Text display UP 587/1	**5WG1 587-2AB.1**
Text display with weekly schedule UP 587/2	**5WG1 587-2AB.2**

Product and Applications Description

The Text display UP587/1 is available in four colors, matching the design of the wall switch design line DELTA i-system:

electro white	5WG1 587-2AB01
titanium white	5WG1 587-2AB11
carbon metallic	5WG1 587-2AB21
aluminum metallic	5WG1 587-2AB31

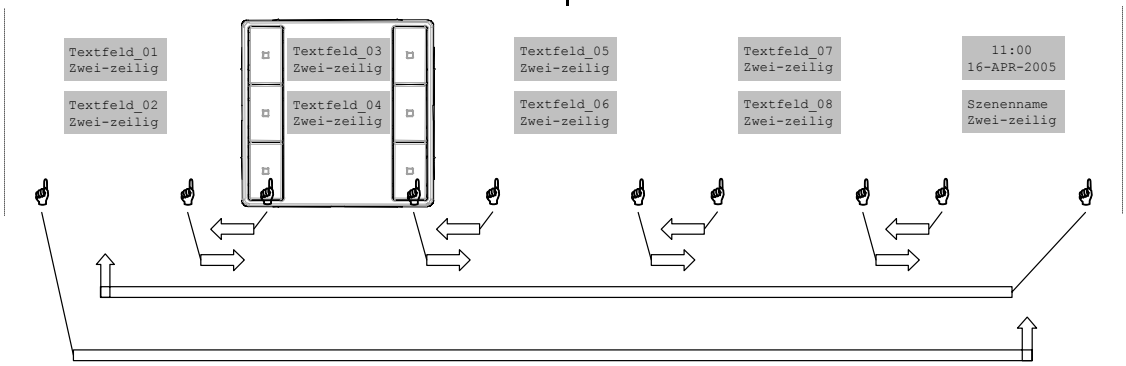
Besides the Text Display UP 587/1 the Text Display with weekly schedule UP 587/2 is available in the same colors. It additionally offers a weekly schedule with up to 40 weekly schedule entries.

electro white	5WG1 587-2AB02
titanium white	5WG1 587-2AB12
carbon metallic	5WG1 587-2AB22
aluminum metallic	5WG1 587-2AB32

As far as the features of the UP 587/1 and UP 587/2 are the same the following description mentions the text display UP 587 only.

The Text Display UP 587 is slid onto the Bus Transceiver Module (BTM) together with its DELTA line / DELTA vita / DELTA miro frame. At the same time the electric connection between the text display UP 587 and the BTM is established via a Bus Transceiver Interface (BTI).
The required BTM and DELTA line / DELTA vita / DELTA miro frame are not included and therefore have to be ordered separately (see current catalog).

The Text display UP587 has three pairs of horizontally aligned buttons.
Two display rows of 11 characters form a display field of which one each is assigned to the upper two pairs of buttons. The text displayed in a display field describes the function assigned to the associated pair of buttons.
The Text display UP587 provides up to nine (9) configurable functions, for switching, forced-control, dimming, solar protection, scene control as well as display of text, operational messages and warning/alarm messages. Alarm messages are activated with an alarm sound. Additionally to the nine functions date and time can be set and displayed if this feature is configured.
These up to ten functions are displayed in functional blocks of two functions each aligning with the two display fields of the text display (see figure below).
The third pair of buttons serves for navigation from one function block to the next (press the right button) or the previous one (press the left button).
If eight or less functions are configured then automatically less function blocks are visible. If an odd number of functions is configured one pair of buttons of a function block will be without displayed text or a function.
Date and time will be displayed ahead of the first function if date and time are configured to be displayed. Below date and time the first configured function will be displayed.
Warning/alarm messages are only displayed if an alert message is received. If more than one warning/alarm message was received the most recent one is displayed. Alarm messages have priority over warning messages.



Text display UP 587/1	**5WG1 587-2AB.1**
Text display with weekly schedule UP 587/2	**5WG1 587-2AB.2**

Configurable functions of the top and middle button pairs

Configurable functions of the top and middle button pairs
A total of up to nine (9) functions can be configured for the top and middle button pairs. These function alternatives are available:

a) Switching on/off, display status (LED)
b) Switch toggle, display status (LED)
c) Switch on/off, Forced control on/off, display status (LED)
d) Recall / save scene (1-bit)
e) Recall / save scene (8-bit)
f) Switch on/off, Dim up/down, display status (LED) + dim value
g) Switch toggle, dim up/down, display status (LED) [2 x switch/dimming with a single pair of buttons]
h) Switch on/off, display + change + send dim value, display status (LED)
i) Shutter/blinds up/down, slats open/close, stop, display position
j) Roller shutters up/down, stop, display position
k) Display, (change), and send value
l) Display, (change), and send dim value
m) Display, (change), and send temperature value
n) Display text
o) Display text dependent on a value
p) Warning-/Alarm annunciation

A user-defined text may be displayed on two rows with 11 characters each for each function.
For the functions

- Display, (change), and send value
- Display, (change), and send dim value
- Display, (change), and send temperature value

a free text (11 characters) may be configured for the first row. The second row displays the current value in the middle of the row. For analog values a unit text with up to 4 characters can be edited. The value displayed in the second row is driven by the value received via the bus. ETS is used to enter the fixed text and the configuration of the display fields.
A function is operated directly using the pair of buttons associated with the display field. Temperatures or other analog value are sent immediately onto the bus after a change. The function associated with the text is configured using the ETS.

Display of the functions can be configured such that
- the last function operated by the user is visible,
- the display shows a preselected function after a time-out starting with the last user operation has expired,
- the function with the latest change of value is presented,
- time and date are displayed.

Switching / Send value
When one of the buttons is depressed the corresponding telegram (On/Off/Toggle) is sent immediately.
Additionally a bell function is possible. When the button is depressed an on/off telegram is sent and when the button is released the reverse telegram is sent.

No special actions are assigned to this function for bus voltage failure or bus voltage recovery.

Forced control switching
Depressing the buttons briefly immediately sends the configured telegram (forced on / forced off) onto the bus. Depressing the buttons longer sends a telegram that deactivates the forced control and at the same time sends an on or off signal.
Actuators with a forced control input allow for overriding specific actuator outputs by central control commands.
This may prohibit e.g. turning selected lights on during energy savings or night mode. In night mode a forced control off telegram may be sent at 20:00 and at 06:00 a forced control telegram may deactivate the forced control.
The text display with weekly schedule UP587/2 offers these schedule functions.

No special actions are assigned to this function for bus voltage failure or bus voltage recovery.

Dimming with Stop telegram
Short and long duration of depressing a button are distinguished. When the button is depressed for a short period then a switching telegram (On, Off, or Toggle) is sent. When the button is depressed for a longer period, which is configurable, then a dimming telegram is sent. The function is dimming with stop telegram. This function includes a dimming telegram sent to start dimming up or down when the rocker is pressed down and a stop telegram when the rocker is released.

No special actions are assigned to this function for bus voltage failure or bus voltage recovery.

Send value (8 bit)
When one of the buttons is depressed the corresponding telegram is sent immediately. This function allows to send 8-bit integer values (EIS 6) in the value range 0...255. Different 8-bit values may be assigned to each button of a button pair. This allows to e.g. set a dimming actuator to a pre-defined value or to control the speed of a fan..

No special actions are assigned to this function for bus voltage failure or bus voltage recovery.

Text display UP 587/1	**5WG1 587-2AB.1**
Text display with weekly schedule UP 587/2	**5WG1 587-2AB.2**

Send value (2 byte; 4 byte)
This allows displaying as well as changing and sending of floating point values (2 Byte = EIS 5; 4 Byte = EIS 9). Pressing the button to the left or right of the display field decreases or increases the displayed value. The last value changed is sent onto the bus.

No special actions are assigned to this function for bus voltage failure or bus voltage recovery.

Display / send dimming value (EIS6)
The text display shows the last current dimming status value received via the bus. This value may be changed by pressing the buttons. The changing value is inversely displayed (white on black) while the buttons are pressed. The displayed dimming value is sent onto the bus when the button is released.

No special actions are assigned to this function for bus voltage failure or bus voltage recovery.

Display / send temperature value (EIS5)
The text display shows the last current temperature value received via the bus. This value may be changed by pressing the buttons. The changing value is inversely displayed (white on black) while the buttons are pressed. The displayed temperature value is sent onto the bus when the button is released.

No special actions are assigned to this function for bus voltage failure or bus voltage recovery.

Solar protection (Shutters / Blinds)
Short and long duration of depressing the buttons are distinguished. When the button is depressed for a short period then a switching telegram is sent, which changes the angle of the slats or stops the movement of the blinds. When the button is depressed for a longer period then the blind / shutter moves up or down. The direction of the movement can be assigned as left button up / right button down or left button down / right button up during configuration. This parameter allows e.g. for control of roof windows, garage doors etc in both directions.

No special actions are assigned to this function for bus voltage failure or bus voltage recovery.

Scene (1-bit)
The "scene (1-bit)" function allows for changing the characteristics of a preset scene, i.e. brightness levels and switching states of the groups within a scene, without using the ETS. A pair of buttons can be used to recall one scene each (e.g. left button: scene 1, right button: scene 2) with briefly depressing the respective button or save the corresponding scene by depressing the button for a longer period. When a save action is initiated the LED lights up. A recall of a scene happens with a 1-bit switching telegram, where the "0"-telegram recalls scene 1 and the "1"-telegram recalls scene 2. A parameter determines which button is assigned to which scene.
A scene is saved via a 1-bit switching telegram, where the "0"-telegram saves scene 1 and the "1"-telegrams saves scene 2. The scene controller must have a functionally corresponding application program.
Before saving a scene the actuators belonging to that scene must be set to the desired light levels and switching states. When receiving a save telegram a scene controller is commanded to interrogate the current light levels and switching states of the actuators and save these as scene settings.
The period distinguishing a short from a long button press can be configured.

No special actions are assigned to this function for bus voltage failure or bus voltage recovery.

Scene (8-bit)
The "scene (8-bit)" function allows for changing the characteristics of a preset scene, i.e. brightness levels and switching states of the groups within a scene, without using the ETS. A pair of buttons can be used to recall one scene each with briefly depressing the respective button or save the corresponding scene by depressing the button for a longer period. When a save action is initiated the LED lights up. A recall of a scene happens with an 8-bit telegram, where the lower 6 bits (bit 0-5) contain the scene number, bit 6 is reserved, and bit 7 is set to "0" (recall). A parameter determines, which button is assigned to which scene.
A scene is saved via an 8-bit telegram, where the lower 6 bits (bit 0-5) contain the scene number, bit 6 is reserved, and bit 7 is set to "1" (save). The scene controller or actuators with an 8-bit scene function must have a functionally corresponding application program.
Before saving a scene the actuators belonging to that scene must be set to the desired light levels and switching states. When receiving a save telegram scene controllers or actuators with 8-bit scene function are commanded to interrogate the current light levels and switching states of the actuators and save these as scene settings.
The period distinguishing a short from a long button press can be configured.

No special actions are assigned to this function for bus voltage failure or bus voltage recovery.

Display text
The text display can show text in two rows of up to 11 characters each. The function “Display text” allows to display messages (EIS15) received via the bus.

Text display UP 587/1	**5WG1 587-2AB.1**
Text display with weekly schedule UP 587/2	**5WG1 587-2AB.2**

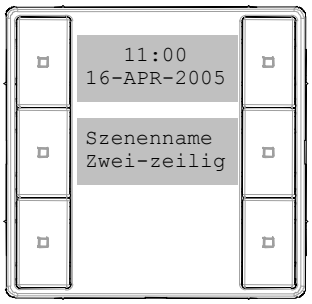
No special actions are assigned to this function for bus voltage failure or bus voltage recovery.

Value-dependent display of text
Pre-defined text can be displayed dependent on a value received via the bus. Two thresholds may be defined for the value-dependent display of text. The comparison value is an 8 bit value (EIS6) received via the bus.

No special actions are assigned to this function for bus voltage failure or bus voltage recovery.

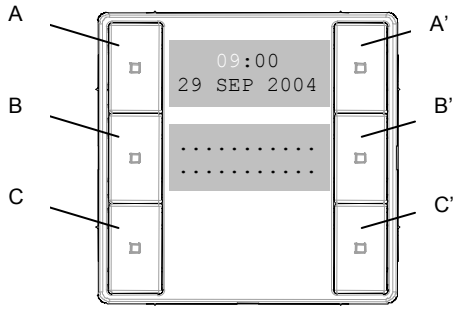
Warning / Alarm annuciation
When a warning / alarm annunciation is triggered the corresponding function is displayed with the configured warning / alarm text ("Window kitchen open", "frost protection alarm"). Warnings are associated with a blinking LED, while alarms additionally are accompanied by an acoustic alarm. Several warnings/alarms coming in at the same time are displayed with alarms having priority over warnings. Within the priority group (warnings / alarms) the last message received is displayed on top of older messages.
In case of an alarm the left LED flashes in sync with the acoustic alarm until the left button is depressed. Acoustic alarm and left LED are turned off and the right LED flashes until the right button is depressed to acknowledge the alarm. If the right button is depressed immediately the acoustic alarm and both LED's are turned off and the acknowledgement is sent onto the bus.
If further annunciations are pending the next ones are displayed.
After all warnings / alarms have been acknowledged the text display shows the function that was visible before the warning / alarm annunciations were activated.

Function Time/Date
If time and date are present the text display UP 587 shows these in a time / date function block.



The user can change date and time at the display. Depressing both buttons associated with the date / time display switches the text display into the operation mode "time".
The display automatically switches into the operation mode "time" for the user to enter date and time when bus power resumes and the display determines that date and time are missing after start up.
The operation mode "time" displays date and time differently to guide the user. The value to be set by the user is presented in inverted mode (white on black).
When the operation mode "time" is entered the display buttons have these assigned functions:

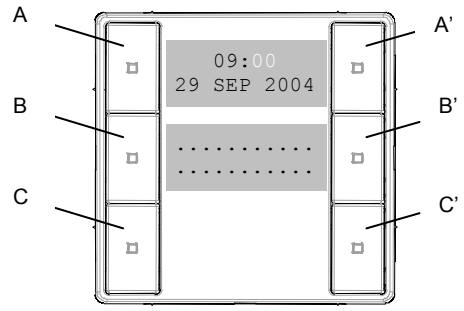
Input hour



A	Value for hour is decremented by one
A'	Value for hour is incremented by one
B	No function
B'	No function
C	Keep value set and switch to entry for year
C'	Keep value set and switch to entry for minute
C+C'	When C and C´ are depressed simultaneously, then: The input process is finished, date and time are sent onto the bus, if configured, and the text display is switched into the normal operation mode. If the date set is not valid (e.g. 31st February 2006), the cursor jumps to the day with an acoustic warning for a corrective entry.

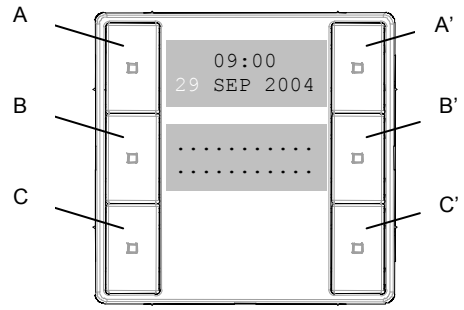
Text display UP 587/1	**5WG1 587-2AB.1**
Text display with weekly schedule UP 587/2	**5WG1 587-2AB.2**

Input minute



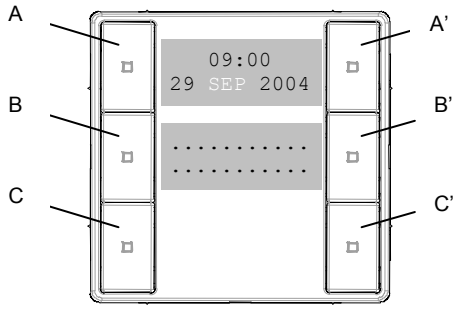
A	Value for minute is decremented by one
A'	Value for minute is incremented by one
B	No function
B'	No function
C	Keep value set and switch to entry for hour
C'	Keep value set and switch to entry for day
C+C'	See Input hour

Input day



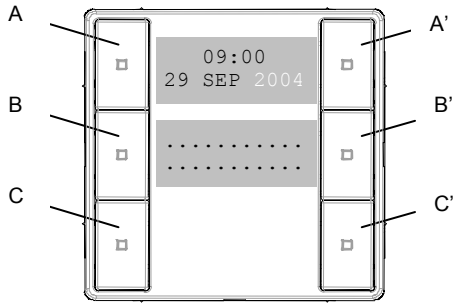
A	Value for day is decremented by one
A'	Value for day is incremented by one
B	No function
B'	No function
C	Keep value set and switch to entry for minute
C'	Keep value set and switch to entry for month
C+C'	See Input hour

Input month



A	Value for month is decremented by one
A'	Value for month is incremented by one
B	No function
B'	No function
C	Keep value set and switch to entry for day
C'	Keep value set and switch to entry for year
C+C'	See Input hour

Input year



A	Value for year is decremented by one
A'	Value for year is incremented by one
B	No function
B'	No function
C	Keep value set and switch to entry for hour
C'	Keep value set and switch to entry for month
C+C'	See Input hour

If no button was pressed for five minutes in the operation mode “time” the text display automatically switches back into the normal operation mode.

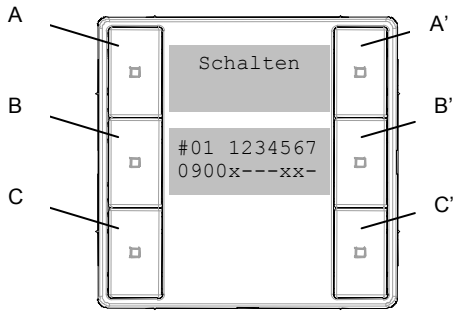
If date / time are missing after bus power resumes the text display stays in the operation mode “time” until a valid date and time have been entered.

Text display UP 587/1	**5WG1 587-2AB.1**
Text display with weekly schedule UP 587/2	**5WG1 587-2AB.2**

Weekly schedule (only for UP587/2)
The text display with weekly schedule UP587/2 offers a weekly schedule function with up to 40 weekly schedule entries, which can be configured at the display itself.
The user may enter weekly schedules for any of the nine visible functions if these apply to switching (on/off), dimming, forced control, solar protection or send value.

Example:
Switching on/off is assigned to the top pair of buttons.
On Monday, Friday and Saturday the switching command shall be sent at 09:00.

Depressing both buttons associated with the function switches the text display into the operation mode "schedule".
The selected function appears in the upper field of the display.



The two rows of the selected function and the associated LED show the value to be sent with the schedule entry.
The middle two rows of the text display show the number of the (first) schedule entry, the time and the week days for execution of the schedule entry for this function.

Pressing buttons A and A' determine the value that is sent with the schedule entry.

Example:
Pressing the left button sets the value to Off.
Pressing the right button sets the value to On.

The schedule entry is set field by field.
Pressing buttons C or C' the entry for a field is finalized and the entry fort he previous / next field is initiated. The first field is the hour (in the example: 09). The second fiel dis the minute. The following seven fields determine the week days for execution of the schedule entry (marked with x).
The value in a field is decreased / increased using buttons B or B'. Holding the buttons down for more than 0.5s will scroll the value of the field.

The schedule entry is activated when the clock symbol is visible. Deactivated schedule entries show no clock symbol.
If a schedule is not assigned to any week day the schedule entry is erased when the entry page is left or when the user switches to another schedule entry.
When the cursor highlights the number of the schedule entry then pressing button B or B' switches to the previous or next schedule entry for this function.

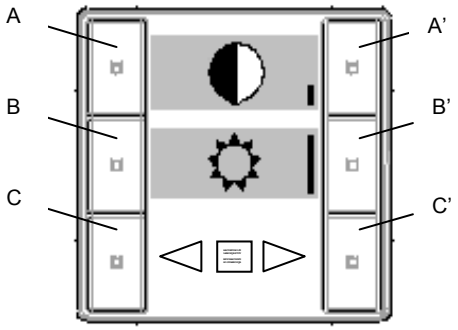
Simultaneously depressing buttons C and C' concludes the schedule entry and ends the operation mode „schedule".

If no button was pressed for five minutes in the operation mode "schedule" the text display automatically switches back into the normal operation mode.

Text display UP 587/1	**5WG1 587-2AB.1**
Text display with weekly schedule UP 587/2	**5WG1 587-2AB.2**

Display settings
The background lighting of the Text display UP587 can be configured to either be always turned off, function as an orientation light (always on) or be switched via the bus. If the background lighting is turned off it is activated for 20 seconds when a button is pressed. Each subsequent press of a button extends the time for the background lighting by another 20 seconds. The user may turn the background lighting permanently on or off. The background lighting can be turned on / off independently of this user setting via the bus if this function is configured.

Simultaneously depressing the bottom pair of buttons (C+C') sets the device into display configuration mode. The top display field shows the contrast setting (symbol: ◐) and the lower display field shows the brightness (symbol: ☼).



Button functions:

A	Decrease contrast
A'	Increase contrast
B	Decrease brightness
B'	Increase brightness
C	Turn-off background lighting permanently
C'	Turn-on background lighting permanently
C+C'	Leave display configuration mode

The back-ground lighting can be turned on or off any time via the bus if this function is configured.

On bus voltage recovery the LCD backlighting takes the status before bus voltage failure.

LED's
Each top and middle button has an associated LED.
Functions with an LED status annunciation (see Configurable Functions) may be configured to display status with a statically lit and/or flashing LED.
A static LED status display may be configured to directly (status value = 1, then LED = on) or indirectly (status value = 0, then LED = on) display the value of a status object. Alternatively, a static LED display may be selected where the LED assigned to the On button flashes every 2 seconds for up to 100ms if the status is "Off".
A flashing LED status display may be configured to directly (status value = 1, then LED = flashing) or indirectly (status value = 0, then LED = flashing) display the value of a status object with a one second flashing on/off interval.
If both alternatives static and flashing status display are configured then flashing has priority. When the LED does not flash the static status object determines the state of the LED.
The LED may be configured to be permanently on or off.

No special actions are assigned to this function for bus voltage failure or bus voltage recovery.

Application Programs

Text display UP 587/1:
25 CO Text display 908901

Text display with weekly schedule UP 587/2:
25 CO Text display with weekly schedule 908801

With the ETS v1.2 or later (*EIB* Tool Software) the parameters and addresses are assigned appropriately and downloaded into the device.

Note

The application program is already loaded into the device at the manufacturing plant.

Text display UP 587/1	**5WG1 587-2AB.1**
Text display with weekly schedule UP 587/2	**5WG1 587-2AB.2**

Installation Instructions

- The device may be used for permanent interior installations in wall boxes in dry locations.

WARNING

- The device must be mounted and commissioned by an authorised electrician.
- The device may be mounted to switch and socket combination box mounts if VDE-certified devices are used exclusively.
- The prevailing safety rules must be heeded.
- For planning and construction of electric installations, the relevant guidelines, regulations and standards of the respective country are to be considered.

Technical Specifications

Power supply
via Bus Transceiver Module (BTM),
e.g. BTM Plus UP117/11 (order no. 5WG1 117-2AB11)
- EIB bus current: 7 mA (w/o display backlighting),
  20 mA (with display backlighting)

Functional data
- Accuracy of the internal clock:
  ±3 seconds/day at 20°C

Control elements
- 3 horizontal pairs of buttons
- Number of switching operations: > 20000 per button
- 1 learning button:
  for switching between normal operating mode and addressing mode

Display elements
- 1 red LED: for monitoring bus voltage and displaying mode (LED=On → addressing mode), selected with the learning button
- 4 red LED's
  as orientation or status display, assigned to the upper four buttons
- LC-Display with background lighting
  2 display fields each with 2 rows of 11 characters; the display fields are assigned to the top and middle button pairs; background lighting is controllable

Connections
- 10-pin connector:
  for connection to a Bus Transceiver Module UP117

Physical specifications
- housing: plastic
- dimensions (L x W x D):
  55 x 55 x 24 mm (incl. spring)
- weight: approx. 30 g
- installation: mounted on BTM UP117

Electrical safety
- degree of pollution (according to IEC 60664-1): 2
- protection (according to EN 60529): IP 20
- overvoltage class (according to IEC 60664-1): III
- bus: safety extra low voltage SELV DC 24 V
- the device complies with EN 50 090-2-2

Reliability
Failure rate: < 266 fit at 40 °C

Electromagnetic compatibility
complies with EN 50090-2-2

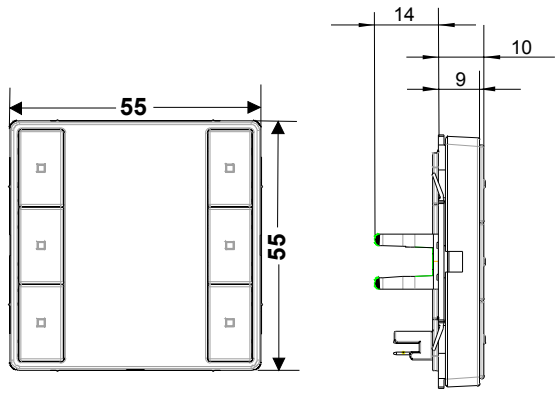
Environmental specifications
- climatic conditions: EN 50090-2-2
- ambient temperature operating: - 5 ... + 45 °C
- ambient temperature non-op.: - 25 ... + 60 ° C
- relative humidity (non-condensing): 5 % to 93 %

Markings
CE, EIB, KNX

CE mark
complies with the EMC regulations (residential and functional buildings), and low voltage regulations

Dimension Diagram

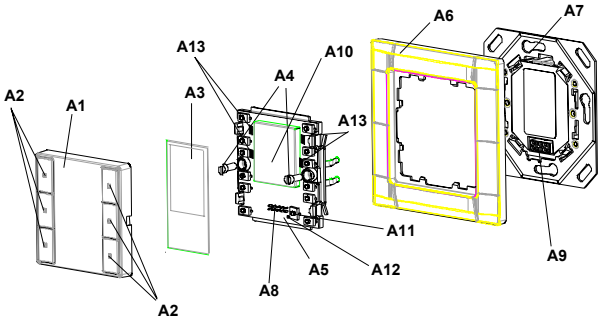
Dimensions in mm



(Principal design)

Text display UP 587/1	**5WG1 587-2AB.1**
Text display with weekly schedule UP 587/2	**5WG1 587-2AB.2**

Location and Function of the Display and Operating Elements



A1 Transparent frame with switch buttons
A2 Switch button
A3 White label insert
A4 Mounting screws
A5 Base module
A6 Design frame (DELTA line/vita/miro)
A7 Bus Transceiver Module (BTM) UP117
A8 BTI interface on base module
A9 BTI interface on BTM UP117
A10 Display on base module with background lighting
A11 Learning button for switching between normal operating mode and addressing mode for receiving the physical address
A12 LED for indicating normal operating mode (LED off) and addressing mode (LED on); upon receiving the physical address the device automatically returns to normal operating mode
A13 Status LED

Mounting and wiring

General description

The Textdisplay UP 587 is slid onto the Bus Transceiver Module (BTM) UP117 together with its DELTA line / vita / miro frame. The electric connection between the Textdisplay UP 587/1 and the BTM is established via a Bus Transceiver Interface (BTI).

BTM and DELTA line / DELTA vita / DELTA miro frame are not included and therefore have to be ordered separately (see current catalog).

Mounting

– The BTM UP117 (A7) is mounted into a flush-mount box (see installation instruction of the BTM).
– Remove the transparent frame with the switch buttons (A1) from the base module (A5) by inserting a screwdriver laterally into the recesses and lifting the transparent frame upwards from the base module.
– Slip the base module (A5) together with the design frame DELTA line / DELTA vita / DELTA miro (A6) onto the BTM UP117.
– Attach the base module to the BTM UP117 (A7) with the screws delivered in the package (A4). Slip the transparent frame with the switch buttons back onto the base module.

Unmounting

– Remove the transparent frame with the switch buttons (A1) from the base module (A5) by inserting a screwdriver laterally into the recesses and lifting the transparent frame upwards from the base module.
– Loosen the screws (A4) securing the base module to the BTM (A7).
– Remove the base module (A5) together with the design frame DELTA line / DELTA vita / DELTA miro (A6) from the BTM (A7).

Address assignment

– Remove the transparent frame with the switch buttons (A1) from the base module (A5) by inserting a screwdriver laterally into the recesses and lifting the transparent frame upwards from the base module.
– Press the learning button on the device (A11) to initiate the assignment of the physical address to the device.
– The programming LED (A12) turns on to indicate the programming mode. Upon receiving the physical address the device automatically returns to normal operating mode and the LED turns off.

General Notes

- Any faulty device should be returned to the local Siemens office.
- If you have further questions concerning the product please contact our technical support.
  ☎ +49 (180) 5050-222
  🖷 +49 (180) 5050-223
  ✉ adsupport@siemens.com
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Text display UP 587/1	**5WG1 587-2AB.1**
Text display with weekly schedule UP 587/2	**5WG1 587-2AB.2**

Room for Notes

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