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Data Sheet

5100-P Digital Output Module

Eight VDC Sinking Outputs

DO	VDC	P
8 Digital Outputs Sinking		

Data Sheet: 5100-P Digital Output Module

Description

- ▶ Eight +24 VDC sinking digital outputs (open collector)
- ▶ Open collector NPN transistor to +24RET
- ▶ High current: 350 mA per output / 1.8 A per module
- ▶ Individual LED status indicator for each output

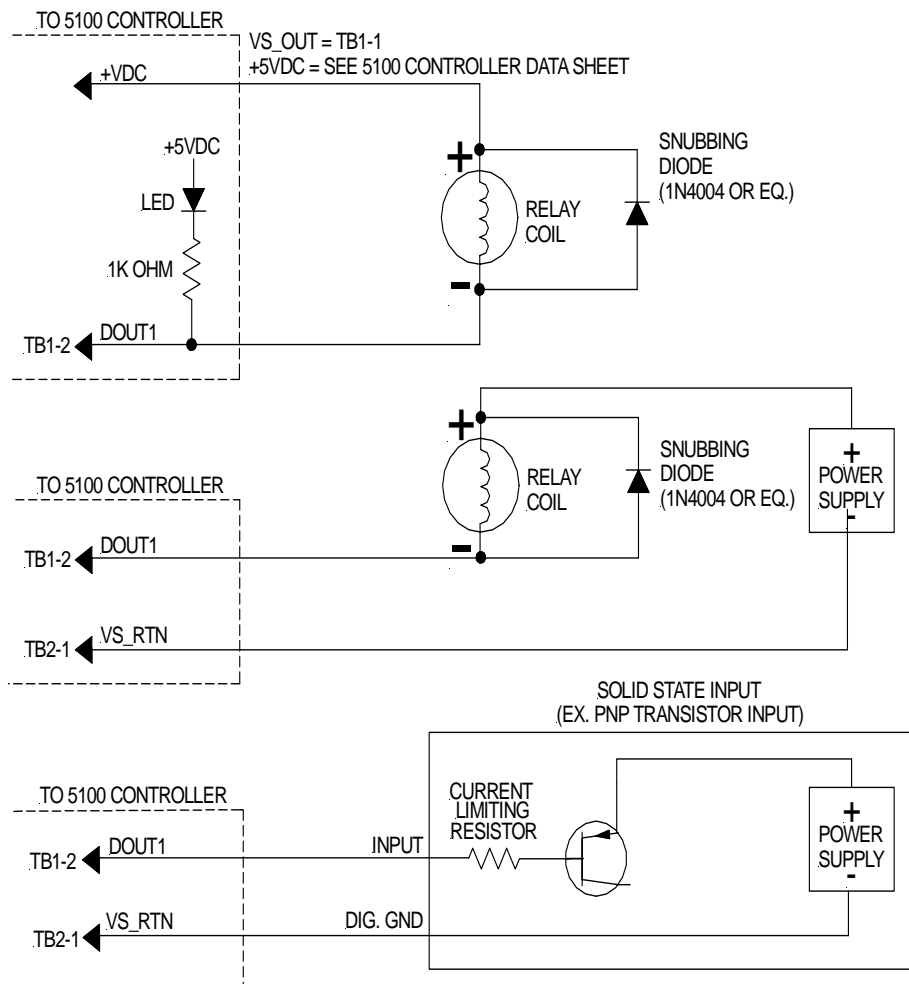
5100-P Specifications

Parameter	Value	Description
General		
Number of outputs	8	
Output type	sinking	Outputs are active low. NPN transistor to controller's voltage supply return (VS_RTN).
Connection type	Screw terminal	Screw terminal spring clamp accepts #14-22 AWG wire. Terminated connector may also be unplugged.
Status indicator	1 LED per output	Each output has a red LED indicator.
Isolation rating	500 VDC	Isolation voltage between any output and other sensitive 5100 circuitry.
Module type	5121	Identifier for the hardware and software type
Performance		
Output current - Note 1		
I_{OH} / channel	350 mA	The maximum 'ON' current that any given output can sink.
I_{OH} / module @ 25°C	1 A	The maximum current that all the outputs on a module can sink at a given time.
I_{OH} / module @ 50°C	1.8 A	
I_{OH} / controller	3 A	The maximum current that all the outputs on the controller can sink at a given time.
I_{LEAK} per channel	200 μ A	The maximum leakage current when the output is in the 'OFF' state.
Output voltage		
Max V_{OH}	+5VDC	The voltage on an output terminal with nothing connected (internal LED and 1K Ω series resistor to +5VDC).
Max V_{OL} @ 350mA	1.4 VDC	The maximum output 'ON' voltage.
Max V_{OL} @ 50mA	0.9 VDC	
Maximum V_{CE}	32 VDC	The maximum output 'OFF' voltage.
Output response time	0.100 mSec	The maximum application response time to output transition.
Environmental		
Temperature	Operating: 0 to 50°C Storage: -25 to 85°C	Refer to the Model 5100 Controller Data Sheet for proper mounting instructions.

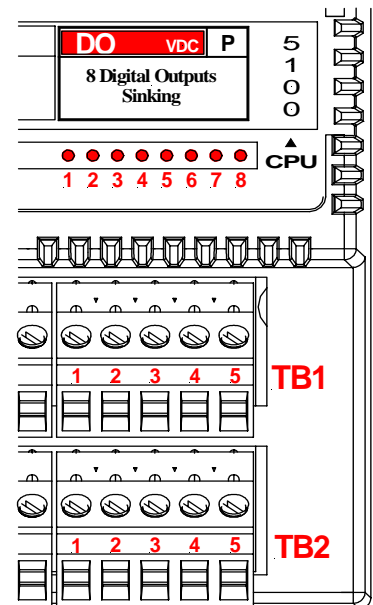
1. With proper mounting as described in the Model 5100 Controller Data Sheet

Application Information

Typical Application



Module Identification



I/O Terminations

Terminal	Label	Function
TB1-1	VS_OUT	
TB1-2	LED1	Dout #1
TB1-3	LED3	Dout #3
TB1-4	LED5	Dout #5
TB1-5	LED7	Dout #7
TB2-1	VS_RTN	
TB2-2	LED2	Dout #2
TB2-3	LED4	Dout #4
TB2-4	LED6	Dout #6
TB2-5	LED8	Dout #8

Notes



1. If an output is used to drive transistor loads, proper current limiting must be observed.
2. If an output is used to drive inductive loads, inductive kicks must be limited via high-speed diodes and/or equivalent devices. Diodes should be mounted as close to the load as possible.
3. When a digital device is powered via an external power source, it may be necessary to tie the ground of this power source to the controller voltage supply return (VS_RTN).
4. The total combined output current for the module must not exceed 300 mA (assuming proper mounting as described in the Model 5100 Controller Data Sheet).
5. For register and programming information, refer to the Model 5100 Applications Guide.

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