

Vector TCI-W Outdoor Air Condenser Controller – Set Up and Navigation

OAC fan operation is controlled via OAC built-in controller, which adjusts OAC fan speed based on the compressor head pressure.

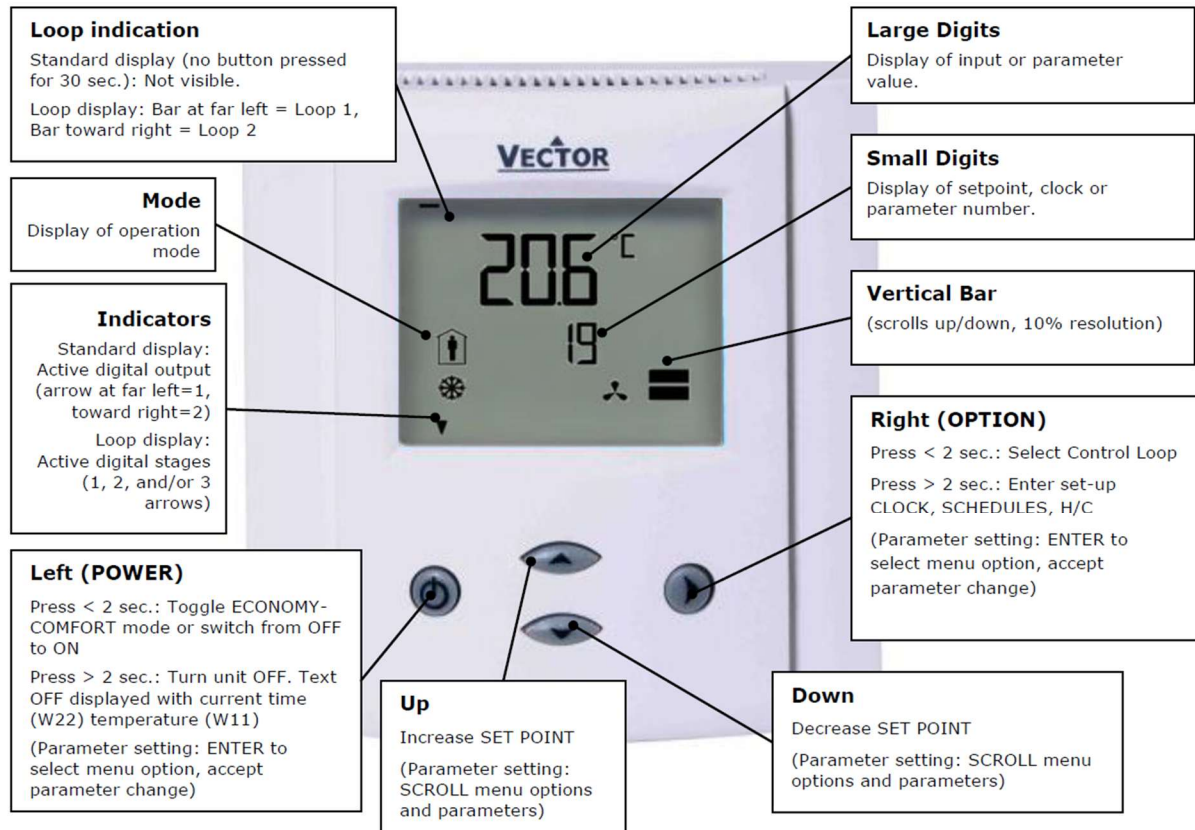
Current OAC models use **Vector TCI-W Universal Controller**. Basic info regarding the set up (for current application) and navigation are presented below; for more details on this controller – refer to **controller manufacturer documentation**.

Note that OAC controller typically comes from the factory pre-set and pre-configured – refer to following info as/when needed.

OAC Controller Layout and Navigation

Vector Controller display and navigation keys are shown on Pic. X-1.

Display and Operation



Operation mode symbols		Control symbols	
	Comfort (occupied): All control functions operating per set points		Heating (Reverse) Active
	Economy (unoccupied): Set points shifted according to 1L07, 2L07		Cooling (Direct) Active
OFF	Energy Hold Off: Outputs are off, inputs monitored for alarms		Schedule Set
			Manual Override
			Fan Active

Pic. X-1

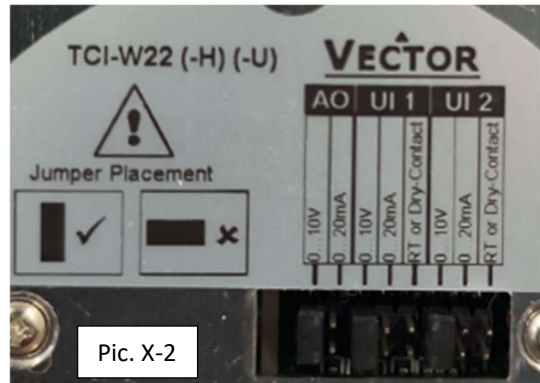
Parameter Access and Configuration

1. Press UP/DOWN buttons simultaneously for three seconds. The display will show firmware version and revision number. Press the OPTION button to start login.
2. CODE is shown in small display.
3. Code to access **user** parameters is **009**, **control** parameter is **241**. The access numbers are fixed and cannot be changed.
4. Select this using UP/DOWN buttons.
5. Press OPTION after selecting the correct code.
6. Once logged in with 009, the user/display parameters are displayed immediately. Once logged in with 241 control modules are displayed (Lp1, Lp2, 1u, 2u, etc.) – select with UP/DOWN and open with OPTION. As soon as the module is open, its parameters are displayed.
7. Select the parameters with the UP/DOWN buttons and change it by pressing the OPTION button. Three arrows are displayed to indicate that the parameter may be modified. Use UP/DOWN buttons to adjust the value.
8. After you are done, press OPTION to save the new value and return to the selection level (arrows disappear when selection is saved). Pressing left hand POWER button without pressing OPTION will discard the value and return without saving. For control parameters press POWER again to leave parameter selection and return to control module selection.
9. Press the POWER to leave the menu. The unit will return to normal operation if no button is pressed for more than 5 minutes.

OAC Controller Set Up

Following settings and configurations are applicable to current equipment set up and used sensors (pressure transducer).

1. Set controller input and output jumpers (refer to Pic. X-2):
 - Open back panel of the controller to access mini-jumpers’ panel.
 - Set jumpers as follows (ensure the proper jumper placement):
 - set AO jumper to 0-10V;
 - set UI 1 jumper to 0-10V;
 - set UI 2 jumper to 0-10V.



2. Program **User and Display parameters** (Password 9)
 - UP09 = 1 (Display Input valve in large display)
 - UP10 = 3 (Display UI1 sensor input value in large display)
 - UP11 = 2 (Display setpoint value on small display)
 - UP12 = 1 (Display control loop 1 setpoint on small display)
 - UP13 = 1 (Display analog output value on bar graph display)
3. Program **Input parameters** (Password 241)
 - 1U 00 = 1 (UI 1 signal type to 0-10VDC)
 - 1U 01 = -15 (UI 1 0V value to -150 PSI)
 - 1U 02 = 135 (UI 1 10V value to 1350 PSI)
 - 1U 03 = 2 (UI 1 display multiplier to x10)
 - 1U 04 = 0 (UI 1 unit of measure to blank)
 - 1U 06 = 0 (UI1 offset. Actual offset is 10 times this value in PSI.)

4. Program **Control Loop parameters** (Password 241)
 - 1L 00 = 3 (Use UI1 value as control loop 1 input)
 - 1L 03 = 30 (Set minimum setpoint value to 30/300 PSI)
 - 1L 04 = 50 (Set maximum setpoint value to 50/500 PSI)
 - 1L 12 = 5 (Set proportional band to 50 PSI.)
 - 1L 14 = 2 (Set integral gain to 2% output change per adjustment.)
 - 1L 15 = 5 (Set the time between integral speed adjustments to 5 seconds.)
5. Program **Output parameters** (Password 241)
 - 1A 00 = 1 (Connect analog output signal to output of control loop 1)
 - 1A 01 = 1 (Set control loop 1 to direct acting i.e. pressure rises, fan speeds up)
 - 1A 02 = OFF (Set analog output signal type to 0-10VDC)
 - 1A 05 = 0 (Set analog output voltage for minimum control loop output to 0V)
 - 1A 06 = 100 (Set analog output voltage for maximum control loop output to 10V)
6. Set setpoint for control loop
 - When at normal display (exit config menus per **step 9 in Parameter Access and Configuration** (see above)), then adjust setpoint value using up and down buttons. Set to 350.

THIS PAGE IS INTENTIONNALLY LEFT BLANK

