



ATOUGH

TW-FUSION

USER MANUAL

Touch panel for automation, air conditioning and air quality



Manual V1.0

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1. Introducing the TW-FUSION

A single panel for centralised room control

The TW-FUSION is a glass touch panel with four touch zones and a 1.3-inch colour display. It was designed to combine automation, air conditioning and indoor environmental information in a simple interface.

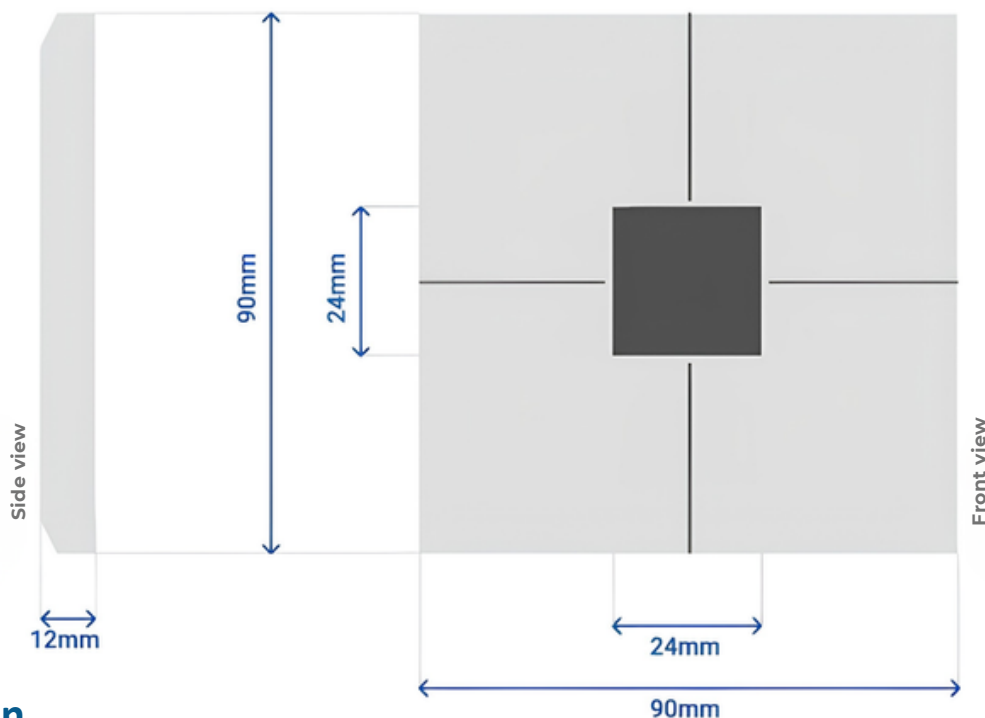


Main features

- Four independently programmable keys and swipe gestures.
- Control of lighting, shutters, gates and other ATouch functions.
- Control of up to three Modbus RTU air conditioning units with D-GATEWAY5 Pro.
- Display of temperature, humidity, dew point and air quality.
- Configurable screen saver, night mode, backlight and keypad sound.

Note: the available options may vary depending on the firmware version and installation configuration.

2. Dimensions and installation

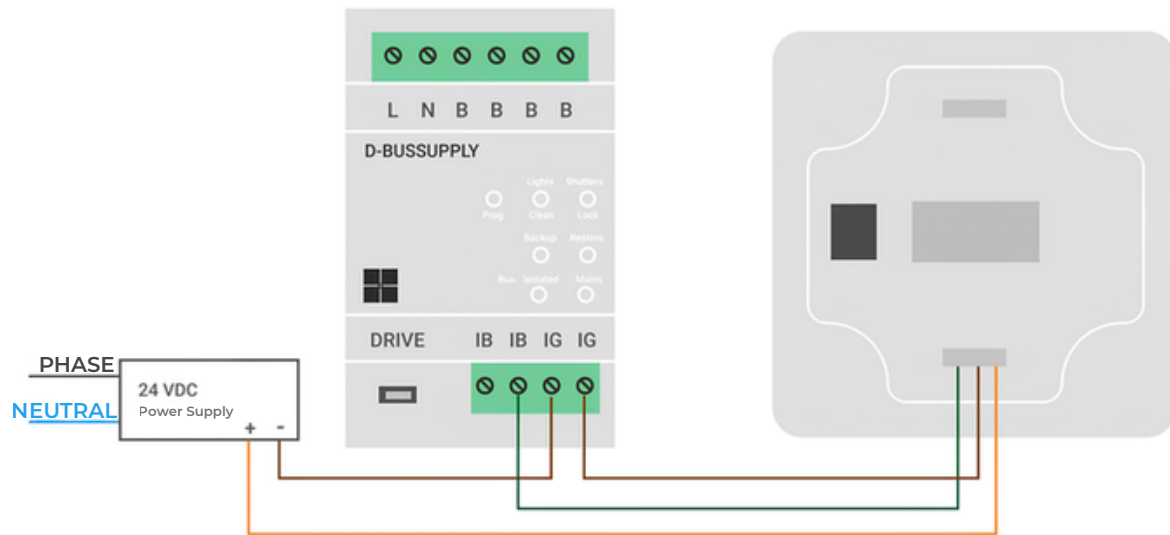


Installation

- Front dimensions: 90 × 90 mm.
- Approximate total depth: 12 mm.
- Central display: 24 × 24 mm.
- Install in an empty “W” box, with the panel correctly levelled.
- Avoid cable tension and contact between the back of the glass and abrasive surfaces.

3. Electrical connections

Installation must be carried out with the power switched off.



Keypad terminals

24 VDC	Power supply
GND	Power supply reference
BUS	ATouch communication

- Use 0.8 mm wire in an empty “W” box or a 4-core Y(St)Y cable, 2 × 2 × 0.8.
- Protection is provided by the isolated D-BUSSUPPLY circuit.

4. Operating modes

The display always shows the active mode and essential operating information.



AUTOMATION

Control of:

- Lighting
- Shutters
- Gates
- ATouch equipment.



AIR CONDITIONING

Control of:

- Temperature
- Ventilation
- Operating mode
- Up to three Modbus RTU units.



AIR QUALITY

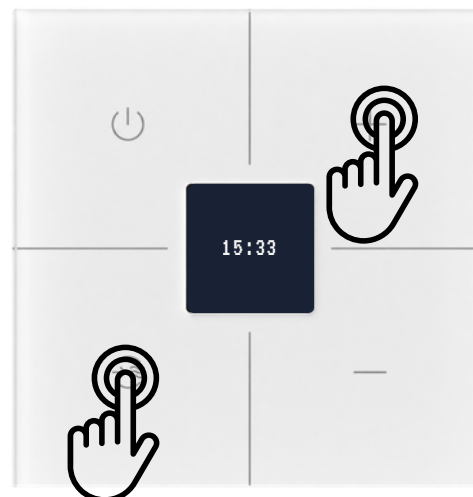
View:

- Temperature
- Humidity
- Dew point
- Air quality indicator.

How do I switch between modes?

Use the cross touch gesture shown on the keypad to cycle through the available modes in the following order:

- Automation;
- Air conditioning (if applicable);
- Air quality.



5. Keys and gestures

The function of each zone adapts to the mode shown on the display.



Available gestures

- Short press: performs the main function shown.
- Long press: opens secondary functions, such as menus or switching off the AC unit.
- Cross touch: switches between Automation, Air Conditioning and Air Quality.
- Swipe: enables up/down or on/off commands when programmed, controls vane/swing and switches between units and modes.

6. Automation control

The four zones can be programmed independently.

- Control lighting.
- Raise, lower or stop shutters.
- Open gates and control other ATouch equipment.
- Execute specific commands according to the configuration, such as timers, delays or scenes.



Operation

Select Automation

- 1 Use the mode change gesture until the automation screen appears. It should display only the current time.

Execute the command

- 2 Touch the assigned zone, swipe or place your palm on the keypad to run the configured scene.

Check the status

- 3 The display shows the executed function and its feedback, when available.

7. Microswitch functions

There are three openings on the underside of the keypad. The central opening has no button, while the other two contain microswitches.

The left and right microswitches can be pressed using a toothpick, pen or thin screwdriver.

Right microswitch

Restarts the display.

Left microswitch

Allows you to:

- Program the keys;
- Control the backlight;
- Restore factory settings.

Note: these settings can also be controlled under “Configure inputs” in the ATouch 5.0 app.



Settings

Restart the display

Press the right microswitch. The display will then restart.

Switch off the backlight

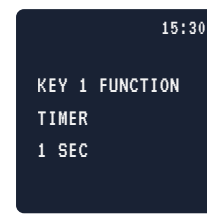
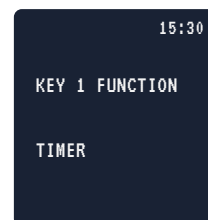
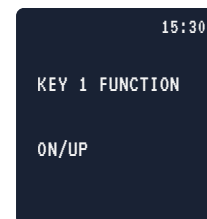
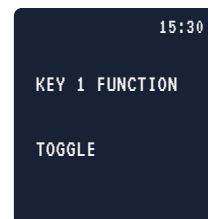
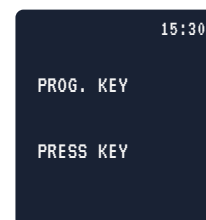
Press the left microswitch for 2 seconds;
Then press it again for 5 seconds.

7. Microswitch functions

Settings

Programming an Automation key

- Press the left microswitch for 2 seconds.
- When the “PROGRAM KEY” “PRESS KEY” screen appears, touch the key you want to program.
- Choose one of the following options:
 - Change, On/Up, Off/Down, Timer, Delay or Scenario.
 - Press the left microswitch to move to the next option.
 - To confirm the selected option, touch the keypad key.
- If you select Timer or Delay, choose one of the following durations:
 - 1 sec, 1 min, 5 min, 15 min, 30 min, 1 hour or Memory.
 - Touch the key again to confirm.
- The keypad returns to Automation mode.



Factory reset

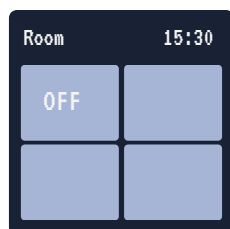
Press the left microswitch for 10 seconds until you hear a long beep. This operation deletes all keypad settings.

8. Air conditioning control

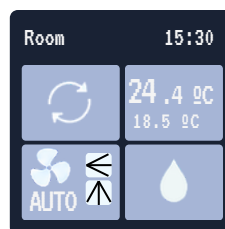
These air conditioning controls vary according to the equipment configuration. This manual presents all available options.

Switching on and off

- 1 With the unit switched off, touch the **upper left zone** to switch it on. When it is on, press and **hold the same key** to switch it off.



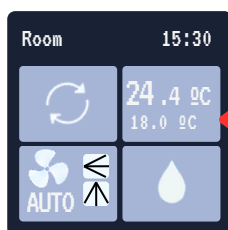
Off



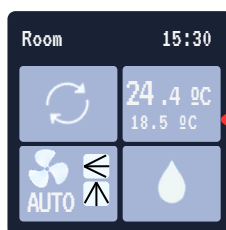
On

Set the temperature

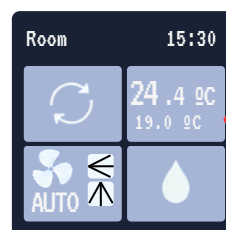
- 2 Use the **+** button to increase and the **-** button to decrease the desired temperature.



Decrease
temperature



Current
temperature



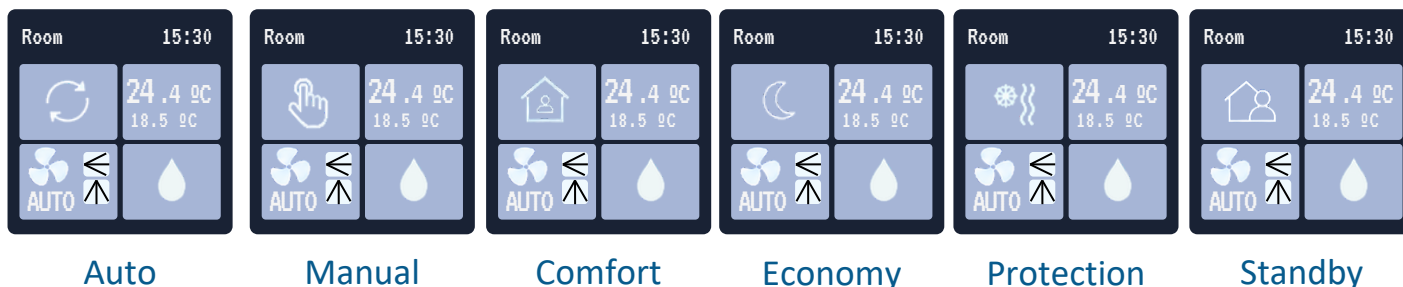
Increase
temperature

8. Air conditioning control

These air conditioning controls vary according to the equipment configuration. This manual presents all available options.

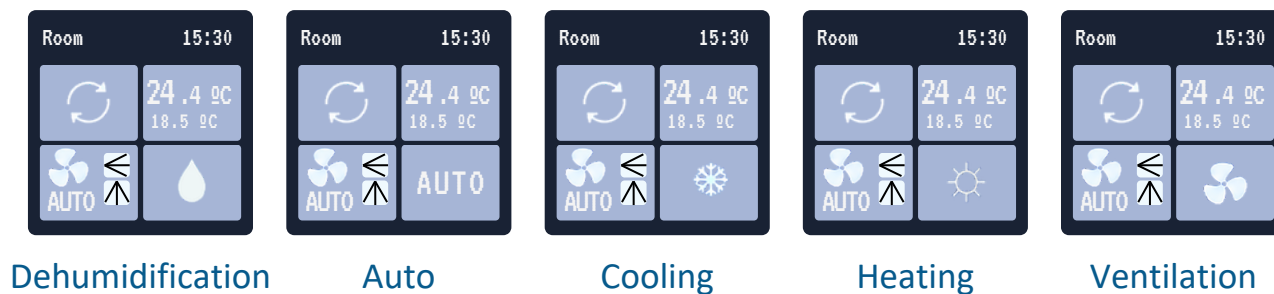
3 Change special modes

With the unit switched on, touch the **upper left zone** to change to the next mode.



4 Change operating modes

Swipe over the two keys on the left to change to the next mode.



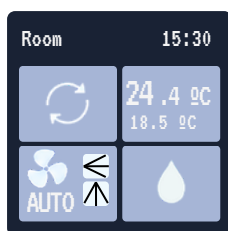
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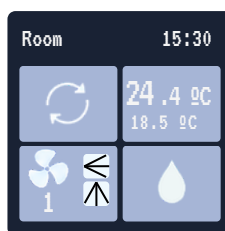
5

Control ventilation

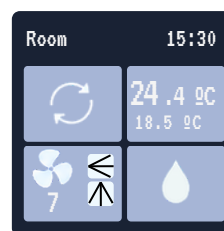
Touch the **lower left zone** to cycle through the speeds.



Automatic
speed



Speed
1

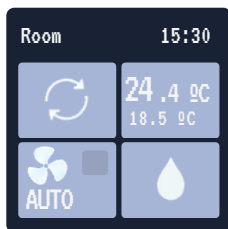


Speed
7

6

Control the vertical vane

Swipe over the two upper keys to control the available vertical vane positions.



No vane



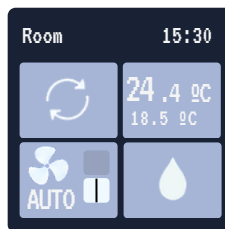
Off



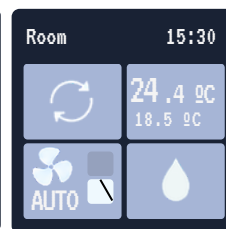
On



Left



Centre

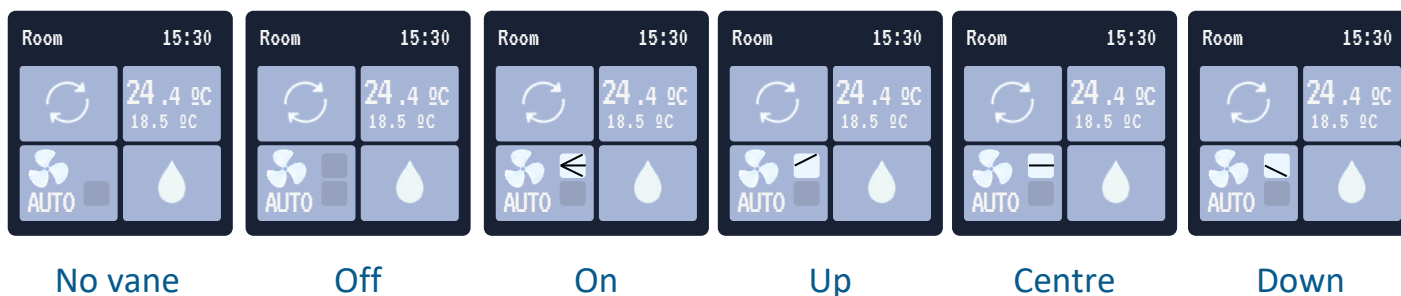


Right

8. Air conditioning control

Control the horizontal vane

- 7** Swipe over the two keys on the **right** to control the available horizontal vane positions.



Switch units

- 8** Swipe over the two lower keys to switch between units, if applicable.



Modbus RTU control requires D-GATEWAY5 Pro and compatible air conditioning units.

9. Air conditioning mode and menu

Information displayed

- Selected unit and time.
- Room temperature and set temperature.
- Unit status and operating mode.
- Ventilation speed.
- Horizontal and vertical vane status.
- Air conditioning error warnings, when applicable.

Menu navigation

Press and hold the lower left key to open the menu.

Standby key Returns to the previous menu or closes the menu.

- / + key Moves the selection down or up.

Advanced key Opens a menu option or applies the selected option.



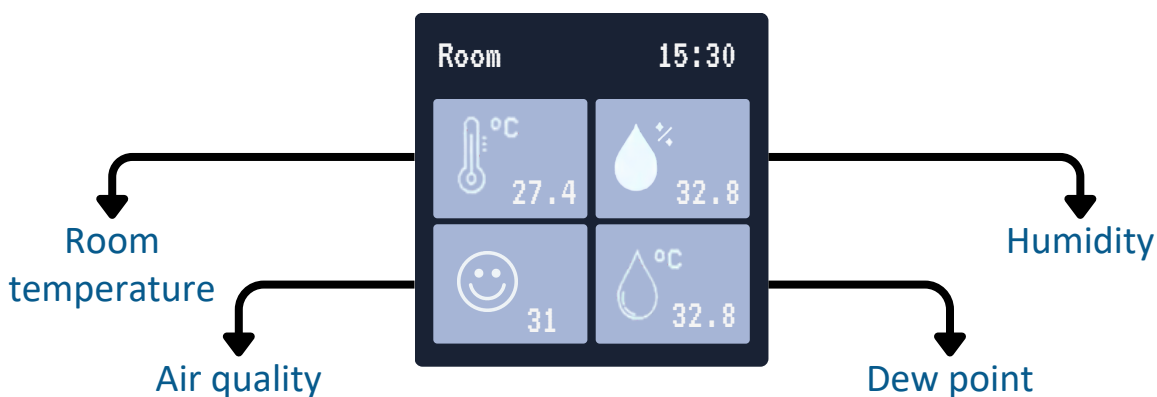
Calibration

Allows you to configure the temperature adjustment, known as the offset. This value is applied to the temperature detected by the keypad.

10. Air quality

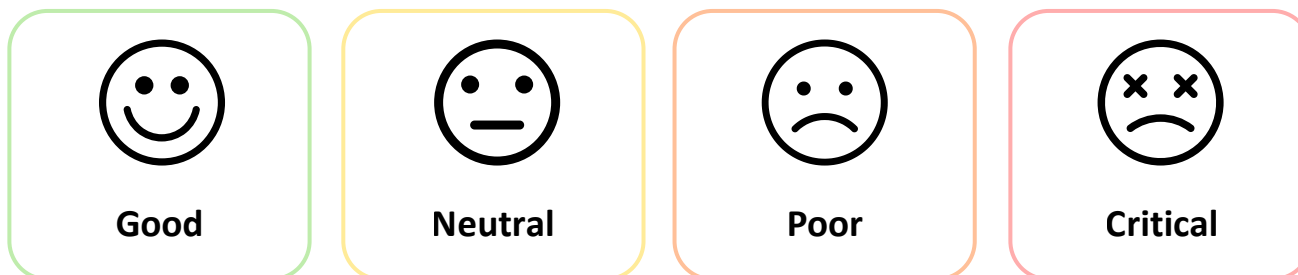
The TW-FUSION calculates air quality directly on the keypad and provides a simple, immediate reading.

Available data



Visual indicator

The numerical air quality value is accompanied by an emoji: Good, Neutral, Poor or Critical.



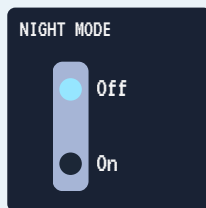
11. General menu and customisation

In Automation mode, press and hold the lower left key on the main screen to access the Menu.

Standby key Returns to the previous menu or closes the menu.

- / + key Moves the selection down or up.

Advanced key Opens a menu option or applies the selected option.



Night mode

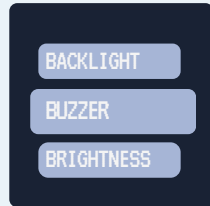
Switches night mode on or off. This mode switches off the backlight and limits the active screen time to 10 seconds.



Backlight

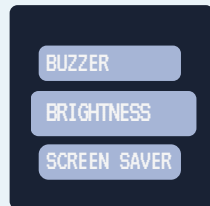
Switches the keypad backlight on or off.

11. General menu and customisation



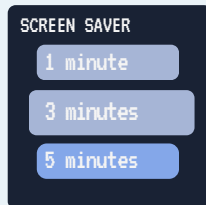
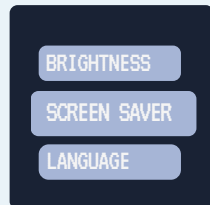
Buzzer

Enables or disables the keypad touch sound.



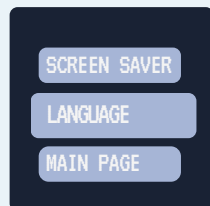
Brightness

Controls the brightness of the keypad display.



Screen saver

Sets the screen activity period to 1, 3 or 5 minutes. This protects the display against burn-in. Simply touch any key to reactivate the display.

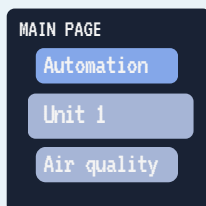
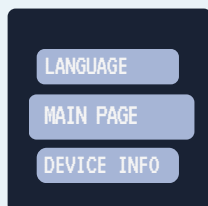


Language

Allows you to select the device language. The following are available:

- PT-PT
- EN-UK
- DE-DE
- ES-ES
- FR-FR

11. General menu and customisation



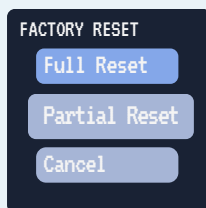
Main page

Selects the page displayed first whenever you unlock the keypad. You can choose Automation, Units or Air Quality.



Device info

Displays technical keypad information, such as the firmware version, hardware version and serial number.



Factory reset

Allows you to perform a factory reset. Full Reset resets all settings and units. Partial Reset resets the settings.

12. Technical data and maintenance

Electrical characteristics

Power supply	24 VDC
Maximum consumption	0.6 W
Display	1.3-inch colour
Installation	Empty “W” box
Warranty	5 years

References

Glossy white	TW-FUSIONG-W
Glossy black	TW-FUSIONG-B
Matt white	TW-FUSIONM-W
Matt black	TW-FUSIONM-B
Matt white with lines	TW-FUSIONM-WX
Matt black with lines	TW-FUSIONM-BX

Cleaning

Use a damp cloth with soap or diluted detergent. Do not use glass cleaner, alcohol or thinner. Prevent cleaning products from coming into contact with the rear of the device, as they may damage it and invalidate the warranty.

Safety and warranty

- Electrical installation must be carried out by a qualified technician.
- Switch off the power before installing or servicing the device.
- Keep the invoice and do not alter the product labels.
- Electrical damage caused by misuse or physical damage may invalidate the warranty.