

Issued: September 2002

Product and Applications description

The IR transmitter AP 421 is available in the following designs:

- | | |
|------------------------|----------------|
| titanium white: | |
| - with red LED cover | 5WG1 420-3AB11 |
| - with white LED cover | 5WG1 420-3AB12 |

For wireless control of actuators the IR transmitter AP 421 transmits infrared signals received by the IR-receiver S 440 and downloaded to the IR-decoder N 450, which transforms these signals into appropriate bus telegrams.

The IR transmitter AP 421 can control actuators, e.g. for defined on and off switching, dimming fluorescent lights, or for raising and lowering venetian blinds and adjusting the louvres. With the two push button rockers two separate groups of actuators can be stimulated.

Notes:

- The battery (FLATPACK Alkaline, 6V) is not included and has to be ordered separately.
- A device suspected faulty should be returned to the local SIEMENS office.

Application Programs

No application programs required

Technical Specifications

Power supply

FLATPACK Alkaline battery, 6 V (to be ordered separately, order number: 5WG1 490-8AA81)

IR transmission unit

- light wave length: 950 nm
- transmission freq.: 458 kHz
- transmission range:
(the receiver must be within uninterrupted optical reach)
 - red LED cover: approx. 8 m unfocused
 - white LED cover: approx. 6 m unfocused
- adjustable channels: 2 of 64

Adjustment elements

for channel adjusting:
rotary and slide switch (built in the device), access is possible after removing the bottom part

Operator elements

2 key rocker with neutral positions

Display elements

for transmission and battery observance: 1 red LED

Physical specifications

- housing: plastic
- dimensions (W x H): 75 x 115 mm
- weight: approx. 80 g (without battery)
- fire load: approx. 2600 kJ ± 10%

Electrical safety

- protection (according to EN 60529): IP 20
- protection class (according to IEC 1140): III

Reliability

Rate of failure: 440 fit at 40 °C

Electromagnetic compatibility

complies with
EN 50080-1, EN 50082-2 and EN 50090-2

Environmental specifications

- climatic conditions: EN 50090-2-2
- ambient temperature operating: - 5 ... + 45 °C
- ambient temperature non-op.: - 25 ... + 70 °C
- relative humidity (non-condensing): 5 % to 93 %

CE norm

complies with the EMC regulations (residential and functional buildings)

Location and Function of the Display and Operator Elements

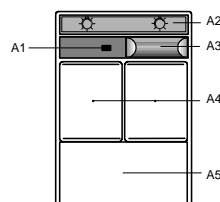


Figure 1: Location and function of the display and operator elements

- | | |
|----|--|
| A1 | LED for transmission and battery observance
flashing on rocker depression;
no display: replace battery |
| A2 | label for notes |
| A3 | IR two-electrode transmission tubes |
| A4 | rocker switch
top depression (1) = ON/UP/BRIGHTER
bottom depression (0) = OFF/DOWN/DARKER |
| A5 | battery compartment |

Label Legends Included

- : switch lighting
- : dim lighting
- : raise / lower blinds / blinds control
- : air conditioning / ventilation
- : open / close
- : bell
- : timer
- : delay

The above can be combined as required. For inserting the labels the cover of the labelling area must be removed from the transmitter. Therefore handle the cover by its cut-out on the side with a screw-driver. Insert label between the paper strip and the cover and slide the cover back onto the transmitter.

Mounting and wiring

Mounting notes

- Take care that there is an uninterrupted optical reach from the two-electrode transmission tubes to the receiver. Especially if people are staying in front of the device in order to use it.
- The IR-transmitter can be mounted with screws or optionally with the included double-faced adhesive tape.
- It can also be mounted in box mounts (55/60°). The battery compartment cover and the device can be protected against being removed with the included safety screw.

Mounting with screws (Figure 2)

- Opening the IR-transmitter:
 - open the battery compartment (B1)
 - previously detach the safety screw (B2)
 - push the clamps in the battery compartment to the middle (B3) and remove the device from the base panel (B4).
- Pierce the horizontal or vertical holes (B6) of the base panel (B4) with a screw-driver or another suitable tool.
- Attach the base panel (B4) with screws respectively with dowels and screws.
- Hang the device onto the base panel with its upper side and click it into place at the retaining clamps (B3) with its bottom side to attach the device on the base panel.
- Insert the battery and slide on the cover (B1) back on again.
- Fasten the battery compartment with the included safety screw (B2).

Mounting with double-faced adhesive tape (Figure 2)

- Remove one of the protection films (B9) from the double-faced adhesive tape (B8) and stick the tape in the recesses (B7) on the device's back side.
- Strip off the remaining protection films (B9) and push the base panel onto a smooth, dustless and greaseless foundation.

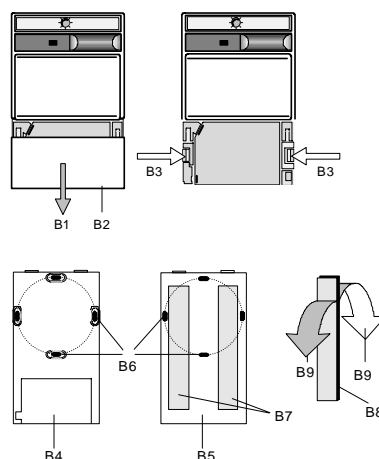


Figure 2: Mounting the IR transmitter

- | | |
|----|---------------------------------|
| B1 | opening the battery compartment |
| B2 | safety screw |
| B3 | interlocking clamps |
| B4 | base plate, front view |
| B5 | base plate, rear view |
| B6 | horizontal/vertical long slots |

- | | |
|----|----------------------------|
| B7 | recesses for adhesive tape |
| B8 | double face adhesive tape |
| B9 | protective films |

Adjusting the transmission channel

The IR transmitter occupies a pair of channels (1 channel per rocker) selected by the user from a choice of 64 channels for sending the IR signals. The selected pair of transmission channels is adjusted via a rotary switch and a slide switch. The switches are situated at the device's back side. That's why the transmission channel should be adjusted before mounting the device on the base panel. Afterwards it is necessary to take off the IR-transmitter from the base panel (see figure 2) to reach the switches.

Correlation of the channel and its corresponding switch position

channel		position of the rotary switch	position of the slide switch
left rocker	right rocker		
0	1	0	1/2
2	3	0	3/4
4	5	1	1/2
6	7	1	3/4
8	9	2	1/2
10	11	2	3/4
12	13	3	1/2
14	15	3	3/4
:	:	:	:
:	:	:	:
58	59	E	3/4
60	61	F	1/2
62	63	F	3/4

Adjusting the pair of transmission channels (Figure 3)

The pair of transmission channels is set via the rotary switch (C1) and the slide switch (C2) on the device's (C3) back side.

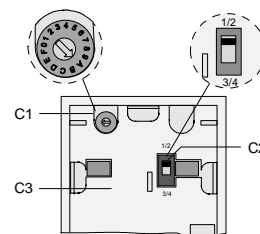


Figure 3: Adjusting the pair of transmission channels

- | | |
|----|---|
| C1 | rotary switch with possible settings 0-F |
| C2 | slide switch with possible settings 1/2 and 3/4 |
| C3 | IR-transmitter (rear view) |

Battery substitution

Substitution of the battery (Figure 4)

- Detach the safety screw (D2) at the bottom of the battery compartment cover.
- Push down (as shown by the direction of the arrow) and remove the battery compartment cover.
- Remove the empty battery and replace it by a new battery (D3) (FLATPACK Alkaline battery, 6 V, order number: 5WG1 490-8AA81).
- Insert the battery compartment cover back again, push it to the top and fasten it with the safety screw (D4).

Note: Do not carry out any actions with the rocker of the IR-transmitter while substituting the battery!

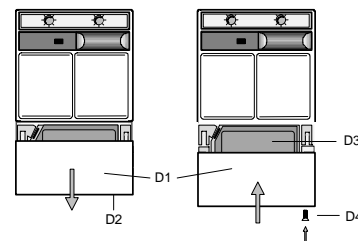


Figure 4: Battery substitution