

A65 SERIES

Temperature & Humidity Controllers

- Slim frame measures 13mm in thickness
- High contrast LCD and user-friendly interface
- Manual or automatic fan speed selection
- Anti-freeze protection
- Temperature display selection in Celsius / Fahrenheit
- 7-day schedule programming
- Modulating valve control
- Supports remote/external temperature sensor
- Supports energy saving by dry contact (room key)
- Flush-mounting. 86-86 wall-mount installation box
- Gloss white/black available for selection
- Touch keys on LCD x5



SCOPE OF APPLICATION

The A65 Series thermostats and humidistats are optimized for residential and office buildings. Easy to install and configure, A65 can be used for 2-pipe application, with 3-speed FCUs and ECM fans, modulating valves, AHUs, humidity controllers, etc.

With temperature set, A65 provides modulating signal for valve control to regulate chilled or heated water to the occupants' desired comfort. Monitoring both relative humidity and temperature, A65 maintains consistent indoor climate conditions, keeping your property comfortable and healthy. The A65 Series features a minimalist design in a small form factor that matches your modern interior décor and details.

Technical Specification

| | |
|---------------------------|---|
| Operating Voltages | 110V _{AC} ~ 240V _{AC} 50/60HZ 24V _{AC} 50 /60HZ |
| Control Signal | Modulating, On/Off |
| Load Capacity | Fan: Resistive Load 3A & Inductive Load 1A Valve: Resistive Load 2A |
| Protection rating | IP20 |
| Temperature Setting Range | 10 ~ 35°C |
| Operating Temperature | 0 ~ 50°C |
| Relative Humidity | 5 ~ 95% R.H. non-condensing |
| Terminal | 2mm ² cable |


Ordering Part Numbers

| Model | Application | Communication | Ventilation Mode | Operating Voltage |
|-------------|---------------|---------------|------------------|------------------------|
| TA652FC | FCU | standalone | Yes | 110-240V _{AC} |
| HA652 | Dehumidifier | standalone | No | 110-240V _{AC} |
| TA650HP | Heat Pump | standalone | No | 24V _{AC} |
| TA650FC-BAC | FCU | MSTP | Yes | 24V _{AC} |
| TA652FC-W | FCU | Wi-Fi | Yes | 110-240V _{AC} |
| TA652FH-W | Floor heating | Wi-Fi | Yes | 110-240V _{AC} |

Product Design



Fan-Speed Control

Fan speeds can be adjustable either manually or automatically. Press  repeatedly till Auto appears on the screen. Fan speeds are determined by the difference between ambient and setpoint temperature.

| | | | |
|---|--------|------------------|---------|
| Difference between room and set temperature | 1°C | High fan speed | Cooling |
| | 0.5°C | Medium fan speed | |
| | | Low fan speed | |
| | -0.5°C | Low fan speed | Heating |
| | | Medium fan speed | |
| | -1°C | High fan speed | |

Display and Keys



- 1 Time
- 2 Room Temperature
- 3 Current Set Point
- 4 Temperature Unit
- 5 Current Program
- 6 Heat / Cool Mode
- 7 Auto-changeover
- 8 Valve output status: On / Off
- 9 Fan status: Low / Med / High / Auto
- 10 Wi-Fi connection status
- 11 Dual-function Mode / Menu key
- 12 Dual-function Clock / Scheduling key
- 13 Dual-function Fan / System ON key
- 14 Adjust set point or value of setting

Operating Modes

Comfort

By default, A65 operates in comfort mode under normal conditions. Press the Up or Down keys to freely adjust the temperature. For Wi-Fi models, the synchronization with mobile app occurs within 3 seconds.



Forced Ventilation

Press the mode key to enter the ventilation mode.

In ventilation mode, fan speed can be adjusted manually but there will be no output for valve.



Anti-Freeze

Freeze protection a.k.a. Anti-Freeze activates heating mode automatically when temperature falls below 6°C, until temperature rises to 8°C. Anti-Freeze is supported only in heating applications. Default enabled, can be adjusted in Internal Parameter Menu

Auto-Fan-Speed

Press the fan key to cycle through Fan-Low, Fan-Mid, Fan-High, press repeatedly till “Auto” appears on the screen.

In auto mode, fan speed is adjusted by internal program, automatically. Refer to Fan-Speed Control section above.



Restore to Factory Default

Press-n-hold on the mode and fan keys for 3 seconds to access the advanced setting menu.

Clear both parameters in the menu. A65 will reboot automatically and start afresh.

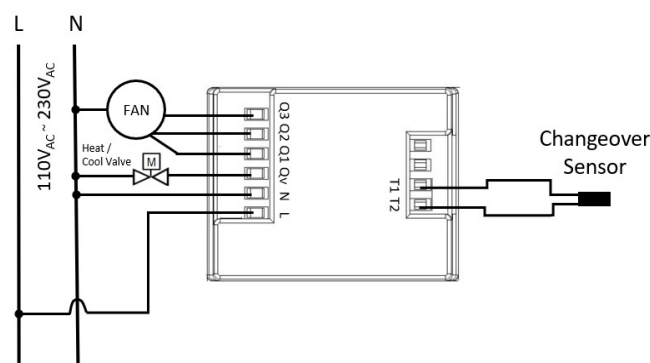


Energy Saving

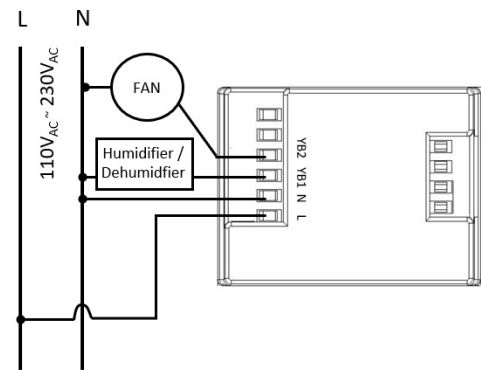
A dry contact (such as hotel key card) can activate the energy saving mode. Setback heating/cooling setpoint overrides temperature setpoint in energy saving mode. For heating, default is 18°C and the range is 10°C ~ 21°C. For cooling, default is 26°C and the range is 22°C to 32°C and the default is 26°C. The abovementioned setpoints and the dry contact type (normal open vs. normal close) can be adjusted in the Internal Parameter Menu.

Product Wiring Diagram

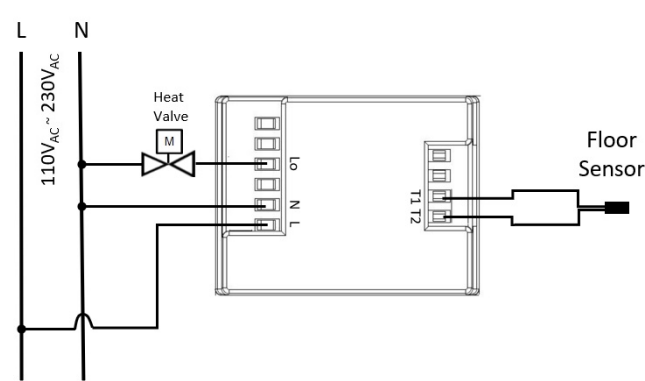
Part number: TA652FC
Two-Pipe Application



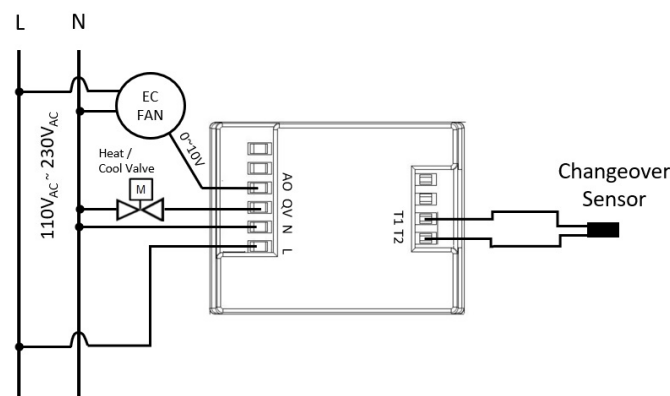
Part number: HA652
Humidity Control



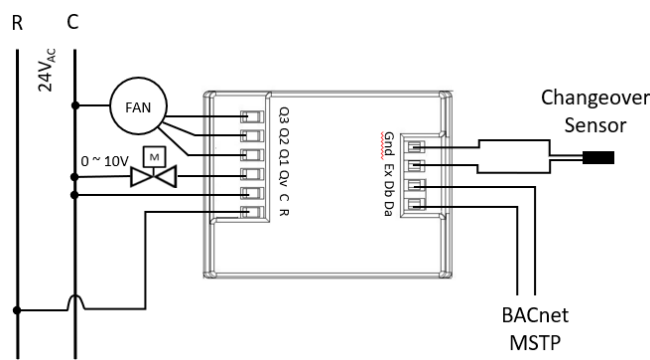
Part number: TA652FH
Floor-heating Application



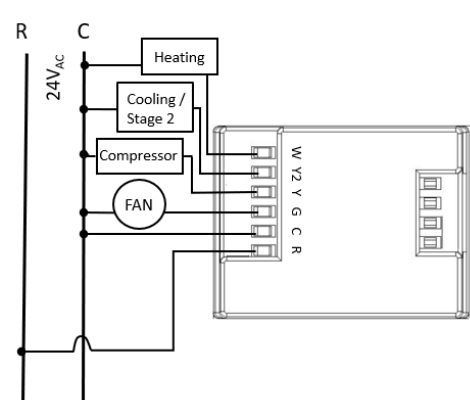
Part number: TA652EC
EC Fan Application



Part number: TA650FC-BAC
Fan Coil Application

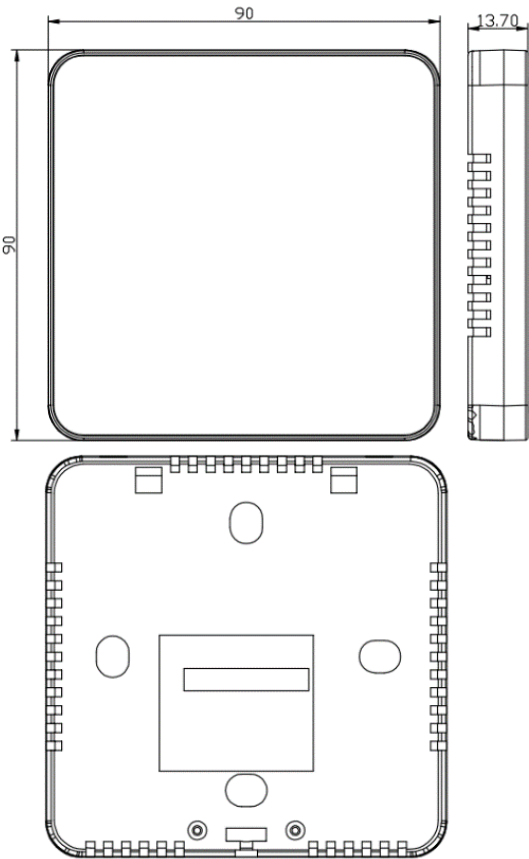


Part number: TA650HP
Heat Pump



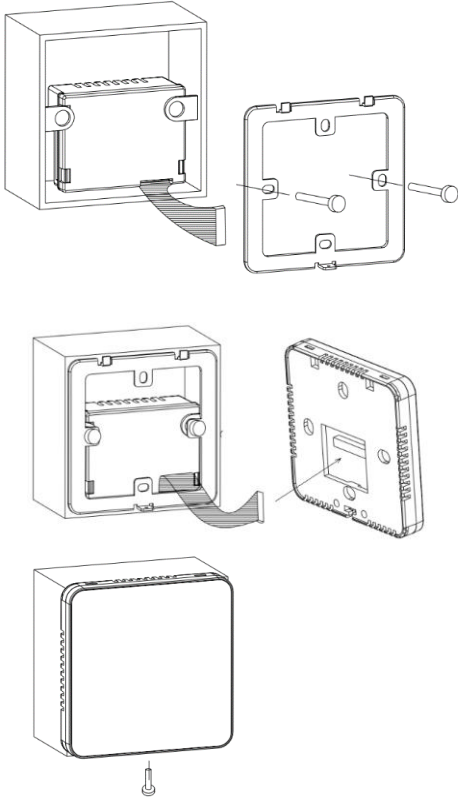
Line-drawing

Front (display) unit

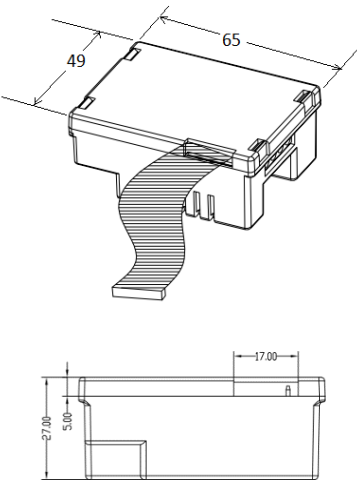





Installation and Wiring

A65 Series can be installed in standard 86-86 box directly.
The screws must be locked tightly to avoid wire break off from the terminals.



Rear (power) unit



| Troubleshooting | |
|---|--|
| Symptoms | Solutions |
|  No Wi-Fi | <ul style="list-style-type: none">• Enter the Advanced Parameter Menu• Clear all Wi-Fi parameters• Wait 2 minutes. A65 reboots automatically |
| No heating | <ul style="list-style-type: none">• Press “M” key to set operation mode to  (heating)• Make sure temperature setpoint is higher than room temp• Wait 5 minutes, see if heating starts |
| No Cooling | <ul style="list-style-type: none">• Press “M” key to set operation mode to  (cooling)• Make sure temperature setpoint is lower than room temp• Wait 5 minutes, see if cooling/compressor starts |
| Touch Keys not working | <ul style="list-style-type: none">• Check whether system is OFF |

Product Range and Models

| Type | Feature | TA652FC TA650FC | TA652FH | TA652HP TA650HP | TA652EC | TA650PF | TA652FC-W TA650FC-W | TA652FH-W | HA652-W HA650-W | TA650FC-BAC | TA650FC-MOD |
|----------------------------------|---|--------------------|---------|--------------------|---------|---------|------------------------|-----------|--------------------|-------------|-------------|
| Application | 2-pipe heating or cooling | • | • | • | | | • | | | • | • |
| | 4-pipe heating and cooling | | | | | | | | | | |
| | Floor heating | | • | | | | | • | | | |
| | Air humidity control | | | | | | | | • | | |
| Communicating | Modbus RTU | | | | | | | | | | • |
| | BACnet MSTP | | | | | | | | | • | |
| | Wi-Fi 802.11b/g/n | | | | | | • | • | • | | |
| Output / Control Interface | ON/OFF | • | • | • | | | • | • | • | • | • |
| | Modulating | | | | • | | | | | • | • |
| | Potential free | | | | | • | | | | | |
| Function | Graphic Icons, Touch keys | • | • | • | • | • | • | • | • | • | • |
| | Display Temp & Set Point | • | • | • | • | • | • | • | • | • | • |
| | Fan Speed (Low, Mid, High, Auto) | • | | | | | • | | | • | • |
| | C°/F field selectable | • | • | • | • | • | • | • | • | • | • |
| | Remote Passive Sensor ^(^) | • | • | | | • | • | • | • | | |
| | PI control | | | | | | | | | • | • |
| | 7-day scheduling | • | • | | | | • | • | | | |
| | Anti-freeze protection | • | • | | | | • | • | | | |
| | Real-time Clock synchronization | | | | | | • | • | • | | |
| | Remote control on Smartphone App | | | | | | • | • | • | | |
| Energy Saving | Ventilation only mode | • | | | • | | • | | | • | • |
| | Occupancy detect (dry-contact) | • | | | | | • | | | | |
| | Unoccupied/Economy Set-Points | • | • | | | | • | • | | | |
| | Low Fan when unoccupied | • | | | • | | • | | | • | • |
| | Adjustable Set Point Limits | • | | | | | • | | | • | • |
| Power Supply | 24V _{AC} | • | | • | | • | • | | • | • | • |
| | 110V _{AC} / 230V _{AC} | • | • | • | • | | • | • | • | | |
| Installation | Flush mounted units | • | • | • | • | • | • | • | • | • | • |

(^) Selected models supplied with 10K NTC sensor, plastics cable 3 meters in length.

