Input Interface Examples for Active High Inputs

Figure 2.14
Drive Input Connected to Switch/Relay Contact

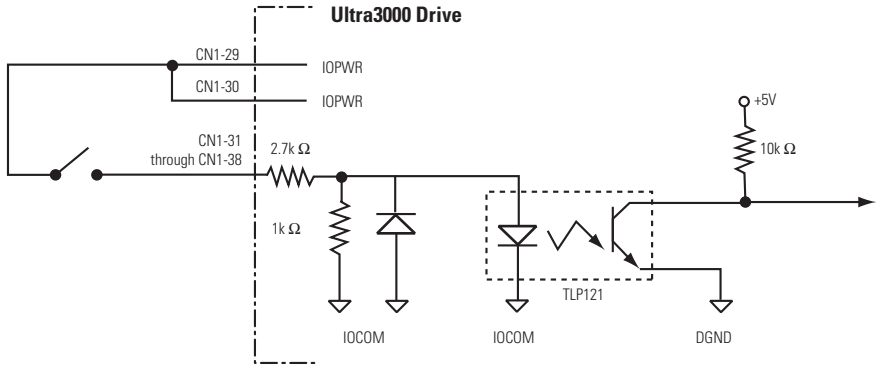


Figure 2.15
Drive Input Connected to Opto-Isolator

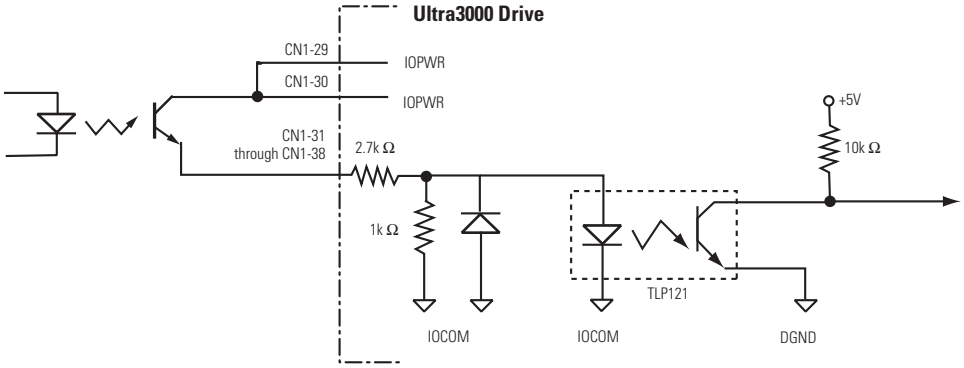


Figure 2.16
Drive Input Connected to NPN Transistor

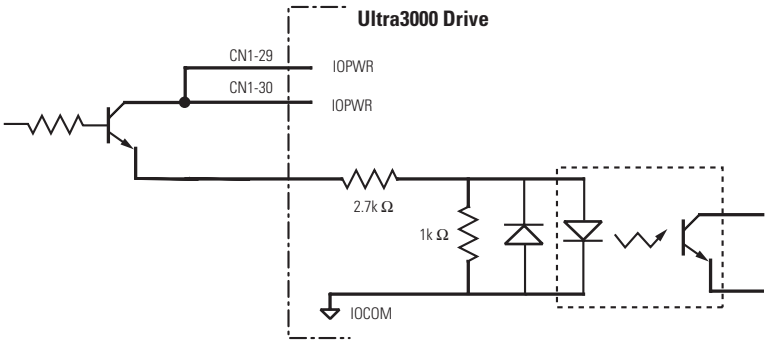


Figure 2.17
Drive Input Connected to NPN Transistor using Switch/Relay

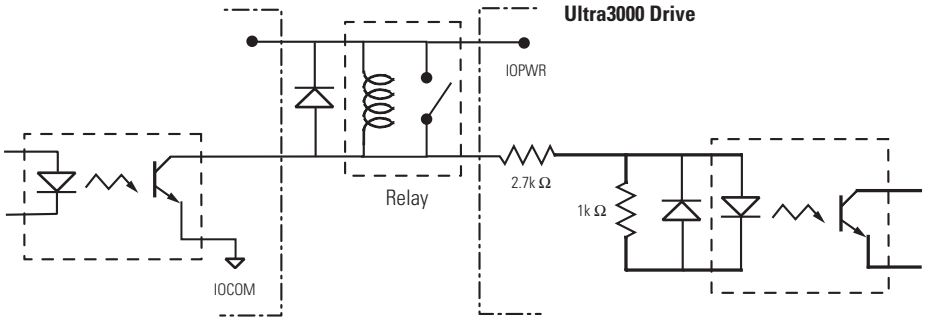


Figure 2.18
Drive Input Connected to NPN Transistor using Opto-Isolator

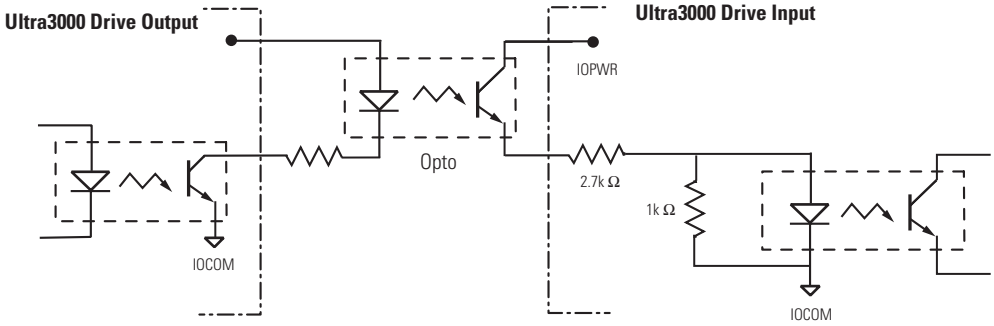


Figure 2.19
Drive Input Connected to another Ultra3000 Output

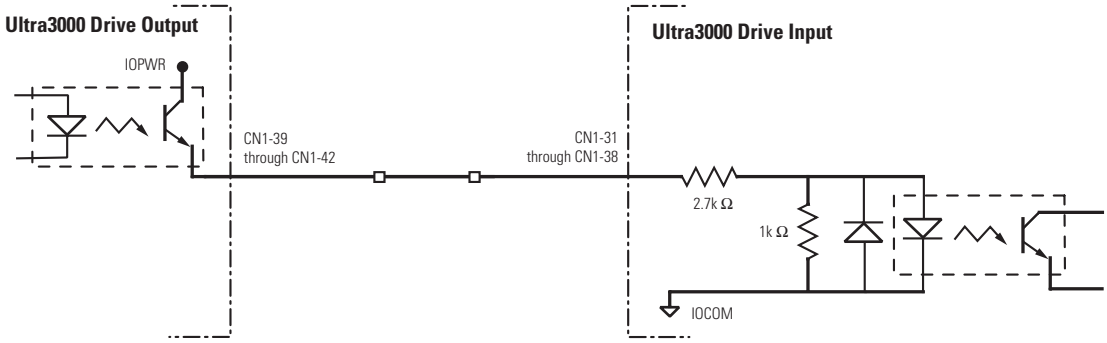
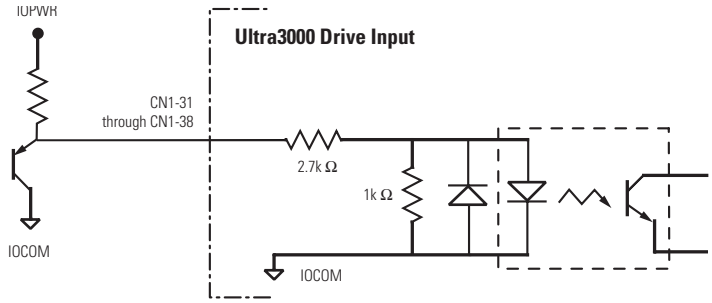


Figure 2.20
Drive Input Connected to PNP Transistor



Input Interface Examples for Active Low Inputs

Figure 2.21
Drive Input Connected to Normally Closed Switch

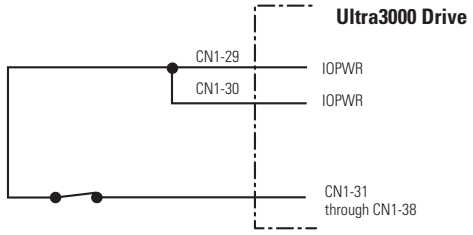


Figure 2.22
Drive Input Connected to Opto-Isolator

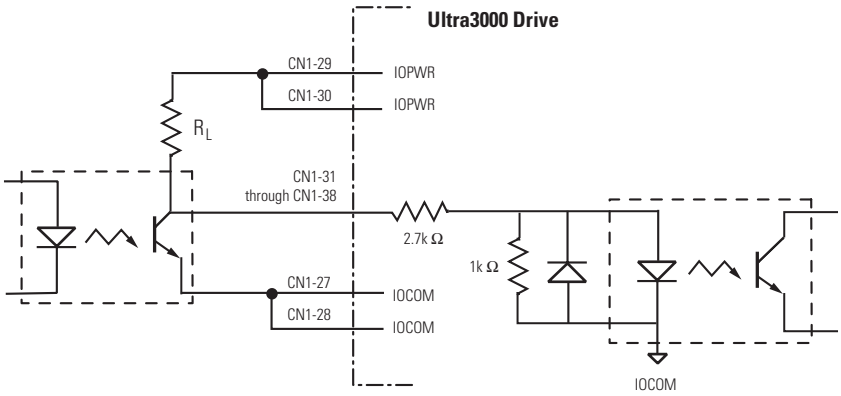


Figure 2.23
Drive Input Connected to NPN Transistor

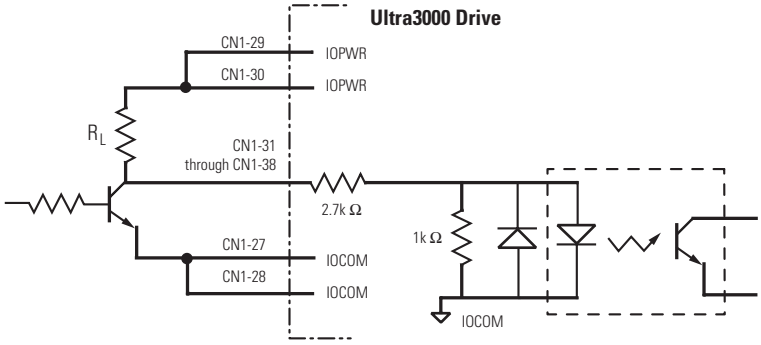
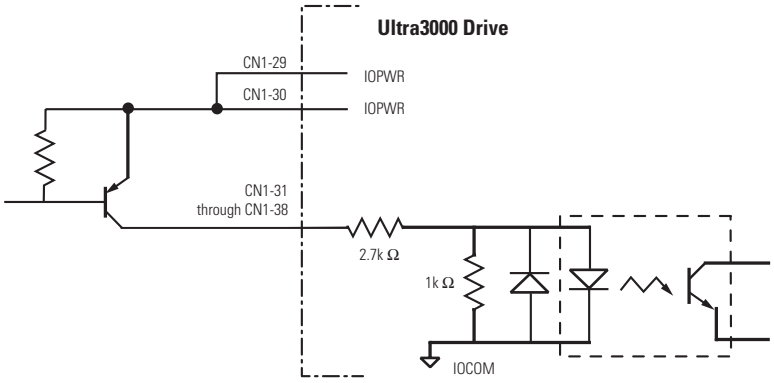


Figure 2.24
Drive Input Connected to PNP Transistor



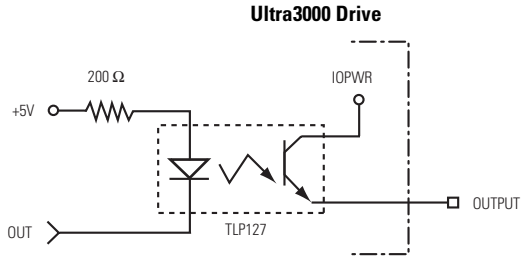
Digital Outputs

There are four opto-isolated transistor outputs that can be configured for a variety of functions through software. Additionally, the drive has a relay output with normally open contacts. On SERCOS drives, the relay output is dedicated as a Brake output, where closed contacts release a motor brake.

The configuration of the transistor outputs is shown in Figure 2.25, and the configuration of the relay output is shown in Figure 2.26.

IMPORTANT There is no overload protection on the transistor outputs.

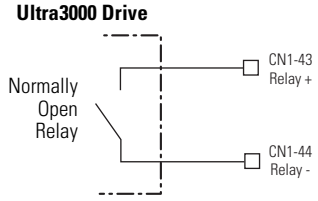
Figure 2.25
Transistor Output Hardware Configuration



The following table provides a description of the digital output specifications.

Parameter	Description	Minimum	Maximum
ON State Current	Current flow when the output transistor is ON	—	50 mA
OFF State Current	Current flow when the output transistor is OFF	—	0.1 mA
ON State Voltage	Voltage across the output transistor when ON	—	1.5V
OFF State Voltage	Voltage across the output transistor when OFF	—	50V

Figure 2.26
Relay Output Hardware Configuration



The following table provides a description of the relay output specifications.

Parameter	Description	Minimum	Maximum
ON State Current	Current flow when the relay is closed	—	1A
ON State Resistance	Contact resistance when the relay is closed	—	1Ω
OFF State Voltage	Voltage across the contacts when the relay is open	—	30V

Drive Output Interface Examples

Figure 2.27
Drive Output Connected to an Opto-Isolator

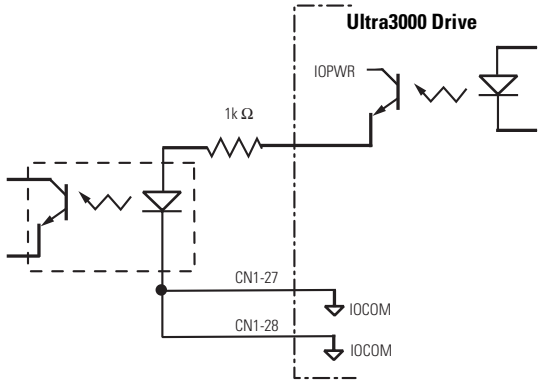


Figure 2.28
Drive Output Connected to an LED Indicator

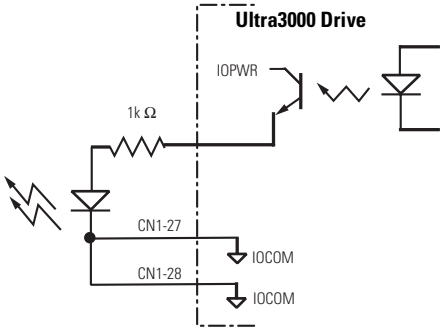


Figure 2.29
Drive Output Connected to a Resistive Load

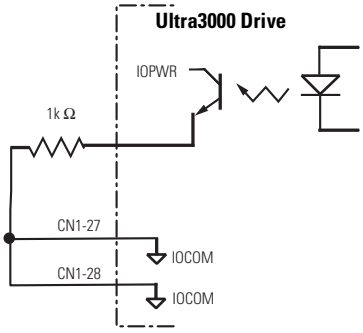


Figure 2.30
Drive Output Connected to a Switch/Relay

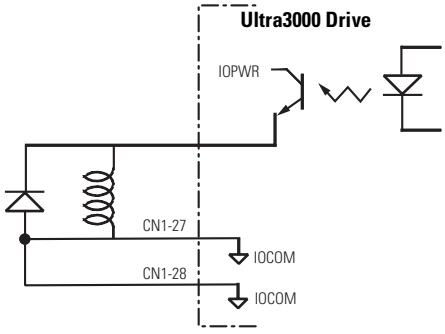


Figure 2.31
Drive Output Connected to an Active Low Input using a Switch/Relay

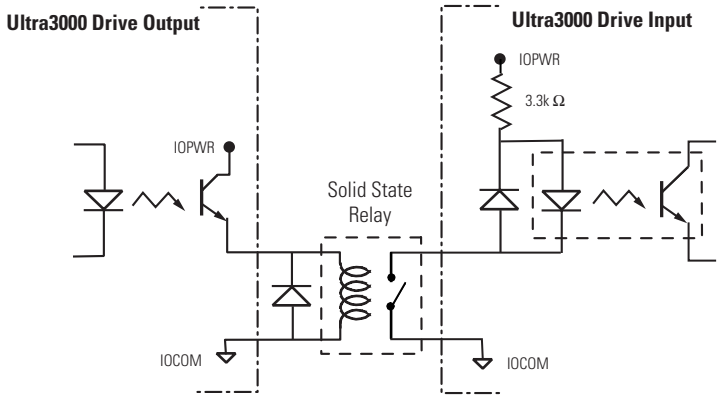


Figure 2.32
Drive Output Connected to an Active Low Input using an Opto-Isolator

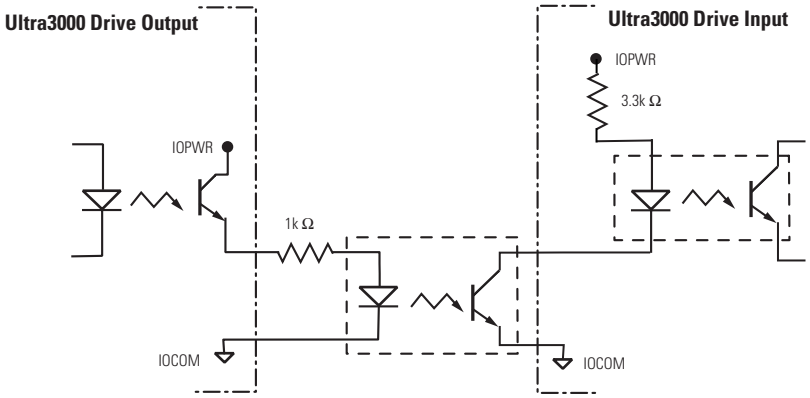


Figure 2.33
Drive Output Connected to an Active High (sinking) Input