

Model: Display Control

Device Type: Display Control

| CONTACT SUPPORT: | | |
|------------------|--|--|
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| NOTES: | n/a | |

| GENERAL INFORMATION | | |
|-----------------------------|---|--|
| SIMPLWINDOWS NAME: | Display Control V3.4 | |
| CATEGORY: | Display Control | |
| VERSION: | V3.4 | |
| SUMMARY: | This module is used to control any device that has a warm up time, source/mode selection, and cool down time. All timer features are automated by the module with feedback available for both warmup and cool down as well as a bar graph to display the progress. The digital input selects on the input side use the parameter table to map which input is selected when that digital is pulsed. If the device is not on when an input is selected, the power_on output is pulsed, the warmup timer is initiated, and the input pulsed after the device is finished warming up. The analog input selection is used to directly select inputs (Analog value of 1 pulses the first digital output, given the above power on logic). An analog value of 0 will turn the device off. | |
| GENERAL NOTES: | | |
| CRESTRON HARDWARE REQUIRED: | RMC3 | |
| SETUP OF CRESTRON HARDWARE: | 2 Series or 3 Series required | |
| VENDOR FIRMWARE: | n/a | |
| VENDOR SETUP: | n/a | |



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| CABLE DIAGRAM: | n/a |
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| CONTROL: | | |
|----------------------|--------------|---|
| Signal/Function Name | <u>D,S,A</u> | Digital, Serial, Analog signal property definition. |
| power_on/off_fb | D | If available, should be tied to feedback signal from the control module to provide true power feedback, otherwise power status is maintained internally to this module. |
| power_on | D | Powers on the device, initiates the warmup timer. After the timer ends, this will select the input designated by the 'power_on_input" parameter if defined. |
| power_off | D | Powers off the device and initiates the cool down timer. |
| power_toggle | D | Toggles the power to the device and follows the same logic above. *NOTE* If you Little Jonny this and cycle power multiple times while the module is warming or cooling, it will register the last action you took once it's done with its timer cycle. (i.e. you hit power on, then power off before the module is done warming, it will immediately go into cooldown/shutdown after the warm timer is done) |
| source1-16_select | D | Triggers power logic if necessary, pulses the input*_en corresponding to the source*_map parameter setting. (i.e. If souce1_select has a source1_map of 5, then input 5 would be triggered when hitting source1_select) |
| screen_up | D | Manual screen control for momentary pulse relay control of a screen. |
| screen_down | D | Manual screen control for momentary pulse relay control of a screen. |
| display_input1-16_Fb | D | Display module's current input feedback. Used when Force_sync is enabled. After Sync delay time, the module will check to see of the display's input feedback matched what input the display control module selected and, if different, will pulse the desired input*_en again to force the display in line. |
| direct_input | Α | Analog value to directly select input*_en outputs. This will also trigger power logic defined in power_on/off inputs above if needed. A value of zero will power off the device. |

FEEDBACK:



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| display_busy_fb | D | This is high while the device is either in warming or cooling mode. Input selects and power controls will not be evaluated until this signal goes low. |
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| power_on_en | D | Signal pulsed when powering on the device for pulse_time. |
| power_off_en | D | Signal pulsed when powering off the device for pulse_time. |
| fake_power_on_fb | D | Latches high/low with power on/off cycles, used when controlled device has no power fb outputs or when those outputs are problematic. |
| fake_power_off_fb | D | Latches high/low with power on/off cycles, used when controlled device has no power fb outputs or when those outputs are problematic. |
| input1-16_en | D | Signals pulsed when input is selected either by pressing the source*_select signals or the direct_input analog value |
| warmcool_timer_fb | Α | Bargraph driver used for touchpanel gauge to show if the device is warming or cooling. |
| warmcool_remaining_fb | Α | Time value showing how much time is left in the warming or cooling event. |
| warming_fb | D | Held high for as long as the device is warming. |
| cooling_fb | D | Held high for as long as the device is cooling. |
| screen_up_relay | D | Tie to screen relay for automatic operation of screen when device is powered on/off. Also pulsed when using the screen_up/down inputs. |
| screen_down_relay | D | Tie to screen relay for automatic operation of screen when device is powered on/off. Also pulsed when using the screen_up/down inputs. |
| screen_stop_relay | D | Tie to screen relay for automatic operation of screen when device is powered on/off. Also pulsed when using the screen_up/down inputs. |

| PARAMETERS: | | |
|-------------|---|--|
| warm_time | D | Value in seconds that the device requires before responding to commands. |
| cool_time | D | Value in seconds that the device requires to cool down before responding to a power on command. |
| pulse_time | D | Value in seconds to pulse power_on/off_en and input*_en signals (used for IR drivers that need specific pulse times, otherwise .1s or 1t is typical for RS232 gear). |



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| repulse_input | D | Whether or not to re-pulse the input if it is called while already on it. Useful for IR based devices so you can always send the input command on each source press. Not really needed for 232 based gear. |
|----------------|---|--|
| source1-16_map | D | The input*_en number to pulse when corresponding source*_select input is pressed. |
| control_type | D | Direct Control or IR based control, Direct control should be used with devices that provide power feedback to this module, if no power feedback hooks defined on this module then IR control should be used. If Direct Control is used and power off is selected, it will not send the power off command unless it sees power on fb is high. |
| power_on_input | D | If defined, this input*_en signal will be pulsed when the power_on input is pulsed. |
| sync_enable | D | Allows forcing of the display to the state the display control module says it should be in. If enabled and the system says the display should be on, if someone manually powers down the display the module will detect this and power it back up to match it's desired state. It will check for this every sync_delay span of time. |
| sync_delay | D | Amount of time in seconds in between sync checks. Usually 30-60 seconds. |
| screen_pulse | D | Amount of time in seconds to pulse the screen_*_relay outputs. |

| TESTING: | | |
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| OPS USED FOR TESTING: | RMC3 = v1.010.0060 | |
| SIMPL WINDOWS USED FOR TESTING: | 4.02.56 | |
| DEVICE DB USED FOR TESTING: | 63.00.002.00 | |
| CRES DB USED FOR TESTING: | 49.06.005.00 | |
| SYMBOL LIBRARY USED FOR TESTING: | 927 | |
| SAMPLE PROGRAM: | PGM DisplayControl (RMC3) V3_4 | |
| REVISION HISTORY: | V3.4 – Initial external release. | |