

A64 SERIES

Temperature & Humidity Controllers

- 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)
- Gloss white / matte black finishing for selection
- Touch keys on LCD x5
- Surface-mounting counterpart to A65



SCOPE OF APPLICATION

The A64 Series thermostats and humidistats are optimized for residential and office buildings. Easy to install and configure, A64 can be used for 2-pipe application, with 3-speed FCUs and ECM fans, modulating valves, AHUs, humidity controllers, etc.

With temperature set, A64 provides modulating signal for valve control to regulate chilled or heated water to the occupants' desired comfort. Monitoring both relative humidity and temperature, A64 maintains consistent indoor climate conditions, keeping your property comfortable and healthy. A64 can be installed on any surface, free from the limitation of junction boxes in different shapes and forms.

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
TA642FC	FCU	standalone	Yes	110-240V _{AC}
HA642	Dehumidifier	standalone	No	110-240V _{AC}
TA640HP	Heat Pump	standalone	Yes	24V _{AC}
TA640FC-BAC	FCU	MSTP	Yes	24V _{AC}
TA642FC-W	FCU	Wi-Fi	Yes	110-240V _{AC}
TA642FH-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	
		Setting value	
	-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, A64 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.



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.



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.



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. A64 will reboot automatically and start afresh.



Anti-Freeze

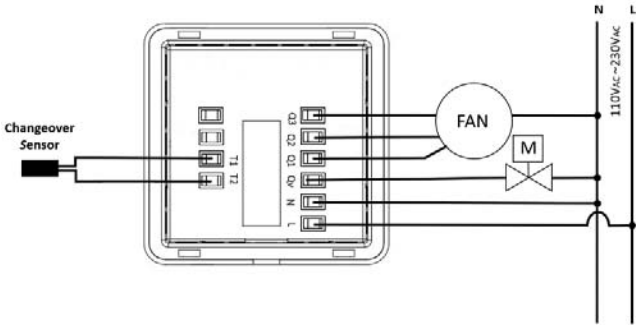
Freeze protection a.k.a. Anti-Freeze activates heating mode automatically when temperature falls below 6°C, until temperature rises to 8°C. Anti-Freeze is supported only in heating applications. Default enabled, can be adjusted in Internal Parameter Menu

Energy Saving

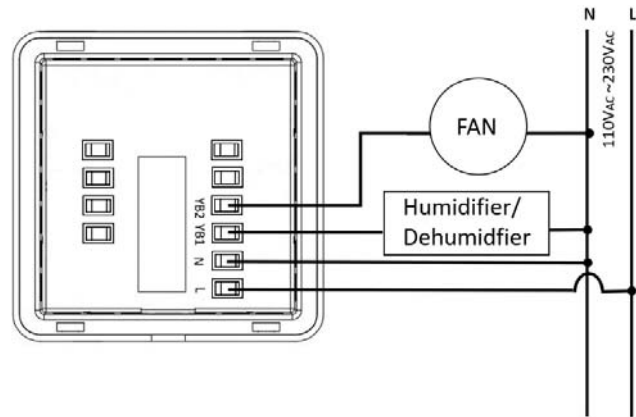
A dry contact (such as hotel key card) can activate the energy saving mode. Setback heating/cooling setpoint overrides temperature setpoint in energy saving mode. For heating, default is 18°C and the range is 10°C ~ 21°C. For cooling, default is 26°C and the range is 22°C to 32°C and the default is 26°C.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

Product Wiring Diagram

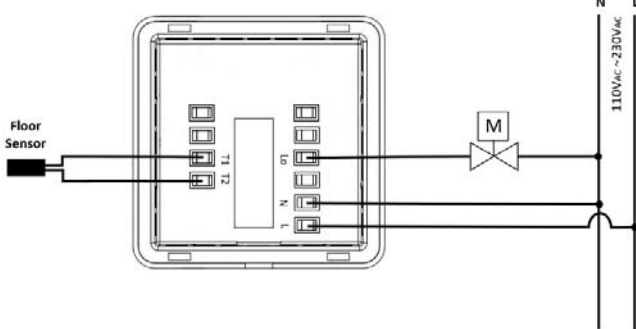
Part number: TA642FC
Two-Pipe Application



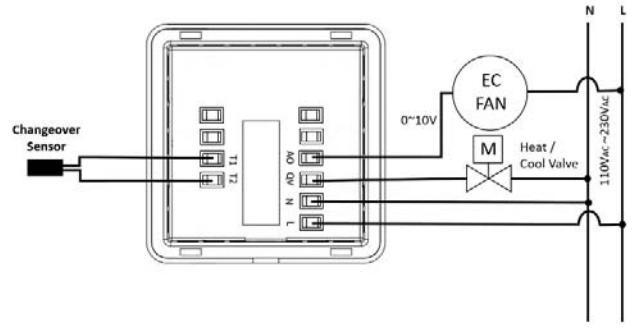
Part number: HA642
Humidity Control



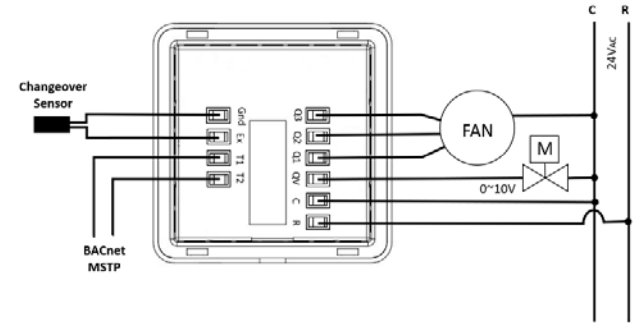
Part number: TA642FH
Floor-heating Application



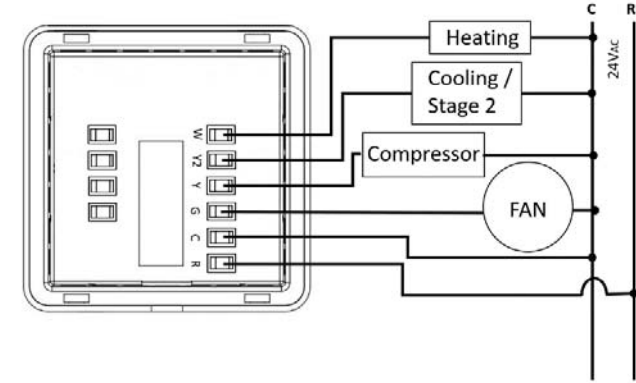
Part number: TA642EC
EC Fan Application



Part number: TA640FC-BAC
Fan Coil Application

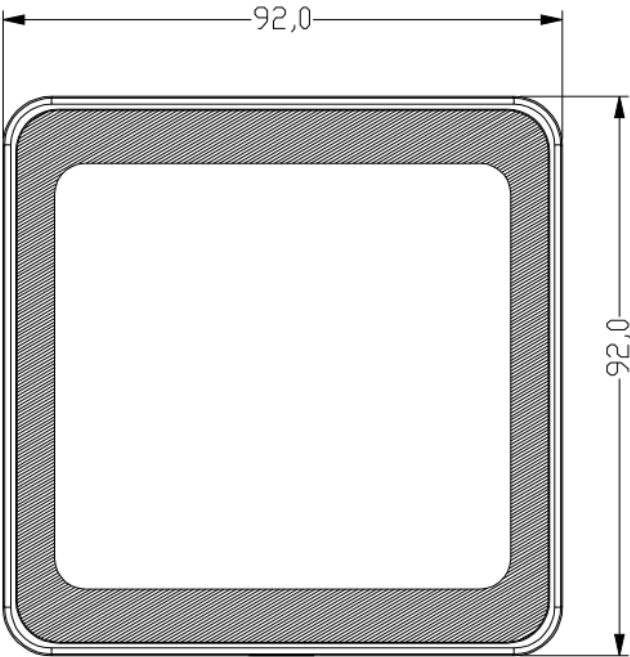


Part number: TA640HP
Heat Pump

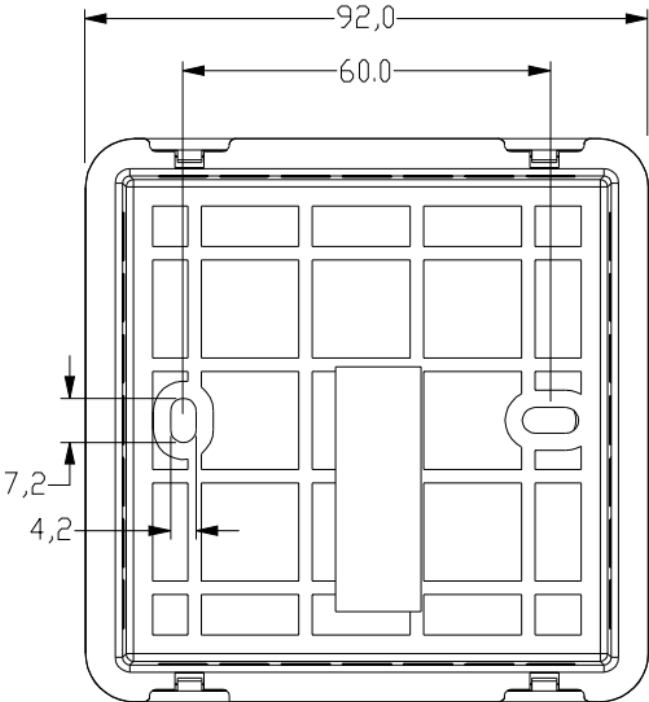


Line-drawing

Front view

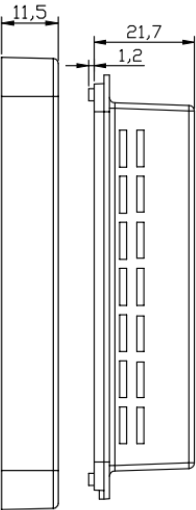





Rear view



Side view

Top and bottom housing separated



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. A64 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	TA642FC TA640FC	TA642FH	TA642HP TA640HP	TA642EC	TA640PF	TA642FC-W TA640FC-W	TA642FH-W	HA642-W HA640-W	TA640FC-BAC	TA640FC-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	Surface mounted units	•	•	•	•	•	•	•	•	•	•

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

