

This publication contains the installation, operation and maintenance instructions for Vari-flow® IAQ Controller.



Carefully read this publication and any supplemental documents prior to any installation or maintenance procedure.

Loren Cook Product Guide, *Vari-Flow*, provides additional information describing the equipment, fan performance, and available accessories.

For additional safety information, refer to AMCA Publication 410-96, *Safety Practices for Users and Installers of Industrial and Commercial Fans*.

All of the publications listed above can be obtained from:

- lorencook.com
- info@lorencook.com
- 417-869-6474 ext. 166

For information and instructions on special equipment, contact Loren Cook Company at 417-869-6474.

Receiving and Inspection

Carefully inspect the accessories for any damage and/or short-age immediately upon receipt of the shipment

Storage

If the controller is stored for any length of time prior to installation, store the controller in its original packaging and protect it from dust, debris and weather.

- Storage Temperature -22°F to 122°F (-30°C to 50°C).

Installation

Location

Consider the following points while choosing a location for the Vari-Flow IAQ Controller.

- Do not place the controller on the floor.
- Maintain a temperature between -1°C to 43°C (30°F to 110°F). A temperature beyond this range may cause condensation and sweating of parts.

! WARNING

Not a means of Disconnect:

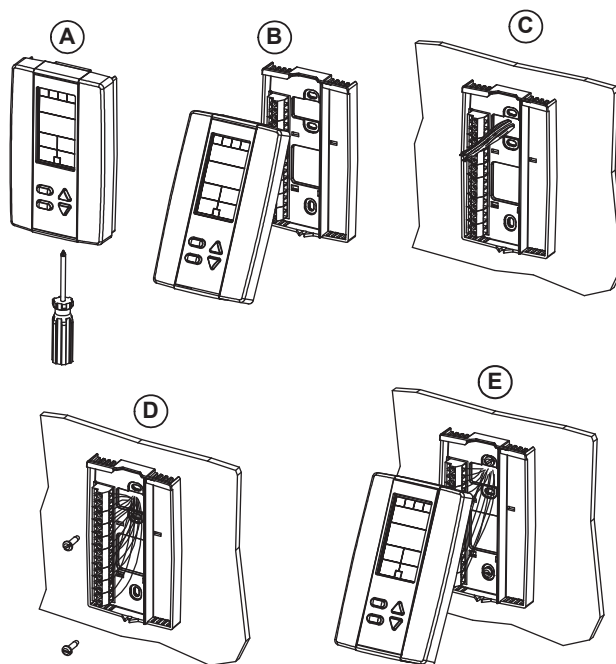
This Controller does not shut off power to the motor.

Voltage Warning

Low-voltage control wires and line voltage power wires must not be installed in same conduit. Failure to follow these instructions could result in malfunction or damage.


Mounting

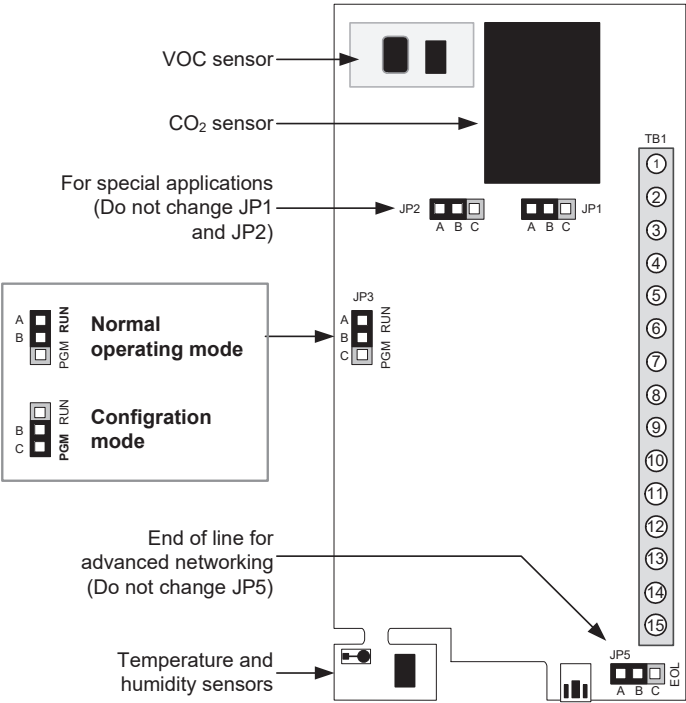
- Remove the captive screw that is holding the base and the front cover of the unit together.
- Lift the front cover of the unit to separate it from the base.
- Pull all wires through the holes in the base.
- Secure the base to the wall using wall anchors and screws (supplied). Make the appropriate connections.
- Mount the control module on the base and secure using the screw.



IAQ Controller

Wiring

 **Avoid touching the VOC and CO2 sensors as this may cause incorrect readings**

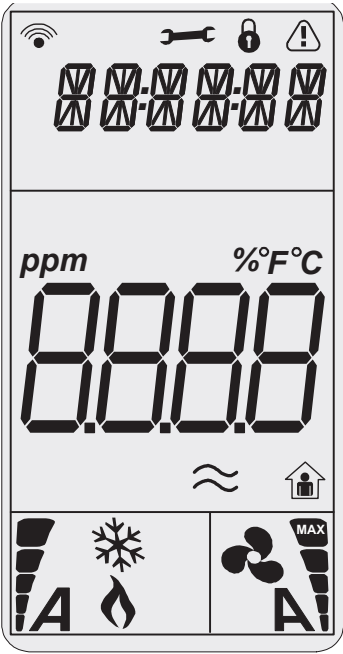


















Terminal Description		Details
1	COM	
2	24Vac / 24Vdc	
3	COM for BO1 (ext 24V)	If JP2 is set to A+B
4	Binary Output 1 (BO1)	
5	COM for BO2 (ext 24V)	If JP1 is set to A+B
6	Binary Output 2 (BO2)	
7	COM	
8	Analog Input (AI1)	
9	COM	
10	Binary Input 1 (BI1)	
11	Analog Output 1 (AO1)	
12	COM	
13	Analog Output 2 (AO2)	
14	BACnet/Modbus A+	
15	BACnet/Modbus B-	

For more information on wiring see additional supplements.

Operation

LCD Legend



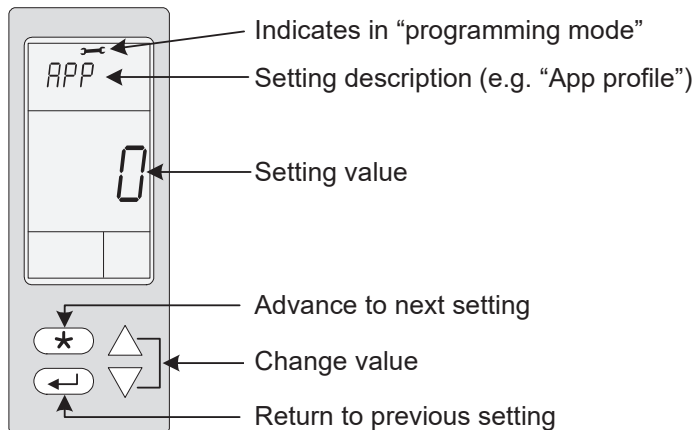
-  Networked Communication
-  Configuration Mode
-  Alarm or Error
-  System Mode (on/off)
-  CO₂
-  VOC
-  Cooling
-  Dehumidification
-  Heating
-  Humidification
-  Fan
-  NSB mode = Night Set Back Mode
-  OCC mode = Unoccupied
-  NSB mode = Normal
-  OCC mode = Occupied
-  Demand Automatic Mode

Programming



Set the Mode Selector Jumper **JP3** to the **“PGM”** mode (Programming Mode). For more information, see

Wiring on page 3. To exit, set the Jumper JP3 back to the **“RUN”** mode (Operation Mode). All changes are saved.



Step / Display	Description	Default	Range / Offset	Increment
1. App Profile	Built-in application profiles automatically configure the controller for the selected application.	0	0 = None; advanced manual configuration 1 = Outside Air Applications (see page 11) 2 = Conference room (see page 12)	1
2. Intrn Temp Offset	The display shows the temperature read by the temperature sensor. Adjust the offset by comparing it with a known value.	Current value	32°F to 122°F / offset: $\pm 9^\circ\text{F}$ (0°C to 50°C / offset: $\pm 5^\circ\text{C}$)	0.2°F (0.1°C)
3. Cool Setpnt Min	The user cannot decrease the setpoint to less than this value.	50°F (10°C)	32°F to 257°F (0°C to 125°C)	0.2°F (0.1°C)
4. Cool Setpnt Max	The user cannot increase the setpoint to more than this value	104°F (40°C)	32°F to 257°F (0°C to 125°C)	0.2°F (0.1°C)
5. Cool Setpnt	Cooling setpoint	71.5°F (22.0°C)	32°F to 257°F (see min and max value) (0°C to 125°C)	0.2°F (0.1°C)
6. Heat Setpnt Min	The user cannot decrease the setpoint to less than this value.	50°F (10°C)	32°F to 257°F (0°C to 125°C)	0.2°F (0.1°C)
7. Heat Setpnt Max	The user cannot increase the setpoint to more than this value	104°F (40°C)	32°F to 257°F (0°C to 125°C)	0.2°F (0.1°C)
8. Heat Setpnt	Heating setpoint	68°F (20°C)	32°F to 257°F (see min and max value) (0°C to 125°C)	0.2°F (0.1°C)
9. Temp Mode	Temperature control mode that you want to authorize to the user in operation mode.	OFF	Auto (Automatic), Cool (Cooling Only), OFF, HEAT (Heating Only)	--

Humidity Setpoints and User Control

The humidity and dehumidification settings appear only on models with the humidity sensor.

10. Humdty Offset	The display shows the relative humidity read by the humidity sensor. Adjust the offset by comparing it with a known value.	Current value	0% to 100% RH / Offset: $\pm 5\%$	0.1% RH
11. Dehum setpnt Min	The user cannot decrease the setpoint to less than this value.	10% RH	0 to 100% RH	0.1% RH
12. Dehum Setpnt Max	The user cannot increase the setpoint to more than this value	80% RH	0 to 100% RH	0.1% RH
13. Dehum setpnt	Dehumidification setpoint	60% RH	10 to 80% RH (see min and max value)	0.1% RH
14. hum setpnt Min	The user cannot decrease the setpoint to less than this value.	10% RH	0 to 100% RH	0.1% RH
15. hum Setpnt Max	The user cannot increase the setpoint to more than this value	80% RH	0 to 100% RH	0.1% RH
16. hum setpnt	Humidification setpoint	40% RH	10 to 80% RH (see min and max value)	0.1% RH
17. Humdty Mode	Humidification control mode that you want to authorize to the user in operation mode.	OFF	OFF, hUn (Humidity Only), Auto (Automatic), dhUn (Dehumidification Only)	--

CO2 Setpoints and User Control

The following CO2 settings appear only on models with the CO2 sensor (see Models on page 1).

18. CO2 Offset	The display shows the CO2 level read by the CO2 sensor. Adjust the offset by comparing it with a known value.	Current value	0 to 2000 PPM / Offset: \pm 200 PPM	1 PPM
19. CO2 setpnt Min	The user cannot decrease the setpoint to less than this value.	400 PPM	0 to 2000 PPM	1 PPM
20. CO2Setpnt Max	The user cannot increase the setpoint to more than this value	1500 PPM	0 to 2000 PPM	1 PPM
21. CO2 setpnt	CO2 setpoint	600 PPM	400 to 1500 PPM (see min and max value)	1 PPM
22. CO2 Mode	Enable or disable CO2 operation mode	ON	ON or OFF	--

VOC Setpoints and User Control

The following VOC settings appear only on models with the VOC sensor (see Models on page 1).

23. VOC Offset	The display shows the VOC level read by the VOC sensor. Adjust the offset by comparing it with a known value.	Current value	0 to 1000 PPB / Offset: \pm 100 PPB	1 PPB
24. VOC setpnt Min	The user cannot decrease the setpoint to less than this value.	0 PPB	0 to 1000 PPB	1 PPB
25. VOC Setpnt Max	The user cannot increase the setpoint to more than this value	1000 PPB	0 to 1000 PPB	1 PPB
26. VOC setpnt	VOC setpoint	800 PPB	0 to 1000 PPB (see min and max value)	1 PPB
27. VOC Mode	Enable or disable VOC operation mode	OFF	ON or OFF	--

Analog Output 1 (AO1)

28. AO1 Min Volt	Select the desired minimum voltage ("zero" value) for the AO1 ramp.	0 V	0 to 10 V	0.1 V
29. AO1 Max Volt	Select the desired maximum voltage ("span" value) for the AO1 ramp.	10 V	0 to 10V	0.1 V
30. AO1 Mode	Determines how the controller calculates the AO1 ramp output value. The controller compares all the enabled input demands (steps 32 to 38) and uses the highest demand or the average of all demands.	HIGH	HIGH (Highest value) or AvrG (Average of all values)	--
31. AO1 DIREV	Direction of the analog signal: Direct (e.g. 0 to 10Vdc) or Reverse (e.g. 10 to 0Vdc).	Dir	Dir (Direct) or rEv (Reverse)	--
32. AO1 Fan	Add fan to AO1 mode (step 30)	OFF	ON or OFF	--
33. AO1 Cool	Add cooling to AO1 mode (step 30)	OFF	ON or OFF	--
34. AO1 Heat	Add heating to AO1 mode (step 30)	OFF	ON or OFF	--
35. AO1 Dehum	Add dehumidification to AO1 mode (step 30)	OFF	ON or OFF	--
36. AO1 Hum	Add humidification to AO1 mode (step 30)	OFF	ON or OFF	--
37. AO1 Co2	Add CO2 to AO1 mode (step 30)	OFF	ON or OFF	--
38. AO1 VOC	Add VOC to AO1 mode (step 30)	OFF	ON or OFF	--

Analog Output 2 (AO2)

39. AO2 Min Volt	Select the desired minimum voltage ("zero" value) for the AO2 ramp.	0 V	0 to 10 V	0.1 V
40. AO2 Max Volt	Select the desired maximum voltage ("span" value) for the AO2 ramp.	10 V	0 to 10V	0.1 V
41. AO2 Mode	Determines how the controller calculates the AO2 ramp output value. The controller compares all the enabled input demands (steps 43 to 49) and uses the highest demand or the average of all demands.	HIGH	HIGH (Highest value) or AvrG (Average of all values)	--
42. AO2 DIREV	Direction of the analog signal: Direct (e.g. 0 to 10Vdc) or Reverse (e.g. 10 to 0Vdc).	Dir	Dir (Direct) or rEv (Reverse)	--
43. AO2 Fan	Add fan to AO2 mode (step 41)	OFF	ON or OFF	--
44. AO2 Cool	Add cooling to AO2 mode (step 41)	OFF	ON or OFF	--
45. AO2 Heat	Add heating to AO2 mode (step 41)	OFF	ON or OFF	--
46. AO2 Dehum	Add dehumidification to AO2 mode (step 41)	OFF	ON or OFF	--
47. AO2 Hum	Add humidification to AO2 mode (step 41)	OFF	ON or OFF	--
48. AO2 Co2	Add CO2 to AO2 mode (step 41)	OFF	ON or OFF	--
49. AO2 VOC	Add VOC to AO2 mode (step 41)	OFF	ON or OFF	--

Binary Output 1 (BO1)

50. BO1 Mode	Determines how the controller calculates the BO1 ramp output value. The controller compares all the enabled input demands (steps 57 to 63) and uses the highest demand or the average of all demands.	HIGH	HIGH (Highest value) or AvrG (Average of all values)	--
51. BO1 DIREV	Direction of the analog signal: Direct (e.g. 0 to 10Vdc) or Reverse (e.g. 10 to 0Vdc).	NO	NO (Normally open) or NC (Normally closed)	--
52. BO1 TPM Hyst	BO1 operates using hysteresis (step 55 and 56) or TPM (step 53 and 54).	HYST	HYST (Hysteresis) or TPM (Time proportional modulation)	--
53. BO1 TPM CPH	If BO1 is set to TPM at step 52, select the number of cycles per hour.	4	3, 4 or 8 CPH (Cycles per hour)	--
54. BO1 Anti Cycle Sec	Select the delay before activating or re-activating the contact.	0 sec	0 to 300 sec	1 sec
55. BO1 Hyst Low Percnt	If BO1 is set to HYST at step 52, select the hysteresis low range percentage	20%	0 to 100%	1%
56. BO1 Hyst High Percnt	If BO1 is set to HYST at step 52, select the hysteresis high range percentage	80%	0 to 100%	1%
57. BO1 Fan	Add fan to BO1 mode (step 50)	OFF	ON or OFF	--
58. BO1 Cool	Add cooling to BO1 mode (step 50)	OFF	ON or OFF	--
59. BO1 Heat	Add heating to BO1 mode (step 50)	OFF	ON or OFF	--
60. BO1 Dehum	Add dehumidification to BO1 mode (step 50)	OFF	ON or OFF	--
61. BO1 Hum	Add humidification to BO1 mode (step 50)	OFF	ON or OFF	--
62. BO1 Co2	Add CO2 to BO1 mode (step 50)	OFF	ON or OFF	--
63. BO1 VOC	Add VOC to BO1 mode (step 50)	OFF	ON or OFF	--

Binary Output 2 (BO2)

64. BO2 Mode	Determines how the controller calculates the BO2 ramp output value. The controller compares all the enabled input values (steps 71 to 77) and uses the highest demand or the average of all demands.	HIGH	HIGH (Highest value) or AvrG (Average of all values)	--
65. BO2 DIREV	Direction of the analog signal: Direct (e.g. 0 to 10Vdc) or Reverse (e.g. 10 to 0Vdc).	NO	NO (Normally open) or NC (Normally closed)	--
66. BO2 TPM Hyst	BO2 operates using hysteresis (step 69 and 70) or TPM (step 67 and 68).	HYST	HYST (Hysteresis) or TPM (Time proportional modulation)	--
67. BO2 TPM CPH	If BO2 is set to TPM at step 66, select the number of cycles per hour.	4	3, 4 or 8 CPH (Cycles per hour)	--
68. BO2 Anti Cycle Sec	Select the delay before activating or re-activating the contact.	0 sec	0 to 300 sec	1 sec
69. BO2 Hyst Low Percnt	If BO2 is set to HYST at step 66, select the hysteresis low range percentage	20%	0 to 100%	1%
70. BO2 Hyst High Percnt	If BO2 is set to HYST at step 66, select the hysteresis high range percentage	80%	0 to 100%	1%
71. BO2 Fan	Add fan to BO2 mode (step 64)	OFF	ON or OFF	--
72. BO2 Cool	Add cooling to BO2 mode (step 64)	OFF	ON or OFF	--
73. BO2 Heat	Add heating to BO2 mode (step 64)	OFF	ON or OFF	--
74. BO2 Dehum	Add dehumidification to BO2 mode (step 64)	OFF	ON or OFF	--
75. BO2 Hum	Add humidification to BO2 mode (step 64)	OFF	ON or OFF	--
76. BO2 Co2	Add CO2 to BO2 mode (step 64)	OFF	ON or OFF	--
77. BO2 VOC	Add VOC to BO2 mode (step 64)	OFF	ON or OFF	--

Analog and Binary Inputs (AI1 and BI1)

78. AI1 Mode	Select the type of sensor and event associated with input AI1.	OFF	OFF (None), OAT (Outside Air Temperature), OCC (Occupancy status), nSb (Night set back status), dFt (Dirty filter), FLS (Air Flow Switch), FLP (Air Flow Protection/Lockout)	--
79. BI1 Mode	Select the type of sensor and event associated with input BI1.	OFF	OFF (None), OCC (Occupancy status), nSb (Night set back status), dFt (Dirty filter), FLS (Air Flow switch), FLP (Air Flow Protection/Lockout)	--
80. Extern Temp Offset	The display shows the temperature read by input AI1 or BI. Adjust the offset by comparing it with a known value.	Current value	-40°F to 212°F / offset: ±18°F (-40°C to 100°C / offset: ±10°C)	0.2°F (0.1°C)

Outside Air Temperature (OAT)

The following features apply only if OAT is selected for AI1 at step 78.

81. AO1 OAT Hi Temp	AO1 no longer modulates and remains at its minimum voltage if the OAT read at AI1 is higher than this value.	122°F (50°C)	-40°F to 257°F (-40°C to 125°C)	0.2°F (0.1°C)
82. AO1 OAT Low Temp	AO1 no longer modulates and remains at its minimum voltage if the OAT read at AI1 is lower than this value.	-40°F (-40°C)	-40°F to 257°F (-40°C to 125°C)	0.2°F (0.1°C)
83. AO2 OAT Hi Temp	Same as step 81, except it applies to AO2	122°F (50°C)	-40°F to 257°F (-40°C to 125°C)	0.2°F (0.1°C)
84. AO2 OAT Low Temp	Same as step 82, except it applies to AO2	-40°F (-40°C)	-40°F to 257°F (-40°C to 125°C)	0.2°F (0.1°C)
85. BO1 OAT Hi Temp	BO1 remains in its inactive or "normal" state if the OAT read at AI1 is higher than this value.	122°F (50°C)	-40°F to 257°F (-40°C to 125°C)	0.2°F (0.1°C)
86. BO1 OAT Low Temp	BO1 remains in its inactive or "normal" state if the OAT read at AI1 is lower than this value.	-40°F (-40°C)	-40°F to 257°F (-40°C to 125°C)	0.2°F (0.1°C)
87. BO2 OAT Hi Temp	Same as step 85, except it applies to BO2	122°F (50°C)	-40°F to 257°F (-40°C to 125°C)	0.2°F (0.1°C)
88. BO2 OAT Low Temp	Same as step 86, except it applies to BO2	-40°F (-40°C)	-40°F to 257°F (-40°C to 125°C)	0.2°F (0.1°C)

Occupied/Unoccupied Mode (OCC)

The following features apply only if OCC is selected for AI1 or BI1 at steps 78 or 79.

89. Unocc Cool Setpnt Min	The user cannot decrease the unoccupied cooling setpoint to less than this value.	50°F (10°C)	32°F to 257°F (0°C to 125°C)	0.2°F (0.1°C)
90. Unocc Cool Setpnt Max	The user cannot increase the unoccupied cooling setpoint to more than this value.	104°F (40°C)	32°F to 257°F (0°C to 125°C)	0.2°F (0.1°C)
91. Unocc Cool Setpnt	Unoccupied cooling setpoint.	90°F (32°C)	32°F to 257°F (see min and max value) (0°C to 125°C)	0.2°F (0.1°C)
92. Unocc Heat Setpnt Min	The user cannot decrease the unoccupied heating setpoint to less than this value.	50°F (10°C)	32°F to 257°F (0°C to 125°C)	0.2°F (0.1°C)
93. Unocc Heat Setpnt Max	The user cannot increase the unoccupied heating setpoint to more than this value.	104°F (40°C)	32°F to 257°F (0°C to 125°C)	0.2°F (0.1°C)
94. Unocc Heat Setpnt	Unoccupied heating setpoint.	64.4°F (18.0°C)	32°F to 257°F (see min and max value) (0°C to 125°C)	0.2°F (0.1°C)

Proportional Band and Integral Time

95. Cool P band	Cooling ramp proportional band	41°F 5°C	35.6°F to 122°F (2°C to 50°C)	0.2°F (0.1°C)
96. Heat P band	Heating ramp proportional band	41°F 5°C	35.6°F to 122°F (2°C to 50°C)	0.2°F (0.1°C)
97. Humdty P band	Humidity ramp proportional band	5 %RH	2.0 % to 50.0 %RH	0.1 %RH
98. CO2 P band	CO2 ramp proportional band	500 PPM	10 to 2000 PPM	1 PPM
99. VOC P Pand	VOC ramp proportional band	500 PPB	10 to 1000 PPB	1 PPB
100. Cool I Time Sec	Cooling integral factor compensation	60 sec	1 to 120 sec	1 sec
101. Heat I Time Sec	Heating integral factor compensation	60 sec	1 to 120 sec	1 sec
102. Humdty I Time Sec	Humidity integral factor compensation	60 sec	1 to 120 sec	1 sec
103. CO2 I Time Sec	CO2 integral factor compensation	60 sec	1 to 120 sec	1 sec
104. VOC I Time Sec	VOC integral factor compensation	60 sec	1 to 120 sec	1 sec

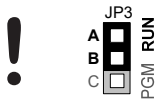
Network Settings (BACnet / Modbus)

105. Select Netwrk Proto	Select the desired network protocol.	bAC	bAC (BACnet MS/TP) or mod (Modbus)	--
106. BACnet Baud Rate	Set the desired MS/TP baud rate setting.	Auto	Auto (Automatic detection), 9.6k, 19.2k, 38.4k, 57.6K, and 76.8k	--
107. MSTP MAC Addrss	Select the desired MSTP MAC Address.	0	1 to 254	1
108. MSTP Max Master	Select the desired MSTP MAX address for the master device.	127	1 to 127	1
109. Adjust Device Inst	Select Yes to change manually and continue to the next step. If you select No, the device instance will be modified automatically according to the MAC address.	No	No or Yes	--
110. 015325	If Yes was selected at step 109, use the arrow keys to change the value and press the [*] button to move to the next digit.	Current value	0 to 4194302	1
111. Modbus Baud rate	Set the desired Modbus baud rate setting.	Auto	Auto detection 9.6k, 19.2k, 38.4k, 57.6K	--
112. Modbus Port Config	Select the desired parity and number of stop bits for Modbus communication	NP2S	NP2S (No parity, 2 Stop bits) EP1S (Even parity, 1 stop bit) OP1S (Odd parity, 1 stop bit)	--
113. Modbus Addrss	Select the desired Modbus address	1	1 to 246	1

General Settings

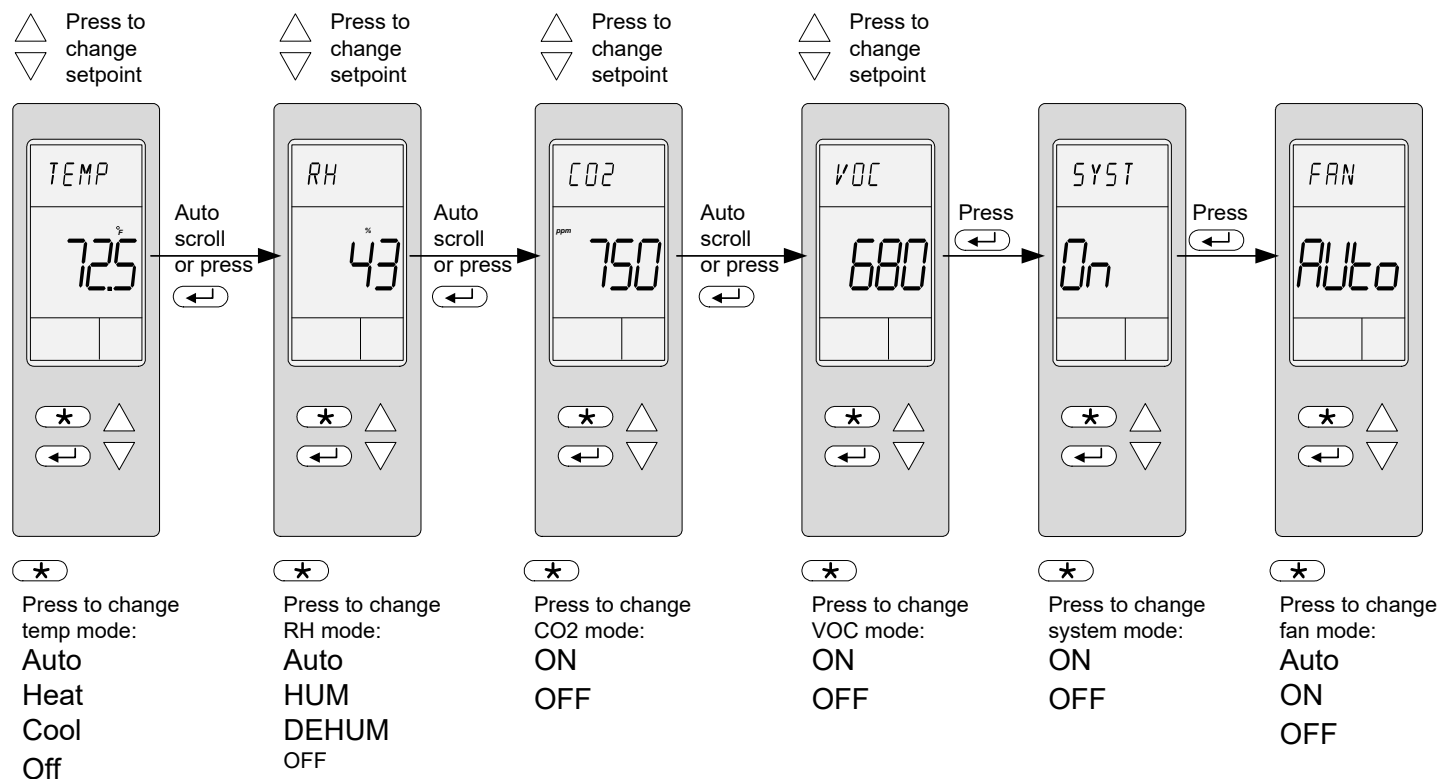
114. Local Unit	Select the unit measure displayed on the controller	MET°C	MET°C (Metric) or ImP°F (Imperial)	
115. Auto Scroll	In operation mode, the sensor values can scroll automatically (ON) or manually by pressing the enter key.	ON	ON or OFF	

Operation Mode



Set the Mode Selector Jumper **JP3** to the **“RUN”** mode (Operation Mode).

For more information, see *Wiring* on page 3.



Power Up

Upon power up, the LCD illuminates, and all segments appear for 2 seconds. The controller then displays its current version for 2 seconds.

LCD Backlight

Pressing any key illuminates the LCD for 4 seconds.

Night Set Back (NSB) Mode

This function is available only if the nSb (Night Set Back contact) option is selected at Step 78, "AI1 Mode" or Step 79, "BI1 Mode". If the contact is triggered, the controller enters NSB mode (the symbol appears) and uses the NSB setpoints defined at Steps 91, "Unocc Cool Setpnt" and 94, "Unocc Heat Setpnt". When the contact is not triggered, the icon appears indicating the normal operation.

No Occupancy Mode

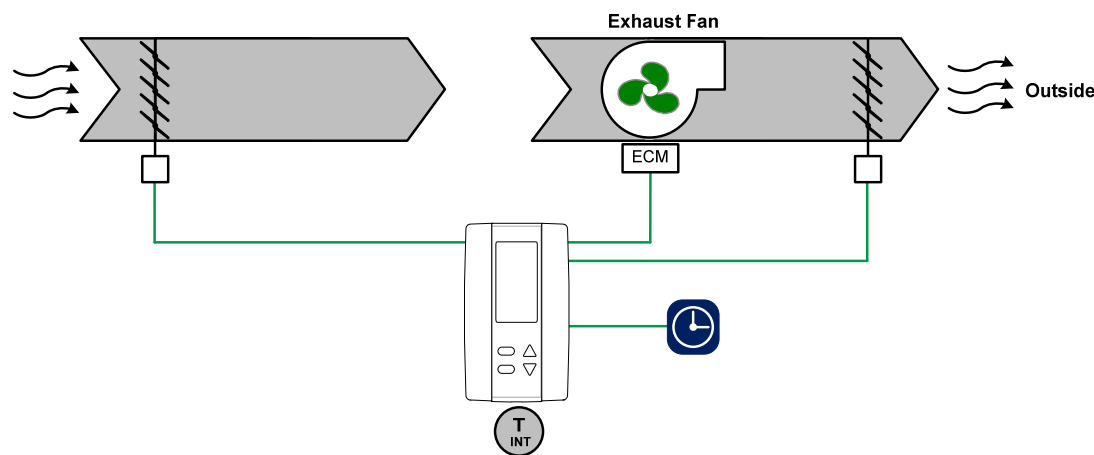
This function is available only if the OCC (Occupancy contact) option is selected at Step 78, "AI1 Mode" or Step 79, "BI1 Mode". If the contact is triggered, the icon appears indicating normal "Occupied" operation. When the contact is not triggered, the controller enters into the Unoccupied mode (the symbol appears) and uses the unoccupied setpoints defined at Steps 91, "Unocc Cool Setpnt" and 94, "Unocc Heat Setpnt" respectively.

Application Profiles

This provides additional information about the application profiles (App Profiles) used in the Vari-Flow IAQ Controllers.

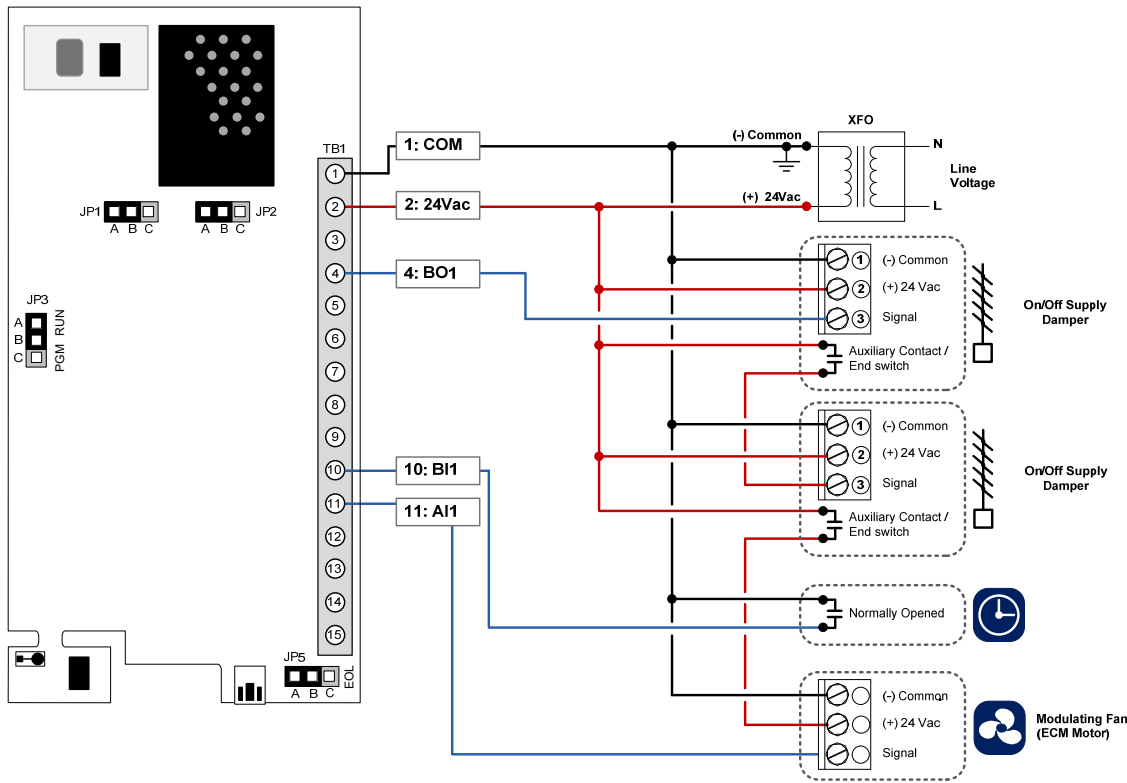
APP PROFILE 1

Outside Air Application (Temperature only)

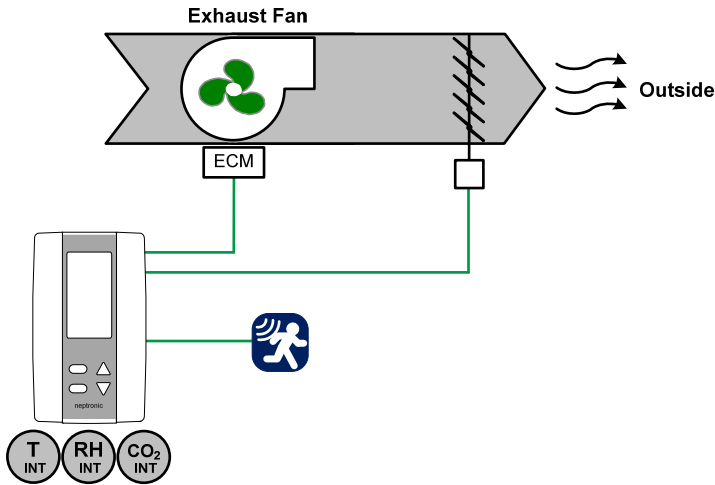


When selecting the option "1" from the application profiles menu, the controller automatically configures the following options:

AO1	Demand Source	Fan	AO2	BO1	Demand Source	Fan	BO2	AI	BI	Configuration	Occupancy	System Modes
	Control Mode	Highest			Control Mode	Highest						Main System
	Direction	Direct	OFF		Direction	Direct	OFF	OFF				Temperature
	Min. Value	0%			TPM/Hysteresis	Hysteresis						Humidity
	Max. Value	100%			Hysteresis Low	0%						CO2
					Hysteresis High	20%						VOC
												Off

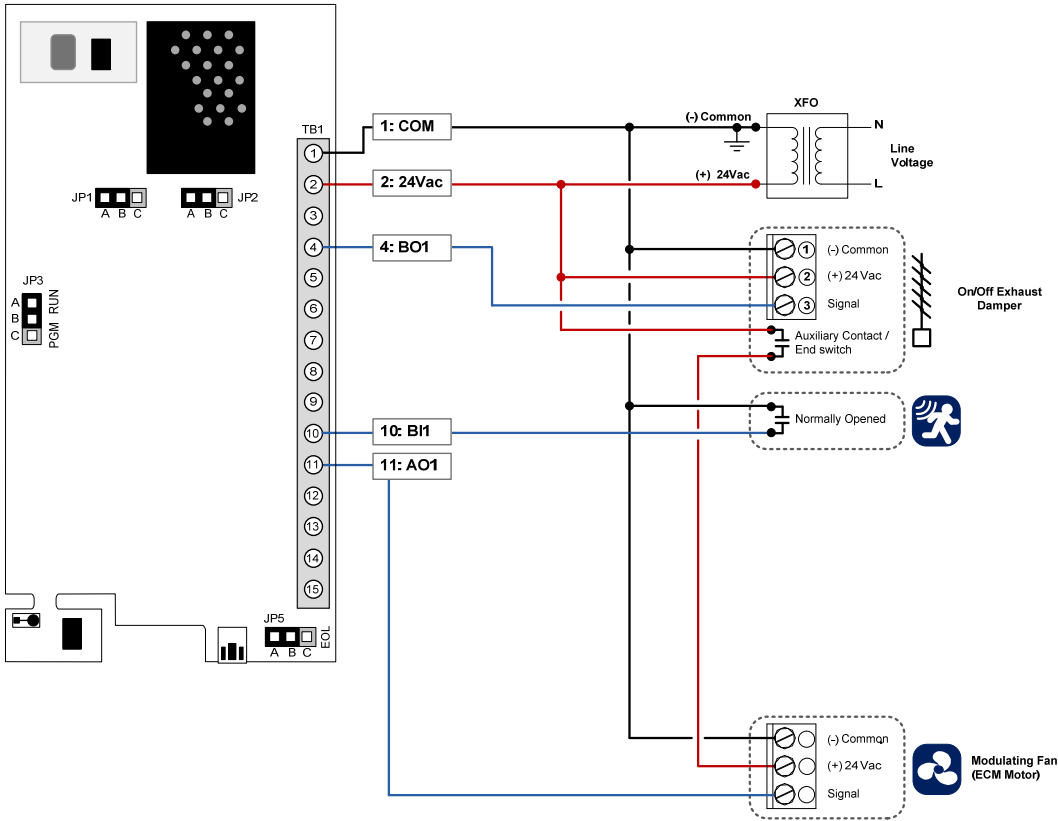


APP PROFILE 2: Conference Room (Temp, RH, and CO₂)



When selecting the option "2" from the application profiles menu, the controller automatically configures the following options:

AO1		AO2	BO1	BO2	AI	BI	System Modes	
Demand Source	Fan		Demand Source			Configuration	Main System	On
Control Mode	Average		Control Mode			Occupancy	Temperature	Auto
Direction	Direct	OFF	Direction	OFF	OFF		Humidity	Auto
Min. Value	0%		TPM/Hysteresis				CO2	On
Max. Value	100%		Hysteresis Low				VOC	Off
			Hysteresis High					



Limited Warranty

Loren Cook Company warrants that your Loren Cook fan was manufactured free of defects in materials and workmanship, to the extent stated herein. For a period of one (1) year after date of shipment, we will replace any parts found to be defective without charge, except for shipping costs which will be paid by you. This warranty is granted only to the original purchaser placing the fan in service. This warranty is void if the fan or any part thereof has been altered or modified from its original design or has been abused, misused, damaged or is in worn condition or if the fan has been used other than for the uses described in the company manual. This warranty does not cover defects resulting from normal wear and tear. To make a warranty claim, notify Loren Cook Company, General Offices, 2015 East Dale Street, Springfield, Missouri 65803-4637, explaining in writing, in detail, your complaint and referring to the specific model and serial numbers of your fan. Upon receipt by Loren Cook Company of your written complaint, you will be notified, within thirty (30) days of our receipt of your complaint, in writing, as to the manner in which your claim will be handled. If you are entitled to warranty relief, a warranty adjustment will be completed within sixty (60) business days of the receipt of your written complaint by Loren Cook Company. This warranty gives only the original purchaser placing the fan in service specifically the right. You may have other legal rights which vary from state to state. For fans provided with motors, the motor manufacturer warrants motors for a designated period stated in the manufacturer's warranty. Warranty periods vary from manufacturer to manufacturer. Should motors furnished by Loren Cook Company prove defective during the designated period, they should be returned to the nearest authorized motor service station. Loren Cook Company will not be responsible for any removal or installation costs.

LOREN COOK COMPANY

Corporate Offices: 2015 E. Dale St. Springfield, MO 65803
Phone 417-869-6474 | Fax 417-862-3820 | lorencook.com

July 2017