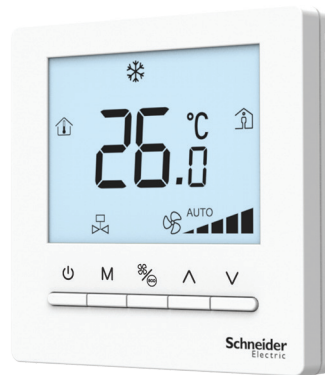


# EasyLogic Thermostat

## TC700 Series for Fan Coil Applications

### User Guide

F-28347-1  
10/2024



# Legal Information

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# Safety Information

## Important Information

Read these instructions carefully and look at the equipment to become familiar with the device before trying to install, operate, service or maintain it. The following special messages may appear throughout this bulletin or on the equipment to warn of potential hazards or to call attention to information that clarifies or simplifies a procedure.



The addition of either symbol to a “Danger” or “Warning” safety label indicates that an electrical hazard exists which will result in personal injury if the instructions are not followed.

This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

### **⚠ DANGER**

**DANGER** indicates an hazardous situation which, if not avoided, **will result in death** or serious injury.

### **⚠ WARNING**

**WARNING** indicates a hazardous situation which, if not avoided, **could result in death** or serious injury.

### **⚠ CAUTION**

**CAUTION** indicates a hazardous situation which, if not avoided, **could result in minor** or moderate injury.

### **NOTICE**

Notice is used to address practices not related to physical injury.

## Please Note

Electrical equipment should be installed, operated, serviced and maintained only by qualified personnel. No responsibility is assumed by Schneider Electric for any consequences arising out of the use of this material.

A qualified person is one who has skills and knowledge related to the construction, installation, and operation of electrical equipment and has received safety training to recognize and avoid the hazards involved.

## Safety Precautions

### **WARNING**

#### **LOSS OF CONTROL**

The designer of any control scheme must consider the potential failure modes of control paths and, for certain critical control functions, provide a means to achieve a safe state during and after a path failure. Examples of critical control functions are emergency stop and over travel stop.

- Separate or redundant control paths must be provided for critical control functions.
- System control paths may include communication links. Consideration must be given to the implications of anticipated transmission delays or failures of the link.
- Each implementation of equipment utilizing communication links must be individually and thoroughly tested for proper operation before being placed into service.

**Failure to follow these instructions could result in death, serious injury or equipment damage.**

### **NOTICE**

#### **PRODUCT DAMAGE DUE TO ELECTROSTATIC DISCHARGE**

Circuit boards and option cards can be damaged by static electricity. Observe the electrostatic precautions below when handling circuit boards or testing components.

- Keep static-producing material such as plastic, upholstery and carpeting out of the immediate work area.
- Store static-sensitive components in protective packaging when they are not installed in the drive.
- When handling a static-sensitive component, wear a conductive wrist strap connected to the component or drive through a minimum of 1 megohm resistance.
- Avoid touching exposed conductors and components leads with skin or clothing.

**Failure to follow these instructions can result in equipment damage.**

### **NOTICE**

#### **PRODUCT DAMAGE DUE TO INCORRECT CLEANING METHODS**

- Use a soft, pre-moistened lint-free cloth for cleaning.
- Do not spray anything directly on the panel or use compressed air.
- Do not use caustic/corrosive products, ammonia, solvents or any cleaning product containing alcohol or grit.
- Never use tools directly on the glass surface.
- Never use paint on the panel.
- Do not drop or crush the panel or allow it to come into contact with liquids.
- Do not use a damaged device (such as one with cracked glass).

**Failure to follow these instructions can result in equipment damage.**



**ATTENTION**  
OBSERVE PRECAUTIONS  
FOR HANDLING  
ELECTROSTATIC  
SENSITIVE  
DEVICES

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## Introduction

EasyLogic TC700 Series fan coil thermostats are optimized for office buildings, schools and hotels. The TC700 Series can be used for 2-pipe or 4-pipe applications. This document provides information on how to use the TC700 Series thermostats, as well as a description of the various functions available.

## Product Description

Part Number	Description
TC700-3A2LXX	EasyLogic, Thermostat, FCU, On/Off, 2P, Standalone, 3 Fan Auto, 240V
TC700-3A4LXX	EasyLogic, Thermostat, FCU, On/Off, 4P, Standalone, 3 Fan Auto, 240V
TC700-3A2PXX	EasyLogic, Thermostat, FCU, Proportional, 2P, Standalone, 3 Fan Auto, 240V
TC700-3A4PXX	EasyLogic, Thermostat, FCU, Proportional, 4P, Standalone, 3 Fan Auto, 240V
TC700-3A2PXX-24	EasyLogic, Thermostat, FCU, Proportional, 2P, Standalone, 3 Fan Auto, 24V
TC700-3A4PXX-24	EasyLogic, Thermostat, FCU, Proportional, 4P, Standalone, 3 Fan Auto, 24V

## List of Included Items

- Thermostat
- Mounting Screws (2 pcs x M 4 x 25 mm Pan header, 2 pcs x M 3.5 x 35 mm countersunk)

## Related Documents

- TC700 Series Specification Sheet (F-28345-x)
- TC700 Series Installation Instructions (F-28346-x)

## Device Set-up

### Mounting Instructions & Standard Installation Practices

Please refer to the TC700 Series Installation Instructions (F-28346-x) for detail.

## Troubleshooting Tips

### Set-up Issues

Issue	Potential Factors	Tips
Thermostat does not turn ON.	Incorrect power supply voltage.	Before connecting the power supply, refer to the installation sheet wiring diagram and related power supply (90-240 Vac or 24 Vac).
	Incorrect wiring connections.	Before connecting the power supply, refer to the installation sheet wiring diagram and related power supply terminals (L & N or R & C).

### Maintenance Issues

In the event of an operating exception, the thermostat will attempt to command the valve to close and place the device in an inoperative state. The display will indicate the current status with one of five diagnostic messages:

EE: MCU Flash failure (retain user setting area)

E1: Temperature sensor short-circuit alert

E2: Temperature sensor open-circuit alert



'Hi' will be displayed if the ambient temperature is higher than 50 °C.

'Lo' will be displayed if the ambient temperature is lower than 0 °C.





## Functions: Operational Instructions

### Button Operations





#### Power On/Off

A press of the ON/OFF button  will turn the power on. Another press of the ON/OFF button  will turn off the power, fan coil and motorized valve. If no buttons are pressed for 10 seconds, the thermostat backlight turns off. Press any button to turn the backlight back on.

#### Temperature Setting






With the power on, press  to decrease the temperature setting and  to increase temperature in steps of 0.5°C. The  will appear on the display. If no buttons are pressed for six seconds,  is displayed, indicating the setpoint is confirmed.

#### Mode Selection






With the power on, press M to switch the operation mode. The display indicates Cooling with , Heating with  and Ventilation with . Auto mode can be selected in the parameter settings and is indicated on the display with .

The Auto mode hysteresis range will be adjusted automatically by the Deadband and Differential parameters setting.

#### Fan Speed Selection

With the power on, press the  button to select a fan speed of High  Medium , Low  or Auto . In Auto mode, the fan speed changes automatically. For a difference of 1 °C, the fan will automatically switch to Low speed. For a difference of 2 °C, the fan will automatically switch to Medium speed. For a difference of 3 °C or more, the fan will automatically switch to High speed.

#### Button Lockout Function

Press and hold the up  and down  buttons at the same time for six seconds to activate the keypad lockup function to prevent thermostat operation by others. While lockout is active, the lock icon  will be displayed on the screen. To deactivate the lockout function, press and hold the up  and down  buttons at the same time for six seconds to unlock the system.

### Operation Instructions

#### Motorized Valve Control

In Cooling mode, the cold water valve will be opened when the room temperature is 1 °C higher than the temperature setting or closed when the room temperature drops to the setting. The hot water valve will remain closed.





In Heating mode, the hot water valve will open when the room temperature is 1 °C lower than the temperature setting and will close when the room temperature rises to the setting. The cold water valve will remain closed.


#### External Door Key / Occupancy Sensor (DI)

This function is only available on models with a 'P' in the model number: 3A2PXX, 3A4PXX, 3A2PXX-24, 3A4PXX-24





### Energy-Saving Functions

#### Eco Mode

Press the FAN/ECO  button to turn on Eco mode. The display will show the  and  icons. If the thermostat is in Cooling mode, the temperature is automatically set to 26 °C with the fan running at Low speed. If the thermostat is in Heating mode, the temperature is automatically set to 18 °C with the fan running at Low speed. To turn Eco mode off, press the up .

or down  $\nabla$  buttons to change the temperature setting or press the FAN/ECO  button.

### Unoccupied Energy Saving Mode

Unoccupied Energy Saving mode can be entered via a hotel room key card. Example: after a hotel room key card is removed from the reader, the  and  icons are displayed. If the thermostat is in Cooling mode, the temperature is automatically set to 28 °C with the fan running at low speed. If the thermostat is in Heating mode, the temperature is automatically set to 16 °C with the fan running at low speed. When the key card is returned to the reader, the indoor icon  is displayed, the ECO icon  is turned off and the thermostat returns to the previously set mode.

## Configuring Parameter Settings

During power-off, press and hold the Mode button M for six seconds to enter the display screen. Press the Mode button M or Fan button to move forward or backward between the parameters shown in the table below. Press the up  $\wedge$  and down  $\nabla$  buttons to adjust these parameters. The Configuration Setting mode will automatically be exited if there is no button operation for six seconds.

**Configuring Parameter Settings Table**

Parameter Number	Parameter	Default	Description
1	Low temperature protection	on	oF: Disabled on: Enabled
2	Fan operation status after temperature setting is reached	dA	dB: Fan off dA: Fan on
3	Power-on state	00	00: Power-down memory 01: Power-down do not remember 02: Power-up power-on
4	Temperature displayed	00	00: Room temperature 01: Setpoint
5	Mode button selection (2-pipe)	02	For 2-pipe models only: 00: Heating only (heating + vent) 01: Cooling only (cooling + vent) 02: Cooling and heating (heating + cooling + vent)
	Mode button selection (4-pipe)	02	For 4-pipe models only: 00: Heating only (heating + vent) 01: Cooling only (cooling + vent) 02: Cooling and heating (heating + cooling + vent) 03: Auto 04: 2 pipe mode with 3-wire valve, heating only (heating + vent) 05: 2 pipe mode with 3-wire valve, cooling only (cooling + vent)

Notes:  
Parameters 1 to 4 apply to all models.  
Parameter 5 mode button selection (2-pipe) only applies to models with a '2' in the part number (2-pipe).  
Parameter 5 mode button selection (4-pipe) only applies to models with a '4' in the part number (4-pipe).  
For a 2-pipe system with 3-wire motorized valve, the thermostat supports either Heating mode or Cooling mode, but not both simultaneously.

## Configuring Parameter Settings for Manufacturing

During power-off, press and hold the Mode button M and down  $\nabla$  button together for eight seconds to enter the display screen. Press the up  $\wedge$  and down  $\nabla$  buttons to change the password from 15 to 21. Then press the Mode button M to move forward or backward between the parameters shown in the table below. Press the up  $\wedge$  and down  $\nabla$  buttons to adjust these parameters. The system will automatically exit if there is no button operation for one minute.

### Configuring Parameter Settings for Manufacturing Table

Parameter Number	Parameter	Default	Description
1	Password	15	Password 21
2	Auxiliary input closed/open	01	00: Occupied when short circuit, unoccupied when open circuit 01: Unoccupied when short circuit, occupied when open circuit
3	Heating mode (KP)	10	1-99
4	Cooling mode (KP)	10	1-99
5	PID sampling time	20	1-99 s
6	KI	1	0-99
7	Span	5	1-99

**Notes:**

Parameter 1 applies to all models.

Parameters 2 to 7 apply only to models with a 'P' in the part number.

## Cybersecurity

At Schneider Electric, we have always considered cybersecurity as a key requirement and are committed to providing more reliable, stable and secure products to minimize potential cyber risks and better protect customer life, property and the environment.

Cybersecurity aims to protect your systems, communications networks, devices, etc., from possible attacks such as destruction, data tampering, or disclosure of confidential information. It is strongly recommended that you follow the Schneider Electric Defense in Depth approach to cybersecurity, as described in the system technical note "How to Reduce Vulnerability to Cyber Attacks." In addition, you can find more useful resources and up-to-date information at Schneider Electric's [Cybersecurity Support Portal](#).

## Equipment Security Features

The following security features are supported:

- Using verification techniques to guarantee the integrity of important configuration data, business data, etc., which are stored in the device.
- Disable all debug port when equipment out of factory, to prevent the attacker to read device firmware and configuration of the data in the device.

## Security Disposal

When equipment needs to be disposed of, it is recommended to destroy it through a safe channel to ensure that the equipment is not re-deployed to your operational systems or illegally exploited.

## Cybersecurity Vulnerability/Incidents

Access the Schneider Electric [Cybersecurity Support Portal](#) (<https://www.se.com/ww/en/work/support/cybersecurity/vulnerability-policy.jsp>) to check the vulnerability management policy or report potential cybersecurity vulnerability or incidents.

## Recommended Maintenance Operations

Recommended maintenance is required regularly over the lifetime of the device:

- Regularly check the I/O cables to ensure they are properly connected and there is no unauthorized access.
- Power off the device when it's not needed.

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