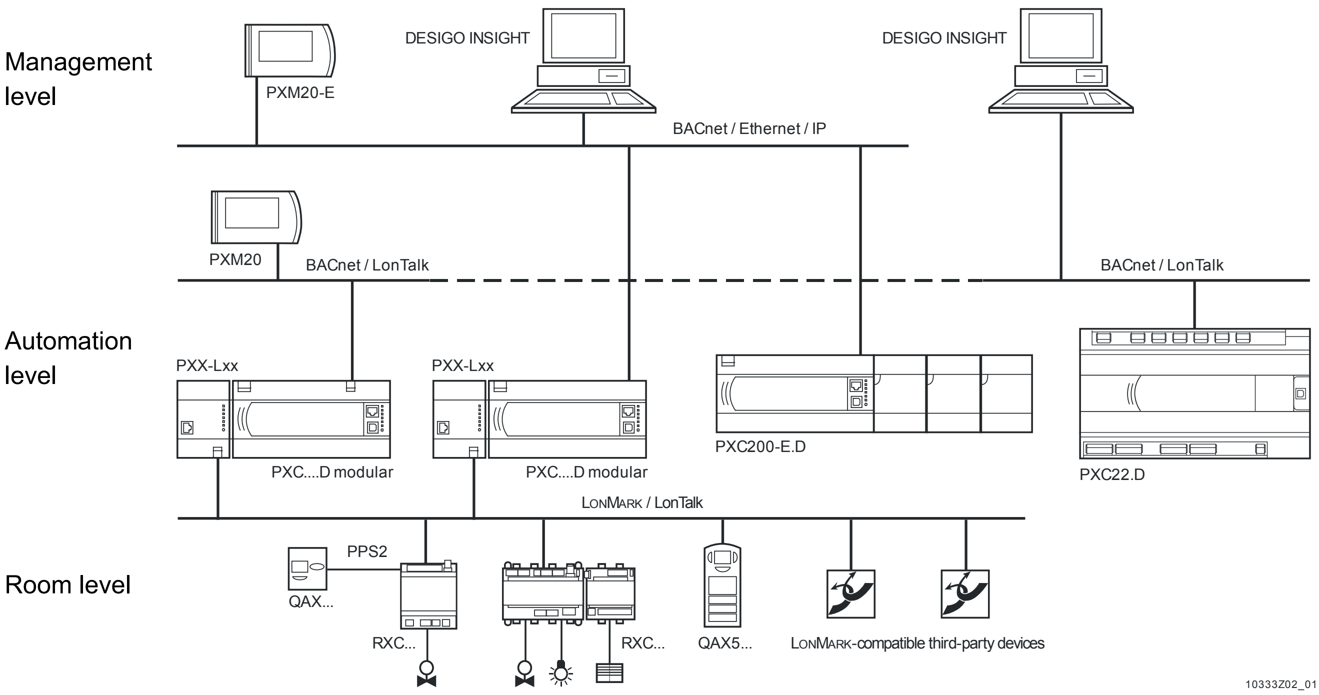
- Interrogating or restoring network data
- Monitoring and testing the inputs of one or more controllers
- Direct control of the outputs of one or more controllers for test purposes or to balance hydraulic circuits
- Trend features for long-term data logging
- Report functions for printing project data




**Options for connecting the RXT10 tool:**

1) Connection to the standard room unit
2) Connection to the room controller
3) Connection to the flexible room unit
4) Connection to the PXC....D + PXX-Lxx system controller (see page 17)

# Integration into the building automation and control system




### Stand-alone operation at field level

The Desigo RXC room automation system can be operated as a stand-alone system. All the required functions are made possible by means of LON communications between the devices.

### Integration into the automation level

Through integration into the Desigo PX automation level, a number of further functions become available (refer to the PX system description, document CM110756).

The room level is integrated into the automation level by means of the system controller PXC....D + PXX-Lxx. This controller converts the LONMARK objects into BACnet objects, and provides comprehensive grouping functions. Up to 60 room controllers can be connected to each PXX-L11 system controller, and up to 120 to each PXX-L12 system controller.

Features of the system controllers PXC....D + PXX-Lxx:

- Concentration of data of the room controllers, and easy manipulation of this data
- Simple definition of groups
- Implementation of system functions, e.g. time schedules, trends, alarms etc.
- Coordination with the primary plant
- Efficient engineering and rational commissioning

Features of the PXM20 / PXM20-E operator unit

- Operation and monitoring of the entire automation level including inputs, outputs and the room-controller operating states.
- Display and modification of time schedules
- Graphics-based display of trend data

## Integration into the management level

Because it is integrated into the automation level, the room level can also be displayed and operated at the management level.

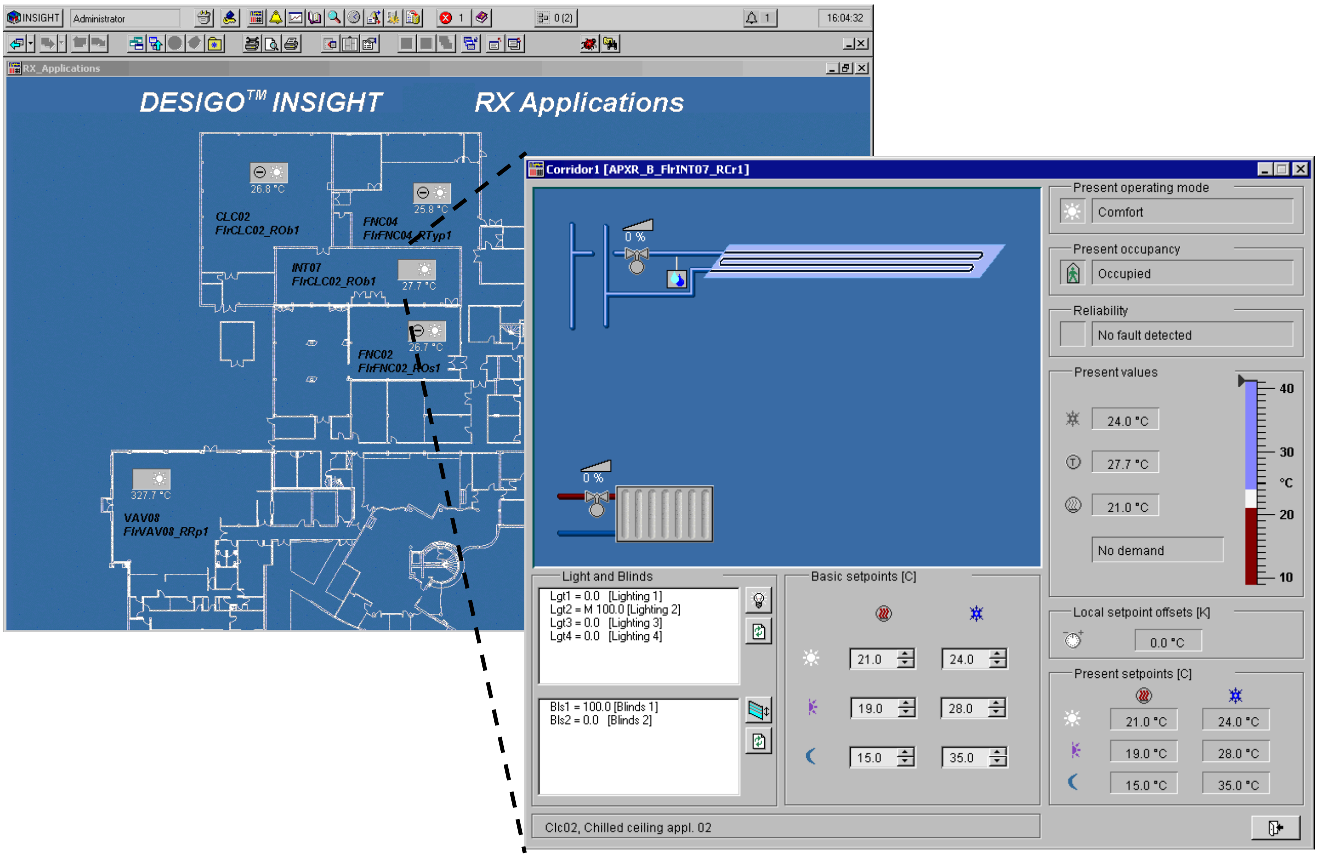
Desigo Insight is the Windows-based management station within the Siemens building automation and control system. With its modular structure it covers every level of complexity - from small buildings to large building complexes and geographically separate buildings For more information refer to the Desigo system description, document CM110660.

Depending on the degree of complexity required, the Desigo Insight management station may incorporate, for example, the following program modules for the user:

- Plant Viewer: graphics-based operation of the plant
- Time Scheduler: time schedules for a wide range of switching operations
- Object Viewer: display and modification of data point values
- Alarm Router: routing of alarm messages
- etc.

The Desigo Insight management station allows the following additional functions for control and operation of the room controllers:

- Monitoring and operation of rooms, plus trend logging
- Building use and room occupancy time schedules
- Integration of the controller data into plant graphics
- Central control of setpoints, operating modes, lighting, blinds etc.




For every standard application a suitable super genie is available in Desigo Insight

### Time schedules for building use and room occupancy

One option which is frequently employed at the automation level or in the Desigo Insight management station is the use of central *Building use* and *Room occupancy* time schedules. These make it possible to optimize the supply of energy to match varying periods of room occupancy.

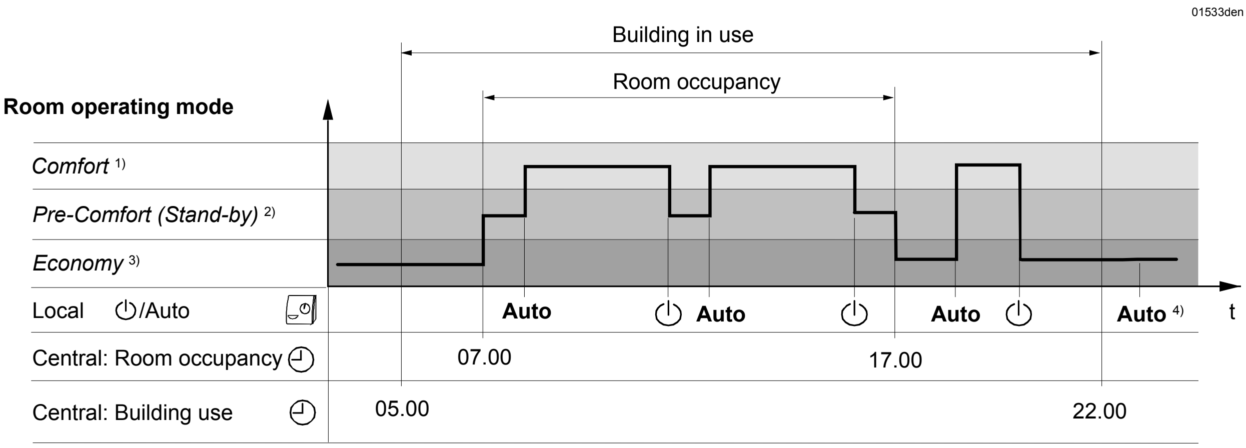
The *Building occupancy* time schedule determines the overall period of time during which the building is in use. Outside this period, the plant (e.g. HVAC primary plant) remains available, but at reduced output.

The *Room occupancy* time schedule determines the occupancy times in individual rooms or groups of rooms. This enables individual tenants of the building, for example, to define their own occupancy hours.

### Central and local control of operating modes

The diagram below shows an example of how the central time schedules (*Building use* and *Room occupancy*) interact with the local ⏻ / Auto control button on the room unit (operating as an occupancy function in this case).

Local control with an occupancy sensor is also possible.




**Example of the routines over a typical day:**

| | |
|---|---|
| 1) *Comfort* | The room temperature is within the comfort range. |
| 2) *PreComfort (Standby)* | The heating or cooling output is slightly reduced (during the temporary absence of the room occupant) |
| 3) *Economy* | The heating or cooling output is reduced significantly. |

4) Outside the times defined by the *Building use* program, local operation has no influence on the operating mode.

# Overview of the Desigo RXC equipment

| Desigo RXC controllers | | Documentation |
|---|---|---|
| **RXC10** | Room controller in room-style housing for chilled ceilings, radiator-type heaters and VAV systems (supply or extract air) | CA2N3830 |
| **RXC20, RXC21, RXC22** | Room controllers for fan coil systems, chilled ceilings and radiator-type heating | CA2N3834 |
| **RXC30** | Room controller for radiators and chilled ceilings, with lighting control | CA2N3840 |
| **RXC31** | Room controller for VAV systems (supply and extract air) | CA2N3844 |
| **RXC32** | Room controller for VAV systems (supply air, with built-in pressure sensor) | CA2N3845 |
| **RXC34.1 *)** | Laboratory fume hood controller for fast VSV control | CA2N3847 |
| **RXC34.1/ALG *)** | Laboratory room controller for fast VSV control | CM2N3848 |
| **RXC38 *)** | Room controller for special applications | CM2N3841 |
| **RXC39** | Room controller for fan coil systems | CM2N3856 |
| **RXC40** | Extension module for RXC30 / 31 / 38, / 39 for lighting control | CA2N3842 |
| **RXC41** | Extension module for RXC30 / 31 / 38, / 39 for control of blinds | CA2N3843 |

| Desigo RXC room units | | |
|---|---|---|
| **QAX30.1** | Room unit with temperature sensor | CA2N1741 |
| **QAX31.1** | Room unit with temperature sensor and setpoint adjuster | CA2N1741 |
| **QAX32.1** | Room unit with temperature sensor, setpoint adjuster and ⏻ / Auto switch | CA2N1641 |
| **QAX33.1** | Room unit with temperature sensor, setpoint adjuster and ⏻ / Auto / Fan switch | CA2N1642 |
| **QAX34.1** | Room unit with temperature sensor, setpoint adjuster, ⏻ / Auto / Fan switch and LCD display | CA2N1645 |
| **QAX39.1** | Universal setpoint adjuster | CA2N1646 |
| **QAX50, QAX51** | Flexible room unit with temperature sensor, setpoint adjuster, ⏻ / Auto / Fan switch, LCD display and rocker switches for lighting and blinds | CA2N1648 |
| **QAX84.1/PPS2** | Flush mounting room unit with temperature sensor, setpoint adjuster, ⏻ / Auto / Fan switch and LCD display | CA2N1649 |
| **QAX90.1 *)** | Wireless room unit with temperature sensor | CA2N1643 |
| **QAX91.1 *)** | Wireless room unit with temperature sensor and setpoint adjuster | CA2N1643 |
| **RXZ90.1 *)** | Receiver with PPS2 interface, for wireless room units | CA2N1644 |
| **QAX95.1 *)** | EnOcean room unit with temperature sensor | CM2N1660 |
| **QAX96.1 *)** | EnOcean room unit with temperature sensor and setpoint adjuster | CM2N1660 |
| **QAX95.4, QAX96.4, QAX97.4, QAX98.4** | Wireless and batteryless room units with EnOcean interface | CM2N1663 |
| **RXZ95.1/LON** | EnOcean gateway with LONWORKS interface | CM2N1661 |

*****) Product phased out

| Desigo RXC system controllers and tools for commissioning and service | | Documentation |
|---|---|---|
| **PXC….D, PXC…-E.D** | Automation stations, modular series | CM1N9222 |
| **PXX-L11, PXX-L12** | Extension modules (integration of 60 / 120 RXC room controllers) | CM1N9282 |
| **PXR11, PXR12 *)** | System controllers (integration of 60 and 120 RXC room controllers respectively) | CA1N9235 |
| **RXT10.3** | Commissioning and service tool (software) for maintenance of projects with integration via NIDES or PXR11, PXR12 | CM110669 |
| **RXT10.5** | Commissioning and service tool (software) for projects with integration via PXX-L11, PXX-L12, Desigo V5.1-SP and late | CM110658 |
| **RXT20.1** | Service terminal | CA2N3851 |

| Accessories | | |
|---|---|---|
| **RXZ01.1** | LONWORKS bus terminator 52.3 Ω | CA2N3861 |
| **RXZ02.1** | LONWORKS bus terminator 105 Ω | CA2N3861 |
| **RXZ03.1** | LONWORKS point coupler *(for systems with V1 applications only)* | CA2N3849 |
| **RXZ10.1** | Cable kit for RXT10 | see CM110758 |
| **RXZ20.1** | Terminal covers for RXC20, RXC21 and RXC22 | CA2N3834 |
| **RXZ30.1** | Terminal covers for RXC30 / 31 / 32 / 34.1*) / 38 / 39 | CA2N3840 |
| **RXZ40.1** | Terminal covers for RXC40 and RXC41 | CA2N3842 |
| | | |
| **UA1T** | Power amplifier for thermic valve actuators | CA2N3591 |
| **----------** | Air filter for RXC32 controller | see CA2N3845 |

| Third-party devices | | | |
|---|---|---|---|
| **Link Power Supply** | LPT bus power supply (Siemens) | Order number: | 6EP1252-0AA00 |

| Desigo RXC, other documentation | | |
|---|---|---|
| | Desigo RXC Applications library | CA110300 |
| | Desigo RXC Planning and installation manual | CA110330 |
| | Desigo RX Hardware overview | CA2N3804 |

*****) Product phased out

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