

AegisTEC+ Greenhouse Controller

Configuration Setup

ID	Description	Min - Max	Your Setting
P0	Vent channels each operate a 24 volt DC motor and use two output terminals per channel in order to run the motors in both directions. Low voltage rotary gear motors for curtain vents and low voltage linear actuators to lift hinged vents are controlled as vent channels. Louvers are controlled as fans, not vents, unless they are operated by a low voltage linear actuator.	0-5	
P1	Set for light deprivation curtains. Each light deprivation channel operates a 24-volt DC motor and uses two output terminals in order to run the motors in both directions.	0-4	
P2	Set for the total number of cooling devices. Cooling devices include fans, louvers (except for louvers operated by a low voltage DC actuator, which are configured as vents), and other cooling accessories such as evaporative curtains.	0-6	
P3	The controller is set up to allow separate control of up to two heaters. Heaters are normally controlled through a thermostat line connected to dry relay contacts. Outputs 9 and 10 are provided as dry contacts for heaters. Additional dry contacts can be configured by separating the voltage bus as described in the manual.	0-10	
P4	There are ten output terminals which correspond to the ten button selections on the screen. The vents will use a consecutive string of terminals, and this instructs which terminal to use as the first in the string. It is typically set to terminal #1, although it can be set to others. Note that it must start on an odd numbered terminal.	1-9	
P5	Light deprivation uses curtain motors and is handled the same way as vents. See P4.	1-9	
P6	Cooling devices include fans, louvers (except for louvers operated by a low voltage DC actuator, which are configured as vents), and other cooling accessories such as evaporative curtains. The cooling outputs will be grouped in a consecutive string of output terminals, and this establishes the starting terminal for the string.	1-10	
P7	Heating outputs are configured together in a string of output terminals, and this establishes the starting terminal for the string. Note that heaters are normally controlled through a thermostat line connected to dry contacts. Contacts 9 and 10 are set up as dry contacts, so for one heater select 9 or 10, and for 2 heaters select 9.	1-10	
P8	This sets the number of output terminals used to control grow lights.	0-2	
P9	Grow light outputs are configured together in a string of output terminals, and this establishes the starting terminal for the string.	0-2	
P10	This sets the output terminal that will control a dehumidification device. Set to 0 if no device is used.	0-15	
P11	A second temperature sensor can be connected to control a second greenhouse zone.	-	
P12	A humidity sensor can be connected to monitor humidity and allow control of various functions in response. Set to 1 if a humidity sensor is connected.	-	
P20	The controller factory default is set to Fahrenheit. Set this to 1 if Celsius is preferred.	-	
P21	This establishes which curtains respond to the second temperature sensor if two are used. The designated curtain and all subsequently numbered curtains will respond to the second temperature sensor.	0-8	
P22	This establishes which heaters respond to the second temperature sensor if two are used. The designated heater and all subsequently numbered heaters will respond to the second temperature sensor.	0-8	
P23	This establishes which fans respond to the second temperature sensor if two are used. The designated fan and all subsequently numbered fans will respond to the second temperature sensor.	0-8	
P25	DIF stands for differential and is a period of time during the day when different settings apply, such as increasing the temperature from 4-6 PM. Up to two periods per day can be established.	0-2	

ID	Description	Min - Max	Your Setting	
P27	This sets the time period over which wind speed is averaged to avoid initiating actions due to short gusts. This varies depending on local climate and greenhouse characteristics. 1-3 minutes is a good starting point that can be adjusted with observation.	1-5		
P28	This sets the number of rotations needed for the wind sensor to calculate the wind speed. Set to 25 for miles per hour or 17 for kilometers per hour.	-		
P29	This tells the controller if a wind sensor is connected.	-		
P30	Use this screen ONLY if you suspect a problem with the configuration and want to start over. This will erase all your settings and revert to the factory settings when the unit was new. Set to 0 and reboot to initiate the reset.	-		
P31	This enables a high temperature setting to turn the fans off. This is to avoid running fans when the temperature is beyond their ability to provide cooling.	-		
P32 - P37	This determines whether the specific fan (1-6) should turn off if a certain input is on. Set to 0 if you do not want the fan to turn off for any input. 1 = off if input #1 is on 2 = off if input #2 is on.	0-2	P32	
			P33	
			P34	
			P35	
			P36	
			P37	
P38	This sets how long the curtains shut for rain.	-		
P39 - P42	Choose which rain sensor input number the specific curtain (1-4) is controlled by.	0-3	P39	
			P40	
			P41	
			P42	
P43	In addition to the humidity output terminal, one vent can be set to respond to humidity. Select the vent that should respond.	0-P0		
P44	This is the length of time in minutes that the light deprivation curtain motor needs to run to open and close the curtain.	1.0-20.0		
P45 - P48	In many cases, if a vent is open, it will interfere with the light deprivation curtain. This setting will ensure that the specific vent (1-4) closes to allow the deprivation curtain to move properly.	-	P45	
			P46	
			P47	
			P48	

Curtain Settings

ID	Description	Min - Max	Default	Your Setting	
P49 - P53	When the greenhouse temperature reaches the setting entered here, the specific vent (1-5) will open. The closing temperature is related to the opening temperature by the ventilation temperature gap entered in P74.	0°-100°	75°	P49	
				P50	
				P51	
				P52	
				P53	
P54 - P58	This is the setpoint temperature for the specific vent (1-5) during the differential time period in P150 and P151.	0°-100°	65°	P54	
				P55	
				P56	
				P57	
				P58	
P59 - P63	This is the setpoint temperature for the specific vent (1-5) during the differential time period in P154 and P155.	0°-100°	80°	P59	
				P60	
				P61	
				P62	
				P63	

ID	Description	Min - Max	Default	Your Setting	
P64 - P68	The specific vent (1-5) will open for the number of seconds entered here, stop, and wait for the number of minutes entered in the vent's idle time. At that point, if the desired temperature has been reached, the vent will remain in its position. If it has not been reached, the vent will open further for the same number of seconds. It will repeat this cycle until the desired temperature is reached or it is fully opened. The same cycle will be repeated when closing.	2-100	15	P64	
				P65	
				P66	
				P67	
				P68	
P69 - P73	This is how long the specific vent (1-5) will wait in minutes as described in P64-P68.	0.2-10.0	3.0	P69	
				P70	
				P71	
				P72	
				P73	
P74	This is the difference in between the temperature that causes the vent to open and the temperature that causes it to close. Setting this too low causes the vents to open and close unnecessarily. 5° is a good starting point. It can be adjusted after observing the greenhouse operation.	0.2°-12°	3.0°		
P80	This sets the humidity at which the curtain assigned to the humidity sensor will open to dry things.	0-100	95		
P81	This is the number of seconds the curtain will open for the humidity event.	0-100	10		
P82	The humidity event will be ignored if the temperature is below this setpoint.	0°-100°	32°		
P83 - P86	Depending on greenhouse construction and vent installation, there could be interference if vents close in the wrong order. This step assumes that the system is equipped with a rain and/or wind speed sensor. Select which other vent should close before this specific vent (1-4).	0-P0	0	P83	
				P84	
				P85	
				P86	
P87 - P90	When closing for rain or wind, the vents will not close in stages in the way that they open and close for temperature. This setting establishes how far you want the vent to close by specifying how long it will run. It will run for this amount of time, stop, and remain in that position until it reopens. This assumes the connection of a rain or wind speed sensor.	1-254	100	P87	
				P88	
				P89	
				P90	
P91	Select which vents will close from high wind speeds. The vent with the number chosen, as well as those with all lower numbers, will close from high wind speeds.	0-4	0		
P92	Set this to the wind speed that should cause vent closure. There is a separate setting for the wind speed that allows the vents to reopen (P93). This assumes the connection of an anemometer.	0-120	15		
P93	Set this to the speed to which the wind must reduce for the vents to reopen. The difference between the close and open speeds should be great enough to avoid unnecessary cycling of the vents. This varies according to greenhouse characteristics and local climate.	0-99	10		

Fan Settings

ID	Description	Min – Max	Default	Your Setting	
P101 - P106	This sets the temperature at which the specific fan (1-6) will turn on. The shut off temperature is determined by P120. If a differential time is set, this screen also displays the settings during the differential period.	0°-100°	70°	P101	
				P102	
				P103	
				P104	
				P105	
				P106	
P107 - P112	This sets the specific fan's (1-6) start temperature during the first differential time period. The shut off temperature is determined by P120. This screen also displays the temperatures that are set for the normal daily setting and the second time differential time period if there is one.	0°-100°	60°	P107	
				P108	
				P109	
				P110	
				P111	
				P112	
P114 - P119	This sets the specific fan's (1-6) start temperature during the second differential time period. The shut off temperature is determined by P120. This screen also displays the temperatures that are set for the normal daily setting and the first time differential time period.	0°-100°	80°	P114	
				P115	
				P116	
				P117	
				P118	
				P119	
P120	This sets the difference between the temperature that the fans turn on and the temperature at which they turn off. If this is set too low, the fans will cycle on and off unnecessarily. 6° is a good starting point. The best setting varies based on greenhouse characteristics and local climate and can be adjusted based on observation and experience.	0°-100°	6.5°		
P121	If the wind sensor is connected, use this to set the wind speed at which the fans will stop.	-	-		
P122	This sets how much the wind speed must decrease for the fans to start again.	-	-		
P124	Fan #1 can be set to run to reduce humidity. Set this to the humidity level that causes the fan to turn on. This assumes the connection of a humidity sensor. Set to 101 to deactivate.	0-101	99		
P125	This sets how much the humidity must decrease for the fan to turn off. 5% is a good starting point which can be adjusted based on observation. This assumes the connection of a humidity sensor. Set to 101 to disable humidity function.	0-101	5		
P126	Set this to the temperature below which there is no need for the fan to reduce the humidity. This assumes the connection of a humidity sensor.	0°-100°	32°		
P130 - P135	This setting helps to coordinate between fans and vents. If vents are set to a higher temperature than the specific fan (1-6), and there is no need for fans to run after the vents open, this setting can be used and should be set near the vent opening temperature.	0°-100°	0	P130	
				P131	
				P132	
				P133	
				P134	
				P135	

Dehumidification Settings

ID	Description	Min – Max	Default	Your Setting
P147	This sets the humidity level for the dehumidifier output. This is a separate function from the fan humidity level. Set to 101 to deactivate.	0-101	60	
P148	This sets the difference in humidity between when the dehumidifier will turn on and when it will turn off. Setting this too low will cause the dehumidifier to cycle unnecessarily. 6% is a good starting point that can be adjusted after observing operation.	0-101	4	

Time Differential Settings

ID	Description	Your Setting
P150	This sets the time at which the first time differential begins. Note that the 24 hour time format is used, i.e. 3:00 PM = 15:00. Greenhouse settings will switch to those specified for the DIF1 time period.	
P151	This is the time that ends the first differential time period. Settings will revert to normal daily settings.	
P152	This is DIF1's second start time.	
P153	This is DIF1's second end time.	
P154	This sets the time at which the second time differential begins. Note that the 24 hour time format is used. Greenhouse settings will switch to those specified for the DIF2 time period.	
P155	This is the time that ends the second differential time period. Settings will revert to normal.	
P156	This is DIF2's second start time.	
P157	This is DIF2's second end time.	

Light Settings

These parameters control the light deprivation and some grow light settings. The light dep logic allows you to close shades and vents when dep is activated. Afterward, the vents will wait two minutes in the reopen sequence.

ID	Description	Your Setting
P158	This sets the time of day for the light deprivation curtains to close, darkening the greenhouse.	
P159	This sets a time to open the light deprivation curtains, allowing light back into the greenhouse.	
P160	This sets a second time for the light deprivation curtains to close, darkening the greenhouse.	

P161	This sets a second time to for the light deprivation curtains to open, allowing light into the greenhouse.	
P162	This sets the time of day for the grow lights to turn on.	
P163	This sets the time of day for the grow lights to turn off.	
P164	This sets a second time of day for the grow lights to turn on.	
P165	This sets a second time of day for the grow lights to turn off.	

Heater Settings

These parameters control the starting temperature for heaters. The heaters can also be controlled by the DIF function.

ID	Description	Min - Max	Default	Your Setting
P169 - P178	This sets the temperature for the specific heater (1-10) to turn on. It will turn off at the temperature specified in P199.	0°-100°	60°	P169
				P170
				P171
				P172
				P173
				P174
				P175
				P176
				P177
P179 - P188	This sets the specific fan's (1-6) start temperature during the first differential time period. The shut off temperature is determined by P120. This screen also displays the temperatures that are set for the normal daily setting and the second time differential time period if there is one.	0°-100°	50°	P178
				P179
				P180
				P181
				P182
				P183
				P184
				P185
				P186
P187				
P189 - P198	This sets the temperature for the specific heater (1-10) to turn on during the second time differential period. It will turn off at the temperature specified in P199. The primary and first differential time period settings are also displayed.	0°-100°	65°	P188
				P189
				P190
				P191
				P192
				P193
				P194
				P195
P196				
P199	This sets the gap between the temperature that the heaters turn on and the temperature that they turn off. Setting this too low will cause the heaters to cycle unnecessarily. 4-5 degrees is a good starting point that can be adjusted after observation.	0°-10.0°	3.0°	P197
				P198

Miscellaneous Settings

These parameters control various extra settings, such as parameter shortcuts, LCD settings, and additional grow light settings.

ID	Description	Min – Max	Default	Your Setting
P200 - P209	This provides a shortcut to a frequently used parameter in the system settings. When on the main screen, pressing the button (of the ten available functions) corresponding to this output and then pressing the top button of the screen that comes up will open system settings to the parameter number specified here. This avoids scrolling through the system settings menu for the parameter that is to be adjusted.	49-200	50-59	P200
				P201
				P202
				P203
				P204
				P205
				P206
				P207
				P208
P209				
P220	Adjust this to the desired screen brightness when the device is in use.	25-100	100	
P221	Adjust this to the desired screen brightness when the screen dims after use.	2-30	25	
P225	This sets the first start time for a second set of grow lights.	-	-	
P226	This sets the first stop time for a second set of grow lights.	-	-	
P227	This sets the second start time for a second set of grow lights.	-	-	
P228	This sets the second stop time for a second set of grow lights	-	-	