HCP7 COMMISSIONING SETUP MANUAL

EX HEVAC defaults that can be user edited are as follows:

*****If these defaults & time clock region are suitable then there is no adjustment needed.**

EX HEVAC DEFAULTS

1.) Current Time, Date and Daylight saving status (DLS) — A.E.S.T +DLS
(Summer time start @ 1st Sunday in October, Winter time @ 1st Sunday in April)

2.) Number of "CO" & NO2 sensors to be connected to controller (1-42) — 4 X CO , 0 X NO2

3.) CO sensor manufacturers maximum CO measurement (10-500) — 100

4.) NO2 sensor manufactuers maximum NO2 measurement (10-50) — 20

5.) Time switch set to enable fan @ 100% between the hours of 7-9am & 5-7pm (subject to D3 & M link)

6.) Idle run timer set to enable fan for 10 minutes at 100% if fan hasn't started in the past 24 hours, but is inhibited from starting in this mode between the hours of 10pm to 9am.

7.) PreSet to suit UNOCCUPIED **but modified** using **CUSTOM** mode to exceed AS1668.2 requirements as per HEVAC'S recommendations
(Hevac may have preset changes as per your project requirements, but will be noted on packing box.)

MAIN MENU

PRESS [ENTER] **to enter main menu to alter settings,** Use [▲] or [▼] to scroll up or down through menus.

Under menu called **SET CLOCK-** SET SYSTEM CLOCK, DATE & DAYLIGHT SAVING

Under menu called **SET TIME SWITCH-** SET FORCED FAN RUN TIMES & DAYS.

Under menu called **CONFIGURE CONTROLLER-** 1.) SET NUMBER OF SENSORS
- # of CO sensors
- # of NO2 sensors

NOTE this menu is password protected. P/W= ***9562***

2.) SENSORS FULL SCALE VALUE
- CO sensor full scale
- NO2 sensor full scale

3.) OCCUPANCY TYPE
- -occupied -loads relative factory default
- -unoccupied -loads relative factory defaults
- -custom" -User editing of all settings

↳ EDITABLE SETTINGS IN SUB MENUS

4.) IDLE PERIOD AUTO FAN RUN TIMER
5.) TIME SWITCH FAN SPEED
6.) CONFIG MODBUS
7.) RESTORE FACTORY DEFAULTS

SPARE ME THE DETAILS : changing # of CO Sensors connected.

Generally the only item needing editing is the number of connected Hevac HGS-CO sensors. Follow the steps below to simply edit this value.

*1.) Press the **ENTER** button to display the 1st menu : SET CLOCK*

*2.) Press the **DOWN** button till CONFIGURE CONTROLLER menu is displayed. press **ENTER**.*

*3.) Using the **UP, DOWN & ENTER** buttons enter the password number "**9562**", press **ENTER.***

*4.) NUMBER OF SENSORS menu will be displayed, press **ENTER**.*

*5.) Number of **CO** Sensors will be displayed & showing existing quantity (ex factory = 4)*

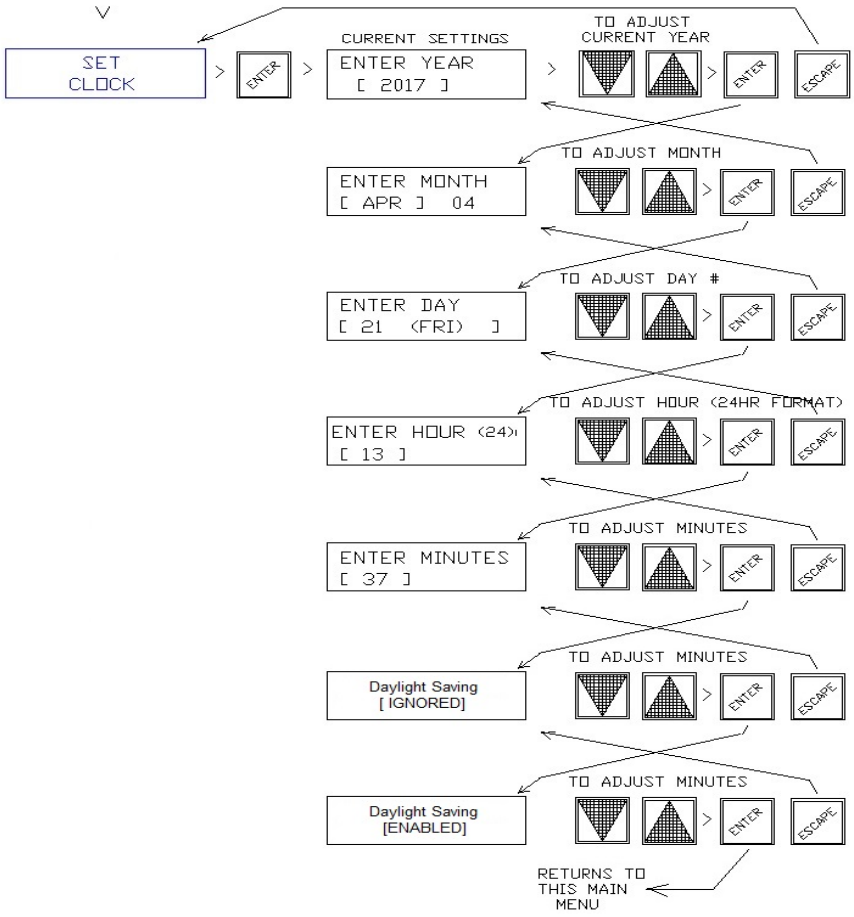
*6.) Use the **UP** or **DOWN** buttons to edit quantity of connected CO sensors , press ENTER.*

*7.) Number of NO2 Sensors will be displayed (ex factory = 0), press **ENTER** to except.*

*8.) Press the **ESC**(ape) button to exit programming & resume normal automatic control.*

SET CLOCK

From the running screen press the **ENTER** button to display the 1st main sub menu **"SET CLOCK"** to check or edit the controllers time, date and day light saving enable or disable settings. Daylight saving (if enabled) starts on the 1st Sunday in October (at 2am) and finish on the 1st Sunday in April (3am)



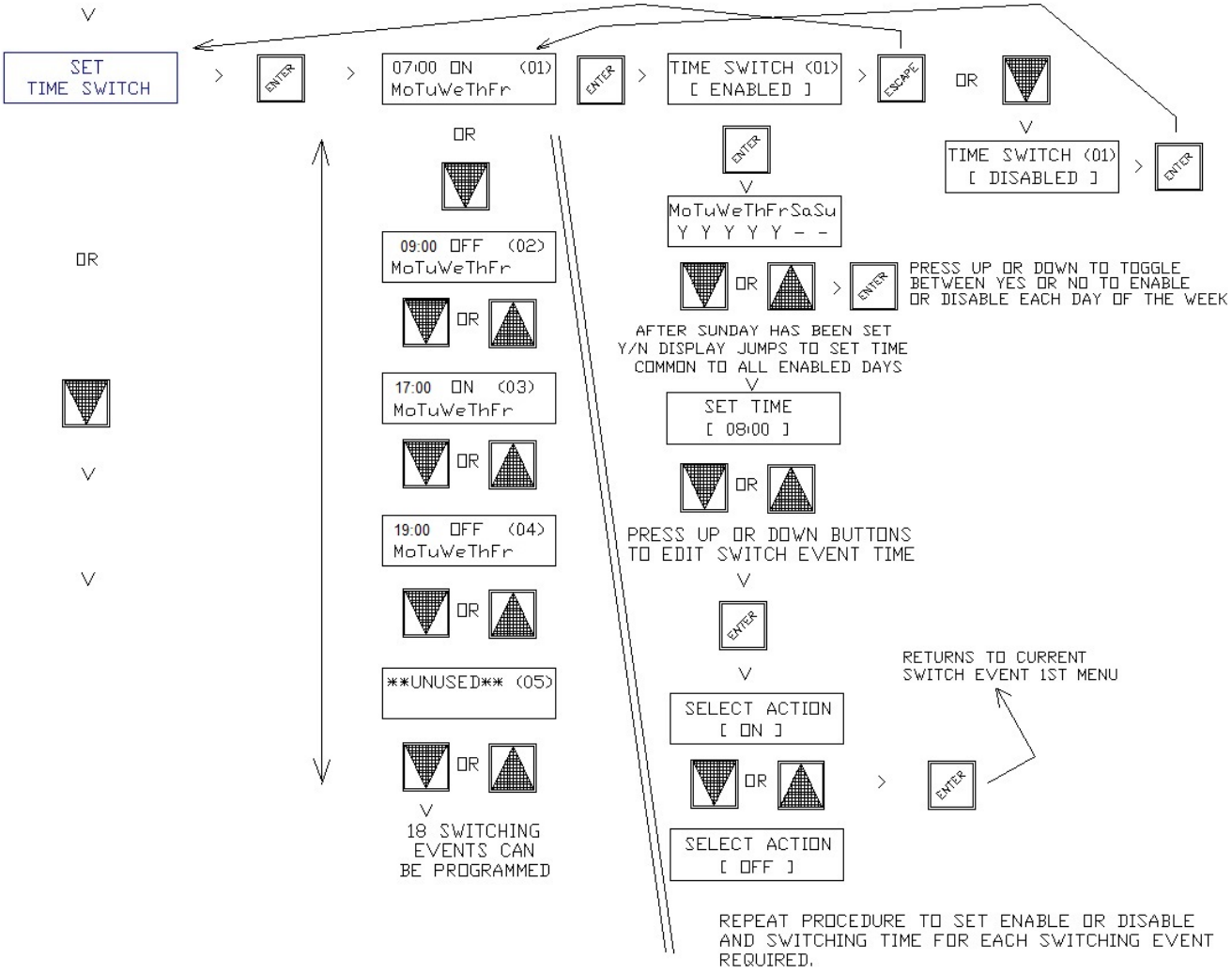
SET TIME SWITCH or / & MANUAL I/P FORCED FAN RUN

The controllers internal time switch for forced fan run (***enabled by also fitting a wire link between terminals M & D3***) can be easily programmed for multiple ON/OFF switching times for each day of the week. The controller comes factory preset for forced ON fan operation to cover normal peak periods- Monday to Friday from 07:00 (event 01) till 09:00 (event 02) in the morning and 17:00 (event 03) till 19:00 (event 04) in the evening.

To edit settings, from the normal running screen, Press the fascia button labeled "**ENTER**".

Scroll down through the menu tree with the "**DOWN**" arrow button till **"SET TIME SWITCH"** is displayed. Press the "**ENTER"** button to open this menu. The existing detail for switching event 1 is displayed. Unlike other time switches, this controller has very flexible unassigned switching events (instead of fixed sequential ON then OFF routines). Time switching events can be set to switch (change state) at any time & day/s, and set as a switching ON event or OFF event. With this method, multiple ON / OFF events can be set on individual days or groups of days (crossing midnight is no issue). 18 switching events are available.

Alternatively the D3 & M link can be used as an external manual forced fan ON input from some other device , ie manual switch , thermostat or a movement sensor(c/w built in run on timer). It can be interlocked with time switch times to only allow external forced operation during programmed times or if no time switch OFF time entered the external interlock can trigger operation as required 24/7.



CONFIGURE CONTROLLER (+ SUB MENU'S)

To alter controller configuration , scroll to the main menu called "**CONFIGURE CONTROLLER**" & press ENTER

The controller will request a 4 digit password which is "9562" use ▲ or ▼ & ENTER buttons to set.

Press ▲ or ▼ Buttons to scroll through sub menus & press ENTER to edit

- NUMBER OF SENSORS > # of CO sensors , # of NO2 sensors
- SENSOR FULL SCALE > Scale of CO sensors, Scale of NO2 sensors
- OCCUPANCY TYPE > Unoccupied, Occupied, Custom (> **various sub menus**)
- OUTPUT DELAY TIMERS (delay on & run on timer settings per relay)
- TIME WEIGHTED AVERAGE (sensor averaging time window)
- IDLE PERIOD AUTO FAN RUN TIMER (time gap & run duration)
- TIME SWITCH FAN SPEED (speed setting for forced fan run override)
- CONFIGURE MODBUS (RS485 modbus comms settings)
- RESTORE FACTORY DEFAULTS (clear memory & return controller to defaults)

-NUMBER OF SENSORS

Press ENTER to open the "**NUMBER OF SENSORS**" sub menu.

NUMBER OF CO SENSORS menu opens displaying current setting.

In the "**NUMBER OF CO SENSORS**" menu Press ▲ or ▼ buttons to alter the quantity of connected CO sensors.

Press ENTER to except # of connected CO sensors & jump to number of NO2 sensors connected

In the "**NUMBER OF NO2 SENSORS**" menu Press ▲ or ▼ buttons to alter the quantity of connected sensors.

Press ENTER button to except the # of connected NO2 sensors and return to this main sub menu.

Press ▲ or ▼ button to Scroll through the other Configure Controller sub menus, & select using ENTER

or press ESC to escape to the main running screen

-SENSOR FULL SCALE

Press ENTER to open the "**SENSOR FULL SCALE**" sub menu.

"CO SENSOR FULL SCALE" menu opens displaying current setting.

In the "**CO SENSOR FULL SCALE**" menu Press ▲ **or** ▼ buttons to alter the maximum CO sensor Value.

Press ENTER to except the scale value of connected CO sensors & jump to scale setting for connected NO2 sensors

In the "**NO2 SENSOR FULL SCALE**" menu Press ▲ **or** ▼ buttons to alter the maximum NO2 sensor Value.

Press ENTER then ESC to finish editing & return to main screen or ▼ to move to another menu.

*Note: The HCP7 Controller and expansion modules EXP7 are designed to respond to gas sensors with an output voltage of 2 to 10vDC over their measurement range. Examples being : The Hevac HGS-CO sensors produce 2-10v over 0-**100** ppm & DWYER CO sensors typically produce 2-10v over 0-**200** ppm. The SENSOR FULL SCALE settings must be set to match the attached sensors, and sensor (types) must be of the same range, ie all CO sensors if set to 200 must all have a full range of 200, if NO2 sensors are also connected and set to 20ppm , then all NO2 sensors have to be 0-20ppm sensors.*

-OCCUPANCY TYPE

To enter "**OCCUPANCY TYPE**" menu Press ENTER or ▲ or ▼ to move to another menu.

In the "**OCCUPANCY TYPE**"screen Press ▲ or ▼ to scroll the choice of "OCCUPIED", "UNOCCUPIED" or "CUSTOM"

choosing "OCCUPIED " or " UNOCCUPIED" using the ENTER button will load those settings and return you to this menu.

choosing "CUSTOM" using the ENTER will jump to its 1st sub menu "EDIT CO LEVELS".

SUB MENU "CUSTOM" in Occupancy type

USE THIS SUB MENU TO EDIT ALL VALUES FOR CO & NO2 TRIGGER POINTS, TIME DELAYS AND RESPONCE TIMES & METHOD. NOTE : USING THIS MENU SHIFTS RESPONSABILITY FROM HEVAC CONTROLS PTY.LTD TO THE USER FOR COMPLIANCE WITH AUSTRALIAN STANDARDS AS1668.2

IF "**CUSTOM**" IS SELECTED AS THE OCCUPANCY TYPE, THE FOLLOWING SUB MENUS ARE ACCESSABLE

-EDIT CO LEVELS	- set On, Off, Start & Range trigger points of relative output relays & Y1 in ppm CO
-EDIT NO2 LEVELS	- set On, Off, Start & Range trigger points of relative output relays & Y1 in ppm NO2
-SET RESPONSE METHOD	- choose Time Weighted Average (TWA) or Current Value (CV) for each output

- EDIT CO LEVELS

(CO LOW SPEED FAN SETTINGS - RELAY 1)

To **enter** "EDIT CO LEVELS" menu Press ENTER or ▼ to jump to "EDIT NO2 LEVELS" menu.

Edit "CO LOW SPEED FAN OFF " using the ▲ or ▼ buttons to alter the low speed FAN turn OFF point in ppm CO.

Press ENTER to accept & jump to edit screen **"LOW SPEED FAN ON"**

Edit "CO LOW SPEED FAN ON" using the ▲ or ▼ buttons to alter the low speed FAN turn ON point in ppm CO.

Press ENTER to accept & jump to edit screen "CO HIGH SPEED FAN OFF"

(CO HIGH SPEED FAN SETTINGS - RELAY 2)

Press ENTER to edit "HIGH SPEED FAN OFF" using the ▲ or ▼ buttons to alter high speed turn OFF point in ppm CO.

Press ENTER to accept & jump to edit screen **"HIGH SPEED FAN ON"**

Edit " HIGH SPEED FAN ON" using the ▲ or ▼ buttons to alter the high speed FAN turn ON point in ppm CO.

(CO STROBE SETTINGS - RELAY 3)

Edit "STROBE OFF" using the ▲ or ▼ buttons to alter the STROBE turn off point in ppm CO.

Press ENTER to accept & jump to edit screen "STROBE ON"

Edit "STROBE ON" using the ▲ or ▼ buttons to alter the STROBE turn ON point in ppm CO.

(CO SIREN SETTINGS - RELAY 4)

Edit "SIREN OFF" using the ▲ or ▼ buttons to alter the SIREN turn off point in ppm CO.

Press ENTER to accept & jump to edit screen **"SIREN ON"**

Edit "SIREN ON" using the ▲ or ▼ buttons to alter the SIREN turn ON point in ppm CO.

(CO VSD RAMP SETTINGS - Y1)

Edit "VSD RAMP START" using the ▲ or ▼ buttons to alter the VSD RAMP start point in ppm CO.

Press ENTER to accept & jump to edit screen "VSD RAMP P BAND"

Edit "VSD RAMP P-BAND" using the ▲ or ▼ buttons to alter the VSD RAMP P BAND in ppm CO.

Press ENTER to accept & jump to edit screen "VSD RAMP I-TIME"

Edit "VSD RAMP I-TIME" using the ▲ or ▼ buttons to alter the VSD RAMP Integral TIME in Minutes.

Press ENTER to accept & jump to edit screen **"VSD MIN O/P LEVEL"**

Edit "VSD MIN O/P LEVEL" using the ▲ or ▼ buttons to alter the VSD Minimum Output level.

Press ENTER to accept & return to this sub menu.

Press ▼ to jump to "EDIT NO2 LEVELS" or press ESC to move back up through the menus.

-EDIT NO2 LEVELS

(NO2 LOW SPEED FAN SETTINGS - RELAY 1)

To **enter** "EDIT NO2 LEVELS" menu Press ENTER or ▼ to jump to "SET RESPONSE METHOD" menu.

Edit "NO2 LOW SPEED FAN OFF" using the ▲ or ▼ buttons to set low speed FAN turn OFF point in ppm NO2.

Press ENTER to accept & jump to edit screen **"LOW SPEED FAN ON"**

Edit "NO2 LOW SPEED FAN ON" using the ▲ or ▼ buttons to alter the low speed FAN turn ON point in ppm NO2.

Press ENTER to accept & jump to edit screen "NO2 HIGH SPEED FAN OFF"

(NO2 HIGH SPEED FAN SETTINGS - RELAY 2)

Press ENTER to edit "HIGH SPEED FAN OFF" using the ▲ or ▼ buttons to alter high speed turn OFF point in ppm NO2.

Press ENTER to accept & jump to edit screen **"HIGH SPEED FAN ON"**

Edit " HIGH SPEED FAN ON" using the ▲ or ▼ buttons to alter the high speed FAN turn ON point in ppm NO2.

(NO2 STROBE SETTINGS - RELAY 3)

Edit "STROBE OFF" using the ▲ or ▼ buttons to alter the STROBE turn off point in ppm NO2.

Press ENTER to accept & jump to edit screen "STROBE ON"

Edit "STROBE ON" using the ▲ or ▼ buttons to alter the STROBE turn ON point in ppm NO2.

(NO2 SIREN SETTINGS - RELAY 4)

Edit "SIREN OFF" using the ▲ or ▼ buttons to alter the SIREN turn off point in ppm NO2.

Press ENTER to accept & jump to edit screen "SIREN ON"

Edit "SIREN ON" using the ▲ or ▼ buttons to alter the SIREN turn ON point in ppm NO2.

(NO2 VSD RAMP SETTINGS - Y1)

Edit "VSD RAMP START" using the ▲ or ▼ buttons to alter the VSD RAMP start point in ppm NO2.

Press ENTER to accept & jump to edit screen "VSD RAMP P-BAND"

Edit "VSD RAMP P-BAND" using the ▲ or ▼ buttons to alter the VSD RAMP P-BAND in ppm NO2.

Press ENTER to accept & jump to edit screen "VSD RAMP I-TIME"

Edit "VSD RAMP I-TIME" using the ▲ or ▼ buttons to alter the VSD RAMP Integral TIME in Minutes.

Press ENTER to accept & jump to edit screen **"VSD MIN O/P LEVEL"**

Edit "VSD MIN O/P LEVEL" using the ▲ or ▼ buttons to alter the VSD Minimum Output level.

Press ENTER to accept & jump to edit screen **"SET RESPONSE METHOD"**

-SET RESPONSE METHOD - (TWA or CV)

Use this menu to set whether an output relay (or the VSD ramp) should respond to the highest sensor signal but which is averaged out over a time window period using the TWA time setting , or to respond to the highest actual current sensor value (CV) .

Edit "LOW SPEED ON/OFF CONTROL METHOD" using the ▲ or ▼ buttons to select "CV" or "TWA".

Press ENTER to accept & jump to edit screen "HIGH SPEED CONTROL METHOD"

Edit "HIGH SPEED ON/OFF CONTROL METHOD" using the ▲ or ▼ buttons to select "CV" or "TWA".

Press ENTER to accept & jump to edit screen "STROBE ON/OFF CONTROL METHOD"

Edit "STROBE ON/OFF CONTROL METHOD" using the ▲ or ▼ buttons to select "CV" or "TWA".

Press ENTER to accept & jump to edit screen "SIREN ON/OFF CONTROL METHOD"

Edit "SIREN ON/OFF CONTROL METHOD" using the ▲ or ▼ buttons to select "CV" or "TWA".

Press ENTER to accept & jump to edit screen "VSD RAMP CONTROL METHOD"

Edit "VSD RAMP CONTROL METHOD" using the ▲ or ▼ buttons to select "CV" or "TWA".

Press ENTER to accept & return to this sub menu Set Response Method.

you are here ⇩

SUB MENUS UNDER "CONFIGURE CONTROLLER"

⇧
- NUMBER OF SENSORS
- SENSOR FULL SCALE
- OCCUPANCY TYPE > Unoccupied, Occupied, (**Custom** > **various sub menus**)
- OUTPUT DELAY TIMERS
- TIME WEIGHTED AVERAGE
- IDLE PERIOD AUTO FAN RUN TIMER
- TIME SWITCH FAN SPEED
- CONFIGURE MODBUS
- RESTORE FACTORY DEFAULTS

⇩

To jump to the another main sub menu from this point press ESC twice till "OCCUPANCY TYPE"

Then use the ▲ or ▼ buttons to move through the main sub menus.

or repeatedly Press ESC to move back up through the menus and to exit to the main running screen.

-OUTPUT DELAY TIMERS

USE THIS MENU TO ADJUST THE DELAY ON AND RUN ON TIME DELAYS FOR EACH RELAY OUTPUT (COMMON FOR CO & NO2 RESPONSE)

Edit "**LOW SPEED FAN ON DELAY**" using the ▲ or ▼ buttons to alter the ON time delay in mins & secs.

Press ENTER to accept & jump to edit screen "**LOW SPEED FAN RUN ON TIMER**"

Edit "**LOW SPEED FAN RUN-ON** "using the ▲ or ▼ buttons to alter the run ON time delay in mins & secs.

Press ENTER to accept & jump to edit screen "**HIGH SPEED START DELAY**"

Edit "**HIGH SPD FAN ON DELAY**" using the ▲ or ▼ buttons to alter the ON time delay in mins & secs.

Press ENTER to accept & jump to edit screen "**HIGH SPEED FAN RUN ON TIMER**"

Edit "**HIGH SPEED FAN RUN-ON**"using the ▲ or ▼ buttons to alter the run ON time delay in mins & secs.

Press ENTER to accept & jump to edit screen "**STROBE ON DELAY**"

Edit "**STROBE ON DELAY**" using the ▲ or ▼ buttons to alter the STROBE turn ON delay in mins & secs.

Edit "**SIREN ON DELAY**" using the ▲ or ▼ buttons to alter the SIREN turn ON delay in mins & secs.

Press ENTER to accept & and return to this main sub menu.

Press the ▲ or ▼ buttons to scroll to other main sub menus or press ESC to exit programming

-TIME WEIGHTED AVERAGE

USE THIS MENU TO CHANGE THE TIME WINDOW THAT A SENSOR MEASUREMENT IS AVERAGED OVER , AS1668.2 EXCEPTS THIS SET TO 8 HOURS, ALTHOUGH THIS SETTING WILL CAUSE VERY DELAYED SENSOR RESPONSE. SETTING THIS VALUE LOWER EXCEEDS REQUIREMENTS AND WILL GIVE FASTER SENSOR RESPONSE, OR USING THE "CUSTOM MENU" OUTPUTS CAN BE ALTERNATIVELY INDIVIDULY SET TO USE "CURRENT VALVE" WHICH THEN USES THE HIGHEST REAL TIME ACTUAL SENSOR VALUE.

Press ENTER to allow editing of the existing value

Press the ▲ or ▼ buttons to change the time window in hours & minutes .

Press ENTER to accept the new value & return to this main sub menu.

Press the ▲ or ▼ buttons to scroll to other main sub menus or press ESC to exit programming

-IDLE PERIOD AUTO FAN RUN TIMER

USE THIS MENU TO SET THE IDLE PERIOD AFTER WHICH THE FAN WILL AUTOMATICALLY START AND THE LENGTH THE FAN THEN RUNS FOR TO PROVIDE MINIMUM VENTILATION REQUIREMENTS

Press ENTER to edit settings in the menu**"IDLE PERIOD AUTO FAN RUN TIMER"**

Edit "IDLE AUTO RUN DELAY" using the ▲ or ▼ buttons to set the delay time to start fan after an idle period.

Press ENTER to accept & jump to edit screen "RUN FOR TIME" screen.

Edit "RUN FOR TIME" using the ▲ or ▼ buttons to set the length of time the fan runs for in minutes.

Press ENTER to accept & jump to edit screen "INHIBIT IDLE RUN FROM" screen.

Edit "INHIBIT IDLE RUN FROM" using the ▲ or ▼ buttons to set start lockout time, to inhibit idle fan run start.

Press ENTER to accept & jump to edit screen "INHIBIT IDLE RUN UNTIL" screen.

Edit "INHIBIT IDLE RUN UNTIL" using the ▲ or ▼ buttons to set finish lockout time, to allow idle fan run start.

Press ENTER to accept and return to this main menu

Press the ▲ or ▼ buttons to scroll to other main sub menus or press ESC to exit programming

-TIME SWITCH FAN SPEED (this value also used for used for idle run timer fan speed)

*USE THIS MENU TO SET THE FAN SPEED USED DURING FORCED **ON** OPERATION DUE TO THE INTERNAL TIME SWITCH OR IDLE TIMER OPERATION OR EXTERNAL INTERLOCK.*

Press ENTER to edit settings in the menu"TIME SWITCH FAN SPEED"

Edit "TIME SWITCH FAN SPEED" using the ▲ or ▼ buttons to set VSD speed during forced T/Switch run operation

if the 2 speed ON/OFF CONTROL (no VSD) link is fitted, then instead of VSD speed , LOW or HIGH speed is selectable

Press ENTER to accept and return to this main menu

Press the ▲ or ▼ buttons to scroll to other main sub menus or press ESC to exit programming

-CONFIGURE MODBUS

TO ENABLE THE USE OF MODBUS SET THE SETTINGS IN THE MENU BELOW AS REQUIRED TO MATCH THE SYSTEM CONNECTED , ALSO NOTE : INTERNAL RED CONNECTOR LINKS ON THE BOTTOM CIRCUIT BOARD HAVE TO BE RELOCATED TO TRANSFER USE OF TERMINALS "X5, X6 & X7" FROM SENSOR INPUT USE TO MODBUS USE. WITH POWER OFF, OPEN THE HOUSING & LOCATE THE 3 RED JUMPERS ON THE PCB LABLED "CN3 & CN4" (3 JUMPERS) REPOSTION THESE 3 JUMPERS FROM THE TOP 2 PINS (V) TO THE BOTTOM 2 PINS (C).

Press [ENTER] to edit settings in the menu"CONFIG MODBUS"

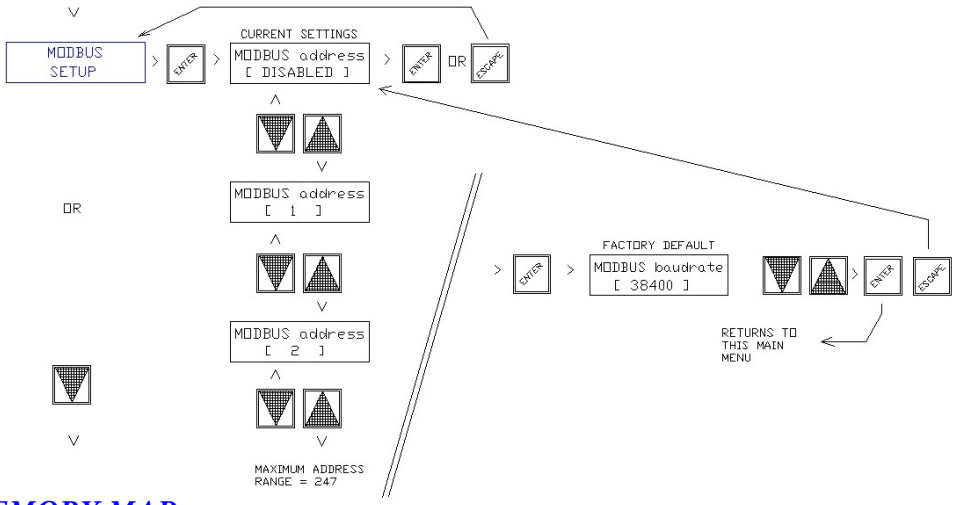
Edit "MODBUS Address" using the ▲ or ▼ buttons.

Press [ENTER] to except address and jump to edit screen for the baudrate"MODBUS BAUDRATE"

Edit "MODBUS Baudrate" address using the ▲ or ▼ buttons.

Press [ENTER] to accept and return to this main menu.

Press the ▲ or ▼ buttons to scroll to other main sub menus or press [ESC] to exit programming



MODBUS MEMORY MAP

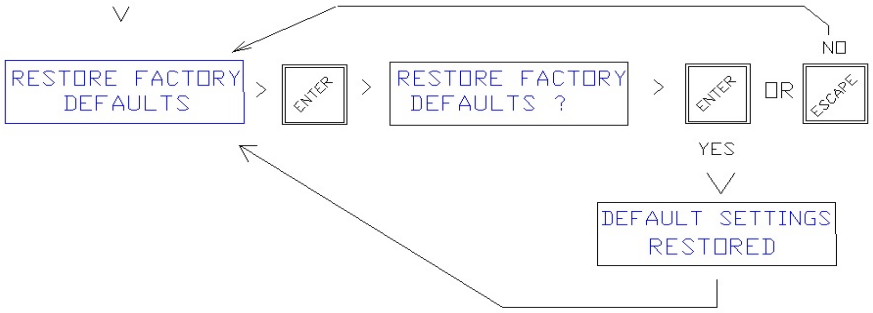
Modicon	Address	Access	Description	Units	Type	Explanation	Default	Min	Max	Error	InternalUse	Internal Use
Read Coils											Op Address	Byte Address
00161	160	ReadOnly		-	boolean		-	-	-	-	00160	20.0
01001	1000	ReadOnly	Relay 0	-	boolean	TRUE if relay is active	-	-	-	-	00000	n/a
01002	1001	ReadOnly	Relay 1	-	boolean	TRUE if relay is active	-	-	-	-	00001	n/a
01003	1002	ReadOnly	Relay 2	-	boolean	TRUE if relay is active	-	-	-	-	00002	n/a
01004	1003	ReadOnly	Relay 3	-	boolean	TRUE if relay is active	-	-	-	-	00003	n/a
01005	1004	ReadOnly	Relay 4	-	boolean	TRUE if relay is active	-	-	-	-	00004	n/a
Inputs												
10001	0	ReadOnly	Unassigned input 0	-	boolean	No current function	-	-	-	-		
10002	1	ReadOnly	Unassigned input 1	-	boolean	No current function	-	-	-	-		
10003	2	ReadOnly	Unassigned input 2	-	boolean	No current function	-	-	-	-		
10004	3	ReadOnly	Unassigned input 3	-	boolean	No current function	-	-	-	-		
Write Coils											Semaphore Address	Byte Address
00169	168	ReadWrite		-	boolean		-	-	-	-	00168	21.0
Read Registers												Byte Address
45001	5000	ReadOnly	Controller model	-	unsigned 16bit	Controller model number	1	-	-	-		
45002	5001	ReadOnly	MODBUS mapping version	-	unsigned 16bit	MODBUS memory/coil mapping version number	1	-	-	-		
41023	1022	ReadOnly	Number of CO sensors	-	unsigned 8bit	Number of configured CO sensors (these will be the first group of sensors)	-	0	42	-		22
41024	1023	ReadOnly	Number of NO2 sensors	-	unsigned 8bit	Number of configured NO2 sensors (these appear after the CO sensors)	-	0	42	-		23
41025	1024	ReadOnly	Max CO sensor gas reading	ppm	unsigned 8bit	Maximum ppm level reported by all CO sensors	-	0	255	-		24
41026	1025	ReadOnly	Max NO2 sensor gas reading	ppm * 10	unsigned 8bit	Maximum ppm level reported by all NO2 sensors	-	0	25.5	-		25
41027	1026	ReadOnly	TWA CO gas reading	ppm	unsigned 8bit	Time weighted average of the maximum of all CO sensors	-	0	255	-		26
41028	1027	ReadOnly	TWA NO2 gas reading	ppm * 10	unsigned 8bit	Time weighted average of the maximum of all CO sensors	-	0	25.5	-		27
41029	1028	ReadOnly	Sensor 1 gas reading	ppm or ppm*10	unsigned 8bit	For CO sensor value is ppm, for NO2 sensor value is ppm * 10	-	0	250	255		28
41030	1029	ReadOnly	Sensor 2 gas reading	ppm or ppm*10	unsigned 8bit	For CO sensor value is ppm, for NO2 sensor value is ppm * 10	-	0	250	255		29
41031	1030	ReadOnly	Sensor 3 gas reading	ppm or ppm*10	unsigned 8bit	For CO sensor value is ppm, for NO2 sensor value is ppm * 10	-	0	250	255		30
41032	1031	ReadOnly	Sensor 4 gas reading	ppm or ppm*10	unsigned 8bit	For CO sensor value is ppm, for NO2 sensor value is ppm * 10	-	0	250	255		31
...	...	...	...	...	...	...						
41068	1067	ReadOnly	Sensor 40 gas reading	ppm or ppm*10	unsigned 8bit	For CO sensor value is ppm, for NO2 sensor value is ppm * 10	-	0	250	255		67
41069	1068	ReadOnly	Sensor 41 gas reading	ppm or ppm*10	unsigned 8bit	For CO sensor value is ppm, for NO2 sensor value is ppm * 10	-	0	250	255		68
41070	1069	ReadOnly	Sensor 42 gas reading	ppm or ppm*10	unsigned 8bit	For CO sensor value is ppm, for NO2 sensor value is ppm * 10	-	0	250	255		69
Write Registers												Byte Address
41023	1022	ReadWrite		-	unsigned 16bit		0	-	-	-		22

-RESTORE FACTORY DEFAULTS

Press [ENTER] to access the choice of restoring settings to origional factory defaults (unoccupied mode as per AS1668.2)

To restore factore defaults select [YES] using the ▲ or ▼ buttons, then press [ENTER]

Press [ESC] to exit programming & return to normal operation & running display



PLEASE NOTE : RESETTING THE CONTROLLER TO FACTORY DEFAULTS SETS THE CONTROLLER TO FULLY CONFORM TO UN-OCCUPIED AS1668.2 MODE SETTINGS USING 8HR TWA FOR ALL OUTPUTS . EX HEVAC SETTINGS ARE SET BEFORE DESPATCH SUCH THAT RELAYS 1 & 3 TO USE CURRENT VALUE AND THE TWA IS ALSO CHANGED TO 1 HR (FROM 8).

MENU SYSTEM CONCEPT & BASIC OVERVIEW