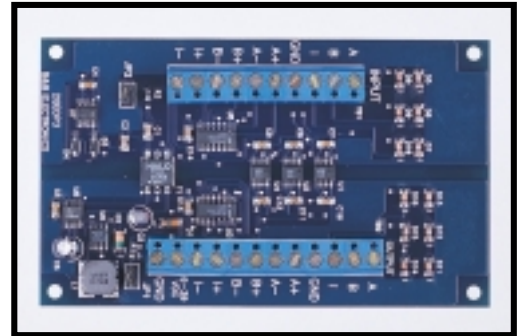


## *Encoder Optical Isolator and TTL Converter*

### Model 2QEOP3

The 2QEOP3 allows you to optically isolate your encoders from your controllers. Additionally, it allows you to convert TTL to differential, and vice versa. The 2QEOP3 allows your encoder to connect to your controller with only a optical connection between the two systems, removing ground loops with 2000 volts RMS of isolation between the input and output.

Channels A, B, and Z are isolated and allow a count rate of up to 3 MHz in quadrature 1X mode, 6 MHz in quadrature 2X mode, and 12 MHz in quadrature 4X mode with a propagation delay of less than 100 ns. The 2QEOP3 has a wide range power supply input accepting a voltage source from 10 to 30VDC. This unit is designed to be used with our SNAPTRACK for DIN rail mounting or can be mounted using standoffs.



**Uses:**

- TTL and differential isolator
- Repeater to extend distance of TTL and differential signals
- TTL to Differential Conversion
- Differential to TLL Conversion

**Setup:**

	<b>TTL</b>	<b>Differential</b>
Input (JP2)	Open	Shorted
Output (JP1)	Open	Shorted

**Notes:**

- When unit is used in differential mode, the input TTL lines should not be connected.
- The output TTL lines are always enabled. The jumper only affects the differential output driver.

**Mounting:**

The 2QEOP3 is designed to fit B&B's SNAPTRAK. In addition, there are four corner-mounting holes, if standoff mounts are the preferred mounting method. Figure 1 shows the mounting-hole locations.

**Optional Hardware:**

- TK2D-12 ..... SNAPTRACK
- TKAD..... DIN Rail Adapter Clip

**Specifications:**

	<b>Minimum</b>	<b>Nominal</b>	<b>Maximum</b>
Input Voltage	10 VDC		30 VDC
Input Current *	50 mA DC		250 mA DC
Input Power	1.5 Watts		
Temperature	0°C		70°C
Propagation Delay		50 nS	100 nS
Bandwidth			10 MHz
Isolation	2000 Volts RMS for 1 Minute		
Dimensions	2.75 x 4.6 in (See Figure 1)		

*\* Tested with no output load. Tested at 3 MHz Count Input.*

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Figure 1

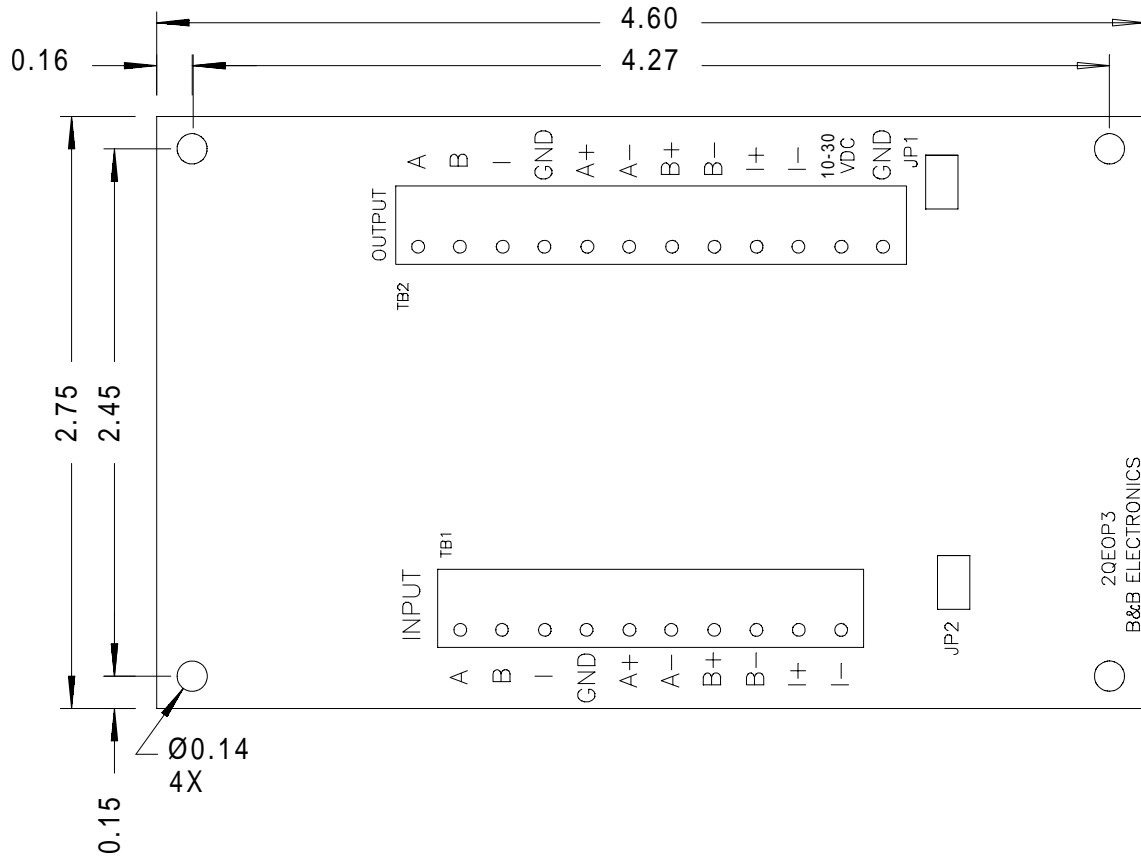
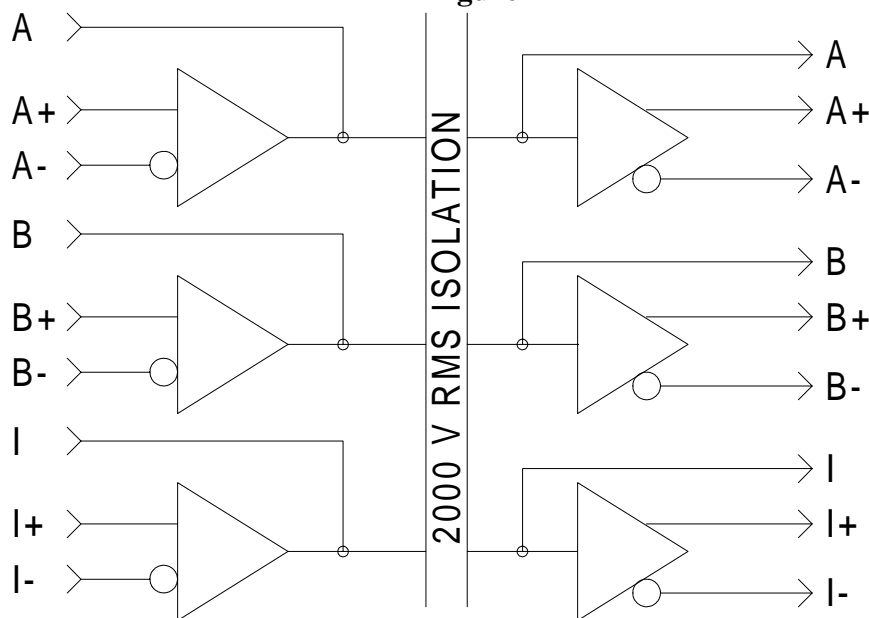


Figure 2



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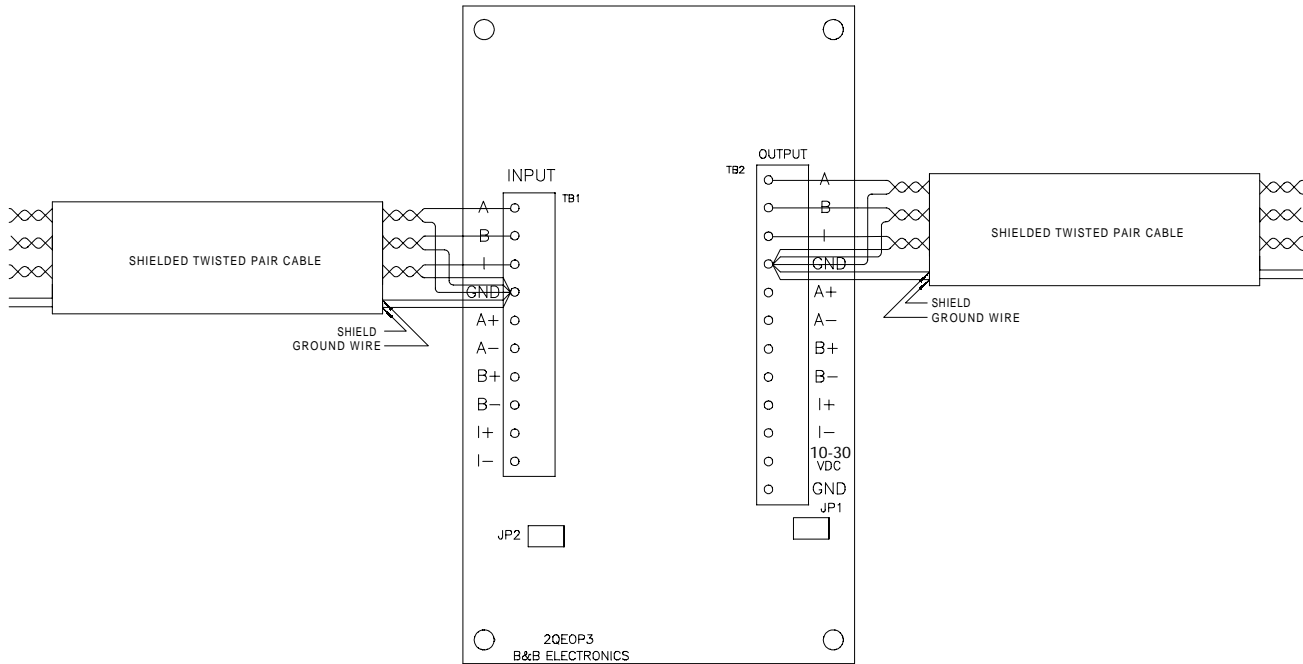
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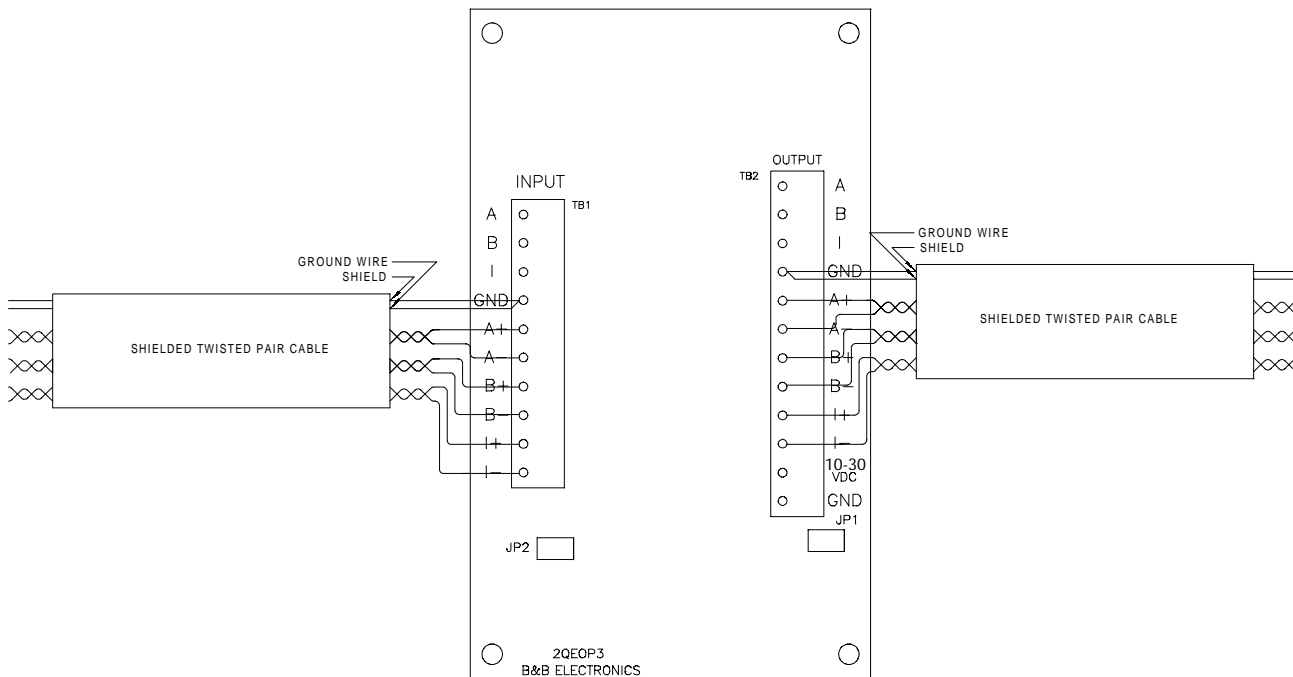
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**Figure 3. Typical TTL Wiring Practice**



**Figure 4. Typical Differential Wiring Practice**



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