CELECT

CTS-S / CTS-G

Touch Screen Programmable Thermostat
For
7 Days Setting

CORONDO CONTROLS LTD
BOLTON BL1 2PT

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Instruction Manual

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E. Electrical Specification

Temperature measurement:	0~40°C / 32~99°F
Control temperature range:	5~35°C / 41~95°F
Temperature resolution:	0.5°C / 1°F
Temperature accuracy:	±0.5°C / ±1°F
Battery:	2 X AA alkaline battery
Relay contact Voltage:	230Vac 50/60Hz
Relay contact Current:	8A Max
Classification of control:	Class II
Purpose of control:	Micro-disconnection on operation
Electronic control:	Type 2.B
Terminals:	Flexible Cord Conductors
Nominal cross-sectional area of the conductor to be: fitted in the terminal block	$1 \sim 2.5mm^2$

🗑 This symbol indicates separate collection for electrical and electronic equipments.

A. Installation, Mounting:

CAUTION:
1. Turn off CTS-S / CTS-G electronic source and the electrical devices(e.g. heater, cooler) which will be connected before installation and maintenance.
2. The installer must be a trained service personnel.
3. Disconnect the supply before battery replacement.
4. Replace only with the same or equivalent type of batteries
5. Do not dispose the used up battery with the household waste. Please refer to your local area for proper disposal.
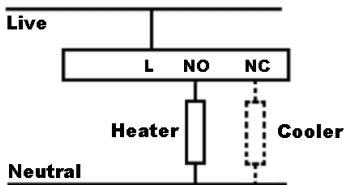6. It must be mounted on a dry clean indoor place.

1. Installation Location:
The thermostat should be mounted on an inner wall 1.5m above the floor and its position should be readily affected by changes of the general room temperature with freely circulating air.

Prevent direct exposure to sunlight, dripping or splashing area. Do not place the unit at a location where air circulation is slow, or where it has great temperature changes (e.g. near door). Do not place the thermostat near heat generating sources (radiators, hot air vents, TV or lights).

2. Wiring:
For Heat Mode

Live

| L | NO | NC |

Heater   **Cooler**

Neutral

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"LO" will be shown when room temperature is below 0°C / 32°F

"HI" will be shown when room temperature is above 40°C / 99°F

When the relay is turned on, "HEAT ①" or "COOL ①" icons are shown.

Low Battery

If the voltage batteries drop below 2.7V, ▭ icon will be on. The battery is detected every hour.

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3. Press ▼ or ▲ to change the override setting temperature.

Temporary override returns to normal mode when the next program starts.

Permanent override keeps using the override setting temperature unless user manually switches to other modes.

System Setting

In Normal mode, press "SYSTEM" to enter System mode.
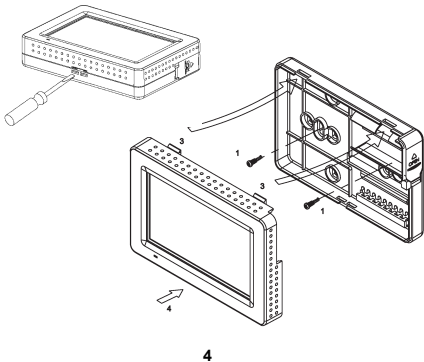System mode is set in the sequence of:
HEAT→ COOL→ OFF→ HEAT…

System Mode	
HEAT MODE	Relay will be turned on when the room temperature is lower than the setting temperature
COOL MODE	Relay will be turned on when the room temperature is higher than the setting temperature
OFF MODE	Relay will always be turned off at any temperature.

Caution:
- TURN OFF any electrical devices before wiring.
- There are 3 terminals. Connect "L" to the power supply and connect "NO" to heater or cooler.
- Push all cables back into wall prior to fixing to avoid trapping wires.
- Do not use metal conduit or of cable provided with a metal sheath.
- Recommend adding Fuse or protective device in the live circuit.

User may connect both heating and cooling appliance to terminal NO and NC. However, user has to make sure only one appliance is allowed to turn on at a time If heater is used and heater is not turned on by CTS-S / CTS-G, the cooler should be turned off manually.

3. Mounting:

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Normal Mode Operations

Cool mode:
Relay is turned on:
Measured temperature $\geq$ Setting temperature + Span
Relay is turned off:
Measured temperature $\leq$ Setting temperature – Span
Heat mode:
Relay is turned on:
Measured temperature $\leq$ Setting temperature – Span
Relay is turned off:
Measured temperature $\geq$ Setting temperature + Span
Off mode:
Relay is always turned off.

Override mode

1. Press PERMANENT OVERRIDE PROGRAM 8 to select (temporary) override, permanent override and program.
2. Default heat/cool override setting temperature is 26°C /79°F.

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Default program settings are shown as below:

	Mon - Fri	Sat - Sun
Program1 (Wake)	**6:00** Heat - 21°C /70°F Cool - 26°C /79°F	**6:00** Heat - 21°C /70°F Cool - 26°C /79°F
Program2 (Out)	**8:00** Heat - 16°C /61°F Cool - 29.5°C /85°F	**10:00** Heat - 16°C /61°F Cool - 29.5°C /85°F
Program3 (Lunch)	**12:00** Heat - 21°C /70°F Cool - 26°C /79°F	**12:00** Heat - 21°C /70°F Cool - 26°C /79°F
Program4 (Out)	**14:00** Heat - 16°C /61°F Cool - 29.5°C /85°F	**14:00** Heat - 16°C /61°F Cool - 29.5°C /85°F
Program5 (Back)	**18:00** Heat - 21°C /70°F Cool - 26°C /79°F	**18:00** Heat - 21°C /70°F Cool - 26°C /79°F
Program6 (Night)	**22:00** Heat - 16°C /61°F Cool - 29.5°C /85°F	**22:00** Heat - 16°C /61°F Cool - 29.5°C /85°F

1. Base housing
   i. Adjust the base on the wall or junction box and ensure that the base is at surface level and cover the junction box comfortably.
   ii. If necessary, pull the cables out through the hole of the base.
   iii. If necessary, place 2 pcs of wall anchors in the wall.
   iv. Fasten the base with 2 pcs of long screws.
   v. Place the cables at the hole near the terminal block.
2. Hold the thermostat on the base.
3. Push the thermostat straight onto the base until it snaps into place.
4. Insert 2 AA batteries into the battery case on the thermostat. Note the polarity of the batteries. Do not mix batteries of different type or different brand. Do not use old and new batteries simultaneously.

B. **Features:**

- 7-day, 6-time-zone heat/cool program settings
- EEPROM stores heat and cool program settings
- Fast Program Copy
- Temperature display in °C or °F
- Temperature Measurable Range: 32–99 °F / 0–40 °C
- Override Mode (Temporary / Permanent)
- Real clock in 12/24-Hour Display
- Adjustable Temperature Control Span
- LCD Backlighting
- Energy, UV lamp Usage counters
- Defrost Control
- Clean Screen Mode
- Calendar
- Security Mode

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6. Press EXIT to discard any changes and exit program setting.
7. Press CONFM to save settings and select another day to set the program.
8. If Press Fn enter to copy mode, the selected day disappear and show another weekday keys.
9. Press other weekday with ⌷ which you want to copy the program to. Selected weekdays will have no ⌷ surrounded.
10. Press EXIT to discard any changes and exit copy mode.
11. Press CONFM to process the copy and exit copy mode.

Program Mode

1. Press "PROG" to enter the program mode.

MON	TUE	WED	THU	FRI	SAT	SUN

PROG	Fn		EXIT

2. Press weekday to select the program day.
3. Press PROG to review or update the program.
4. Or Press Fn to copy the program (see step 8).
5. Press ▼ or ▲ to change the time(minimum time period is 10mins), heat or cool setting temperature and the program periods 1 to 6.

```
MON
            ▲        ▲
PROGRAM 1   ▼  21.5℃ ▼ HEAT
                0.0

     8:00 ▲
          ▼

          CONFM    EXIT
```

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Setup Mode

There are 7 settings in the setup mode:
1. Calendar
2. 12/24 hours selection
3. C/F display selection
4. Span Selection
5. Delay/ Long delay selection
6. DST (Daylight savings time)
7. Security Lock

Press and hold SYSTEM for 5 seconds to enter setup mode. In setup mode, press EXIT to discard changes made to current setting and exit setup mode. Press CONFM to apply changes and proceed to next setting.

Calendar

Press ▼ or ▲ to change the year, month and year

24/12 Hours

Press ▼ or ▲ to choose either 12hr (12 hours) or 24hr (24 hours) representation.
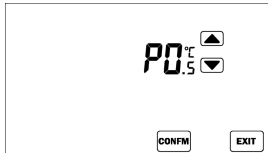
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C/F Display

Press ▼ or ▲ to select the temperature unit to be used.
C – Celsius, F – Fahrenheit. *Conversion error may occur.*

Span Selection

Press ▼ or ▲ to change span setting. The selectable values are 0.5°C(1°F) / 1.0°C(2°F) / 1.5°C(3°F). The temperature unit depends on temperature unit selected by user.

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2. UV and Energy counter are shown alternatively by pressing USAGE
3. Press CLEAR to clear the current counter records.
4. Press EXIT to exit the usage mode.

Adjusting Usage Limit
1. Press and hold USAGE for 2 seconds during the usage mode.
2. Press ▼ or ▲ to change the limit time (0~9999).
3. Press CONFM to save the setting
4. Press EXIT to exit the limit setting.
5. Adjust the interval time to zero for disabling counting.

Defrost

When the room temperature is below or equal to 5°C / 40°F, defrost control will be turned on. During defrost, heater will always be turned ON and cooler will always be turned OFF irrespective of the current temperature control setting. Defrost indicator ❄ will be shown on the screen.

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Clean Screen Mode
1. Press CLEAR to enter the cleaning screen mode
2. The screen will show a 20-second countdown immediately after the key press
3. During countdown, all keys are disabled.
4. When countdown reaches zero, press EXIT to exit clean screen mode or press CLEAR repeat the countdown.

Usage
CTS-S / CTS-G can record UV and Energy usages. These counters count hourly. Each count is 4-digit long (0~9999). UV usage counts as long as CTS-S / CTS-G is powered on assuming that user is using a UV lamp for 24-hour. Energy usage counts when heater or cooler is turned on. When the counts reach the set limit, the corresponding usage icon will be shown on the screen.

View Usage
1. Press USAGE to enter the usage mode.

Delay / Long Delay
Press ▼ or ▲ to toggle between Delay and Long Delay.
The use of the Delay is to prevent short cycling of system for turning on heater or cooler.
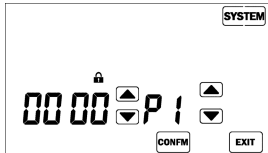
	Delay	Long delay
Heat mode	5~10sec	4~5 min
Cool mode	4~5 min	4~5 min

DST (Daylight Savings Time)
Press ▼ or ▲ to enable or disable DST function.
Remark: The DST is based on the EU time zone.

Security Lock
Press ▼ or ▲ to enable(ON) or disable(OFF) the security lock. If it is enabled, user is required to input a 4-digit password.

Press ▼ or ▲ on the left to change the password. P1 indicates that the 1st digit password (read from left) is selected for edit. Press ▼ or ▲ on the right to select the digit wanted to edit.

After setting all 4 digits, press CONFM to activate the security mode. When security mode is activated, "🔒" is shown on the LCD and all keys are disabled expect "SYSTEM".

If the password is 8888, all settings will restore to default upon pressing CONFM

Disable the Security Lock
1. Press SYSTEM and user is required to enter the correct password
2. If the password is correct, the security lock will be disabled. Otherwise, it remains locked.

Remark : Security Lock cannot be maintained once power is lost

Operations
View Calendar
1. Press the current weekday to view current date.
2. Press EXIT to exit the viewing.

Clock Setting
1. Press CLOCK to enter the clock setting mode.
2. Firstly, the hour is shown. Press ▼ or ▲ to change the hour. Press CONFM to save the setting.
3. Then, the minute is shown. Press ▼ or ▲ to change the minute. Press CONFM to save the setting and exit clock setting.