Models
EVCB14NIT0S  (0 TRIACS / pressure independent)
EVCB14NIT2S  (2 TRIACS / pressure independent)
EVCB14NIT4S  (4 TRIACS / pressure independent)
EVCB14NDT4S  (4 TRIACS / pressure dependent)
EVCB14NIT0SF (0 TRIACS / independent / feedback)
EVCB14NIT4SF (4 TRIACS / independent / feedback)

TRL54  (Thermostat 3x3)

Description
The EVCB Series is a combination controller and thermostat with support for networked communications via the BACnet MS/TP or Modbus protocol. The Networkable VAV Controller is designed for simple and accurate control of any variable air volume box in a number of zone control configurations. Its field configurable algorithms enable versatile implementation of required control sequences.

Applications
- Single duct, cooling only
- Single duct cooling and/or heating
- Up to 4 stage reheat and/or cool
- Up to 4 On/Off heat and/or cool
- Up to 4 time proportioned (TPM) heat or reheat
- Up to 2 analog (0-10Vdc) reheat and/or cool
- Up to 2 floating heat and/or cool
- Pressure dependent or pressure independent
- With or without auto changeover
- Supply/exhaust (requires an additional EVC)

Features
- Field configured VAV algorithms, inputs and outputs
- Built-in actuator (70 lb-in)
- On board differential pressure sensor (select models)
- Simple air balancing and commissioning via thermostat
- Automatically sets operation mode to pressure dependent or independent based on the presence of air flow
- Configurable PI (Proportional-Integral) function
- Independent, configurable proportional control band and dead band per ramp
- Selectable internal or external temperature sensor (10KΩ)
- External CO2 sensor input with integrated logic
- Changeover by contact or external temperature sensor
- Internal and external temperature sensor calibration
- Optional potentiometer feedback for increased precision of actuator position
- Freeze protection
- Removable, raising clamp, non-strip terminals

Operational Features
- Backlit LCD with simple icon and text driven menus
- Network service port via on-board mini USB connector
- Manual night set back or no occupancy override
- Multi level lockable access menu and setpoint
- Selectable Fahrenheit or Celsius scale
- 3-wire connection to controller and 4 push buttons

Network Communication
- BACnet MS/TP or Modbus communication port (selectable via DIP switch)
- Select MAC address via DIP switch or via network
- Select direction on analog outputs
- Select thermostat's default display

BACnet MS/TP®
- Automatic baud rate detection
- Automatic device instance configuration
- Copy & broadcast configuration via thermostat menu or via BACnet to other controllers
- BACnet scheduler
- Firmware upgradeable via BACnet
- Support for COV (change of value)

Modbus
- Modbus @ 9600, 19200, 38400 or 57600 bps
- RTU Slave, 8 bits (configurable parity and stop bits)
- Connects to any Modbus master
Controller Specifications

<table>
<thead>
<tr>
<th>Description</th>
<th>EVCB Series</th>
</tr>
</thead>
<tbody>
<tr>
<td>Torque</td>
<td>70 in.lb. [8 Nm] at rated voltage</td>
</tr>
<tr>
<td>Power consumption</td>
<td>10 VA max</td>
</tr>
<tr>
<td>Running time through 90º</td>
<td>90 seconds</td>
</tr>
<tr>
<td>Power supply</td>
<td>22 to 26 Vac 50/60 Hz</td>
</tr>
<tr>
<td>Inputs</td>
<td>2 Universal inputs (Thermistor 10KΩ Type 3, digital 24Vac/dry contact, or 0-10Vdc)</td>
</tr>
<tr>
<td></td>
<td>2 digital inputs</td>
</tr>
<tr>
<td>On-board differential pressure sensor</td>
<td>0-1.0&quot; WC (available on pressure independent models)</td>
</tr>
<tr>
<td>Outputs</td>
<td>2 analog outputs (0-10 Vdc or 2-10Vdc; selectable)</td>
</tr>
<tr>
<td></td>
<td>Up to 4 TRIAC outputs 24 Vac, 500mA max fused (on/off, pulse, or 2 floating outputs)</td>
</tr>
<tr>
<td>Real Time Clock</td>
<td>Real-time clock (RTC) with super capacitor backup (approximately 3 days)</td>
</tr>
<tr>
<td>BACnet</td>
<td>BACnet® MS/TP @ 9600, 19200, 38400 or 76800 bps (BAS-C)</td>
</tr>
</tbody>
</table>

*Communication connection* 24 AWG twisted-shield cable (Belden 9841 or equivalent)

*Electrical connection* 0.8 mm² [18 AWG] minimum

*Operating temperature* 0ºC to 50ºC [32ºF to 122ºF]

*Storage temperature* -30ºC to 50ºC [-22ºF to 122ºF]

*Relative Humidity* 5 to 95% non condensing

*Weight* 1.8 kg. [4 lb]

A = 2.85" | 73mm
B = 4.85" | 123mm
C = 1.00" | 24mm
D = 2.36" | 60mm
E = 3.27" | 83mm

The actuator performs an auto-stroke on power up. When changing the actuator adjustment screws, cycle power to initiate the auto-stroke. Auto-stroke is not available on EVC pressure independent without feedback.

Thermostat Specifications

<table>
<thead>
<tr>
<th>Description</th>
<th>TRL54</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensor</td>
<td>Temperature</td>
</tr>
<tr>
<td>Setpoint range</td>
<td>10ºC to 40ºC [50ºF to 104ºF]</td>
</tr>
<tr>
<td>Control accuracy</td>
<td>±0.5ºC [0.9ºF] @ 22ºC [71.6ºF] typical calibrated</td>
</tr>
<tr>
<td>Display resolution</td>
<td>±0.1ºC [0.2ºF]</td>
</tr>
<tr>
<td>Electrical connection</td>
<td>3 wires to EVCB controller and 2 wires to BACnet/Modbus network</td>
</tr>
<tr>
<td>Network service port</td>
<td>Mini USB connector</td>
</tr>
<tr>
<td>Power supply</td>
<td>24Vac or 24Vdc</td>
</tr>
<tr>
<td>Power consumption</td>
<td>1VA</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>0ºC to 50ºC [32ºF to 122ºF]</td>
</tr>
<tr>
<td>Storage temperature</td>
<td>-30ºC to 50ºC [-22ºF to 122ºF]</td>
</tr>
<tr>
<td>Relative humidity</td>
<td>5 to 95% non condensing</td>
</tr>
<tr>
<td>Enclosure protection</td>
<td>IP 30 (EN 60529)</td>
</tr>
<tr>
<td>Weight</td>
<td>80 g. [0.15 lb]</td>
</tr>
</tbody>
</table>

A = 3.00 in (78mm)
B = 3.00 in (78mm)
C = 1.00 in (24mm)
D = 2.36 in (60mm)

Note The thermostat functions only with the EV CB Series controller. All the inputs/outputs are located on the EV CB Series except for the temperature sensor built-in the thermostat.
TRL54 Interface

<table>
<thead>
<tr>
<th>Function</th>
<th>Symbol</th>
<th>Setting</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cooling ON</td>
<td><img src="image" alt="Cooling ON" /></td>
<td>A: Automatic</td>
<td>Technician setting</td>
</tr>
<tr>
<td>Heating ON</td>
<td><img src="image" alt="Heating ON" /></td>
<td>A: Automatic</td>
<td>Menu set-up Lock</td>
</tr>
<tr>
<td>MIN MAX</td>
<td><img src="image" alt="MIN MAX" /></td>
<td>Minimum/Maximum</td>
<td>°C or °F: Celsius scale/Fahrenheit scale</td>
</tr>
<tr>
<td>Alarm status</td>
<td><img src="image" alt="Alarm status" /></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Energy saving mode</td>
<td><img src="image" alt="Energy saving mode" /></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Mechanical Installation
1. Manually close the damper blades and position the actuator to 0° or 90°.
2. Slide the actuator onto the shaft.
3. Tighten the nuts on the "V" bolt to the shaft with an 8mm wrench to a torque of 60 in-lb [6.7 Nm].
4. Slide the mounting bracket under the actuator. Ensure free movement of the slot at the base of the actuator. Place the bracket pin at mid distance of the slot.
5. Affix the bracket to the ductwork with #8 self-tapping screws.

Do not press the clutch when the actuator is powered.

Mounting Instructions

CAUTION: Remove power to avoid a risk of malfunction.
A. Remove the captive screw that's holding the base and the front cover of the unit together.
B. Lift the front cover of the unit to separate it from the base.
C. Pull all wires through the holes in the base.
D. Secure the base to the wall using wall anchors and screws (supplied). Make the appropriate connections.
E. Mount the control module on the base and secure using the screw.

BACnet or Modbus Address DIP Switch (DS1)
MAC address for communication, are selectable by DIP switch using binary logic. If you do not change device instance in program mode, it will be automatically modified according to the MAC address.

<table>
<thead>
<tr>
<th>MAC Address</th>
<th>DS.1 = 1</th>
<th>DS.2 = 2</th>
<th>DS.3 = 4</th>
<th>DS.4 = 8</th>
<th>DS.5 = 16</th>
<th>DS.6 = 32</th>
<th>DS.7 = 64</th>
<th>DS.8 = 128</th>
<th>Default Device Instance</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>153000</td>
</tr>
<tr>
<td>1</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>153001</td>
</tr>
<tr>
<td>2</td>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>153002</td>
</tr>
<tr>
<td>3</td>
<td>ON</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>153003</td>
</tr>
<tr>
<td>4</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>153004</td>
</tr>
<tr>
<td>...</td>
<td>...</td>
<td>...</td>
<td>...</td>
<td>...</td>
<td>...</td>
<td>...</td>
<td>...</td>
<td>...</td>
<td>...</td>
</tr>
<tr>
<td>126</td>
<td>OFF</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>OFF</td>
<td>153126</td>
</tr>
<tr>
<td>127</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>OFF</td>
<td>153127</td>
</tr>
</tbody>
</table>

*Slave addresses available by setting DS.8 to ON*
Wiring

We strongly recommend that all Neptronic products be wired to a separate grounded transformer and that transformer shall service only Neptronic products. This precaution will prevent interference with, and/or possible damage to incompatible equipment.

Room Module (TRL54)

Mode Selector Jumper
RUN = Operation Mode
PGM = Programming Mode

High Total Pressure
Low Static Pressure

JP3 (End of line)
None = No end of line
120O = Last node on network
RXD Flash = receiving via data network
TXD Flash = transmitting data via network
Status Flash = communicating with thermostat
Power On = 24Vac applied to TB1

JP2 (TO3 / TO4 input voltage)
INT = 24Vac supplied internally by TB1
EXT = Apply 24Vac to pin 5 of TB2

JP1 (TO1 / TO2 input voltage)
INT = 24Vac supplied internally by TB1
EXT = Apply 24Vac to pin 1 of TB2

DS1 DIP Switch
The 8 DIP switches represent a binary logic to calculate the MAC address.
Default = all OFF

2 analog inputs (config.)
External temp, changeover, normally cool/heat, setpoint airflow, CO2, air supply temp

2 analog outputs (config.)
Cool ramp 1 or 2, heat ramp 1 or 2, CO2, setpoint airflow

2 digital inputs (config.)
DI2: Override, normally cool/heat
DI1: OCC open/close, NSB open/close

4 TRIAC outputs (config.)
Cool 1 or 2, heat 1 or 2, CO2
On/Off (config close/open percent)
Floating (config float time)
Pulse (heat only)
Direct or reverse

Power Input/Output
24Vac
Pressure & Applications – Menu Overview (1 of 6)
For a description of the default settings for each application refer to Annex A: Control Apps on page 14.

---

**Main Menu**

- **APP MM (Applications)**
  - PoS (C) (Motor mIn pos cooling)
  - 10% (0-100%)

- **PrS MM (Pressure)**
  - ON (enabled)
  - OFF (disabled)

- **InP MM (Inputs)**
  - FPo (fan powered box ON)
  - FPa (fan powered box Auto)

- **InP MM (Inputs)**
  - Mt MM (Motor)
  - SEt MM (Settings)
  - rNP MM (Ramps)
  - NEt MM (Network)
  - Hrs MM (Time & Date)

---

**Sub Menu**

- **APP MM (Applications)**
  - CL (cool only)
  - CH (cool, heat, & reheat)
  - CO2 (carbon dioxide)
  - TOS (tOS)
  - FPo (fan powered box ON)
  - FPa (fan powered box Auto)

- **PrS MM (Pressure)**
  - Ind (independent)
  - dEP (dependent)

- **SEt MM (Settings)**
  - BV.50
  - BV.52

---

**Configuration**

- **APP MM (Applications)**
  - APP (Confirm control apps)
  - NO (cancel)
  - YES (confirm)

---

*** You must press the [ ] button to save any changes ***
*** Pressing the [ ] button returns to the previous step without saving ***

---

The APPS represent pre-defined default settings for selected applications. If you select Yes, the settings in Annex A will be applied and override any values already configured.

We recommend selecting the 'Control Apps' before changing any other configurations. Once selected, certain configurations, such as NSB, proportional bands, and deadbands, will be erased and reset to factory default values.
### Analog Outputs – Menu Overview (4 of 6)

#### Main Menu
- **PrS MM** (Pressure)
- **APP MM** (Applications)
- **InP MM** (Inputs)
- **tNP MM** (Temperature)
- **Mt MM** (Motor)
- **SEt MM** (Settings)
- **rNP MM** (Ramps)
- **NEt MM** (Network)
- **Hrs MM** (Time & Date)

#### Sub Menu
- **Configuration**

#### Configuration

*** You must press the button to save any changes ***
*** Pressing the button returns to the previous step without saving ***

<table>
<thead>
<tr>
<th>Main Menu</th>
<th>Sub Menu</th>
<th>Configuration</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **AO1 (AO1 ramp)**
  - MSV 20
  - Go to “AO1”

- **Ao1(MIN)** (Minimum voltage)
  - 0.0 Vdc
  - Go to “AO2”

- **Ao1(MAX)** (Maximum voltage)
  - 10.0 Vdc
  - Go to “tNP” MM

- **Ao1 (Direction)**
  - dIR (direct)
  - rEv (reverse)
  - Go to “AO2”

- **AO2 (AO2 ramp)**
  - MSV 22
  - Go to “tNP” MM

- **Ao2(MIN)** (Minimum voltage)
  - 0.0 Vdc
  - Go to “tNP” MM

- **Ao2(MAX)** (Maximum voltage)
  - 10.0 Vdc
  - Go to “tNP” MM

- **Ao2 (Direction)**
  - dIR (direct)
  - rEv (reverse)

- **Out (Output config)**
  - iO1
  - iO2
  - iO3
  - iO4

- **AO1**
- **AO2**

---

*** You must press the button to save any changes ***
*** Pressing the button returns to the previous step without saving ***

---

- **tNP MM** (Temperature)
  - t = Auto and On options are for fan powered box applications and are only available with models:
    - EVCB14NIT4S
    - EVCB14NDT4S
    - EVCB14NIT4SF

---

- **PrS MM** (Pressure)
- **APP MM** (Applications)
- **InP MM** (Inputs)
- **tNP MM** (Temperature)
- **Mt MM** (Motor)
- **SEt MM** (Settings)
- **rNP MM** (Ramps)
- **NEt MM** (Network)
- **Hrs MM** (Time & Date)
Settings – Menu Overview (6 of 6)

**Main Menu**

- PrS MM (Pressure)
- APP MM (Applications)
- InP MM (Inputs)
- OuT MM (Outputs)
- tNP MM (Temperature)
- Mt MM (Motor)
- SET MM (Settings)
- rNP MM (Ramps)
- NEt MM (Network)
- Hrs MM (Time & Date)

**Sub Menu**

- **Configuration**

---

*** You must press the button to save any changes ***

*** Pressing the button returns to the previous step without saving ***

- **nEt** (Network choice)
- **bAC** (BACnet)
- **Md** (Modbus)
- **CPy** (copy configuration)

- **nEt** (Network config)
- **bAC** (BACnet)
- **Md** (Modbus)
- **CPy** (copy configuration)

- **Abr** (BACnet auto baud rate)
- **No** (Manual)
- **Yes** (Automatic)

- **bAu** (BACnet baud rate)
  - **57.6k** (9.6k, 19.2k, 38.4, 57.6k)

- **CFG** (Modbus comport config)
  - **nP2** (no parity, 2 stop bits)
  - **EP1** (odd parity, 1 stop bit)
  - **CP1** (odd parity, 1 stop bit)

- **MA** (Modbus address)
  - **1** (1-246)

- **MA** (Modbus address)
  - **127** (1-127)

- **SCd** (Config succeed)
  - **AV 167**

*** You must press the button to save any changes ***

*** Pressing the button returns to the previous step without saving ***

---

If type = bAC, menu contains "Type", "bAC" and "CPy".
If type = Md, menu contains "Type" and "Md".

---

Refer to Copy Config Annex for a complete list of messages and error codes.

---

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Operation Menus
This menu is accessible through normal operation mode. The Mode Selector jumper (JP1) of the thermostat must be set to the "RUN" position (Operation Mode). Refer to Wiring on page 4.

1. Press the [*] and [↵] buttons simultaneously for 5 seconds. The "ENTER PASSWORD" screen appears.
2. Enter the password within 1 minute by using the arrow keys to increase or decrease the value and the [*] and [↵] buttons to toggle between the digits.
   a. Password 372 = Temperature Offset Menu
   b. Password 637 = Network Settings Menu
   c. Password 757 = Air Balance Mode
3. If you enter the wrong password, the thermostat displays "Error" and returns to Operation Mode. The thermostat will return to normal mode if you navigate through the entire menu and do not make any selection, or if you do not press any key for 5 minutes. The changed values will be saved automatically.

Menu 372 – Temperature Offset

1. "TSI" (temperature sensor offset)
   Range: 10 to 40°C [50 to 104°F]
   Offset: Max ± 5°C
   Increment: 0.1°C [0.2°F]
   Compare the displayed temperature reading with a known value from a thermometer. To offset or calibrate the sensor, use the arrows key to set the desired temperature reading. This is useful for thermostats installed in areas where the temperature read is slightly different than the room’s actual temperature. For example, a thermostat placed right under the air diffuser. If the thermostat is set to use an external temperature sensor (Ets), the thermostat displays “OFF”.

2. "ETS" (external temperature sensor offset)
   Range: 0 to 50°C [41 to 122°F]
   Offset: Max ± 5°C
   Increment: 0.1°C [0.2°F]
   This option appears if you’ve set one of the analog inputs to Ets (External temperature sensor). When the thermostat is connected to the appropriate analog input, the display shows the temperature read by the external temperature sensor. Adjust the offset by comparing it with a known value (e.g. thermometer). If the sensor is not connected or short circuited, the display is blank “Error”.

3. "PRS" (input 3 reading)
   Range: 250mV (0") to 4000mV (1")
   Displays the voltage output value in mV of the pressure sensor. Does not appear for EVCB14NDT4S (pressure dependent) models.

4. "PRS MIN" (input 3 minimum reading)
   Range: 10mV to 180mV
   Default: 60mV
   This setting represents the deadband of the pressure sensor in mV. For advanced users or special applications only. We recommend that you use the default setting of 60mV. Does not appear for EVCB14NDT4S (pressure dependent) models.

Menu 637 – Network Settings

1. "TYP" (type)
   If type = BAC, menu contains "Type", "BAC" and "CPYc"
   If type = Mod, menu contains "Type" and "mOd"

2. "mOd" (modbus)
   Abr (Modbus auto baud rate)
   No (Manual)
   Yes (Automatic)
   BAr (BACnet auto baud rate)
   No (Manual)
   Yes (Automatic)

3. "MA" (modbus address)
   1 (1-246)
   Modifiable only if all DS2 DIP switches are set to OFF.

4. "CFG" (modbus comport config)
   NP2 (no parity, 2 stop bits)
   OP1 (odd parity, 1 stop bit)
   EP1 (even parity, 1 stop bit)
   Go to "CFGc"

5. "SOr" (config succeed)
   SCd (Config succeed)
   done
   Go to "SCd"

6. "MA" (MSTP MAX master)
   127 (1-127)
   Go to "MAc"

7. "Add (Start address)"
   0 (0-254)
   Add (End address)"
   0 (0-254 max start + 63)

8. "Copy (confirm copy)
   No (cancel)
   Yes (confirm)

9. "Copy Config"
   in (in progress)
   done (done)
   Go to "START"
Menu 757 – Air Balancing Mode

Pressure Independent: models EVCB14NIT0S, EVCB14NIT2S, and EVCB14NIT4S

1. During the power up sequence of the thermostat (when the firmware versions are displayed), press and hold both the and buttons.
2. The "PRS" screen appears. Enter 372 within 1 minute by using the arrow keys to increase or decrease the value and the buttons to toggle between the digits.
3. Use the arrow buttons to select YES and then press .

Reset to Factory Default Settings

This will erase all actual configurations and replace them with the factory default settings.

1. During the power up sequence of the thermostat (when the firmware versions are displayed), press and hold both the and buttons.
2. The "PRS" screen appears. Enter 372 within 1 minute by using the arrow keys to increase or decrease the value and the buttons to toggle between the digits.
3. Use the arrow buttons to select YES and then press .
Operation Mode

The Mode Selector Jumper (JP1) of the thermostat must be set to the “RUN” position (Operation Mode). Refer to Wiring on page 3.

Power Up

Upon power up, the LCD illuminates and all segments appear for 2 sec. The thermostat then displays its current version of the thermostat for 2 seconds followed by the current version of the controller for 2 seconds. Pressing any key on the thermostat illuminates the LCD for 4 seconds.

Temperature

The thermostat displays the temperature reading for 8 seconds. If the sensor is disconnected or short circuited, then “OFF”, “- - -” and alarm symbol ▲ are displayed. To toggle the temperature scale between °C and °F, press the ▲ button.

Temperature Setpoint

To display the setpoint, press the ▲ or ▼ key twice. The set point appears for 5 seconds. To adjust the setpoint, press the arrow keys while the temperature is displayed. If the setpoint adjustment has been locked, the lock ▲ symbol appears.

Air Flow and Air Supply Temperature

Press the  button for 5 seconds and use the arrow keys to view the “Flo” (airflow), “FOS” (airflow setpoint), and “aST (air supply temperature). After 5 seconds without any action, the thermostat returns to operation mode. The air supply temperature appears only if analog input AI1 or AI2 are configured with the AST option.

Control Mode

To access the Control Mode, press the  button. The Control Mode appears for 5 seconds. Press the  button to scroll through the following control modes. These options can vary depending on the options selected in “Temp Control Mode” and “Enable OnOff Control Mode.

• Auto (Automatic Cooling or Heating)
• Cooling only (on, with cooling symbol)
• Heating only (on, with heating symbol)
• OFF (if it is not disabled in Programming Mode)

Night Set Back (NSB) or Occupancy Mode

This function is only available if you set DI1 to nSb (Night set back contact) or Occ (occupancy mode). If the DI1 contact is triggered, the thermostat enters NSB or No Occupancy Mode (the ▲ symbol appears) and uses the NSB or OCC heating and cooling setpoints.

If not locked, you can override the night set back or no occupancy mode for a predetermined period by pressing any of the 4 buttons. During the override period the ▲ symbol will flash. If the ▲ symbol does not flash, the override period is finished or the night set back or no occupancy override has been locked in programming mode.
### Annex A: Control Apps

Refer to Pressure & Applications – Menu Overview (1 of 6) on page Error! Bookmark not defined. for more information.

<table>
<thead>
<tr>
<th>Description</th>
<th>CL</th>
<th>CLHt</th>
<th>CHrH</th>
<th>CO2</th>
<th>ITOS</th>
<th>FPbo</th>
<th>FPbA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Min. Setpoint</td>
<td>20°C (68°F)</td>
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<td>28°C (82°F)</td>
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<td>20°C (68°F)</td>
<td>20°C (68°F)</td>
<td>24°C (75°F)</td>
<td>24°C (75°F)</td>
<td>24°C (75°F)</td>
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<tr>
<td>TO1 Ramp</td>
<td>HR1</td>
<td>CR1</td>
<td>HR1</td>
<td>CR1</td>
<td>OFF</td>
<td>HR1</td>
<td>HR1</td>
</tr>
<tr>
<td>TO1 Signal Type</td>
<td>On/Off</td>
<td>On/Off</td>
<td>On/Off</td>
<td>On/Off</td>
<td>On/Off</td>
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</tr>
<tr>
<td>TO1 Close Pos.</td>
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<td>40%</td>
<td>40%</td>
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<td>TO1 Open Pos.</td>
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<td>0%</td>
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<tr>
<td>TO2 Ramp</td>
<td>HR1</td>
<td>HR1</td>
<td>HR1</td>
<td>CO2</td>
<td>OFF</td>
<td>HR1</td>
<td>HR1</td>
</tr>
<tr>
<td>TO2 Signal Type</td>
<td>Pulse</td>
<td>On/Off</td>
<td>Pulse</td>
<td>On/Off</td>
<td>On/Off</td>
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</tr>
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<td>TO3 Ramp</td>
<td>HR2</td>
<td>CR2</td>
<td>HR2</td>
<td>HR1</td>
<td>OFF</td>
<td>Fan ON</td>
<td>Fan Auto</td>
</tr>
<tr>
<td>TO3 Signal Type</td>
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<td>TO4 Ramp</td>
<td>HR2</td>
<td>HR2</td>
<td>HR2</td>
<td>HR1</td>
<td>OFF</td>
<td>HR1</td>
<td>OFF</td>
</tr>
<tr>
<td>TO4 Signal Type</td>
<td>Pulse</td>
<td>On/Off</td>
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<tr>
<td>Motor Ramp</td>
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<td>CRo</td>
<td>CRo</td>
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<td>CR1</td>
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<tr>
<td>AO1 ramp</td>
<td>HR1</td>
<td>CR1</td>
<td>CR1</td>
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<td>HR1</td>
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<tr>
<td>AO2 Ramp</td>
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<td>HR2</td>
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<tr>
<td>A2 Input</td>
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</tr>
<tr>
<td>DI1 Input</td>
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<td>nSb.o</td>
<td>nSb.o</td>
<td>Occ.o</td>
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<td>2°C (4°F)</td>
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<td>Heat Deadband 2</td>
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<td>1.3°C (2.6°F)</td>
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<td>0.3°C (0.6°F)</td>
<td></td>
</tr>
</tbody>
</table>

### Legend

**Grey Text** = Standard default value  
**Bold Text** = Special default value for selected application

- **HR** = Heating ramp
- **CR** = Cooling ramp
- **COr** = Changeover ramp
- **SENS** = Changeover temperature sensor
- **Fan ON** = Fan powered box in continuous mode
- **Fan Auto** = Fan powered box in automatic mode (follows demand)
- **nSb.o** = Night Set Back (normally open)
- **Occ.o** = Occupancy mode (normally open)
- **TO** = Triac output
- **AO** = Analog output
- **AI** = Analog input
- **DI** = Digital input
Recycling at end of life: please return this product to your Neptronic local distributor for recycling. If you need to find the nearest Neptronic authorized distributor, please consult www.neptronic.com.