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STAND-ALONE RELAY CONFIGURATION AND PROGRAMMING FORM

REV 0, Generation 4.0

Welcome, and thank you for your interest in POWER-GATE solid-state relays. This form will allow you to configure both the standard and optional features of our generation 4.0 stand-alone uni-directional and bi-directional relays (if you are trying to configure a single-pole, double-throw switch, or a programmable OR'ing switch, both of which require two bi-directional relays, please use their respective forms).. After completing the form, the information will be sent to the team at Perfect Switch, who will review and contact you shortly. To begin, please enter your email address:

CONTACT INFORMATION

1. Contact Name	2. Company		3. Phone
4. Address 1		**5. Address 2**	
6. City	**7. State/Province**	**8. Zip**	**9. Country**

BASIC RELAY CONFIGURATION

Choose relay type, nominal system voltage, maximum continuous current, package size, LEDs, and triggers. Refer to application and specification sheets for option descriptions and device limitations.

10. Relay Type:	11. Nominal System Voltage:	12. Maximum Continuous Current:
13. Package Size:		

Package Size	50		100		150		200		250		300		400		500		600	
	Uni	Bi	Uni	Bi	Uni	Bi	Uni	Bi	Uni	Bi	Uni	Bi	Uni	Bi	Uni	Bi	Uni	Bi
Small	✓	✓	✓	✓	✓	✓	✓	✓*	✓	✗	✓	✗	✗	✗	✗	✗	✗	✗
Medium	✗	✗	✗	✓	✗	✓	✗	✓	✗	✓	✓	✓	✓	✗	✓	✗	✓	✗
Large	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✓	✗	✓	✗	✓	✗	✓

NOTE: "Uni" is for RY device; "Bi" is for RB, RT, RV, RA, RE, RP, RK, RI, and RC devices
* Only available for 12 V models

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14. LED Configuration (applies to both on-board and remote):
15. Main Trigger Configuration:
16. Override Trigger Configuration:

RELAY OPTIONAL PROGRAMMING

Configure under-voltage, over-voltage, circuit-break, and low-power sleep mode, if desired. Refer to application and specification sheets for feature descriptions and device limitations. Any added features will increase device cost.

17. Would you like to add any of these features?

UNDER-VOLTAGE SETTINGS

Up to 4 levels of under-voltage shutdown are available (not all need to be used) with independent shutdown voltage thresholds and delay times. Note the following:

- Level 1 shutdown voltage> Level 2 shutdown voltage >Level 3 shutdown voltage > Level 4 shutdown voltage
- Level 1 shutdown delay > Level 2 shutdown delay> Level 3 shutdown delay>Level 4 shutdown delay
- Only the enabled level with the lowest shutdown voltage can have the delay disabled; the maximum under-voltage threshold detection delay in this case will be 4 ms.
- Reset voltage must be greater than all enabled shutdown voltages and has an available minimum delay of 20 ms.
- Shutdown voltage is sensed from the source terminal on RY devices and terminal 1 on RB devices.
- Reset voltage is sensed from the source terminal on RY devices, and either terminal 1 or 2 on RB devices.

18. Would you like to add any under-voltage features?
19. Level 1 Under-voltage Shutdown Threshold:
20. Do you want to enable a level 1 shutdown delay?

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Choose the level 1 under-voltage shutdown delay:

21. How many Days?	22. How many Hours?	23. How many Minutes?	24. How many Seconds?	25. How many Milliseconds?

26. Would you like to add a second under-voltage level?
27. Level 2 Under-voltage Shutdown Threshold (must be lower than level 1 threshold):
28. Do you want to enable a level 2 shutdown delay?

Choose the level 2 under-voltage shutdown delay:

29. How many Days?	30. How many Hours?	31. How many Minutes?	32. How many Seconds?	33. How many Milliseconds?

34. Would you like to add a third under-voltage level?
35. Level 3 Under-voltage Shutdown Threshold (must be lower than levels 1 and 2 thresholds):
36. Do you want to enable a level 3 shutdown delay?

Choose the level 3 under-voltage shutdown delay:

37. How many Days?	38. How many Hours?	39. How many Minutes?	40. How many Seconds?	41. How many Milliseconds?

42. Would you like to add a fourth under-voltage level?
43. Level 4 Under-voltage Shutdown Threshold (must be lower than levels 1, 2, and 3 thresholds):
44. Do you want to enable a level 4 shutdown delay?

Choose the level 4 under-voltage shutdown delay:

45. How many Days?	46. How many Hours?	47. How many Minutes?	48. How many Seconds?	49. How many Milliseconds?

50. Which terminal would you like to use for under-voltage reset threshold voltage sensing?
51. Under-voltage Reset Threshold (must be greater than all enabled under-voltage shutdown thresholds):

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Choose the under-voltage reset delay:

52. How many Days?	53. How many Hours?	54. How many Minutes?	55. How many Seconds?	56. How many Milliseconds?

57. Upon under-voltage shutdown, would you like the relay to enter its low-power sleep mode?

OVER-VOLTAGE SETTINGS

Up to 4 levels of over-voltage shutdown are available (not all need to be used) with independent shutdown voltage thresholds and delay times. Note the following:

- Level 1 shutdown voltage < Level 2 shutdown voltage < Level 3 shutdown voltage < Level 4 shutdown voltage
- Level 1 shutdown delay > Level 2 shutdown delay > Level 3 shutdown delay > Level 4 shutdown delay
- Only the enabled level with the highest shutdown voltage can have the delay disabled; the maximum over-voltage threshold detection delay in this case will be 4 ms.
- Reset voltage must be less than all enabled shutdown voltages and has an available minimum delay of 20 ms.
- Shutdown voltage is sensed from the source terminal on RY devices and terminal 1 on RB devices.
- *Reset voltage is sensed from the source terminal on RY devices, and either terminal 1 or 2 on RB devices.

58. Would you like to add any over-voltage features?
59. Level 1 Over-voltage Shutdown Threshold:
60. Do you want to enable a level 1 shutdown delay?

Choose the level 1 over-voltage shutdown delay:

61. How many Days?	62. How many Hours?	63. How many Minutes?	64. How many Seconds?	65. How many Milliseconds?

66. Would you like to add a second over-voltage level?
67. Level 2 Over-voltage Shutdown Threshold (must be higher than level 1 threshold):
68. Do you want to enable a level 2 shutdown delay?

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Choose the level 2 over-voltage shutdown delay:

69. How many Days?	70. How many Hours?	71. How many Minutes?	72. How many Seconds?	73. How many Milliseconds?

74. Would you like to add a third over-voltage level?
75. Level 3 Over-voltage Shutdown Threshold (must be higher than levels 1 and 2 thresholds):
76. Do you want to enable a level 3 shutdown delay?

Choose the level 3 over-voltage shutdown delay:

77. How many Days?	78. How many Hours?	79. How many Minutes?	80. How many Seconds?	81. How many Milliseconds?

82. Would you like to add a forth over-voltage level?
83. Level 4 Over-voltage Shutdown Threshold (must be higher than levels 1, 2, and 3 thresholds):
84. Do you want to enable a level 4 shutdown delay?

Choose the level 4 over-voltage shutdown delay:

85. How many Days?	86. How many Hours?	87. How many Minutes?	88. How many Seconds?	89. How many Milliseconds?

90. Which terminal would you like to use for over-voltage reset threshold voltage sensing?
91. Over-voltage Reset Threshold (must be less than all enabled over-voltage shutdown thresholds):

Choose the over-voltage reset delay:

92. How many Days?	93. How many Hours?	94. How many Minutes?	95. How many Seconds?	96. How many Milliseconds?

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CIRCUIT-BREAK SETTINGS

Up to 2 levels of circuit-break shutdown are available (both do not need to be used) with independent shutdown current thresholds, delay times, and reset configurations, as well as shutdown direction choice for bi-directional relays. Note the following:

- For uni-directional relays, circuit-break operates on current flowing from source-to-load; for bi-directional relays, circuit-break can be programmed to operate in either direction.
- For bi-directional relays, terminal 1 is the same terminal used for sensing under- and over-voltage shutdown thresholds.

97. Would you like to add any circuit-break features?
98. Which direction do you want the circuit-break to operate?
99. Level 1 circuit-break shutdown threshold:

Choose the level 1 circuit-break delay:

100. How many Days?	101. How many Hours?	102. How many Minutes?	103. How many Seconds?	104. How many Milliseconds?

105. Which reset mode would you like to use?
106. How many times do you want the relay to try to reset before reverting to toggle main trigger reset mode?

Choose the level 1 circuit-break reset delay (minimum allowable = 10 seconds):

107. How many Days?	108. How many Hours?	109. How many Minutes?	110. How many Seconds?	111. How many Milliseconds?

112. Would you like to add a second circuit-break level?
113. Which direction do you want the circuit-break to operate?
114. Level 2 circuit-break shutdown threshold:

Choose the level 2 circuit-break delay:

115. How many Days?	116. How many Hours?	117. How many Minutes?	118. How many Seconds?	119. How many Milliseconds?

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120. Which reset mode would you like to use?
121. How many times do you want the relay to try to reset before reverting to toggle main trigger reset mode?

Choose the level 2 circuit-break reset delay (minimum allowable = 10 seconds):

122. How many Days?	123. How many Hours?	124. How many Minutes?	125. How many Seconds?	126. How many Milliseconds?

<mark>SLEEP MODE SETTINGS</mark>

Feature enables relay to go into a low-power sleep mode after a specified period of inactivity. Wake-up and exit from sleep mode can be accomplished through a number of methods which can be enabled or disabled in this form. See application sheet for more information, and note the following:

- Typical watchdog period between timed wake-up events (where conditions for exiting sleep mode are checked) is approximately 33 seconds.
- Exit sleep mode by trigger state change occurs immediately.

127. Would you like to add the sleep mode feature?

Choose the sleep mode entry delay:

128. How many Days?	129. How many Hours?	130. How many Minutes?	131. How many Seconds?	132. How many Milliseconds?

133. Would you like to enable wake-up and exit sleep mode by trigger (main or override) state change?
134. Would you like to enable timed momentary wake-up to check for sleep mode exit conditions?
135. Would you like to enable the current threshold sleep mode check? (i.e. sleep mode entry will be inhibited, and exit from sleep mode will occur when current passing through relay is larger than the threshold; see specification sheet for value)
136. Which direction do you want the current threshold sleep mode check to operate?
137. Would you like to enable the voltage threshold sleep mode check? (i.e. sleep mode entry will be inhibited, and exit from sleep mode will occur when voltage is larger than a user-defined threshold)
138. Which terminal would you like to use for voltage threshold sleep mode check
139. Choose the voltage threshold to both inhibit sleep entry and exit from sleep mode:

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COMMENTS

140.

A copy of your responses will be emailed to null