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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

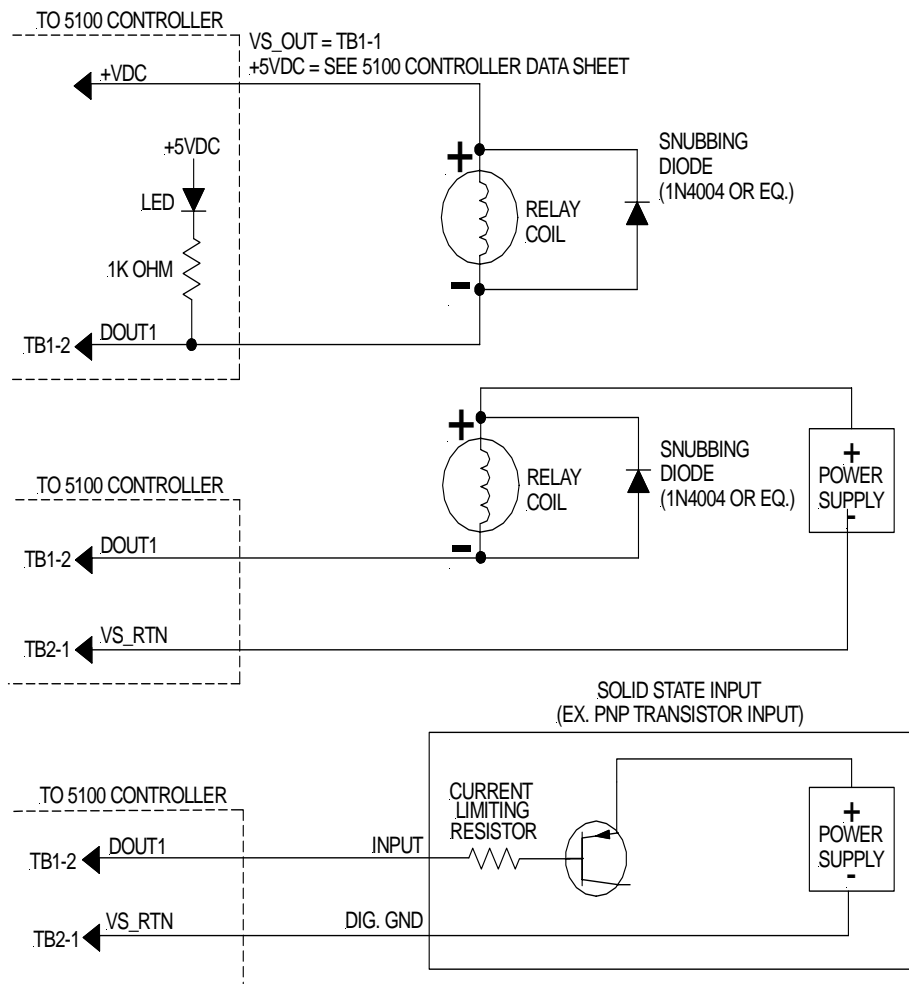
5100-P Specifications

| 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 Storage | 0 to 50°C -25 to 85°C |
| | | Refer to the Model 5100 Controller Data Sheet for proper mounting instructions. |

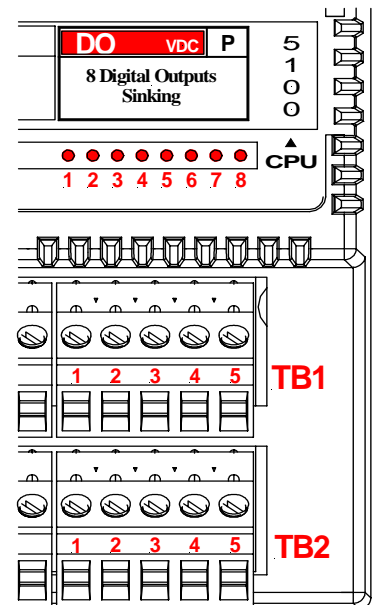
1. With proper mounting as described in the Model 5100 Controller Data Sheet

Application Information

Typical Application



Module Identification



I/O Terminations

| Terminal | Function | Output |
|----------|----------|---------|
| 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_RTIN | |
| 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_RTIN).
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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