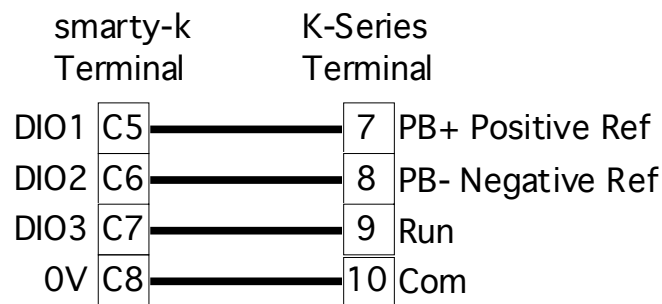# *drive.web dw114 smarty-k* Application Note

The dw114 *smarty-k* module is a *drive.web* smarty that has been modified from the standard current sourcing output to a current sinking output for use with the K-Series single-phase DC drive.

The specifications for the configurable digital inputs/outputs (DIO) 1-3 terminals on the *smarty-k* are:

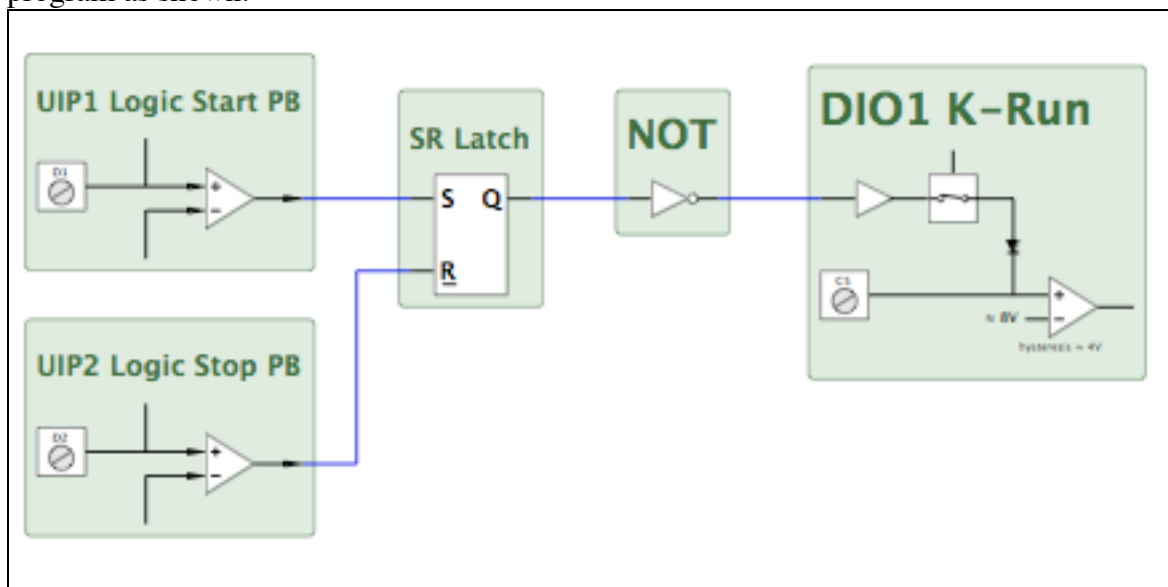|	
Input Impedance:	15 Kohm
Pull-up Voltage:	24 Vdc through 15 Kohm resistor (~ 1.5 mA maximum)

Wiring Diagram

On the K-Series drive, the control inputs are active-low for the PB+ (T7), PB- (T8), and RUN (T9) control functions. Typically, all the DIO features of the *smarty-k* will be configured as outputs and wired according to the following diagram:

```
        smarty-k          K-Series
        Terminal          Terminal

DIO1 | C5 |————————————| 7  | PB+ Positive Ref
DIO2 | C6 |————————————| 8  | PB- Negative Ref
DIO3 | C7 |————————————| 9  | Run
  0V | C8 |————————————| 10 | Com
```

However, if additional inputs are required, the DIO may each be individually configured in any combination inputs/outputs.

Special Programming Requirements

Due to the output circuit's design, an inverter is required when using positive-logic in the smarty program as shown:

In this example, when the SR Latch's output is TRUE, the DIO will indicate FALSE, and the K-Series drive will be in a RUN mode.