



**Room controller units PCD7.L6xx,
Extension modules, Accessories**

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0.1 Document History

Date	Version	Changes	Remarks
2008-09-30	EN01	-	Translation of German version
2010-05-03	EN02	PCD7.L630	Connection with spring terminal block, not with RJ-11
2010-09-15	EN03	PCD7.L67x	New types of connecting cables integrated
2013-02-15	EN04	PCD7.L670 PCD7.L672	New numbering of the strands
2013-09-27	EN05		New logo and new company name
2013-11-13	EN06	A.2	PCD7.L666 don't work with IR
2015-06-04	ENG07	Ch01 A.3	New chapter: Assembly instructions New phone numbers

0.2 About this manual

See the section in the appendix in relation to some of the terms, abbreviations and the references used in this manual.

0.3 Brands and trademarks

Saia PCD® and Saia PG5® are registered trademarks of Saia-Burgess Controls AG.

Technical modifications are based on the current state-of-the-art technology.

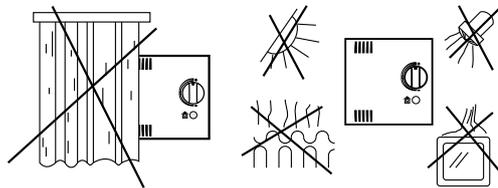
Saia-Burgess Controls AG, 2015. © All rights reserved.

Published in Switzerland

1 Assembly instructions

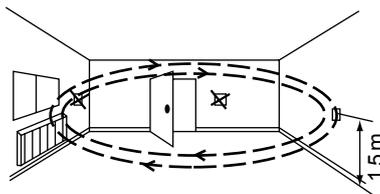
- The room control units must only be installed and connected by an expert in accordance with the wiring diagram. Existing safety standards must also be observed.
- The room control units can only be used to regulate the temperature in dry, closed rooms. The maximum permissible relative humidity is 90%, non-condensing.
- Precise temperature measurement is subject to certain requirements as to the positioning of the temperature sensors. This applies both to the room control device itself and to the externally connected temperature sensor.
- The device can be mounted directly on the wall or flush-mounted within a pattress box.

1

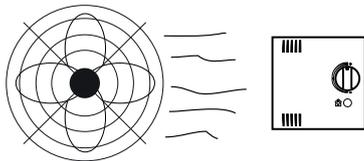


Avoid direct exposure to sunlight or light from powerful lamps.

Do not install next to heat sources such as heaters, refrigerators, lamps etc.



Do not install next to windows and doors because of draughts.



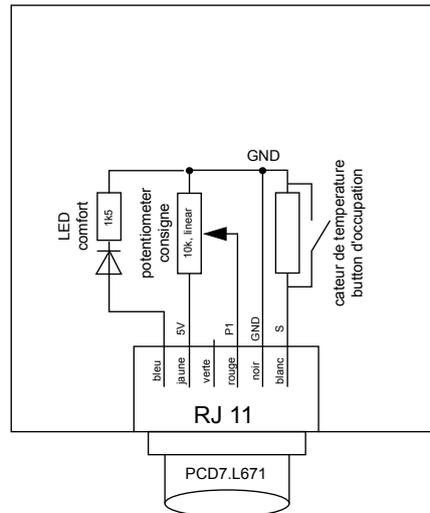
Do not located the control device/ compact room controller in the path of draughts from climate control or ventilation systems.

2 Analogue room control units

PCD7.L63x	General technical specification

PCD7.L630	Room temperature sensor
PCD7.L631	Room temperature sensor with set point setting
PCD7.L632	Room temperature sensor with set point setting, presence sensor and LED

2.1 Techn. specifications of analogue room control units PCD7.L630 - .L632



2

Pin allocation PCD7.L630 - .L632

Signal	Terminal	Description
Temperature sensor	S, GND	Temperature sensor NTC 10 kΩ, measurement range 0...40 °C.
Presence sensor	S, GND	Floating sensor using the temperature sensor.
Set point setting	5V,P1,GND	Potentiometer (10 kΩ, linear) for setting a configurable set point displacement. See description of Config FBox or registers (reg. 104)
LED	LED, GND	LED to display Comfort mode. Comfort mode = 5 V, otherwise 0 V. (5 V, 2 mA max.)

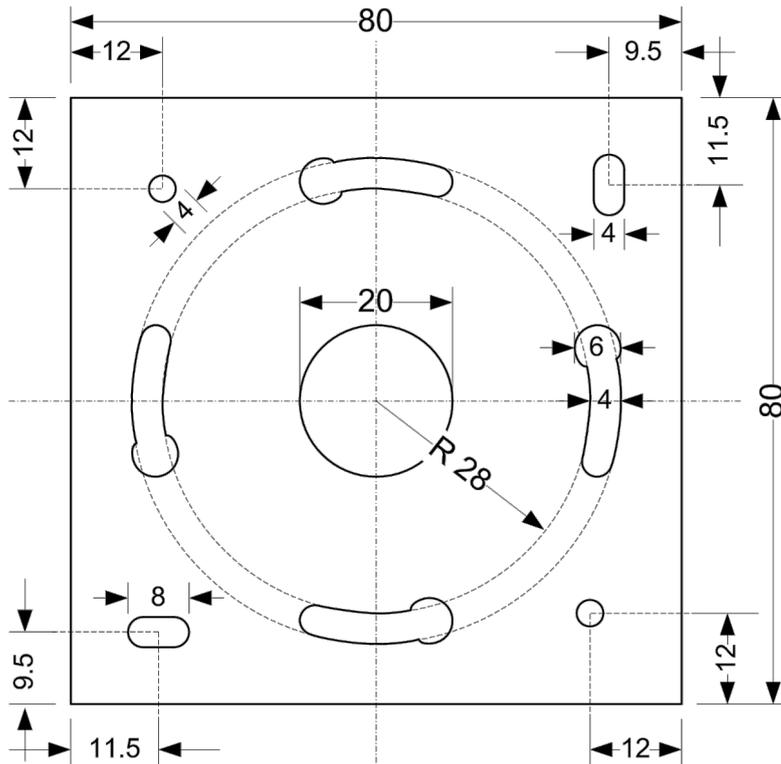
PCD7.L671 connecting cable - colour table

Colour	Terminal	Description
White	S	Temperature/presence sensor
Black	GND	Ground
Red	P1	Potentiometer centre tap
Green		Not used
Yellow	5 V	Potentiometer power supply
Blue	LED	LED with 1.5 kΩ series resistance. (max. 2 mA)

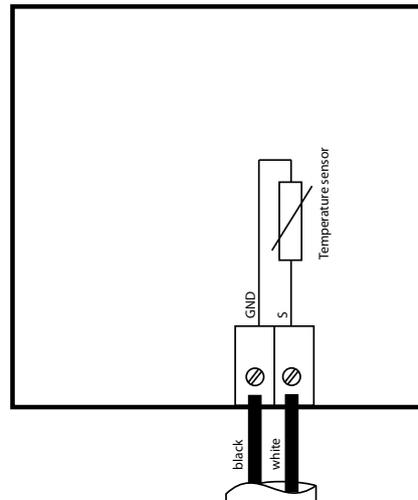
Note

All information points can be read by the SBC S-Bus via a Room FBox or via registers independently of the application.

The use of an analogue room control unit must be indicated in the room controller configuration. See description of Config FBox or registers.



2.1.1 Technical data for PCD7.L630



Room temperature sensor

Pin allocation for PCD7.L630

Signal	Terminal	Description
Temperature sensor	S, GND	Temperature sensor NTC 10 k Ω , measurement range 0...40 °C.

Pin allocation for connecting cable PCD7.L671

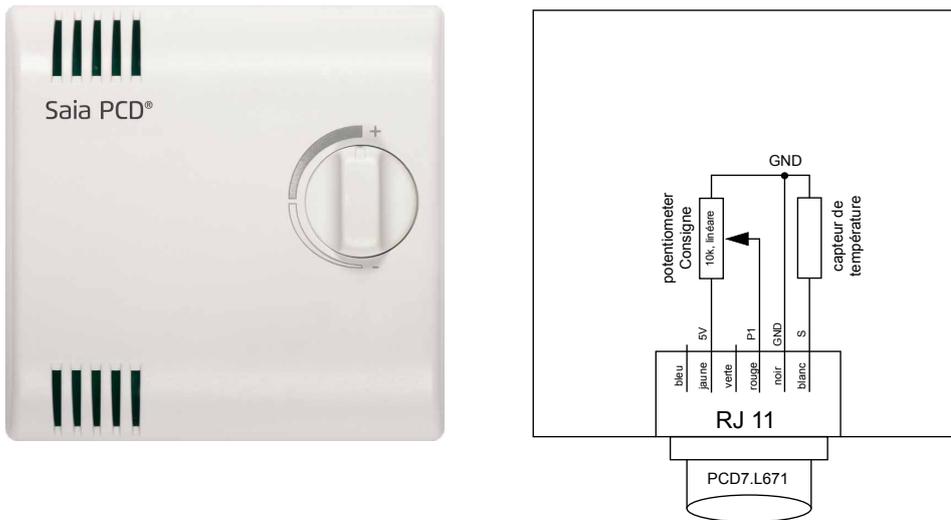
Colour	Terminal	Description
White	S	Temperature/presence sensor
Black	GND	Ground for the temperature sensor

Note

All information points can be read by the SBC S-Bus via a Room FBox or via registers independently of the application.

The use of an analogue room control unit must be indicated in the configuration. See description of Config FBox or registers.

2.1.2 Technical data for PCD7.L631



Room control unit with temperature sensor and set point setting.

Pin allocation for PCD7.L631

Signal	Terminal	Description
Temperature sensor	S, GND	Temperature sensor NTC 10 k Ω , measurement range 0...40 °C.
Set point setting	5V, P1, GND	Potentiometer to set a configurable set point displacement. See description of Config FBox or registers (reg. 104)

PCD7.L671 connecting cable - colour table

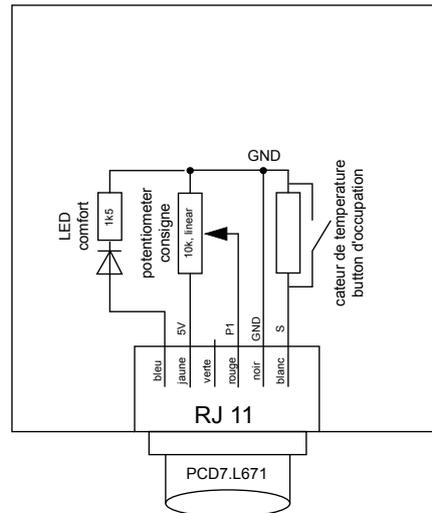
Colour	Terminal	Description
White	S	Temperature sensor
Black	GND	Ground
Red	P1	Set point potentiometer
Green		Not used
Yellow	5 V	Set point potentiometer power supply
Blue	LED	LED with 1.5 k Ω series resistance. (max. 2 mA)

Note

All information points can be read by the SBC S-Bus via a Room FBox or via registers independently of the application.

The use of an analogue room control unit must be indicated in the configuration. See description of Config FBox or registers.

2.1.3 Technical data for PCD7.L632



2

Room control unit with temperature sensor, set point setting and illuminated presence sensor. When the controller is working in Comfort mode, the semi-transparent sensor lights up.

Pin allocation for PCD7.L632

Signal	Terminal	Description
Temperature sensor	S, GND	Temperature sensor NTC 10 kΩ, measurement range 0...40 °C.
Set point setting	5V, P1, GND	Potentiometer to set a configurable set point displacement. See description of Config FBox or registers (reg. 104)
LED	LED, GND	The presence sensor lights up when the controller is running in Comfort mode.

PCD7.L671 connecting cable - colour table

Colour	Terminal	Description
White	S	Temperature sensor
Black	GND	Ground
Red	P1	Set point potentiometer
Green		Not used
Yellow	5 V	Set point potentiometer power supply
Blue	LED	Presence sensor illumination
White	S	Temperature/presence sensor

Note

All information points can be read by the SBC S-Bus via a Room FBox or via registers independently of the application.

The use of an analogue room control unit must be indicated in the configuration. See description of Config FBox or registers.

3 Digital room control units

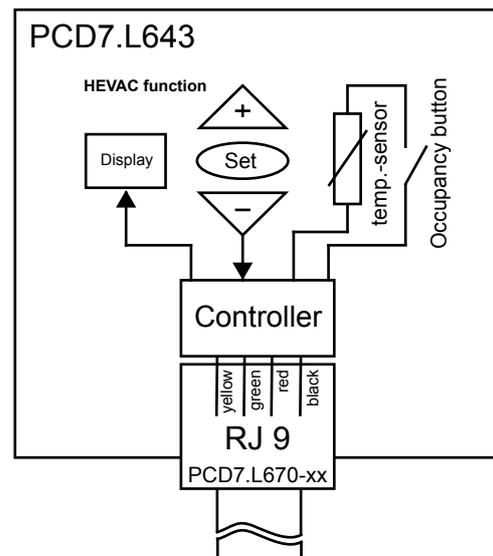
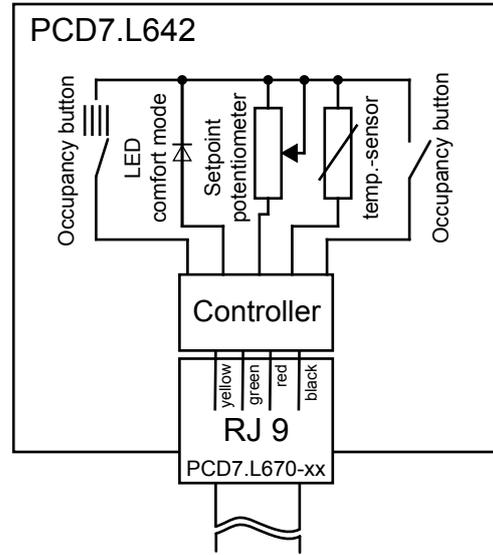
PCD7.L64x	General technical specification

PCD7.L640	Room temperature sensor with set point setting
PCD7.L641	Room temperature sensor with set point setting, presence sensor and LED
PCD7.L642	Room temperature sensor with set point setting, presence sensor, LED and fan control
PCD7.L643	Room temperature sensor with function keys and LCD display for HeaVAC functions.
PCD7.L644	Room temperature sensor with function keys and LCD display for HeaVAC functions, and light and shade functions

PCD7.L660	Mobile room control unit with infrared interface, temperature sensor, function keys and display
PCD7.L661	infrared receiver
PCD7.L662	Mobile room control unit with infrared interface, temperature sensor, function keys and display
PCD7.L663	wireless receiver

PCD7.L650	Interface module to connect up to 8 floating contacts in combination with a room controller

3.1 Technical specifications of digital room control units PCD7.L640 - .L644



Pin allocation for PCD7.L640 - .L644

Interface	Terminal	Description
Serial bus	RC	<p>The connection to the room controller is done with the cable PCD7.L670-xx directly on the controller or the use of expansion modules for lighting and shading on the last module.</p> <p>The power cable, PCD7.L670-xx, is prefabricated on both sides and has a length of either 10, 30 or 50 m.</p> <p>The maximum length between the room controller and the control room control unit must not exceed 50 meters.</p>

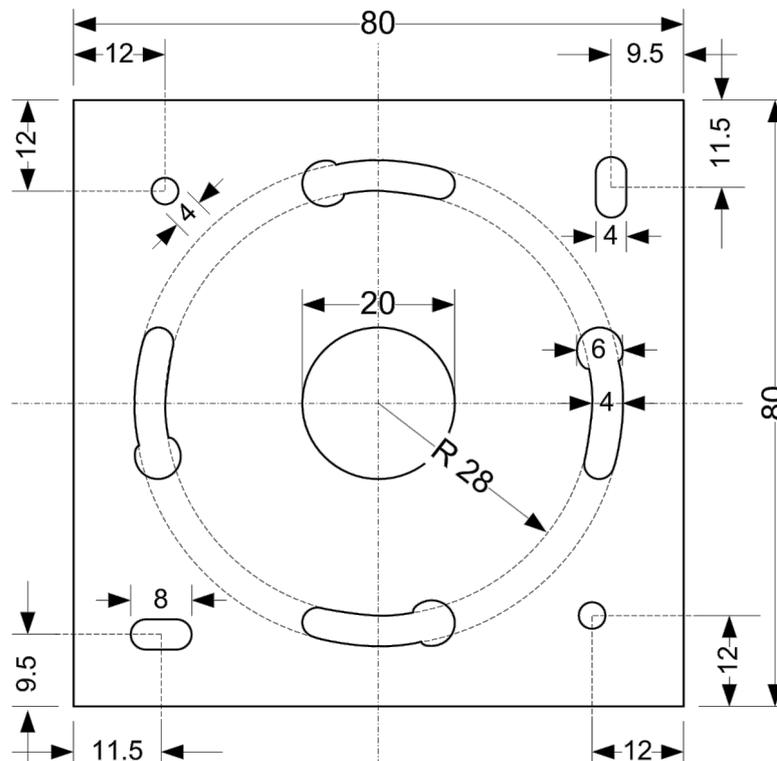
Functions for PCD7.L640 - .L644

Function	Description
Sensor	Room temperature sensor. Measurement range 0...40 °C.
Set point setting	To set a configurable set point displacement. Depending on the room control unit, the setting is entered with a potentiometer or via the integrated display with HeaVAC function. The base set point held in the room controller can be increased or decreased in up to 6 steps. The step size is stored in the room controller configuration. See description of Config FBox or registers (reg. 104). When the Plus, Set and Minus keys are pressed together, the current set point is displayed for approx. 20 seconds.
Presence sensor	The presence sensor can be used to change the operating mode manually to Comfort or Standby/unused. On the L640-L642 control units, the presence sensor lights up in Comfort mode. On the units with displays, the operating mode is shown on the display. The person icon outside the little house indicates non-use; if this icon is flashing, the controller is in Standby mode. In Comfort mode, the person icon moves into the house.

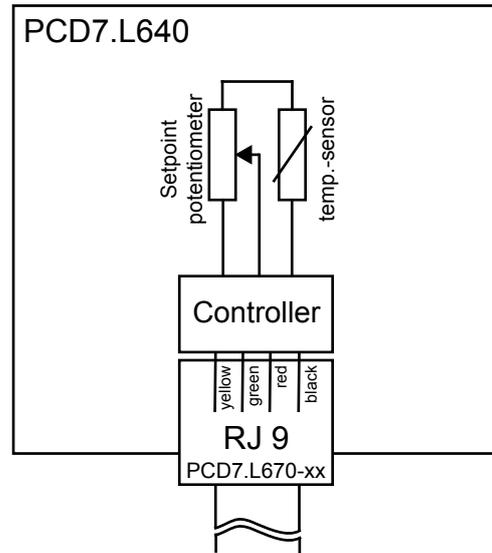
Note

All analogue inputs on the room controller can be read by the S-Bus via a Room FBox or via registers independently of the application.

The use of a digital room control unit must be indicated in the configuration. See description of Config FBox or registers.



3.1.1 Technical data for PCD7.L640



3

Room control unit with temperature sensor and set point setting.

Pin allocation

Interface	Terminal	Description
Serial bus	RC	The connection to the room controller is made with the PCD7.L670-xx directly to the controller, or where extension modules are used for light and shade, to the last module. The PCD7.L670-xx connecting cable is preconfigured at both ends and is either 10, 30 or 50 m long. The maximum length between the room controller and the room control unit must not exceed 50 m.

Functions

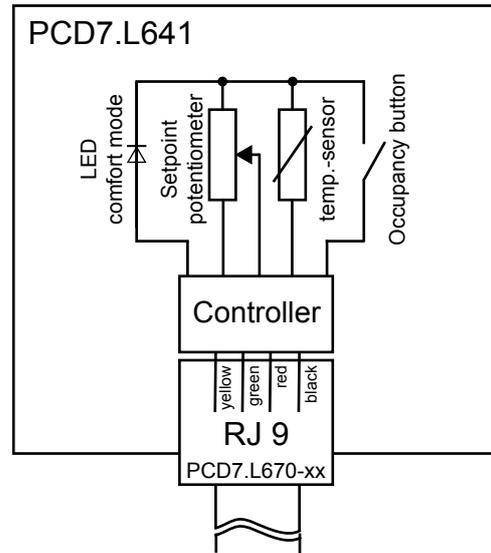
Function	Description
Sensor	Room temperature sensor. Measurement range 0...40 °C.
Set point setting	To set a configurable set point displacement. The setting is entered via a potentiometer. The range is converted into +/- 6 steps and passed to the room controller. The base set point held in the room controller can be increased or decreased in steps. The step size is stored in the room controller configuration. See description of Config FBox or registers (reg. 104). When the Plus, Set and Minus keys are pressed together, the current set point is displayed for approx. 20 seconds.

Note

All analogue inputs on the room controller can be read by the S-Bus via a Room FBox or via registers independently of the application.

The use of a digital room control unit must be indicated in the configuration. See description of Config FBox or registers.

3.1.2 Technical data for PCD7.L641



3

Room control unit with temperature sensor, set point setting and illuminated presence sensor.

Pin allocation

Interface	Terminal	Description
Serial bus	RC	The connection to the room controller is made with the PCD7.L670-xx directly to the controller, or where extension modules are used for light and shade, to the last module. The PCD7.L670-xx connecting cable is preconfigured at both ends and is either 10, 30 or 50 m long. The maximum length between the room controller and the room control unit must not exceed 50 m.

Functions

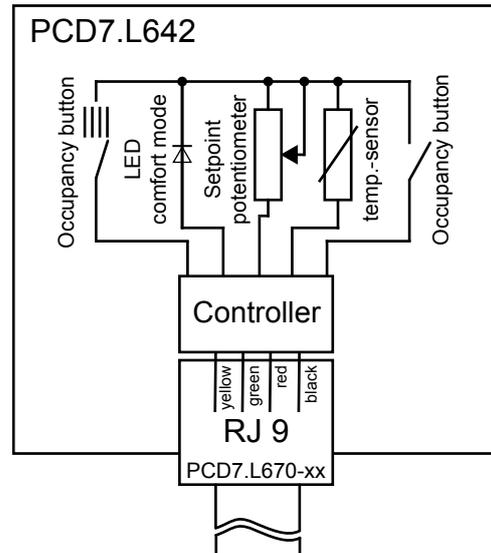
Function	Description
Sensor	Room temperature sensor. Measurement range 0...40 °C.
Set point setting	To set a configurable set point displacement. The setting is entered via a potentiometer. The range is converted into +/- 6 steps and passed to the room controller. The base set point held in the room controller can be increased or decreased in steps. The step size is stored in the room controller configuration. See description of Config FBox or registers (reg. 104). When the Plus, Set and Minus keys are pressed together, the current set point is displayed for approx. 20 seconds.
Presence Sensor	The presence sensor can be used to change the operating mode manually to Comfort or Standby/unused. In Comfort mode, the semi-transparent sensor lights up.

Note

All analogue inputs on the room controller can be read by the S-Bus via a Room FBox or via registers independently of the application.

The use of a digital room control unit must be indicated in the configuration. See description of Config FBox or registers.

3.1.3 Technical data for PCD7.L642



3

Room control unit with temperature sensor, set point setting, illuminated presence sensor and fan control.

Pin allocation

Interface	Terminal	Description
Serial bus	RC	The connection to the room controller is made with the PCD7.L670-xx directly to the controller, or where extension modules are used for light and shade, to the last module. The PCD7.L670-xx connecting cable is preconfigured at both ends and is either 10, 30 or 50 m long. The maximum length between the room controller and the room control unit must not exceed 50 m.

Functions

Function	Description
Sensor	Room temperature sensor. Measurement range 0...40 °C.
Set point setting	To set a configurable set point displacement. The setting is entered via a potentiometer. The range is converted into +/- 6 steps and passed to the room controller. The base set point held in the room controller can be increased or decreased in steps. The step size is stored in the room controller configuration. See description of Config FBox or registers (reg. 104). When the Plus, Set and Minus keys are pressed together, the current set point is displayed for approx. 20 seconds.

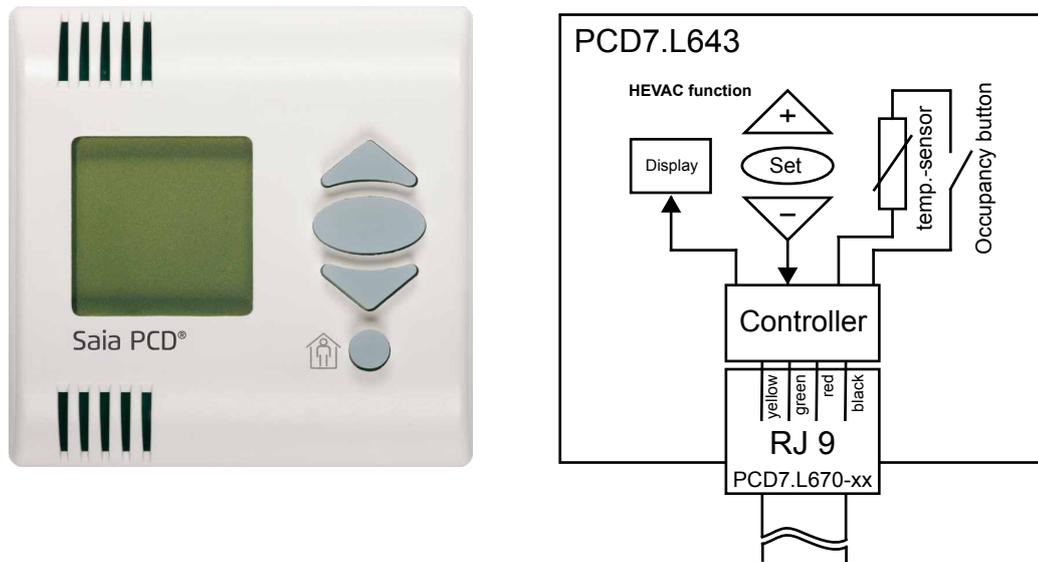
Function	Description
Presence Sensor	The presence sensor can be used to change the operating mode manually to Comfort or Standby/unused. In Comfort mode, the semi-transparent sensor lights up.
Fan control	The fan selection switch can be used to set the fan speed manually. The room controller can only switch to the desired step if this is allowed by the fan operating window. See description of Config FBox or registers (reg. 63, 64)

Note

All analogue inputs on the room controller can be read by the S-Bus via a Room FBox or via registers independently of the application.

The use of a digital room control unit must be indicated in the configuration. See description of Config FBox or registers.

3.1.4 Technical data for PCD7.L643



3

Room control unit with temperature sensor, function keys and display for HeaVAC functions.

Pin allocation

Interface	Terminal	Description
Serial bus	RC	The connection to the room controller is made with the PCD7.L670-xx directly to the controller, or where extension modules are used for light and shade, to the last module. The PCD7.L670-xx connecting cable is preconfigured at both ends and is either 10, 30 or 50 m long. The maximum length between the room controller and the room control unit must not exceed 50 m.

Functions

Function	Description
Sensor	Room temperature sensor. Measurement range 0...40 °C.
Set point setting	To set a configurable set point displacement. Set in +/- 6 steps via the display. The base set point held in the room controller can be increased or decreased in steps. The step size is stored in the room controller configuration. See description of Config FBox or registers (reg. 104). When the Plus, Set and Minus keys are pressed together, the current set point is displayed for approx. 20 seconds.

Function	Description
Presence Sensor	The presence sensor can be used to change the operating mode manually to Comfort or Standby/unused. The operating mode is shown in the display. The person icon outside the little house indicates non-use; if this icon is flashing, the controller is in Standby mode. In Comfort mode, the person icon moves into the house.
Fan control	The HeaVAC menu can be used to set the fan speed manually. The room controller can only switch to the desired step if this is allowed by the fan operating window. See description of Config FBox or registers (reg. 63, 64)

HeaVAC functions

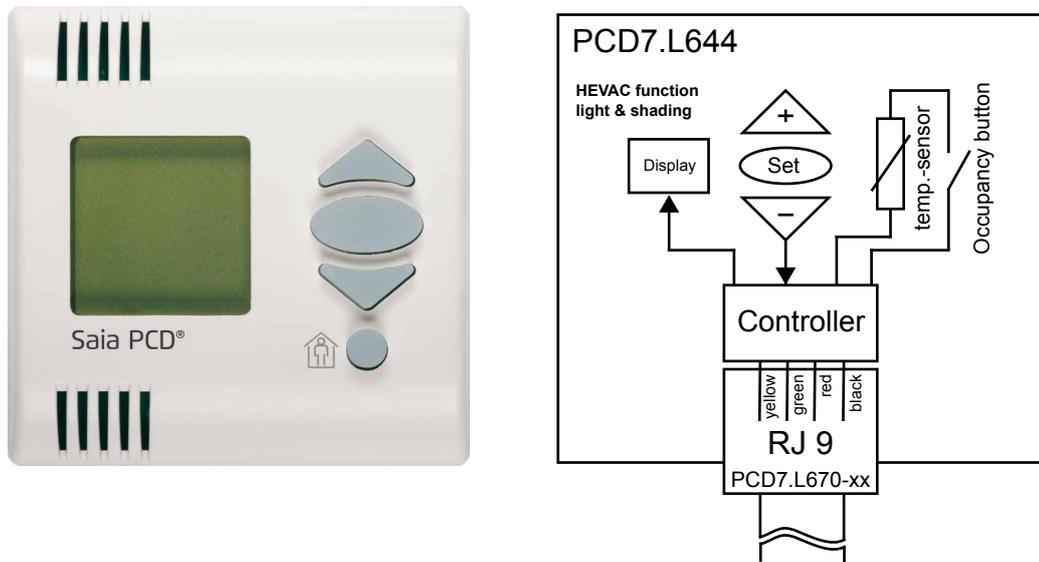
The desired function is activated by pressing and holding the oval SET key (for approx. 2 seconds). The active function is shown in the display by the flashing icon. The setting can be changed with the up/down arrow keys. A short keystroke applies the current setting.

Note

All analogue inputs on the room controller can be read by the S-Bus via a Room FBox or via registers independently of the application.

The use of a digital room control unit must be indicated in the configuration. See description of Config FBox or registers.

3.1.5 Technical data for PCD7.L644



3

Room control unit with temperature sensor, function keys and display for HeaVAC functions, and light and shade functions.

Pin allocation

Interface	Terminal	Description
Serial bus	RC	The connection to the room controller is made with the PCD7.L670-xx directly to the controller, or where extension modules are used for light and shade, to the last module. The PCD7.L670-xx connecting cable is preconfigured at both ends and is either 10, 30 or 50 m long. The maximum length between the room controller and the room control unit must not exceed 50 m.

Functions

Function	Description
Sensor	Room temperature sensor. Measurement range 0...40 °C.
Set point setting	To set a configurable set point displacement. Set in +/- 6 steps via the display. The base set point held in the room controller can be increased or decreased in steps. The step size is stored in the room controller configuration. See description of Config FBox or registers (reg. 104). When the Plus, Set and Minus keys are pressed together, the current set point is displayed for approx. 20 seconds.

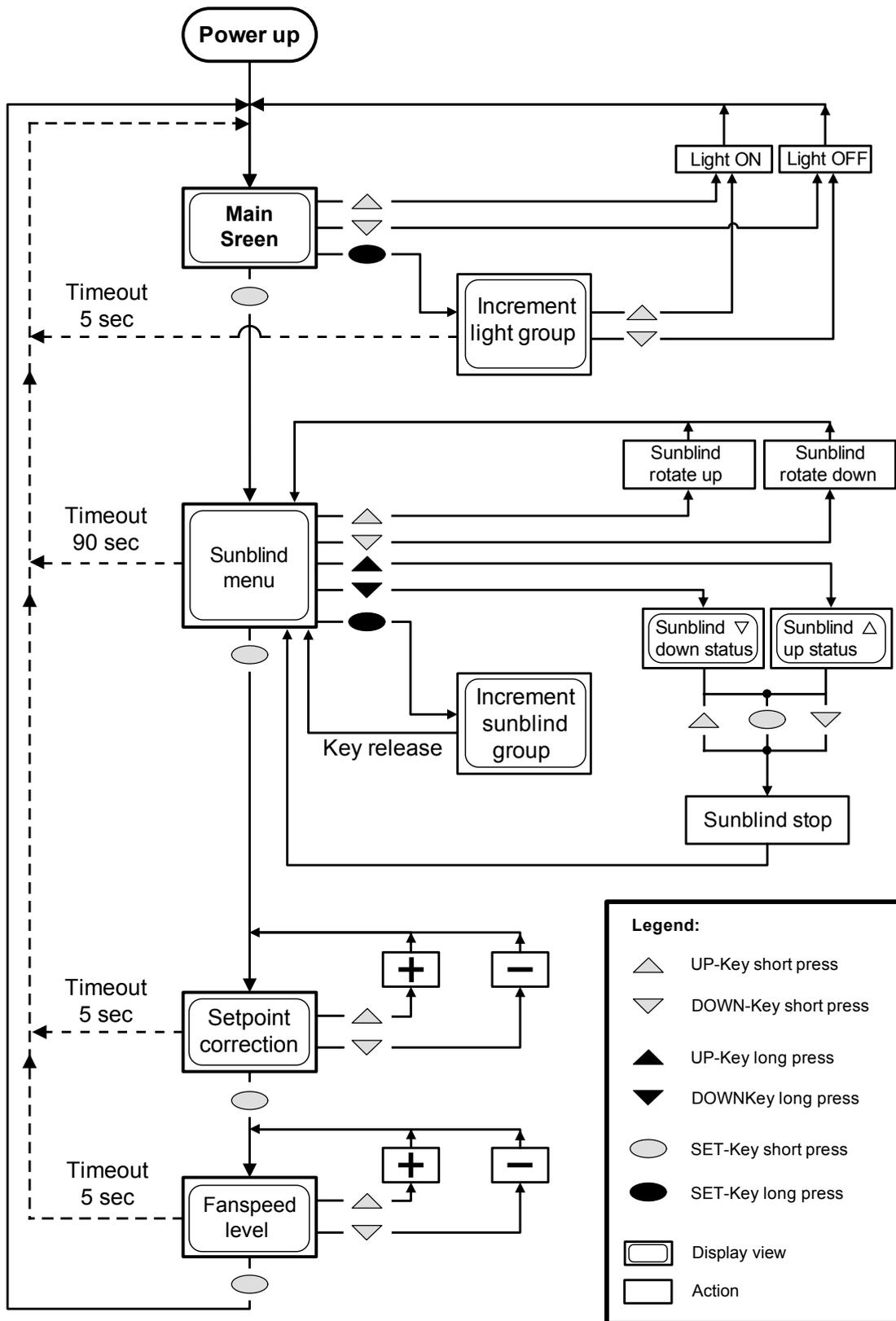
Function	Description
Presence Sensor	The presence sensor can be used to change the operating mode manually to Comfort or Standby/unused. The operating mode is shown in the display. The person icon outside the little house indicates non-use; if this icon is flashing, the controller is in Standby mode. In Comfort mode, the person icon moves into the house.
Fan control	The HeaVAC menu can be used to set the fan speed manually. The room controller can only switch to the desired step if this is allowed by the fan operating window. See description of Config FBox or registers (reg. 63, 64).
Light control	The Light and Shade menu can be used to switch up to four light groups on/off manually. First, the Light menu is activated with the oval SET key. Then the group is selected and switched on/off with the arrow keys. See description of Config FBox or registers (reg. 120).
Blind control	The Light and Shade menu can be used to move up to four blind groups up/down manually. First, the Shade menu is activated with the oval SET key. Then the group is selected and the blinds are controlled with the arrow keys. See description of Config FBox or registers (reg. 120).

Note

All analogue inputs on the room controller can be read by the S-Bus via a Room FBox or via registers independently of the application.

The use of a digital room control unit must be indicated in the configuration. See description of Config FBox or registers.

Operation / Menu structur



3.1.6 Technical data for PCD7.L660 / PCD7.L661 (versions SV1.5 and SV6.1)



3

Mobile room control unit with infrared interface, temperature sensor, function keys and display for HeaVAC functions, and light and shade functions. For operation with the room controller, the PCD7.L661 infrared receiver is required.

Pin allocation

Interface	Terminal	Description
Serial bus	RC	The infrared receivers PCD7.L661 is connected directly to the room controller with the PCD7.L670 cable, or where extension modules are used for light and shade, to the last module. The PCD7.L670-xx connecting cable is pre-configured at both ends and is either 10, 30 or 50 m long. The maximum length between the room controller and the room control unit must not exceed 50 m.

Funktions

Function	Description
Sensor	The room temperature sensor (range 0...40 °C) is integrated into the control unit.
Set-point setting	<p>The base set-point held in the room controller can be increased or decreased in up to 3 steps using the room control unit. The step size is stored in the room controller configuration. See description of the associated configuration parameters.</p> <p>The function key  is used to activate the set-point setting. The display shows the temperature symbol together with the number of steps.</p> <p>The  + and -  keys can be used to adjust the set-point in steps. After approx. 20 seconds, the display returns to the default view.</p>

Function	Description																		
Presence	<p>The two function keys  and  can be used to change the operating mode manually to Comfort or Stand-by/unused. The operating mode is shown on the display for approx. 20 seconds. The person symbol outside the little house indicates non-use; inside the house, it indicates presence. After this, the display returns to the default view.</p>																		
Fan control	<p>The fan setting is activated with the function key  .</p> <p>The display shows a fan symbol. The  + and  - keys can now be used to set the fan speed manually.</p> <table border="0" data-bbox="671 689 1292 913"> <tr> <td>Version SV1.5</td> <td></td> <td>SV6.1 (as from april 2008)</td> </tr> <tr> <td>Fan stopped</td> <td></td> <td>OFF </td> </tr> <tr> <td>Fan step 1</td> <td></td> <td>ON1 </td> </tr> <tr> <td>Fan step 2</td> <td></td> <td>ON2 </td> </tr> <tr> <td>Fan step 3</td> <td></td> <td>ON3 </td> </tr> <tr> <td>Fan automatic</td> <td></td> <td>Auto </td> </tr> </table> <p>The PCD7.L60x room controllers can only switch the fan to the desired step if this is allowed by the fan operating window. See description of the associated configuration parameters.</p>	Version SV1.5		SV6.1 (as from april 2008)	Fan stopped		OFF 	Fan step 1		ON1 	Fan step 2		ON2 	Fan step 3		ON3 	Fan automatic		Auto 
Version SV1.5		SV6.1 (as from april 2008)																	
Fan stopped		OFF 																	
Fan step 1		ON1 																	
Fan step 2		ON2 																	
Fan step 3		ON3 																	
Fan automatic		Auto 																	
Light control	<p>The function key  is used to select the menu for lighting control and to select the desired light group. Pressing the same key several times selects all (ALL) or only one light group (1...4), which can then be switched on and off manually with the  + and  - keys.</p> <p>See description of the associated configuration parameters.</p>																		
Blind control	<p>The function key  is used to select the menu for blind control and to select the desired blind group. Pressing the same key several times selects all (ALL) or only one blind group (1...4), which can then be raised and lowered manually with the  + and  - keys.</p> <p>See description of the associated configuration parameters.</p>																		

Commissioning / configuration

The room control unit has its own configuration parameters, which can be queried and changed with a certain key combination.

To activate the parameter mode, the defined combination of keys should be pressed together for at least 1 second. The display will then switch to parameter mode. The  + and  - keys can be used to change the parameter. If no key has been pressed

for over 20 seconds, parameter mode will be terminated and the current setting will become active.

Function	Description
Battery test	<p>The  key is used to run the integrated test function. All the display symbols flash and the charge level of the battery is displayed; ON stands for sufficient capacity, but when OFF is displayed, the battery should be changed.</p>
IR zone address	<p>To match a room control unit uniquely to a room. To activate the zone address setting, the function keys  and  must be pressed together for at least 1 second. The display then shows the currently e range from 0...30. In the room controller, this is part of the configuration.</p> <p><i>Factory setting: 0</i></p>
 <p>Temperature measurement</p>	<p>The integrated temperature sensor can be used to measure the room temperature.</p> <p>To activate parameterisation, the  +  ,  and  keys should be pressed together. The temperature symbol on the display will then flash and the current setting will be displayed. With the key  + the mode has to be adjusted.</p> <p>OFF: Temperature measurement disabled If the room controller uses the temperature measurement from the room control unit, the current room temperature in the room controller will become invalid (99.9°C). See room controller configuration.</p> <p>ON: Temperature measurement is enabled. The room temperature will be transmitted after any 0.2°C change or after 15 minutes without any change.</p> <p>ON with temperature display: Temperature measurement is enabled and the current room temperature will be permanently shown on the display.</p> <p><i>Factory setting: OFF</i></p>

Function	Description
Retain settings	<p>The settings for the fan and the set-point displacement may be permanently applicable or only valid for the current configuration step.</p> <p>Retain settings:</p> <p>Press  and  keys together for at least 5 seconds. The temperature and fan symbols will flash and status ON will be displayed.</p> <p>Settings are only valid for the current configuration step.</p> <p>Press  and  keys together for at least 5 seconds. The temperature and fan symbols will flash and status OFF will be displayed.</p> <p><i>Factory setting: ON</i></p>
Blind rotation	<p>The rotation function can be used to control venetian blinds. When active, the rotation command is issued with the  key.</p> <p>Deactivate rotation function:</p> <p>Press  and  keys together for at least 5 seconds. On the display, the rotation symbol will flash and the status text OFF will be displayed.</p> <p>Activate rotation function:</p> <p>Press  and  keys together for at least 5 seconds. On the display, the rotation symbol will flash and the status text ON will be displayed.</p> <p><i>Factory setting: OFF</i></p>
Number of light groups	<p>The lighting is controlled by group commands. The assignment of individual lights to groups is part of the room controller configuration. This may differ according to the communications interface, and is described in the relevant section of this Manual.</p> <p>The room control unit has no knowledge of the room controller configuration. It is therefore necessary to parameterise the number of supported light groups in the room control unit separately.</p> <p>Press  and  keys together for at least 5 seconds. On the display, the light symbol flashes and the number of light groups currently configured is shown. The  key can be used to select the value 2, 4 or 8.</p> <p><i>Factory setting: 2</i></p>

Function	Description
Number of blind groups	<p>Light and shade are controlled by group commands. The assignment of individual blinds to groups is part of the room controller configuration. This may differ according to the communications interface, and is described in the relevant section of this Manual.</p> <p>The room control unit has no knowledge of the room controller configuration. It is therefore necessary to parameterise the number of supported blind groups in the room control unit separately.</p> <p>Press  and  + keys together for at least 5 seconds. On the display, the blind symbol flashes and the number of blind groups currently configured is shown. The  + key can be used to select the value 2, 4 or 8.</p> <p><i>Factory setting: 2</i></p>

Error codes

In the error case will be displayed a code with the letter “E” followed by a number. Please contact your service organisation.

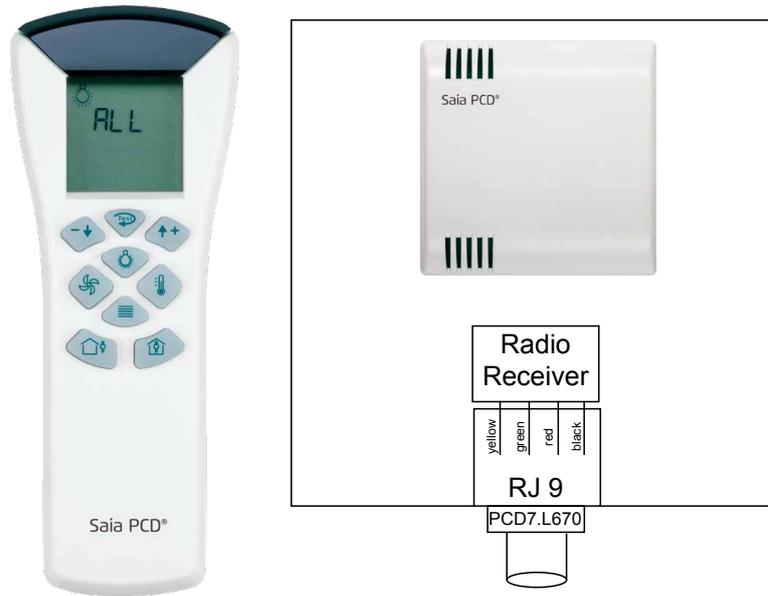
PCD7.L660 SV1.5

- E3: Internal temperature sensor broken
- E4: Internal temperature sensor short circuit
- E5: Internal temperature sensor reference voltage broken
- E6: Internal temperature sensor reference voltage short circuit

PCD7.L660 SV6.1

- E1: Internal temperature sensor defect

3.1.7 Technical data for PCD7.L662 / PCD7.L663 (version SV2.8K)



3

Mobile room control unit with wireless interface, temperature sensor, function keys and display for HeaVAC functions, and light and shade functions. For operation with the room controller, the PCD7.L663 wireless receiver is required.

Pin allocation

Interface	Terminal	Description
Serial bus	RC	The PCD7.L663 wireless receiver is connected directly to the room controller with the PCD7.L670 cable, or where extension modules are used for light and shade, to the last module. The PCD7.L670-xx connecting cable is pre-configured at both ends and is either 10, 30 or 50 m long. The maximum length between the room controller and the room control unit must not exceed 50 m.

Functions

Function	Description
Sensor	The room temperature sensor (range 0...40 °C) is integrated into the control unit.
Set-point setting	<p>The base set-point held in the room controller can be increased or decreased in up to 5 steps using the room control unit, with the last step twice as large as the rest. The step size is stored in the room controller configuration. See description of the associated configuration parameters.</p> <p>The function key  is used to activate the set-point setting. The display shows the temperature symbol together with the number of steps. The  + and -  keys can be used to adjust the set-point in steps. After approx. 20 seconds, the display returns to the default view.</p>

Function	Description
Presence	<p>The two function keys  and  can be used to change the operating mode manually to Comfort or Stand-by/unused. The operating mode is shown on the display for approx. 20 seconds. The person symbol outside the little house indicates non-use; inside the house, it indicates presence. After this, the display returns to the default view.</p>
Fan control	<p>The fan setting is activated with the function key . The display shows a fan symbol. The  + and  keys can now be used to set the fan speed manually.</p> <p>Fan stopped  Fan step 1  Fan step 2  Fan step 3  Fan automatic </p> <p>The PCD7.L60x room controllers can only switch the fan to the desired step if this is allowed by the fan operating window. See description of the associated configuration parameters</p>
Light control	<p>The function key  is used to activate the menu for lighting control and to select the desired light group. Pressing the same key several times selects all (ALL) or only one light group (1...4), which can then be switched on and off manually with the  + and  keys.</p> <p>See description of the associated configuration parameters.</p>
Blind control	<p>The function key  is used to select the menu for blind control and to select the desired blind group. Pressing the same key several times selects all (ALL) or only one blind group (1...4), which can then be raised and lowered manually with the  + and  keys.</p> <p>See description of the associated configuration parameters.</p>

Commissioning / configuration

The room control unit has its own configuration parameters, which can be queried and changed with a certain key combination.

To activate the parameter mode, the defined combination of keys should be pressed together for at least 1 second. The display will then switch to parameter mode. The  + and  keys can be used to change the parameter. If no key has been pressed

for over 20 seconds, parameter node will be terminated and the current setting will become active.

Wireless signals are carried across zones and through walls. This makes it necessary to match the wireless transmitter uniquely to the receiver connected directly to the room controller with the PCD7.L670 connecting cable. A commissioning procedure is run to match the mobile room control unit to the desired receiver.

Function	Description
Matching of control unit to receiver	<p>The room controller and receiver must be powered on and in operation..</p> <p>Press the function keys , ,  and  together. The display shows the currently configured receiver address and the bar graph flashes as long as the room control unit is ready to be given a new receiver address.</p> <p>The receiver transmits its ID when the small button on the back of the device next to the cable inlet is pressed; this is accessible after removing the base of the housing.</p> <p>When the ID has been received successfully, the bar graph on the display stops flashing and the new receiver address is displayed and saved permanently.</p> <p>Pressing any of the function keys will cancel the procedure and the old receiver address will be retained.</p> <p>This procedure can be repeated in the same way any number of times.</p>
Battery test	<p>The  key is used to run the integrated test function. All the display symbols flash and the charge level of the battery is displayed; BAT.ON stands for sufficient capacity, but when BAT.OFF is displayed, the battery should be changed.</p>
Receiver number 	<p>This parameter is reserved for future developments and must be set to 0 for compatibility with the PCD7.L60x system.</p> <p>To activate the address setting, the function keys ,  and  must be pressed together for at least 1 second. The display then shows the currently configured address.</p> <p>The  + and -  keys can be used to modify the address in the range from 0...4.</p> <p><i>Factory setting: 1</i></p>

Function	Description
 <p>Temperature measurement</p>	<p>The integrated temperature sensor can be used to measure the room temperature.</p> <p>To activate parameterisation, the  +  ,  and  keys should be pressed together. The temperature symbol on the display will then flash and the current setting will be displayed.</p> <p>OFF: Temperature measurement disabled. If the room controller uses the temperature measurement from the room control unit, the current room temperature in the room controller will become invalid (99.9°C). See room controller configuration.</p> <p>ON: Temperature measurement is enabled. The room temperature will be transmitted after any 0.2°C change or after 15 minutes without any change.</p> <p>ON with temperature display: Temperature measurement is enabled and the current room temperature will be permanently shown on the display.</p> <p><i>Factory setting: OFF</i></p>
<p>Retain settings</p>	<p>The settings for the fan and the set-point displacement may be permanently applicable or only valid for the current configuration step.</p> <p>Retain settings</p> <p>Press  and  keys together for at least 5 seconds. The temperature and fan symbols will flash and status ON will be displayed. Settings are only valid for the current configuration step.</p> <p>Press  and  keys together for at least 5 seconds. The temperature and fan symbols will flash and status OFF will be displayed.</p> <p><i>Factory setting: ON</i></p>
<p>Blind rotation</p>	<p>The rotation function can be used to control venetian blinds. When active, the rotation command is issued with the  key.</p> <p>Deactivate rotation function Press the  and  keys together. On the display, the rotation symbol will flash and the status text OFF will be displayed.</p> <p>Activate rotation function Press the  and  keys together. On the display, the rotation symbol will flash and the status text ON will be displayed.</p> <p><i>Factory setting: OFF</i></p>

Function	Description
Number of light groups	<p>The lighting is controlled by group commands. The assignment of individual lights to groups is part of the room controller configuration. This may differ according to the communications interface, and is described in the relevant section of this Manual.</p> <p>The room control unit has no knowledge of the room controller configuration. It is therefore necessary to parameterise the number of supported light groups in the room control unit separately.</p> <p>Press  and  + keys together for at least 5 seconds. On the display, the light symbol flashes and the number of light groups currently configured is shown. The  + and  - keys can be used to select the value 2, 4 or 8.</p> <p><i>Factory setting: 2</i></p>
Number of blind groups	<p>Light and shade are controlled by group commands. The assignment of individual blinds to groups is part of the room controller configuration. This may differ according to the communications interface, and is described in the relevant section of this Manual.</p> <p>The room control unit has no knowledge of the room controller configuration. It is therefore necessary to parameterise the number of supported blind groups in the room control unit separately.</p> <p>Press  and  + keys together for at least 5 seconds. On the display, the blind symbol flashes and the number of blind groups currently configured is shown. The  + and  - keys can be used to select the value 2, 4 or 8.</p> <p><i>Factory setting: 2</i></p>

Error codes

In the error case will be displayed a code with the letter “E” followed by a number. Please contact your service organisation.

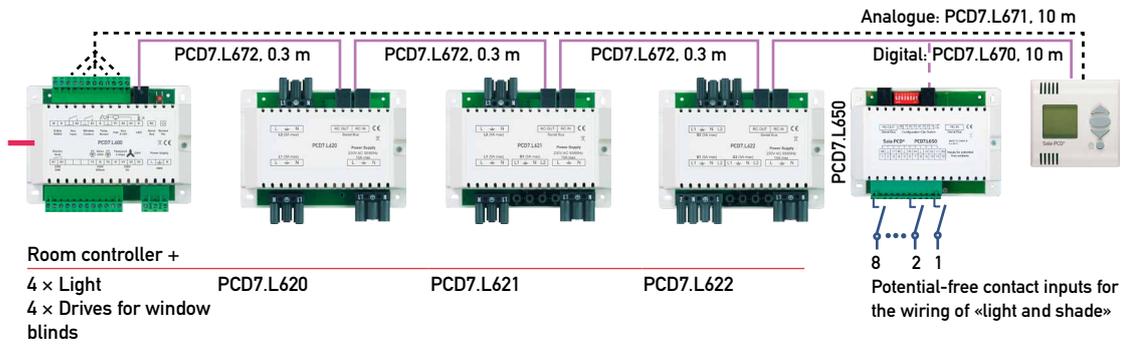
PCD7.L662 SV2.8

E1: Internal temperature sensor defect.

3.2 Technical data for PCD7.L650

Interface module to connect up to 8 floating contacts to control light and shade via industry-standard electronic switches/sensors. The module is used in combination with a room controller and the extension modules for light and shade.

Example application:



3



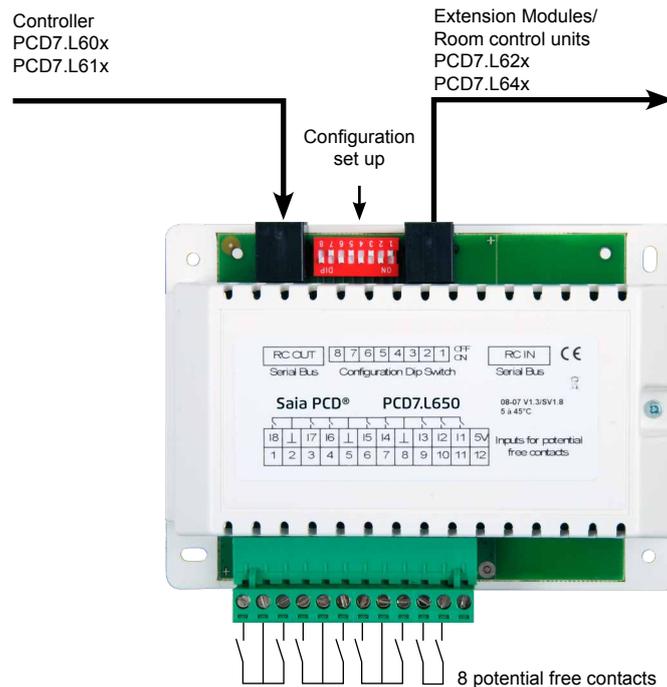
Expansion module of the same type in a room controller, can not be controlled differently.

The PCD7.L650 is connected to the room controller and the extension modules with cable PCD7.L672-xx. To connect digital room control units, cable PCD7.L670 can be used. The maximum length between the room controller and the room control unit must not exceed 11 m.

Interface	Terminal	Description
Serial bus	RC OUT	Communication interface to the room controller
Serial bus	RC IN	Communication interface to connect further components, e.g. extension modules or a digital room control unit.

Functions

Function	Description
Terminals I1-I8	8 digital inputs for floating contacts.



3

Commissioning / configuration

The functions are predefined within the module and are selected via the DIP switch. New settings only take effect after a restart.

System properties - general

Control and sensor commands are sent once only as status changes at the time of the action and are not constantly repeated. This enables e.g. a network command to control the light independently of the current switch setting.

For a combination of light control via contacts and network, it is advisable to use electronic sensors instead of switches.

SBC S-Bus

Where communication has been set to "after change" in the associated Room F-Box for the Saia PCD[®], the next switching command determines the current status. If, on the other hand, communication to the Room F-Box is set to "permanent", a switching command applies for just a short time until the next communication cycle.

3.2.1 Light: 2 light groups with sensor commands 'on' and 'off'
Shade: 2 groups up/down via electronic sensor

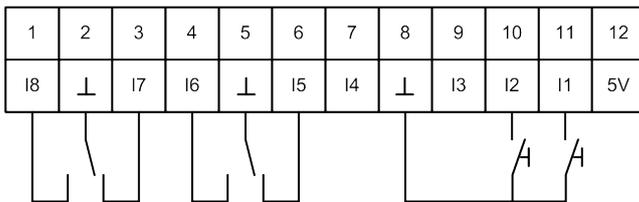
Base controller:	PCD7.L600	PCD7.L601	PCD7.L602	PCD7.L603	PCD7.L610	PCD7.L611
	✓	✓	✓	✓	-	✓

Sensor commands are sent once only as status changes at the time of the action and are not constantly repeated. This enables e.g. a network command to control the light independently of the current switch setting. Where communication has been set to "after change" in the associated Room F-Box for the Saia PCD®, the next switching command determines the current status. If, on the other hand, communication to the Room F-Box is set to "permanent", a different switching command applies for just a short time until the next communication cycle.

3

DIP switch

8	7	6	5	4	3	2	1
OFF	ON						



- | | | | |
|----|------------------|----|--------------------|
| 11 | Light group 1 | 16 | Shade group 1 down |
| 12 | Light group 2 | 17 | Shade group 2 up |
| 15 | Shade group 1 up | 18 | Shade group 2 down |

3.2.2 Light: 1 light group sensor on, automatic off after time delay
Shade: 2 groups shades up/down

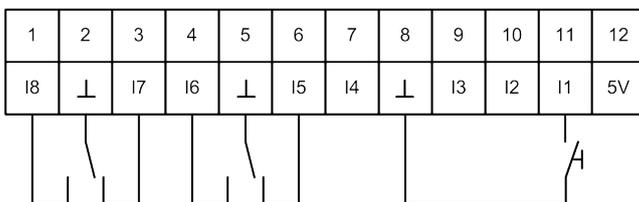
Base controller:	PCD7.L600	PCD7.L601	PCD7.L602	PCD7.L603	PCD7.L610	PCD7.L611
	-	-	-	-	-	✓

The time delay is an integral part of the LON controller PCD7.L611 software and can be set via a parameter using LON configuration software (LN220 or LON Maker). This is one of the internal parameters which require the resource file to be installed using the "Echeleon Resource File Catalog Tool" in order to display values in plain text.

3

DIP switch

8	7	6	5	4	3	2	1
OFF	OFF	OFF	OFF	OFF	OFF	ON	OFF



- 11 Light group 1
- 15 Shade group 1 up
- 16 Shade group 1 down
- 17 Shade group 2 up
- 18 Shade group 2 down

3.2.3 Light: 1 light group sensor on, off via network command
Shade: 2 groups shades up/down

Base controller:	PCD7.L600	PCD7.L601	PCD7.L602	PCD7.L603	PCD7.L610	PCD7.L611
	✓	✓	✓	✓	-	✓

PCD7.L60x SBC S-Bus

In combination with S-Bus controllers, the light outputs are split into up to 4 light groups using the Config F-Box, with the first two groups available for direct control via this module. Groups 3 and 4 can be controlled via the room control unit and S-Bus.

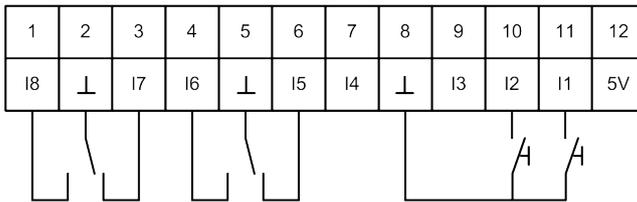
3

PCD7.L611 LON

When the extension units are used with a LON controller, the light and shade outputs must be assigned to the groups by "LON bindings". Without binding, a predefined assignment of the outputs to groups is only effective for initial commissioning.

DIP switch

8	7	6	5	4	3	2	1
OFF	OFF	OFF	OFF	OFF	OFF	ON	ON



- 11 Light group 1
- 12 Light group 2
- 15 Shade group 1 up
- 16 Shade group 1 down
- 17 Shade group 2 up
- 18 Shade group 2 down

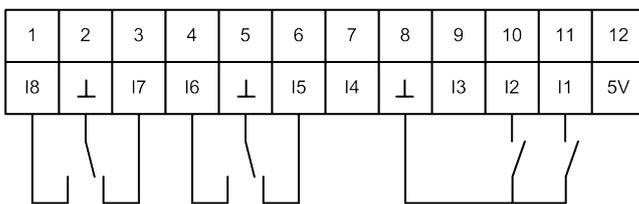
3.2.4 Light: 2 groups via switch
Shade: 2 groups via changeover contacts up/down

Base controller:	PCD7.L600	PCD7.L601	PCD7.L602	PCD7.L603	PCD7.L610	PCD7.L611
	✓	✓	✓	✓	-	✓

3

DIP switch

8	7	6	5	4	3	2	1
OFF	OFF	OFF	OFF	OFF	ON	OFF	OFF



- | | |
|---------------------|-----------------------|
| 11 Light group 1 | 16 Shade group 1 down |
| 12 Light group 2 | 17 Shade group 2 up |
| 15 Shade group 1 up | 18 Shade group 2 down |

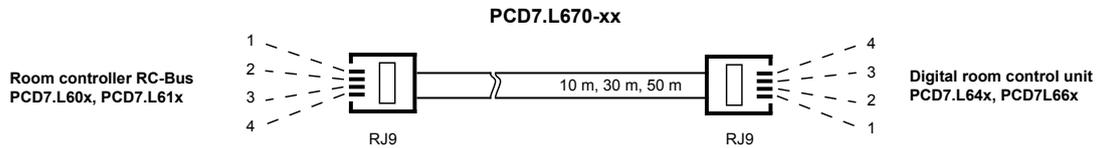
Switching commands are sent once only as status changes at the time of the action and are not constantly repeated. This enables e.g. a network command to control the light independently of the current switch setting. Where communication has been set to "after change" in the associated Room F-Box for the Saia PCD®, the next switching command determines the current status. If, on the other hand, communication to the Room F-Box is set to "permanent", a different switching command applies for just a short time until the next communication cycle.

For a combination of light control via contacts and network, it is advisable to use electronic sensors instead of switches. See application "2 light groups with key commands 'on' and 'off'"

4 Cables for room controllers and room control units

PCD7.L670

Preconfigured cable to connect digital room control units to room controllers or extension modules.

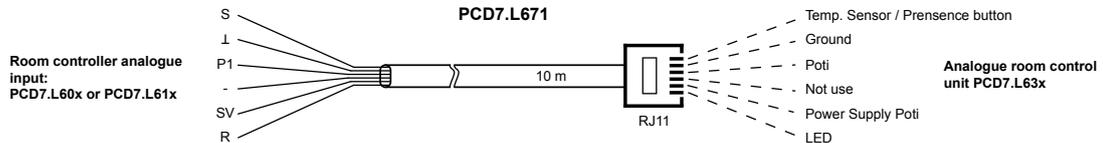


Length 10 m, 30 m, 50 m
 Plug connector RJ-9 / RJ-9

To fit:
 Room control units: PCD7.L64x, PCD7.L661 and PCD7.L663
 Room controllers: PCD7.L60x, PCD7.L61x
 Extension modules: PCD7.L62x and PCD7.L650

PCD7.L671

Preconfigured cable to connect analogue room control units to room controllers.



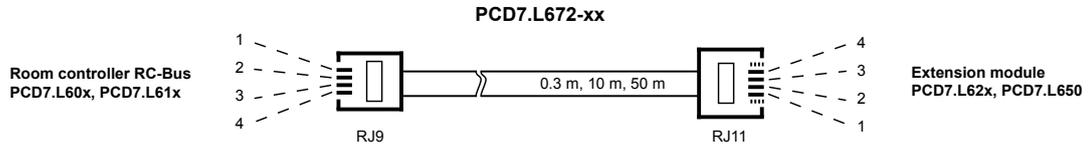
Length 10 m
 Plug connector RJ-11 / flex

To fit:
 Room control units: PCD7.L631 and PCD7.L632
 Room controllers: PCD7.L60x, PCD7.L61x

Note:
 The PCD7.L630 room temperature sensor is fitted with a 2-pole screw terminal. A 2-core cable is sufficient to connect to it; if the PCD7.L671 cable is used, the preconfigured connector is cut off, the insulation removed from the cable before connecting it in the conventional way.

PCD7.L672

Preconfigured cable to connect extension modules to each other and to a room controller.



Length 0.3 m, 10 m, 50 m
 Plug connector RJ-11 / RJ-9

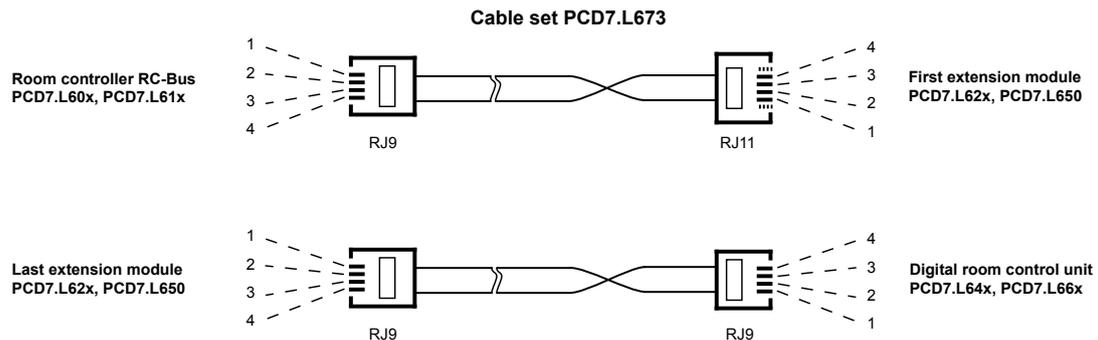
To fit:
 Room controllers: PCD7.L60x, PCD7.L61x
 Extension modules: PCD7.L62x and PCD7.L650

PCD7.L673

Cable set to make up a PCD7.L670 and a PCD7.L672 cable.
 Includes:

Cable length 11 m
 Plug connector 1× RJ-11
 3× RJ-9

Note:
 A crimping tool is needed to press in the RJ plug connector; this can be obtained from retailers.



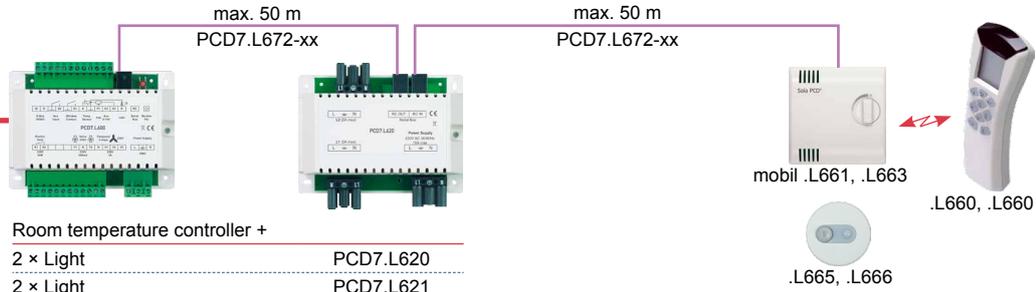
Instructions:

1. Cable cut to size and strip the outer sheath on both sides about 5 mm.
2. The one cable end with even insulated wires in the connector plug and an RJ-pressed with the forceps.
3. Proceed with the other end of the cable as well, but twisted the cable end by 180° in the connector insert and crimp.

Samples of use:

3

Room controller with extension module, input module and PCD7.L66x mobile room control unit

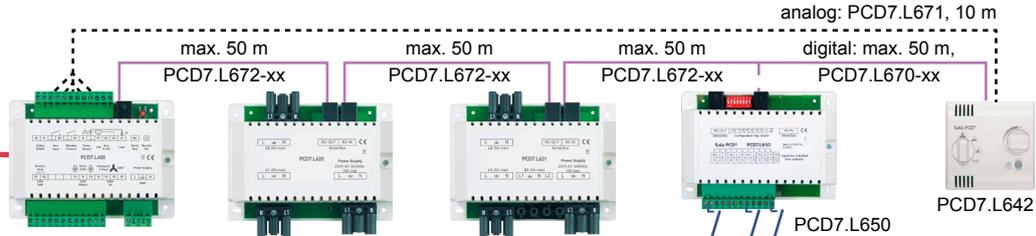


Room temperature controller +

2 × Light	PCD7.L620
2 × Light	PCD7.L621
1 × Store drive	
3 × Store drives	PCD7.L622
2 × Store drives 24 VDC	PCD7.L623

Room temperature controller with two expansion modules, a digital or analog input module and room control unit

! Extension modules per room controller of the same type can not be controlled differently!



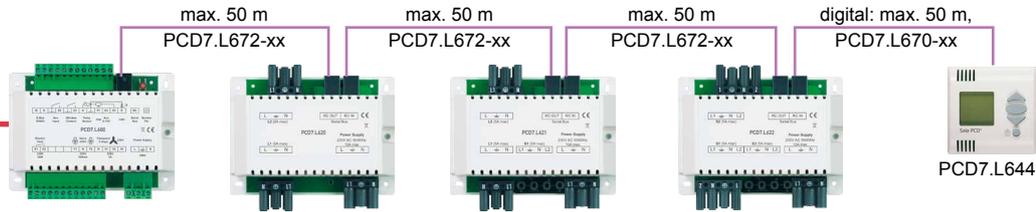
Room temperature controller +

4 × Light	PCD7.L620	PCD7.L621
1 × Store drive		
2 × Light	PCD7.L620	PCD7.L622
3 × Store drives		
2 × Light	PCD7.L621	PCD7.L622
4 × Store drives		
2 × Light	PCD7.L620	PCD7.L623
2 × Store drives 24 VDC		

Potential free contact inputs for the wired by «light and shade»

Room controller with three expansion modules and digital room control unit PCD7.L644

! Extension modules per room controller of the same type can not be controlled differently!



Room temperature controller +

4 × Light	PCD7.L620	PCD7.L621	PCD7.L622
4 × Store drives			

SBC S-Net, BACnet® MS/TP, LonWorks®

A Appendix

A.1 Icons

	In manuals, this symbol refers the reader to further information in this manual or other manuals or technical information documents. As a rule there is no direct link to such documents.
	This symbol warns the reader of the risk to components from electrostatic discharges caused by touch. Recommendation: Before coming into contact with electrical components, you should at least touch the Minus of the system (cabinet of PGU connector). It is better to use a grounding wrist strap with its cable permanently attached to the Minus of the system.
	This sign accompanies instructions that must always be followed.
	Explanations beside this sign are valid only for the Saia PCD® Classic series.
	Explanations beside this sign are valid only for the Saia PCD® xx7 series.

A.2 Order codes

Room controllers		
Type	Description	
SBC Serial S-Net	PCD7.L600	230 VAC room controller with 2 Triac outputs, relay for electric heating and 3-step fan control
	PCD7.L601	230 VAC room controller with 2 Triac outputs, 2 0...10 V outputs, relays for electric heating and 3-step fan control
	PCD7.L603*	24 VAC room controller with 2 Triac outputs, 2 0...10 V outputs, relays for electric heating with 3-step fan control (230 VAC)
	PCD7.L604 *	Room controller 230 VAC with 2 Triac outputs, 2 outputs 0...10 V, incl. 24 VAC (7 W) supply, relay for electric heater and 3-stage fan speed control
LONWORKS®	PCD7.L610	230 VAC room controller with 2 Triac outputs, relay for electric heating and 3-step fan control
	PCD7.L611	230 VAC room controller with 2 Triac outputs, 2 0...10 V outputs, Relays for electric heating and 3-step fan control
	PCD7.L614 *	Room controller 230 VAC with 2 Triac outputs, 2 outputs 0...10 V, incl. 24 VAC (7 W) supply, relay for electric heater and 3-stage fan speed control
	PCD7.L615 *	Double room controller 230AC for radiator/cooling ceiling combinations and VAV applications, 4 triac outputs, 2 × 0...10 V outputs, 2 relays for electric heater and autonomous interfaces for digital room control units
	PCD7.L616	Room controller, 230 VAC, to control air quality with 2 TRIAC outputs, 2 0...10 V outputs, 1 relay for electric heating, 3-stage fan control and 1 interface for a digital room control unit
BAC-net®	PCD7.L681 *	Room controller 230 VAC with 2 Triac outputs, 2 outputs 0...10 VDC, relay for electric heater and 3-stage fan speed control
Extension modules for light and shade		
	PCD7.L620	Extension module to control 2 light bars
	PCD7.L621	Extension module to control 2 light bars and 1 blind motor
	PCD7.L622	Extension module to control 3 blind motors
	PCD7.L623	Extension module to control 2 blind motors 24 VAC with blade movement
Room control units		
Analogue	PCD7.L630	Temperature sensor
	PCD7.L631	Temperature sensor and set-point setting
	PCD7.L632	Temperature sensor, set-point setting, presence sensor and LED
Digital	PCD7.L640	Temperature sensor and set-point setting
	PCD7.L641	Temperature sensor, set-point setting, presence sensor and LED
	PCD7.L642	Temperature sensor, set-point setting, presence sensor, LED and fan control
	PCD7.L643 ¹	Temperature sensor, function keys and LCD display for HeaVAC and light
	PCD7.L644	Temperature sensor, function keys and LCD display for HeaVAC and light and shade functions
Remote control	PCD7.L660	IR remote control with LCD display, temperature sensor and wall mounting for fixed use
	PCD7.L661	IR receiver
	PCD7.L662	Wireless remote control with LCD display, temperature sensor and wall mounting for fixed use
	PCD7.L663	Wireless receiver
	PCD7.L664	Optional wall mounting for mobile use
	PCD7.L665	IR (infra-red) receiver with multi-sensor for presence and brightness for PCD7.L660
	PCD7.L666	Wireless receiver with multi-sensor for presence and brightness for PCD7.L662



Expansion modules to connect third-party devices

PCD7.L650 Expansion module to connect up to 8 external contacts for light&shade

PCD7.L651* Wireless receiver to connect EnOcean room control devices



Accessories

PCD7.L670 Connecting cable for room control units RJ9/RJ9, 10 m

PCD7.L670- Connecting cable for room control units RJ9/RJ9, 30 m
30

PCD7.L670- Connecting cable for room control units RJ9/RJ9, 50 m
50

PCD7.L671 Connecting cable for room control units RJRJ 11/cord, 10 m

PCD7.L672 Connecting cable for room controller/extension modules RJ 11/RJ9, 0.3 m

PCD7.L672- Connecting cable for room controller/extension modules RJ 11/RJ9, 10m
10

PCD7.L672- Connecting cable for room controller/extension modules RJ 11/RJ9, 50m
50

PCD7.L673 Set of connecting cables for digital room control units, 3 × RJ9 and 1 × RJ 11,
length 11 m

PCD7.L679 Manual control unit for room controller configuration

* in preparation

(1 no longer available

A.3 Contact**Saia-Burgess Controls AG**

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