



## Room unit for Synco™ 700 controller

## QAW740

Konnex bus connection

---

**Multifunctional, digital room unit for simple remote control of Synco™ 700 controllers.**

### Use

---

Use

Room unit in combination with a Synco™ 700 controller for plants in:

- Office and administrative buildings
- Business and sales premises
- Schools
- Hospitals
- Factory buildings and workshops
- Apartment buildings

Application

For use with Synco™ 700 controllers for heating, ventilation or cooling (HVAC) systems. Only usable for systems with Konnex (KNX) communication.

### Functions

---

Primary functions

- Remote control of a Synco™ 700 controller
- Room temperature measurement
- Communication via Konnex

## Operator functions

- Temperature setpoint adjustment relative
- Operating level selection via presence button
- Timer function with timer button
- Display of operating level, temperatures, timer function and alarm

## type summary

---

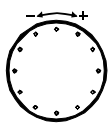
<i>ASN</i>	<i>Type reference</i>	<i>Compatible with</i>
QAW740	Room unit	Synco™ 700 controller

Note Not usable with the Synco™ RXB controller.

## Technical design

---

### Comfort setpoint relativ



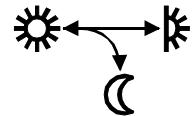
A comfort setpoint adjustment of  $\pm 3\text{ °C}$  ( $\pm 6\text{ °F}$ ), which is transmitted to the controller, can be made using the knob on the room unit. The basic setting of the comfort setpoint is made at the controller itself. During setting with the knob, the display changes to the correction value that is set. If no further settings are made, the setting is acknowledged by the return of the basic display with the room temperature actual value after a delay of 4 seconds.

### Presence button



The presence button temporarily changes the currently effective temperature level. This efficiently matches the room temperature to the respective room use. The change remains effective until the next switching point as per room control program, and works only in automatic mode.

Changeover is possible according to the following procedure:  
Comfort ☀ is always selectable; pre-comfort ☀ or economy ☾ is selectable depending on the level of the last switching point in the controller's room control program.



### Timer function



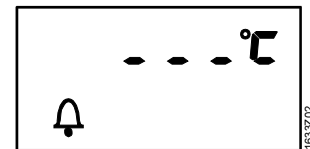
The timer function starts an adjustable time period during which comfort mode is sustained. The function starts by pressing the timer button and selecting the new desired switchover time using the knob; the switchover time is selectable in whole hours. A maximum adjustment of 23 hours from the setting time is possible. The room unit transmits the set adjustment to the controller via the bus, but the actual room control program in the controller remains unchanged.

### Measured value correction of room temperature

In case of deviations from the displayed value, the measured room temperature actual value can be adjusted in the range  $-4.5\text{...}4.5\text{ °C}$ . The room unit transmits the resultant actual value via the bus, and indicates it on the display.

### Error messages

Room sensor short-circuiting or disconnection is indicated by a bell symbol on the display. The room unit transmits such errors via the bus.



The bell symbol also indicates alarms that the assigned controller transmits to the room unit via the bus. The temperature actual value remains on display. In case of a device address conflict, the display changes to this setting.

### Communication

The room unit has a device address and a geographical zone, which it uses for communication with the controller and other devices on the bus system. Therefore, address assignment must be planned for data to be transmitted correctly.

Device address (d)	The room unit automatically provides the device address the first time it is powered up, or it searches for a free device address at the push of a button. However, manual changes are also possible.
The geographical zone (A)	The geographical zone (apartment) must match that of the controller, so it must be entered during installation.
Bus traffic	Bus traffic, which is mainly influenced by the frequency of room temperature measured values, can be limited using the room temperature threshold function. The device does not transmit a measured value until it exceeds the threshold value.
Konnex	The room unit is intended for easy mode, but it is capable of Konnex S-mode integration. Therefore, consult the Konnex bus system description for planning and installation.
<b>Commissioning</b>	The service level and expert level are used for commissioning. The procedure is described in installation instructions CE1G1633.

## Mechanical design

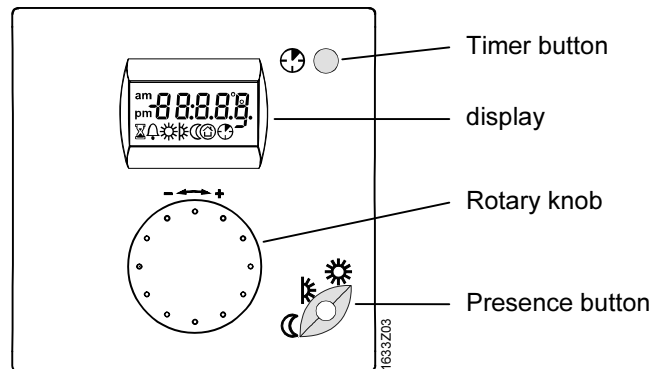
---

### Type of unit

The unit consists of the following components:

- Room unit with integrated electronics and operating elements
- Base for wall mounting with the connection terminals

### operating elements



### display

The following display formats are selectable:

- Celsius / Fahrenheit
- 24 / 12 hour clock

## technical data

Interfaces	Konnex bus	
	Interface type	Konnex TP1
	Transceiver	TP-UART
	Baud rate	9.6 kbit/s
	Current draw bus	7.5 mA
	Bus loading number (SBT)	1.2
	For more information about the Konnex bus, refer to	Data sheet CE1N3127en, basic documentation CE1P3127en
Wiring connections	Konnex bus	As per data sheet CE1N3127en
	Cable type	2-wire, unshielded twisted pair; connections non-interchangeable as per data sheet CE1N3127en
Protection	Safety class	III to EN 60730 (when mounted correctly)
	Degree of protection of housing	IP 20 to EN 60529
	Contamination	Environment to EN 60730
Environmental conditions	Operation	IEC 721-3-3 class 3K 5
	Temperature	0...50 °C (noncondensing)
	Humidity	< 85 % r.h.
	Transport	IEC 721-3-2 class 2K 3
	Temperature	-25...70 °C
	Humidity	< 95 % r.h.
	Storage	IEC 721-3-1 class 1K 3
	Temperature	-25...70 °C
Humidity	< 95 % r.h.	
Standards	<b>CE</b> -conformity	
	EMC directive	89/336/EEC
	Immunity	EN 50082-1, EN 50082-2, EN 60730-1 EN 50090-2-2
	Emissions	EN 50081-1, EN 50081-2, EN50090-2-2
	Low-voltage directive	73/23/EEC
	– Electrical safety	EN 60 730-1, EN 60 730-2-9
Room temperature measurement	Measuring range	0...45 °C
	Time constant	13 min
Other features	Software class	A to EN 60 730
	Weight	approx. 0.115 kg

## Notes

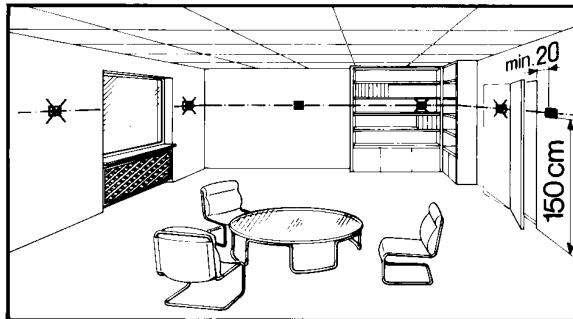
---

### Product liability

- The products may only be used in building services plant and applications as described above.
- When using the products, all requirements specified under "Technical data" must be observed.
- The local regulations for electrical installation must be complied with.

### Engineering

- Install in the main living room or reference room.
- The place of installation should be chosen so that the sensor can capture the room temperature as accurately as possible, without being affected by direct solar radiation or other heating or cooling sources.
- Mounting height is about 1.5 meters above the floor
- The basic principles of the Konnex bus system must be observed (see documents CE1N3127 and CE1P3127).
- The unit can be fitted to most commercially available recessed conduit boxes or directly on the wall.



### installation

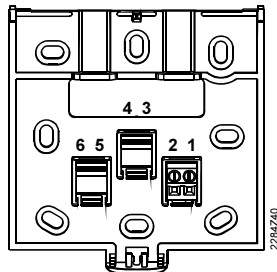
- Wall mounting with base.
- The controller may not be exposed to dripping water.

### Installation and operation

- For the electrical installation, the local safety regulations and standards must be complied with.
- Installation and operating instructions are enclosed with each device.

## Connection diagram

---



1	CE+	Konnex TP1 (non-interchangeable)
2	CE-	Konnex TP1 (non-interchangeable)
3	-	-
4	-	-
5	-	-
6	-	-

Dimensions

