ZEC500/ZEC510 MAP Parameter Names, Definitions and Defaults

Menu - 1	Menu - 2	Paramter Name	Staged Heating	Incremental Heating	SCR Heating	Parameter Description	Adjustable/ Read Only	Range	Reynosa Factory Default Value
Home Page	Setup	Application Type	Staged	Incremental	SCR	Adjusts which application is current on the controller	Adjustable		
		Occupancy Polarity	•	•	•	Determines the polarity of the pressure switch used for occupancy detection	Adjustable	Open/Close	Open
		Occupancy Sensor Enable	•	•	•	Determines if a pressure switch is used to sense occupancy (air handler on) when the damper valve is closed.	Adjustable	False/True	FALSE
		Supply Flow Setpoint	•	•	•	Displays the flow setpoint being controlled (this will be based on the unit conditions (occupancy, temperature setpoint, morning warmup conditions, etc.)	Read only		
		Supply Flow	•	•	•	Shows the actual measured flow	Read Only		
		Supply Area	•	•	•	The supply inlet area used to calculate the supply flow.	Adjustable	Range: 0 - 8.0 sq. ft.	0.35sq ft
		Supply Airflow Pickup Gain	•	•	•	Contains the amplification provided by the pitot tube for Supply Flow.	Adjustable		2
		Damper Mode	•	•	•	Defines the direction of the damper rotation (Normal = CCW to close, Reverse = CW to close)	Adjustable	Normal/Reverse	Normal (CCW to close)
		Fan Control Type	•	•	•	Sets the type of Fan for the VAV Box.	Adjustable	No Fan/Parallel/Series	No Fan
		Box heating installed	•	•	•	Specifies if Box Heating is Installed	Adjustable	False/True	TRUE
		Supplemental heating installed	•	•	•	Specifies if Supplemental Heating is installed	Adjustable	False/True	TRUE
		Number of Heating Stages Installed	•			Sets the number of box heating stages.	Adjustable	Range: 0 - 3	3
		Heating Priority	•	•		Determines whether box or supplemental heat is turned on first	Adjustable		
		Box Heating Type	•	•	•	Dispalys the type of heat installed (for proportional SCR, this value is displayed but not used)	Read only	No Heat, 1 Stage Electric, 2 Stage Electric, Modulating Hot Water Valve, 3 Stage Electric	Modulating Hot Water Valve
		Box Heating Stroke Time		•		Sets the actuator stoke time for the incremental heating valve.	Adjustable	Range: 30 - 120 seconds	
		Box Heating Polarity		•		Reverses the direction of the incremental heating valve. You can either switch this or reverse the wiring to the actuator.	Adjustable	Normal/Reverse	
		Supplemental Heating Stroke Time		•	•	Sets the actuator stoke time for the incremental supplemental heating valve.	Adjustable	Range: 30 - 120 seconds	
		Supplemental Heating Polarity		•	•	Reverses the direction of the incremental supplemental heating valve. You can either switch this or reverse the wiring to the actuator.	Adjustable	Normal/Reverse	
		Heating Priority			•	Determines whether box or supplemental heat is turned on first	Adjustable		
		BACnet ID	•	•	•	Sets the BACnet ID for the BACnet MSTP system	Read only	0-4194302	1
		Active Baud Rate	•	•	•	Sets the baud rate to be used for network communication.	Adjustable	Auto/1200/9600/19200/38400/76800	Auto
		Zone Temperature Offset	•	•	•	Used to calibrate the zone temperature sensor	Adjustable	Range: -5 to 5 Deg F	
		Supply Air Temperature Offset	•	•	•	Used to calibrate the supply air temperature sensor	Adjustable	Range: -5 to 5 Deg F	
		Discharge Air Temperature Offset	•	•	•	Used to calibrate the discharge air temperature sensor	Adjustable	Range: -5 to 5 Deg F	
		Actuator Stroke Time	•	•	•	Sets the damper actuator stroke time. For 90 degree round dampers, the actuator is a 60 second actuator. For 45 degree rectangular dampers, this value is set to 15 seconds for accurate damper positioning.	Adjustable	Range: 30 - 120 seconds	
		PID Tuning Reset	•	•	•	Resets the PRAC+ tuning parameters of the PID controllers to the factory defaults.	Adjustable		
		Auto Tune Enable	•	•	•	Enables the PRAC+ auto tuning algorithm to adjust PID tuning parameters for optimal control performance.	Adjustable		
		Autocalibration Command	•	•	•	This feature drives the VAV box damper shut and once shut offsets the differential pressure sensor so it reads zero.	Adjustable	False/True	FALSE
		Power Fail Restart Time	•	•	•	Specifies that, when the power fail restart logic is enabled, the start is delayed by the time specified in this value.	Adjustable		300.0seconds
		Warmer/Cooler Adjust Enable	•	•	•	Will allow the warmer/cooler adjustment to offset the current setpoint.	Adjustable	False/True	
		Dual Max Enable		•		Enables the Dual Max control sequence	Adjustable	Enable/Disable	
		Heating Limit Enable	•	•	•	Enables the evaluation of supply air temperature against Heating Supply Air Limit. If SAT > Heating Supply Air Limit, heat outputs will be disabled. If SAT < Heating Supply Air Limit, heat outputs will be enabled when determined by the PID loop.	Adjustable		
		Heating Supply Air Limit	•	•	•	Temperature threshold for comparison to supply air temperature sensor to determine if heat outputs need to be disabled.	Adjustable		
		Standalone Mode	•	•	•	Allows the unit to operate in standalone mode and determine occupancy	Adjustable	Off/On	On
		Occupancy Determination Flow Setpoint	•	•	•	This is the flow setpoint that will determine occupancy, above this setpoint, the system is occupied	Adjustable	Range: 0 - 10000 cfm	100 cfm
		Standalone Min Occupied Time	•	•	•	If occupancy is detected in standalone mode, this value is the minimum amount of time the box will stay occupied before switching back to unoccupied.	Adjustable	Range: 0 - 360 minutes	15 minutes
	Setpoints	Occupied Cooling Setpoint	•	•	•	When occupied the thermostat will control cooling to this level. Needs to be set above occupied heating setpoint.	Adjustable	Range: 46 - 99 deg F	72.0°F
		Standby Cooling Setpoint	•	•	•	Specifies the value for the standby cooling setpoint (standby only applies to networked units).	Adjustable	Range: 46 - 99 deg F	77.0°F
		Unoccupied Cooling Setpoint	•	•	•	When unoccupied the thermostat will control cooling to this level.	Adjustable	Range: 46 - 99 deg F	85.0°F
		Occupied Heating Setpoint	•	•	•	When occupied the thermostat will control heating to this level. Needs to be set below occupied cooling setpoint.	Adjustable	Range: 45 - 98 deg F	68.0°F
		Standby Heating Setpoint	•	•	•	Specifies the value for the standby heating setpoint (standby only applies to networked units).	Adjustable	Range: 45 - 98 deg F	66.0°F
		Unoccupied Heating Setpoint	•	•	•	When unoccupied the thermostat will control heating to this level. Needs to be set below unoccupied cooling setpoint.	Adjustable	Range: 45 - 98 deg F	55.0°F
		Warmup Differential	•	•	•	Contains the minimum differential between the supply air and zone temperatures before the system issues a warmup status.	Adjustable		10.0°F
		Effective Cooling Setpoint	•	•	•	Effective Cooling Setpoint	Read only		72.0°F
		Effective Heating Setpoint	•	•	•	Effective Heating Setpoint	Read only		68.0°F
		Discharge Air Temperature Setpoint		•		When the space temperature drops below the heating setpoint the zone controller will start from the supply air temperature setpoint and reset to the supply air setpoint heating Max. Once the Heating Max setpoint is reached the supply air flow will be reset from heating minimum flow to cooling maximum flow.	Adjustable	Range: 45 - 130 deg F	55.0°F
		Discharge Air Setpoint Heating Max		•		When the space temperature drops below the heating setpoint the zone controller will start from the supply air temperature setpoint and reset to the supply air setpoint heating Max. Once the Heating Max setpoint is reached the supply air flow will be reset from heating minimum flow to cooling maximum flow.	Adjustable	Range: 45 - 140 deg F	85.0°F
		Warmer/Cooler Adjust Range	•	•	•	This is the range that the warmer cooler adjustment on the sensor can affect the setpoint. Setting it to 0 will mean the user has no adjustment at the sensor.	Adjustable	Range: 0 - 5 deg F	3 °F
	Commissioning	Cooling Maximum Flow	•	•	•	Sets the maximum supply air flow of the VAV box when cooling.	Adjustable	Range: 0 - 10000 cfm	1,000.0cfm
		Occupied Cooling Min Flow	•	•	•	Sets the minimum supply air flow of the VAV box when cooling.	Adjustable	Range: 0 - 10000 cfm	200.0cfm
		Unoccupied Cooling Min Flow	•	•	•	Sets the minimum supply air flow of the VAV box when unoccupied cooling and in the cooling mode.	Adjustable	Range: 0 - 10000 cfm	0.0cfm
		Occupied Heating Min Flow	•	•	•	Sets the minimum supply air flow of the VAV box when heating. Note when the zone is heating the supply air flow is constant. Thus no maximum heating air flow. This value must exceed Staged Device Min Flow and satisfy 70 CFM/kW to allow electric heat to energize.	Adjustable	Range: 0 - 10000 cfm	200.0cfm
		Unoccupied Heating Min Flow	•	•	•	Sets the minimum supply air flow of the VAV box when unoccupied heating and in the heating mode.	Adjustable	Range: 0 - 10000 cfm	0.0cfm
		Warmup Min Flow	•	•	•	Sets the minimum supply air flow of the VAV box when in warmup mode	Adjustable		200.0cfm
		Staged Device Min Flow	•		•	Displays the minimum required flow that must be reached (without the fan being commanded on) before the system issues a True.	Adjustable		200.0cfm
Inputs	Inputs	Discharge Air Temperature	•	•	•	Displays discharge air temperature (if included)	Read only		
		Discharge Air Velocity Pressure	•	•	•	Displays differential pressure measured across airflow probe.	Read only		
		Occupancy Status	•	•	•	Displays state of occupancy input (pressure switch)	Read only		
		Supply Air Temperature	•	•	•	Displays supply air temperature (if included)	Read only		
		Zone Temperature	•	•	•	Dispalys temperature measured at thermostat	Read only		
Outputs	Outputs	Heating Stage 1 Command	•			Displays status of stage 1 heat	Read only		

Largo Factory Configuration Defaults

Paramter Name	Unit of measure	SE-ZEC500 - Standalone			SE-ZEC510 - Standalone enabled (BACnet capable)			SE-ZEC510 - Verasys Communicating		
		Single Duct	Series Flow	Parallel Flow	Single Duct	Series Flow	Parallel Flow	Single Duct	Series Flow	Parallel Flow
Application Type	-	Configured per unit's heat type	Configured per unit's heat type	Configured per unit's heat type	Configured per unit's heat type	Configured per unit's heat type	Configured per unit's heat type	Configured per unit's heat type	Configured per unit's heat type	Configured per unit's heat type
Occupancy Polarity	-	n/a	Close	Close	n/a	Close	Close	n/a	n/a	n/a
Occupancy Sensor Enable	-	FALSE	TRUE	TRUE	FALSE	TRUE	TRUE	FALSE	FALSE	FALSE
Supply Flow Setpoint	cfm	-	-	-	-	-	-	-	-	-
Supply Flow	cfm	-	-	-	-	-	-	-	-	-
Supply Area	-	Configured per unit's valve size	Configured per unit's valve size	Configured per unit's valve size	Configured per unit's valve size	Configured per unit's valve size	Configured per unit's valve size	Configured per unit's valve size	Configured per unit's valve size	Configured per unit's valve size
Supply Airflow Pickup Gain	-	Configured per unit's valve size	Configured per unit's valve size	Configured per unit's valve size	Configured per unit's valve size	Configured per unit's valve size	Configured per unit's valve size	Configured per unit's valve size	Configured per unit's valve size	Configured per unit's valve size
Damper Mode	-	Reverse	Reverse	Reverse	Reverse	Reverse	Reverse	Reverse	Reverse	Reverse
Fan Control Type	-	No Fan	Series	Parallel	No Fan	Series	Parallel	No Fan	Series	Parallel
Box heating installed	-	Configured per unit's heat type	TRUE	TRUE	Configured per unit's heat type	TRUE	TRUE	Configured per unit's heat type	TRUE	TRUE
Supplemental heating installed	-	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
Number of Heating Stages Installed	-	Configured per unit's heat type (0 for cooling only)	Configured per unit's heat type (0 for cooling only)	Configured per unit's heat type (0 for cooling only)	Configured per unit's heat type (0 for cooling only)	Configured per unit's heat type (0 for cooling only)	Configured per unit's heat type (0 for cooling only)	Configured per unit's heat type (0 for cooling only)	Configured per unit's heat type (0 for cooling only)	Configured per unit's heat type (0 for cooling only)
Heating Priority	-	Box	Box	Box	Box	Box	Box	Box	Box	Box
Box Heating Type	-	Configured per unit's heat type	Configured per unit's heat type	Configured per unit's heat type	Configured per unit's heat type	Configured per unit's heat type	Configured per unit's heat type	Configured per unit's heat type	Configured per unit's heat type	Configured per unit's heat type
Box Heating Stroke Time	seconds	60 for Incremental HW n/a - all other types	60 for Incremental HW n/a - all other types	60 for Incremental HW n/a - all other types	60 for Incremental HW n/a - all other types	60 for Incremental HW n/a - all other types	60 for Incremental HW n/a - all other types	60 for Incremental HW n/a - all other types	60 for Incremental HW n/a - all other types	60 for Incremental HW n/a - all other types
Box Heating Polarity	-	Normal - Incremental n/a - all other types	Normal - Incremental n/a - all other types	Normal - Incremental n/a - all other types	Normal - Incremental n/a - all other types	Normal - Incremental n/a - all other types	Normal - Incremental n/a - all other types	Normal - Incremental n/a - all other types	Normal - Incremental n/a - all other types	Normal - Incremental n/a - all other types
Supplemental Heating Stroke Time	-	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Supplemental Heating Polarity	-	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Heating Priority	-	Box	Box	Box	Box	Box	Box	Box	Box	Box
BACnet ID	-	-	-	-	10000	10000	10000	10000	10000	10000
Active Baud Rate	-	-	-	-	Auto	Auto	Auto	Auto	Auto	Auto
Zone Temperature Offset	°F	0	0	0	0	0	0	0	0	0
Supply Air Temperature Offset	°F	0	0	0	0	0	0	0	0	0
Discharge Air Temperature Offset	°F	0	0	0	0	0	0	0	0	0
Actuator Stroke Time	seconds	60 for 90° round dampers 15 for 45° rectangular dampers	60 for 90° round dampers 15 for 45° rectangular dampers	60 for 90° round dampers 15 for 45° rectangular dampers	60 for 90° round dampers 15 for 45° rectangular dampers	60 for 90° round dampers 15 for 45° rectangular dampers	60 for 90° round dampers 15 for 45° rectangular dampers	60 for 90° round dampers 15 for 45° rectangular dampers	60 for 90° round dampers 15 for 45° rectangular dampers	60 for 90° round dampers 15 for 45° rectangular dampers
PID Tuning Reset	-	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
Auto Tune Enable	-	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
Autocalibration Command	-	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
Power Fail Restart Time	seconds	180	180	180	180	180	180	180	180	180
Warmer/Cooler Adjust Enable	-	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
Dual Max Enable	-	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
Heating Limit Enable	-	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
Heating Supply Air Limit	°F	75	75	75	75	75	75	75	75	75
Standalone Mode	-	On	On	On	On	On	On	Off	Off	Off
Occupancy Determination Flow Setpoint	cfm	10% below min measurable airflow for given valve size	0	0	10% below min measurable airflow for given valve size	10000	10000	10% below min measurable airflow for given valve size	10000	10000
Standalone Min Occupied Time	minutes	15	15	15	15	15	15	15	15	15
Occupied Cooling Setpoint	°F	72	72	72	72	72	72	72	72	72
Standby Cooling Setpoint	°F	77	77	77	77	77	77	77	77	77
Unoccupied Cooling Setpoint	°F	85	85	85	85	85	85	85	85	85
Occupied Heating Setpoint	°F	68	68	68	68	68	68	68	68	68
Standby Heating Setpoint	°F	66	66	66	66	66	66	66	66	66
Unoccupied Heating Setpoint	°F	55	55	55	55	55	55	55	55	55
Warmup Differential	°F	10	10	10	10	10	10	10	10	10
Effective Cooling Setpoint	°F	-	-	-	-	-	-	-	-	-
Effective Heating Setpoint	°F	-	-	-	-	-	-	-	-	-
Discharge Air Temperature Setpoint	°F	55	55	55	55	55	55	55	55	55
Discharge Air Setpoint Heating Max	°F	85	85	85	85	85	85	85	85	85
Warmer/Cooler Adjust Range	°F	3	3	3	3	3	3	3	3	3
Cooling Maximum Flow	cfm	Max Primary CFM (WebSelect)	Max Primary CFM (WebSelect)	Max Primary CFM (WebSelect)	Max Primary CFM (WebSelect)	Max Primary CFM (WebSelect)	Max Primary CFM (WebSelect)	Max Primary CFM (WebSelect)	Max Primary CFM (WebSelect)	Max Primary CFM (WebSelect)
Occupied Cooling Min Flow	cfm	Min Primary CFM (WebSelect)	Min Primary CFM (WebSelect)	Min Primary CFM (WebSelect)	Min Primary CFM (WebSelect)	Min Primary CFM (WebSelect)	Min Primary CFM (WebSelect)	Min Primary CFM (WebSelect)	Min Primary CFM (WebSelect)	Min Primary CFM (WebSelect)
Unoccupied Cooling Min Flow	cfm	Occupancy Determination Flow Setpoint	0	0	Occupancy Determination Flow Setpoint	0	0	50	0	0
Occupied Heating Min Flow	cfm	Heat CFM (WebSelect) * Min Primary CFM (WebSelect) for Cooling Only Units	PAFH (WebSelect) * Min Primary CFM (WebSelect) for Cooling Only Units	PAFH (WebSelect) * Min Primary CFM (WebSelect) for Cooling Only Units	Heat CFM (WebSelect) * Min Primary CFM (WebSelect) for Cooling Only Units	PAFH (WebSelect) * Min Primary CFM (WebSelect) for Cooling Only Units	PAFH (WebSelect) * Min Primary CFM (WebSelect) for Cooling Only Units	Heat CFM (WebSelect) * Min Primary CFM (WebSelect) for Cooling Only Units	PAFH (WebSelect) * Min Primary CFM (WebSelect) for Cooling Only Units	PAFH (WebSelect) * Min Primary CFM (WebSelect) for Cooling Only Units
Unoccupied Heating Min Flow	cfm	Occupancy Determination Flow Setpoint	0	0	Occupancy Determination Flow Setpoint	0	0	50	0	0
Warmup Min Flow	cfm	Min Primary CFM (WebSelect)	Min Primary CFM (WebSelect)	Min Primary CFM (WebSelect)	Min Primary CFM (WebSelect)	Min Primary CFM (WebSelect)	Min Primary CFM (WebSelect)	Min Primary CFM (WebSelect)	Min Primary CFM (WebSelect)	Min Primary CFM (WebSelect)
Staged Device Min Flow	cfm	70 * EH kW	0	0	70 * EH kW	0	0	70 * EH kW	0	0
Discharge Air Temperature	°F	-	-	-	-	-	-	-	-	-
Discharge Air Velocity Pressure	in w.g.	-	-	-	-	-	-	-	-	-
Occupancy Status	-	-	-	-	-	-	-	-	-	-
Supply Air Temperature	°F	-	-	-	-	-	-	-	-	-
Zone Temperature	°F	-	-	-	-	-	-	-	-	-
Heating Stage 1 Command	-	-	-	-	-	-	-	-	-	-

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		Heating Stage 2 Command	•			Displays status of stage 2 heat	Read only			-	-	-	-	-	-	-	-	-	-	-	-
		Heating Stage 3 Command	•			Displays status of stage 3 heat	Read only			-	-	-	-	-	-	-	-	-	-	-	-
		Supplemental Heating Stage 1 Command	•			Displays status of stage 1 supplemental heat	Read only			-	-	-	-	-	-	-	-	-	-	-	-
		Heating Command			•	Displays the heat command (on/off) of the heat output to the proportional actuator or electric heat	Read only			-	-	-	-	-	-	-	-	-	-	-	-
		Heating Output		•	•	Displays the heat command (0-100%) of the heat output to modulating actuator or proportional electric heat	Read only			%	-	-	-	-	-	-	-	-	-	-	-
		Supplemental Heating Output		•	•	Displays the supplemental heat command (0-100%) of the heat output to modulating actuator or proportional electric heat	Read only			%	-	-	-	-	-	-	-	-	-	-	-
		Supply Air Damper Output	•	•	•	Displays damper position (0% = full closed, 100% = full open)	Read only			%	-	-	-	-	-	-	-	-	-	-	-
		Supply Fan Command	•	•	•	Displays status of fan	Read only			-	-	-	-	-	-	-	-	-	-	-	-
Parameters	**-**	***Factory Use Only***								-	-	-	-	-	-	-	-	-	-	-	-

Legend
Helpful for making field configuration adjustments
Helpful for observing controller behavior

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