

OAC HARDWARE CONFIGURATION

FACTORY DEFAULT HARDWARE CONFIGURATION

N1 BACnet MS/TP Network	NONE. No MS/TP sensors or building automation system connected.
Actuator Type	2-10 VDC proportional actuator (Belimo MP-bus with 3000 and 3000S models)
Outdoor Airflow Sensor	Integral, -U or -T, thermal dispersion airflow/temperature probe(s) - Auto detected
Outdoor Air Intake Sensor Area	Null. MUST BE ENTERED FOR OPERATION.
CO2 Sensor	NONE
Occupancy Counter	NONE
Alarm/Mode Relay Assignment	ALRMS (assigned to active alarms bound to N.O. relay, R1)

CUSTOM HARDWARE CONFIGURATION

Open by simultaneously pressing {ESC} {ENT} during normal operation

Use ↑↓ buttons to navigate up/down menu. Press {ENT} to modify (parameter will flash). Use ↑↓ buttons to modify, {ENT} to accept, {ESC} to keep previous.

Fixed parameters (parameters that cannot be changed) will indicate "PARAMETER FIXED"

If LOCK SECURITY<->NONE using the SETUP MENU pressing enter will indicate "CONFIG LOCKED" and only parameter viewing is allowed.

Navigate entire menu to step 28 to save settings. Press {ESC} twice at any time to exit without saving changes.

ITEM #	PARAMETER	VALUE	DESCRIPTION	SKIP TO
1	N1 DEVICES	NONE	No BACnet MS/TP devices connected to network N1.	
		SENS	Approved MS/TP CO2 and/or Occupancy Counters connected to network N1. <i>Note: Approved sensors have network parameters factory preset and autodetected by the EMOAC controller. No configuration is required. If custom configuration of network parameters is desired (baud rate, device MAC address or device/sensor device instance numbers) select BAS rather than SENS.</i>	
		BAS	BAS MS/TP network connected to network N1 <i>Note: MS/TP network parameters should be configured by the network integrator. Choose this setting without a BAS is it is desired to modify network settings (i.e. baud rate, device MAC address, or device instance numbers of device/network sensors).</i>	
2	ITEMS 2 and 3 are only visible on the OAC-4000 and 5000 controllers.			
3	ACTR SGNL	0-5V	0-5 VDC actuator control signal, 0% to 100% of full span.	
		0-10V	0-10 VDC actuator control signal, 0% to 100% of full span.	
		2-10V	2-10 VDC (can drive a 4-20 mA input) actuator control signal, 0% to 100% of full span.	
4	BI1 SGNL	AC	0-24 VAC binary input.	
		DC	0-24 VDC binary input.	
			<i>Note: GP1 is factory configured as a binary input.</i>	
5	BI1 TRIG	HI	Occupied mode is active above the binary threshold.	
		LO	Occupied mode is active below the binary threshold.	
			<i>Note: The binary threshold is 7VAC/VDC with 3000 and 3000A models and 7VAC/3VDC with 4000 and 5000 models.</i>	
5	OAF AREA	{ }	Outdoor airflow measuring device free area, in sq ft [sq m]. Important: Area is required for operation. Leave null field (default) if area is not known during configuration. The device will prompt for area prior to operation.	
6	CO2 TYP	NONE	No CO2 sensor connected.	9
		ANLG	Analog CO2 sensor connected (EMOAC-5000 only). <i>Note: An analog CO2 input is not available when ECO FAULT = ON</i>	
		MS/TP	Approved MS/TP CO2 sensor connected (N1 DEVICES = SENS or BAS).	9

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7	CO2 SGNL	0-5V	0-5 VDC output CO2 sensor installed.	
		0-10V	0-10 VDC output CO2 sensor installed.	
		2-10V	2-10 VDC output CO2 sensor installed.	
		4-20mA	4-20mA (4-wire) output CO2 sensor installed. Jumper required on EMOAC PCB. <i>Note: Factory default output scaling is set to 0-2,000 ppm. The full scale reading of the CO2 sensor can be modified using advanced setup.</i>	
8	CO2 FS	2000	CO2 sensor full scale reading, 1,000 to 10,000 ppm.	
9	CNTR TYP	NONE	No occupancy counter connected.	11
		MS/TP	Approved MS/TP occupancy counter connected (N1 DEVICES = SENS or BAS).	
10	NUM CNTRS	1	Number of counters, 1 to 4. <i>Note: If more than one counter is used, the device instance number additional counters must be modified in each counter. If N1 DEV=SENS, set counter 2 DI=32, counter 3 DI=33 and counter 4 DI=34.</i>	
11	R1 ASGN	NONE	Relay R1 not assigned.	13
		ALRMS	R1 assigned to EMOAC notification alarms bound to R1.	13
		MODE	R1 assigned to the active control mode.	
12	R1 ACTMOD	OCCUNO	R1 active during occupied and unoccupied modes.	
		OCC	R1 active during occupied mode.	
		UNOC	R1 active during unoccupied mode.	
13	ITEMS 14 to 27 are only visible if N1 DEVICES is equal to BAS.			
14	N1 BAUD	76800	N1 network baud rate of 76,800 bps.	
		38400	N1 network baud rate of 38,400 bps.	
		19200	N1 network baud rate of 19,200 bps.	
		9600	N1 network baud rate of 9,600 bps.	
15	N1 MAX MAST	7	N1 network max master, 0 to 127. <i>Note: Limiting MAX MAST to the actual number of devices on the network and sequentially addressing each device will limit network overhead and improve network efficiency. The default value for N1 MAX MAST assumes no building automation system is connected to the N1 MS/TP network.</i>	
16	N1 DEV MAC	1	The MAC address of this device on the N1 network, 0 to 127.	
17	DEV DI	1	The device instance number of this device on the N1 network, 0 to 4,194,302.	
18	ITEM 19 is only visible if CO2 TYP is equal to MS/TP.			
19	CO2 DI	21	The device instance number of the CO2 sensor on the N1 network, 0 to 4,194,302	
20	ITEM 21 is only visible if CNTR TYP is equal to MS/TP and NUM CNTRS is greater than or equal to 1.			
21	CNTR1 DI	31	The device instance number of counter 1 on the N1 network, 0 to 4,194,302.	
22	ITEM 23 is only visible if CNTR TYP is equal to MS/TP and NUM CNTRS is greater than or equal to 2.			
23	CNTR2 DI	32	The device instance number of counter 2 on the N1 network, 0 to 4,194,302.	
24	ITEM 25 is only visible if CNTR TYP is equal to MS/TP and NUM CNTRS is greater than or equal to 3.			
25	CNTR3 DI	33	The device instance number of counter 3 on the N1 network, 0 to 4,194,302.	
26	ITEM 27 is only visible if CNTR TYP is equal to MS/TP and NUM CNTRS is equal to 4.			
27	CNTR4 DI	34	The device instance number of counter 4 on the N1 network, 0 to 4,194,302.	
28	DONE	SAVE	Save changes and return to normal operation.	
		CANCEL	Do not save changes and return to normal operation.	
		RESET	Reset to factory default configuration and return to normal operation.	

OAC FIRMWARE CONFIGURATION

FACTORY DEFAULT FIRMWARE CONFIGURATION

Outdoor Air Control (OAC)	FLOW (modulating airflow setpoint outdoor airflow control during occupied mode)
Occupied Airflow Setpoint	0 cfm [lps] (simultaneously press ↑ or ↓ buttons during normal operation to modify)
Unoccupied Airflow Setpoint	0 cfm [lps]
Off-mode Operation (UN/OFF)	OFF (actuator output 0% when unoccupied mode is active)

CUSTOM FIRMWARE CONFIGURATION

Open by simultaneously pressing ↑↓ during normal operation

Use ↑↓ buttons to navigate up/down menu. Press {ENT} to modify (parameter will flash). Use ↑↓ buttons to modify, {ENT} to accept, {ESC} to keep previous.

Fixed parameters (parameters that cannot be changed) will indicate "PARAMETER FIXED"

If LOCK SECURITY<->NONE using the SETUP MENU pressing enter will indicate "CONFIG LOCKED" and only parameter viewing is allowed.

Navigate entire menu to step 39 to save settings. Press {ESC} twice at any time to exit without saving changes.

ITEM #	PARAMETER	VALUE	DESCRIPTION	SKIP TO
1	OAC	FLOW	Modulate to maintain a fixed, user defined, minimum airflow rate.	9
		CO2	Modulate to maintain a fixed, user defined, CO2 level.	10
		CO2/OAF	Modulate to maintain a calculated minimum airflow rate based on estimated population.	
		COUNT	Modulate to maintain a calculated minimum airflow rate based on measured population.	4
	FIXED	Maintain the fixed minimum position specified by MIN POS. <i>Note: CO2 and CO2/OAF will only be visible if a CO2 sensor was configured during hardware config. COUNT will only be visible if an occupancy counter was configured during hardware config.</i>	15	
2	OA CO2	400	Outdoor air CO2 level, 300 to 700 ppm. <i>Note: Outdoor air CO2 is typically assumed since CO2 sensor technology typically is not accurate in outdoor air applications. OA CO2 can be modified via BACnet if actual CO2 levels are monitored.</i>	
3	MET	1.2	Expected occupant metabolic equivalent based on activity, 0.7 to 10 MET. <i>Note: Sedentary adults have a average MET output of 1.2. Metabolic activity can range between 0.7 (very low activity such as sleeping) to over 10 (very high activity such as jumping rope) and varies with age and diet. Occupant activity significantly affects the relationship between ventilation and indoor CO2 levels.</i>	
4	RP	18 [3.4]	Ventilation zone required airflow rate, 0 to 50 cfm/person [0 to 10 lps/person]. <i>Note: Rp is generally determined using ASHRAE Standard 62.1. The default value is based on the equivalent ventilation rate for 1,000 ppm of sedentary adults and does not meet the requirements of the Standard.</i>	
5	RA	0	Ventilation zone required airflow rate, 0 to 1 cfm/sq ft [0 to 5 lps/sq m]. <i>Note: Ra is generally determined using ASHRAE Standard 62.1. The default value does not meet the requirements of the Standard.</i>	
6	AZ	0	Ventilation zone floor area, 0 to 99,999 sq ft [0 to 9,999 sq m]. <i>Note: Az must be entered if Ra is greater than 0.</i>	
7	EZ	1	Ventilation effectiveness, 0.1 to 1.5. <i>Note: Ez is generally determined using ASHRAE Standard 62.1. It should be used when occupancy counters are used or CO2 sensors are installed in the return air stream.</i>	
8	EVZ	1	Ventilation efficiency, 0.1 to 1. <i>Note: Using an estimated value for Evz can improve DCV performance on multi-zone systems.</i>	11

OAC FIRMWARE CONFIGURATION

9	OA SET	0	Occupied outdoor airflow setpoint, 0 to 9,999 cfm [0 to 5,000 lps]. <i>Note: The minimum outdoor airflow setpoint can be modified at any time during normal operation by pressing the ↑ or ↓ buttons.</i>	13
10	CO2 SET	1000	CO2 setpoint, 500 to 2,000 ppm. <i>Note: The CO2 setpoint can be modified at any time during normal operation by pressing the ↑ or ↓ buttons.</i>	
11	DCV MIN	0	Lower ventilation rate limit during DCV, 0 to DCV MAX cfm [lps] <i>Note: DCV MIN limits the minimum ventilation rate setpoint rather than fixed damper position. Set to equal the minimum required ventilation rate or local exhaust rate, whichever is greater.</i>	
12	DCV MAX	NONE 9999	Upper ventilation rate limit during DCV, NONE or DCV MIN to 9,999 cfm [5,000 lps] <i>Note: DCV MAX limits the maximum ventilation rate setpoint rather than fixed damper position. Set to equal the ventilation required for the maximum expected population. This limit may result in higher than expected CO2 levels and activate the CO2 alarm if the CO2-DCV method uncertainly would result in over-ventilation at high occupancy levels. Setting DCV MAX to NONE will not limit ventilation and maintain the CO2 level specified.</i>	
13	UNOC SET	0	Unoccupied mode airflow setpoint, 0 to 9,999 cfm [0 to 5,000 lps]. <i>Note: The unoccupied airflow setpoint will be maintained whenever UN/OFF is set to UNOC in step 14 or via BACnet.</i>	
14	UN/OFF	OFF UNOC	Off Mode: The actuator output signal will be set to 0% when occupied mode is inactive. Unoccupied Mode: Modulate to maintain UNOC SET when occupied mode is inactive.	
15	MIN POS	10%	Minimum fixed damper position, 0% to 100% of full stroke. <i>Note: MIN POS is used as the default damper position during active fault conditions when UNOC or OA modes are active.</i>	
16	ITEMS 17 to 21 are only visible if OAC is set to FLOW, CO2, CO2/OAF or COUNT.			
17	UNOC ALARM	OFF MAN AUTO	UNOC mode airflow notification alarm disabled. UNOC mode airflow notification alarm enabled. Manual reset required. UNOC mode airflow notification alarm enabled. Automatic reset with return to in tolerance.	23
18	R1 BIND	NO YES	Do not bind active alarm to relay, R1. Bind active alarm to relay, R1 (requires R1 ASGN=ALRMS during hardware config.).	
19	TYPE	LO HI HI/LO	Low airflow alarm. Active below SETPNT - TOL after specified DELAY. High airflow alarm. Active above SETPNT + TOL after specified DELAY. High/Low airflow alarm. Active above/below SETPNT ± TOL after specified DELAY.	
20	SETPNT	{}	Alarm setpoint, in cfm [lps]. <i>Note: The default {} value for SETPNT is UNOC SET.</i>	
21	TOL	20%	Alarm tolerance, ½ OAF PID deadband tolerance to 50%	
22	DELAY	1	Delay, 0 to 30 minutes, after alarm is "outside" of tolerance before alarm is active.	
23	ITEMS 24 to 29 are NOT visible if MOAC is set to CO2 (MOA airflow alarm is not available when MOAC is set to CO2).			
24	OA ALARM	OFF MAN AUTO	Occupied mode airflow notification alarm disabled. Occupied mode airflow notification alarm enabled. Manual reset required. Occupied mode airflow notification alarm enabled. Automatic reset with return to in tolerance.	30
25	R1 BIND	NO YES	Do not bind active alarm to relay, R1. Bind active alarm to relay, R1 (requires R1 ASGN=ALRMS during hardware config.).	
26	TYPE	LO HI HI/LO	Low airflow alarm. Active below SETPNT - TOL after specified DELAY. High airflow alarm. Active above SETPNT + TOL after specified DELAY. High/Low airflow alarm. Active above/below SETPNT ± TOL after specified DELAY.	
27	SETPNT	{}	Alarm setpoint, in cfm [lps]. <i>Note: The default {} value for SETPNT is OA SET when OAC is set to FLOW, the calculated active airflow setpoint when OAC is set to OAF/CO2 or COUNT, or 0 when OAC is set to FIXED or PASS.</i>	
28	TOL	15%	Alarm tolerance, ½ OAF PID deadband tolerance to 50%	
29	DELAY	1	Delay, 0 to 30 minutes, after alarm is "outside" of tolerance before alarm is active.	
30	ITEM 31 to 36 are only visible if CO2 TYP is equal to ANLG or MS/TP (i.e. a CO2 sensor is installed).			
31	CO2 ALARM	OFF MAN AUTO	All mode CO2 notification alarm disabled. All mode CO2 notification alarm enabled. Manual reset required. All mode CO2 notification alarm enabled. Automatic reset with return to in tolerance.	36

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32	R1 BIND	NO	Do not bind active alarm to relay, R1.	
		YES	Bind active alarm to relay, R1 (requires R1 ASGN=ALRMS during hardware config.).	
33	TYPE	HI	High CO2 alarm. Active below SETPNT - TOL after specified DELAY.	
34	SETPNT	{ }	Alarm setpoint, in ppm. <i>Note: The default { } value for SETPNT is CO2 SET when OAC is set to CO2, or 1,000 when OAC is set to FLOW, CO2/OAF, COUNT, FIXED or PASS.</i> <i>Important: 1,000 ppm may be exceeded whenever 18 cfm [3.4 lps] or less is provided to sedentary adults even though the ventilation rate provided may meet the requirement of ASHRAE standard 62.1.</i>	
35	TOL	15%	Alarm tolerance, ½ CO2 PID deadband tolerance to 50%	
36	DELAY	10	Delay, 0 to 30 minutes, after alarm is "outside" of tolerance before alarm is active.	
37	TRBL ALARM	OFF	System status notification alarm disabled.	39
		MAN	System status notification alarm enabled. Manual reset required.	
		AUTO	System status notification alarm enabled. Automatic reset with return to in tolerance.	
38	R1 BIND	NO	Do not bind active alarm to relay, R1.	
		YES	Bind active alarm to relay, R1 (requires R1 ASGN=ALRMS during hardware config.).	
39	DONE	SAVE	Save changes and return to normal operation.	
		CANCEL	Do not save changes and return to normal operation.	
		RESET	Reset to factory default configuration and return to normal operation.	

OAC SCHEDULE CONFIGURATION

SCHEDULE CONFIGURATION

Open by simultaneously pressing ↑{EN} during normal operation

Use ↑↓ buttons to navigate up/down menu. Press {ENT} to modify (parameter will flash). Use ↑↓ buttons to modify, {ENT} to accept, {ESC} to keep previous.

Fixed parameters (parameters that cannot be changed) will indicate "PARAMETER FIXED"

If LOCK SECURITY<>NONE using the SETUP MENU pressing enter will indicate "CONFIG LOCKED" and only parameter viewing is allowed.

Navigate entire menu to step 25 to save settings. Press {ESC} twice at any time to exit without saving changes.

ITEM #	PARAMETER	VALUE	DESCRIPTION	SKIP TO
1	TIME	12:00 AM	Time of day.	
2	MONTH	1	Month.	
3	DAY	1	Day of month.	
4	YEAR	2017	Year.	
5	TRIG ENABLE	YES NO	The binary trigger must be enabled for OCC or UNOC modes to be active. OCC and UNOC modes are determined only by the schedule.	
6	SCHED	OFF	No schedule set.	25
		DAYS	Allows a different occupied start time and duration to be entered for each day of the week.	11
		WEEKS	Allows a different occupied start time and duration to be entered for weekdays and weekends.	
7	M-F OCC	OFF 12:00 AM	Set the occupied start time for Monday to Friday, OFF or time of day.	
8	OCC HRS	0.0	Set the occupied duration, in hours, for Monday to Friday.	
9	S-S OCC	OFF 12:00 AM	Set the occupied start time for Saturday and Sunday, OFF or time of day.	
10	OCC HRS	0.0	Set the occupied duration, in hours, for Saturday and Sunday.	25
11	MON OCC	OFF 12:00 AM	Set the occupied start time for Monday, OFF or time of day.	
12	OCC HRS	0.0	Set the occupied duration, in hours, for Monday.	
13	TUE OCC	OFF 12:00 AM	Set the occupied start time for Tuesday, OFF or time of day.	
14	OCC HRS	0.0	Set the occupied duration, in hours, for Tuesday.	
15	WED OCC	OFF 12:00 AM	Set the occupied start time for Wednesday, OFF or time of day.	
16	OCC HRS	0.0	Set the occupied duration, in hours, for Wednesday.	
17	THU OCC	OFF 12:00 AM	Set the occupied start time for Thursday, OFF or time of day.	
18	OCC HRS	0.0	Set the occupied duration, in hours, for Thursday.	
19	FRI OCC	OFF 12:00 AM	Set the occupied start time for Friday, OFF or time of day.	
20	OCC HRS	0.0	Set the occupied duration, in hours, for Friday.	
21	SAT OCC	OFF 12:00 AM	Set the occupied start time for Saturday, OFF or time of day.	
22	OCC HRS	0.0	Set the occupied duration, in hours, for Saturday.	
23	SUN OCC	OFF 12:00 AM	Set the occupied start time for Sunday, OFF or time of day.	
24	OCC HRS	0.0	Set the occupied duration, in hours, for Sunday.	
25	DONE	SAVE	Save changes and return to normal operation.	
		CANCEL	Do not save changes and return to normal operation.	
		RESET	Reset to factory default configuration and return to normal operation.	

OAC CONTROLLER - ADVANCED SETUP

Open by simultaneously pressing {ESC} ↑ during normal operation. Follow navigation rules below.

↑ or ↓ Move up/dwn {ENT} Move right {ESC} Exit menu	↑ or ↓ Move up/dwn {ENT} Move right {ESC} Move left	↑ or ↓ Move up/dwn {ENT} Move right {ESC} Move left	↑ or ↓ Modify (Parameter Flashes) {ENT} Accept, move left {ESC} Cancel, move left	Range/Units (if applicable) IP Min/Max SI Min/Max		Notes/Comments
ADVANCED ↓	SYSTEM ↓	U/M=IP ↓	U/M=IP ↓ U/M=SI ↑			Imperial/US customary units (ft, fpm, cfm, °F) International system of units (m, m/s, lps, °C)
		AF METH=ACT ↑↓	AF METH=ACT ↓ AF METH=STD ↑			Actual air velocity or volumetric flow Standard (mass) air velocity or volumetric flow
		ALT=0 ↑	ALT=0 ↑↓	-200/20000 ft	-60/6000 m	Altitude
	DAMPER ↑↓	STROKE=100 ↑	STROKE=100 ↓	25/100 %		Damper stroke at full open position
	OAF SENSOR ↑↓	LCD INT=300 ↓	LCD INT=300 ↑↓	1/3000		Integration buffer size for airflow on LCD
<i>OAC-5000 Only</i>						
		OAF SGNL=0-10V ↑↓	OAF SGNL=0-10V ↓ OAF SGNL=2-10V ↑↓ OAF SGNL=0-5V ↑↓ OAF SGNL=1-5V ↑			Linear analog output for airflow (AO2)
		OAF UNITS=FPM ↑↓	OAF UNITS=FPM ↓ OAF UNITS=CFM ↑			Velocity, FPM [MPS] Volumetric Flow, CFM [LPS]
		OAF FS=2000 ↑↓	OAF FS=2000 ↑↓	100/9999 Units	50/5000 Units	Full scale airflow
		OAF INT=30 ↑↓	OAF INT=30 ↑↓	1/1000		Integration buffer size for airflow analog output
		GAIN=1 ↑↓	GAIN=1 ↑↓			Gain adjustment for OAF flow
		OFFSET=0 ↑↓	OFFSET=0 ↑↓	±20000 cfm	±10000lps	Offset adjustment for OAF flow
		ADJUST=OFF ↑↓	ADJUST=OFF ↓ ADJUST=ON ↑			Disable offset/gain adjustments Enable offset/gain adjustments
		EXT CAB=0 ↑↓	EXT CAB=0 ↑	0/40 ft	0/12.2 m	Extension cable added to original flow probes
		RESET PROBES ↑	RESET=N ↓ RESET=Y ↑			Do not clear probe cal data Clear probe cal data and read/re-write one wire memory data

OAC CONTROLLER - ADVANCED SETUP

	OAF PID ↑↓	DEADBAND=10 ↓	DEADBAND=10 ↑↓	10/50%	Deadband (centered)
		RESPONSE=5 ↑↓	RESPONSE=5 ↑↓	1/10 or CUS	PID response time (recommended)
RESPONSE=CUS		P=10 ↑↓	P=10 ↑↓	1 to 100%	Proportional term
		I=5 ↑↓	I=5 ↑↓	1 to 100%	Integral term
		D=25 ↑↓	D=25 ↑↓	1 to 100%	Derivative term
		FLT ACT=5 ↑↓	FLT ACT=5 ↑↓	1/30 minutes	Delay before "far out" goes to active "fault"
		FLT DEACT=1 ↑↓	FLT DEACT=1 ↓	1/30 minutes	Delay after return to "outside" or "normal" to deactivate "fault"
		RETRY DEL=1 ↑↓	RETRY DEL=1 ↓	1/30 minutes	Delay before clearing "fault" to "normal" for control retry
		RETRIES=MAX ↑	RETRIES=MAX ↑	0/999 or MAX (no limit)	Number of retries allowed for control retry
CO2 TYPE<->NONE	CO2 PID ↑	DEADBAND=10 ↓	DEADBAND=10 ↑↓	10/50%	Deadband (centered)
		RESPONSE=5 ↑↓	RESPONSE=5 ↑↓	1/10 or CUS	PID response time (recommended)
RESPONSE=CUS		P=10 ↑↓	P=10 ↑↓	1 to 100%	Proportional term
		I=5 ↑↓	I=5 ↑↓	1 to 100%	Integral term
		D=25 ↑↓	D=25 ↑↓	1 to 100%	Derivative term
		FLT ACT=5 ↑↓	FLT ACT=5 ↑↓	1/30 minutes	Delay before "far out" goes to active "fault"
		FLT DEACT=1 ↑↓	FLT DEACT=1 ↓	1/30 minutes	Delay after return to "outside" or "normal" to deactivate "fault"
		RETRY DEL=1 ↑↓	RETRY DEL=1 ↓	1/30 minutes	Delay before clearing "fault" to "normal" for control retry
		RETRIES=MAX ↑	RETRIES=MAX ↑	0/999 or MAX (no limit)	Number of retries allowed for control retry

OAC CONTROLLER - TOOLS

Open by simultaneously pressing {ESC} ↑ during normal operation. Follow navigation rules below.

↑ or ↓ Move up/dwn
 {ENT} Move right
 {ESC} Exit menu

↑ or ↓ Move up/dwn
 {ENT} Move right
 {ESC} Move left

↑ or ↓ Move up/dwn
 {ENT} Run tool
 {ESC} Cancel, move left

Notes/Comments

ADVANCED ↓

TOOLS ↑↓

TEST DMPR ↓

{RUN TOOL}

Set damper between 0 and 100% open and display airflow

FIND MIN POS ↑↓

{RUN TOOL}

Enter desired minimum nominal airflow rate to find MIN POS. Write MIN POS to memory.

ADJUST OAF ↑

{RUN TOOL}

Run outdoor air field adjust wizard and write GAIN and OFFSET to memory.

OAC CONTROLLER - DIAGNOSTICS

Open by simultaneously pressing {ESC} ↑ during normal operation. Follow navigation rules below.

↑ or ↓ Move up/dwn
{ENT} Move right
{ESC} Exit menu

↑ or ↓ Move up/dwn
{ENT} Move right
{ESC} Move left

↑ or ↓ Move up/dwn
{ENT} Move right
{ESC} Move left

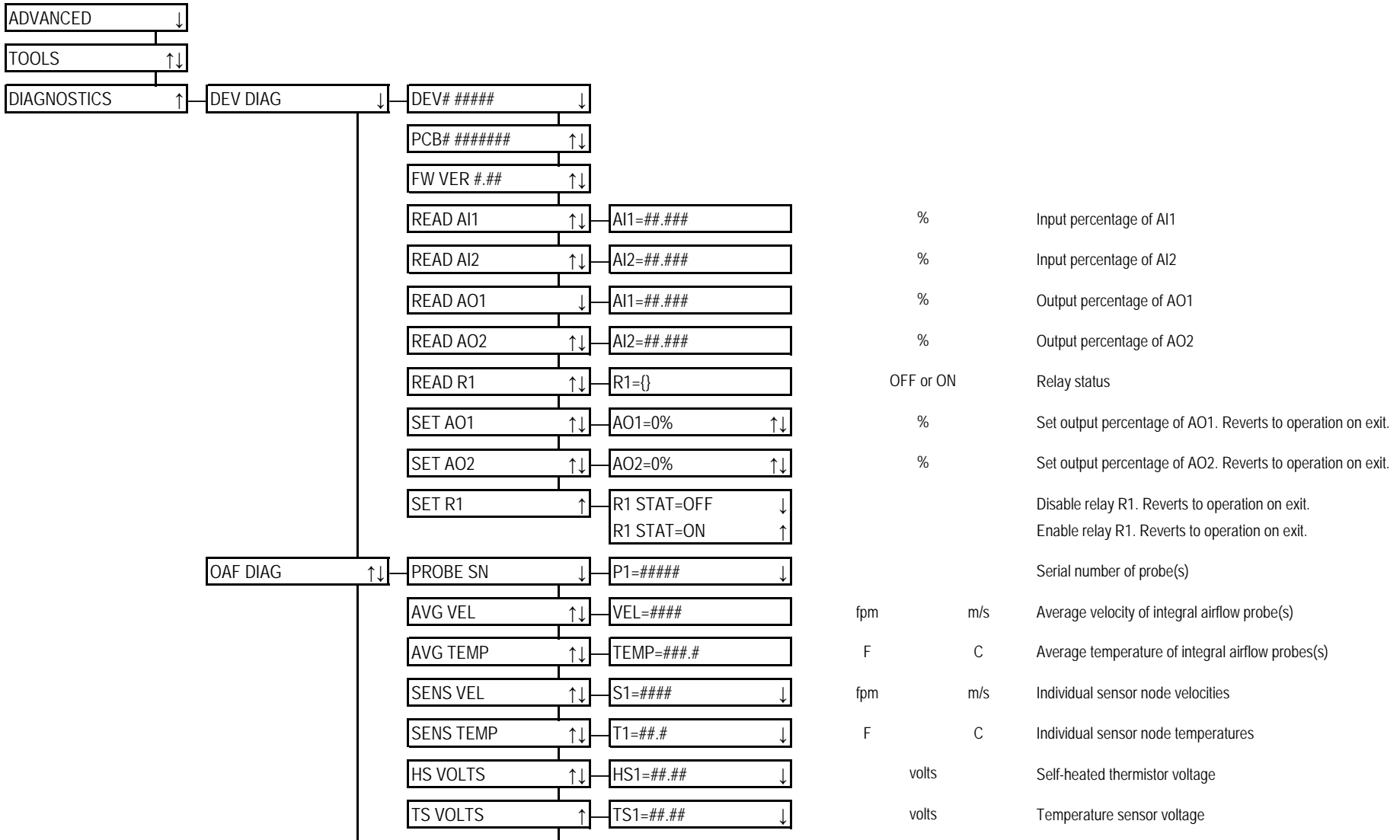
↑ or ↓ Modify/Scroll, Parameter Flashes
{ENT} Accept/Hold Last
{ESC} Cancel, move left

Range/Units (if applicable)

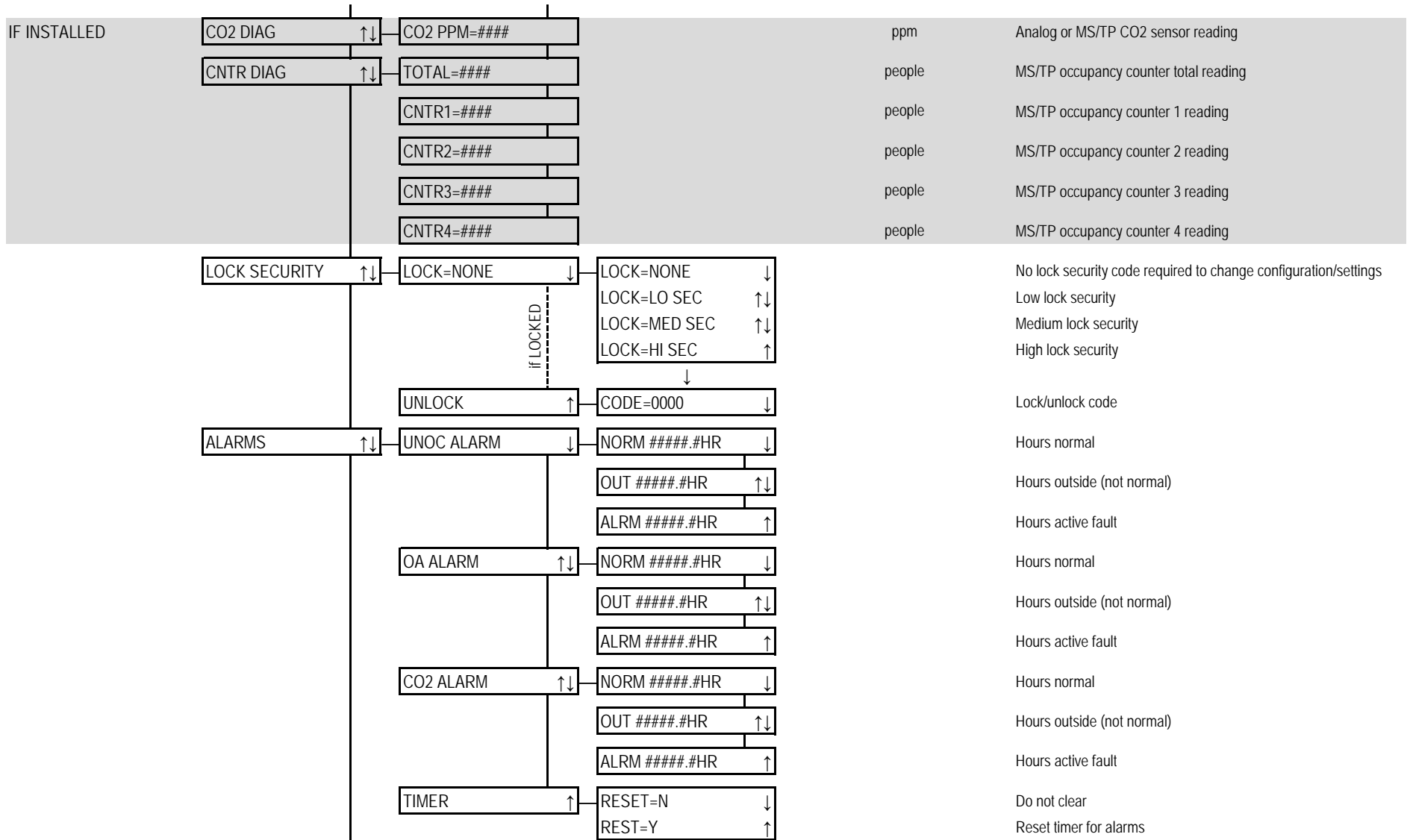
IP Min/Max

SI Min/Max

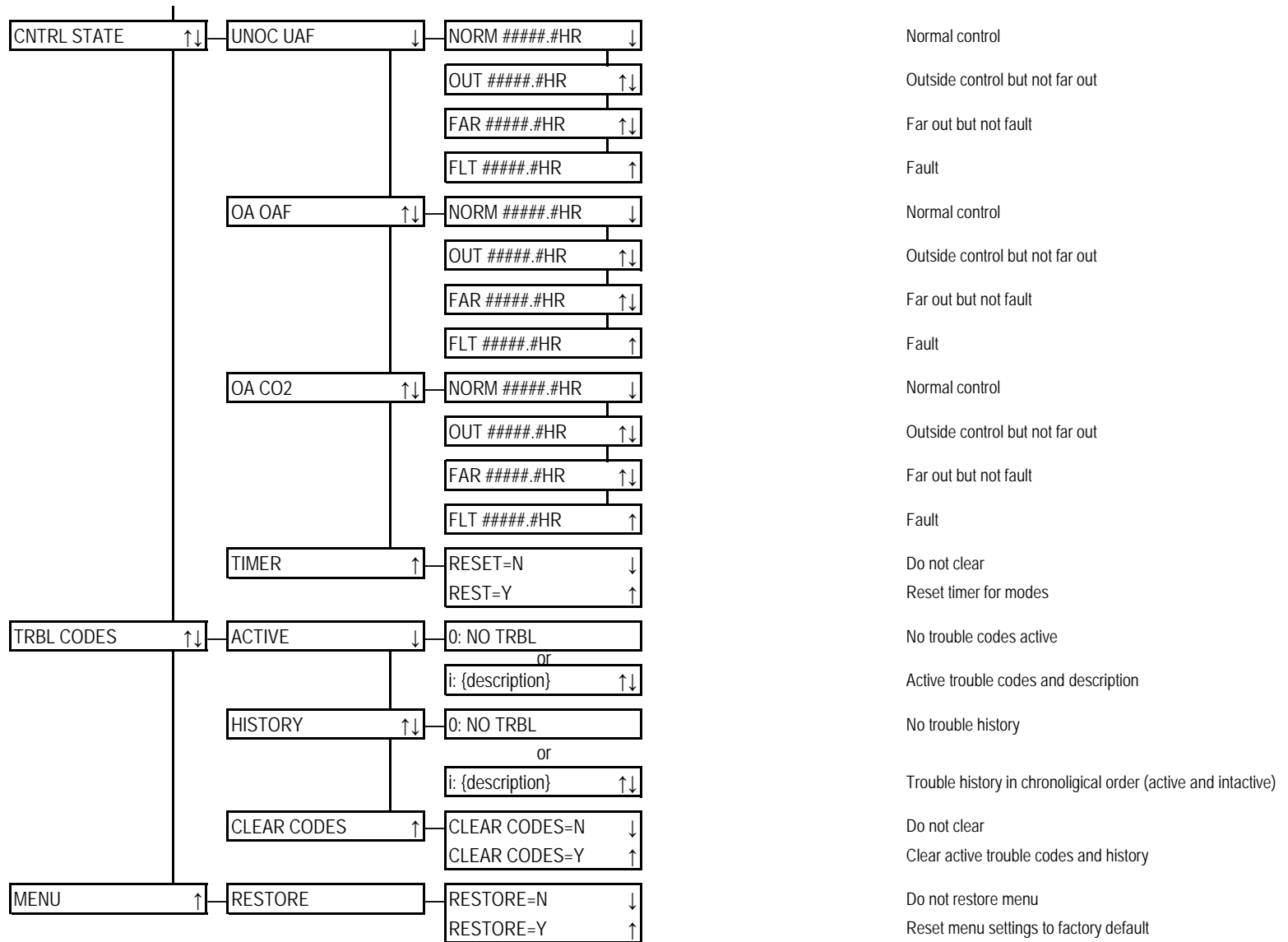
Notes/Comments



OAC CONTROLLER - DIAGNOSTICS



OAC CONTROLLER - DIAGNOSTICS



DISPLAY FUNCTION

STARTUP DISPLAY (after power up)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
	0	A	C	-	5	0	0	0									Display Series and Board Model
	F	I	R	M	W	R	E		#	#	.	#	#				Display Firmware Version
	M	M	-	D	D	-	Y	Y	T	T	:	T	T	?	M		Date and Time (3000S only)
	O	A	F		P	1								#	#	#	P1 Presence: YES, NO
	O	A	F		P	2								#	#	#	P1 Presence: YES, NO
	C	O	2		T	Y	P	E				#	#	#	#	#	CO2 Type: NONE, ANLG, MS/TP
	N	1		D	E	V	I	C	E	S				#	#	#	N1 DEVICES (N1 DEV): NONE, SENS, BAS
Visible if N1 DEV <> NONE	C	O	2		M	S	/	T	P					#	#	#	NONE, ERR or Last 4 digits of DI*
	C	N	T	R	1		M	S	/	T	P			#	#	#	NONE, ERR or Last 4 digits of DI*
	C	N	T	R	2		M	S	/	T	P			#	#	#	NONE, ERR or Last 4 digits of DI*
	C	N	T	R	3		M	S	/	T	P			#	#	#	NONE, ERR or Last 4 digits of DI*
	C	N	T	R	4		M	S	/	T	P			#	#	#	NONE, ERR or Last 4 digits of DI*
	R	1		A	S	G	N							#	#	#	R1 Assignment: ALRMS or MODE

* Notes:

NONE - Sensor not configured

ERR - Configured sensor not found when N1 DEVICES=BAS (Operate in PASS MODE if OAC = CO2 or OAF/CO2)

ERR - Configured sensor not found after discovery delay when N1 DEVICES=SENS (Operate in PASS MODE if OAC = CO2 or OAF/CO2)

Last 4 digits of DI - Configured sensor found

DISPLAY FUNCTION

SETPOINT DISPLAY (OAC=FLOW)

Press ↑ or ↓ arrow to enter setpoint display mode. Use ↑ or ↓ to change setpoint. Return to normal operating display after 15 seconds.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
S	E	T	P	N	T		#	#	#	#	C	F	M	↑	↓

Display Active Setpoint

NORMAL OPERATING DISPLAY (OAC=FLOW, CO2/OAF or COUNT)

↑ or ↓ arrows changes setpoint.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
#	#	#	#	C	F	M						X	X	X	X
#	#	#	#	C	F	M	+					X	X	X	X
#	#	#	#	C	F	M	-					X	X	X	X
#	#	#	#	C	F	M	+	+				X	X	X	X
#	#	#	#	C	F	M	-	-				X	X	X	X
#	#	#	#	C	F	M	+	+				X	X	X	X
#	#	#	#	C	F	M	-	-				X	X	X	X
#	#	#	#	C	F	M	??		T			X	X	X	X
#	#	#	#	C	F	M	??		U			X	X	X	X
#	#	#	#	C	F	M	??		M			X	X	X	X
#	#	#	#	C	F	M	??		C			X	X	X	X

Display Airflow (Control state=Normal) and Mode

Display Airflow + (Control state=Outside High) and Mode

Display Airflow - (Control state=Outside Low) and Mode

Display Airflow ++ (Control state=Far Out High) and Mode

Display Airflow -- (Control state=Far Out Low) and Mode

Display Airflow ++ flashes (Control state=Active Control Fault High) and Mode

Display Airflow -- flashes (Control state=Active Control Fault Low) and Mode

Display Airflow, {?? = control state}, TRBL Alarm Active and Mode

Display Airflow, {?? = control state}, UNOC Alarm Active and Mode

Display Airflow, {?? = control state}, MOA Alarm Active and Mode

Display Airflow, {?? = control state}, CO2 Alarm Active and Mode

Note: Multiple active alarms will cycle on display. Escape clears manual active alarms.

DISPLAY FUNCTION

SETPOINT DISPLAY (OAC=CO2)

Press ↑ or ↓ arrow to enter setpoint display mode. Use ↑ or ↓ to change setpoint. Return to normal operating display after 15 seconds.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
S	E	T	P	N	T		#	#	#	#	P	P	M	↑	↓

Display Active Setpoint

NORMAL OPERATING DISPLAY (OAC=CO2)

↑ or ↓ arrows changes setpoint.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
#	#	#	#	P	P	M						X	X	X	X
#	#	#	#	P	P	M	+					X	X	X	X
#	#	#	#	P	P	M	-					X	X	X	X
#	#	#	#	P	P	M	+	+				X	X	X	X
#	#	#	#	P	P	M	-	-				X	X	X	X
#	#	#	#	P	P	M	+	+				X	X	X	X
#	#	#	#	P	P	M	-	-				X	X	X	X
#	#	#	#	P	P	M	??		T			X	X	X	X
#	#	#	#	P	P	M	??		U			X	X	X	X
#	#	#	#	P	P	M	??		C			X	X	X	X

Display CO2 (Control state=Normal) and Mode

Display CO2 + (Control state=Outside High) and Mode

Display CO2 - (Control state=Outside Low) and Mode

Display CO2 ++ (Control state=Far Out High) and Mode

Display CO2 -- (Control state=Far Out Low) and Mode

Display CO2 ++ flashes (Control state=Active Control Fault High) and Mode

Display CO2 -- flashes (Control state=Active Control Fault Low) and Mode

Display CO2, {?? = control state}, TRBL Alarm Active and Mode

Display CO2, {?? = control state}, UNOC Alarm Active and Mode

Display CO2, {?? = control state}, CO2 Alarm Active and Mode

Note: Multiple active alarms will cycle on display. Escape clears manual active alarms.

DISPLAY FUNCTION

NORMAL OPERATING DISPLAY (OAC=FIXED)

OAC=FIXED: Setpoint changed in SETUP CONFIG (MIN POS).

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
#	#	#	#	C	F	M						X	X	X	X
#	#	#	#	C	F	M				T		X	X	X	X
#	#	#	#	C	F	M				M		X	X	X	X
#	#	#	#	C	F	M				C		X	X	X	X

Display airflow and Mode

Display Airflow, TRBL Alarm Active and Mode

Display Airflow, MOA Alarm Active and Mode

Display Airflow, CO2 Alarm Active and Mode

Note: Multiple active alarms will cycle on display. Escape clears manual active alarms.

DISPLAY FUNCTION

DETAIL DISPLAY

Press {ENT} to show itemized, {ESC} from itemized returns to normal or after 60 second timeout.
 Display will step through the following items. Some items are MOAC dependent.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		
M	O	D	E									X	X	X	X	Active Mode, OFF, UNOC, OCC	
O	A	C								X	X	X	X	X	X	OAC method	
M	M	-	D	D	-	Y	Y		T	T	:	T	T	?	M	Date and Time (3000S only)	
D	M	P	R									#	#	#	%	Current Damper Position	
S	E	T	P	N	T							#	#	#	#	%	Setpoint if OAC=FIXED
S	E	T	P	N	T					#	#	#	#	C	F	M	Setpoint if OAC=FLOW, CO2/OAF, or COUNT
O	A	F								#	#	#	#	C	F	M	Measured airflow
S	E	T	P	N	T					#	#	#	#	P	P	M	Setpoint if OAC=CO2
C	O	2								#	#	#	#	P	P	M	Display measured CO2 level (if CO installed)
P	O	P		E	S	T						#	#	#	#		Display calculated occupancy using CO2/OAF (if CO2 installed)
C	O	U	N	T	E	R						#	#	#	#		Display counter occupancy (if counter installed)