



Document Reference: AN060008VS1

Connecting a relay to a Digital Output

Required Equipment:

This application note discusses digital outputs for the following Baldor VS1 Series Drives:

VS1SP Inverter
VS1GV Vector
VS1SD Servo

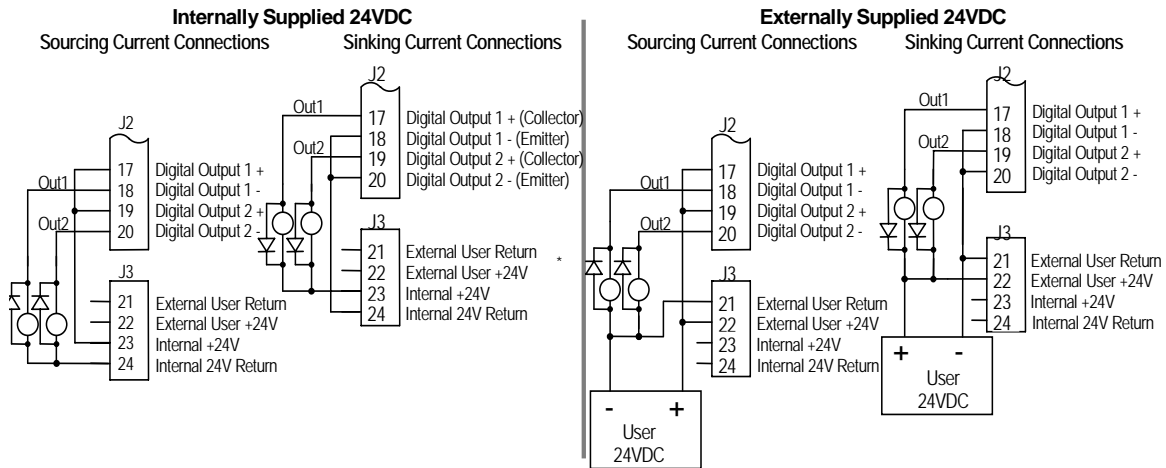
Introduction:

There are two programmable opto isolated outputs available on the VS1 controls. Each output may be programmed to represent a single output condition. The opto outputs may be configured for sinking or sourcing 60 mA, with a rated voltage of 5 to 30VDC.

Procedure:

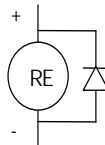
The Digital Outputs 1 and 2 can be connected using the internal supply or an external power source provided by the customer, as shown in Figure 1.

Figure 1 Digital Output Power Connections



When the Digital Outputs are used to directly drive a relay, a flyback diode rated at 1A, 100V (IN4002 or equivalent) minimum should be connected across the relay coil. See Figure 2. This is used to suppress noise.

Figure 2 Noise Suppression



Programming the Digital Outputs, can be done by following these steps:

1. Press the MENU key on the keypad.
2. Using the arrow keys scroll to PROGRAMMING, press ENTER.
3. LEVEL 1 BLOCKS, press ENTER.
4. Scroll to OUTPUT SETUP, press ENTER.
5. Scroll to DIGITAL OUTPUT 1 or 2, press ENTER.
6. Scroll to the output condition wanted, press ENTER.
7. Press the soft key A, which represents STATUS, to exit programming and return to the status screen.

A list and definition of the different output conditions can be found in the Installation & Operating Manual for the VS1 controls.

