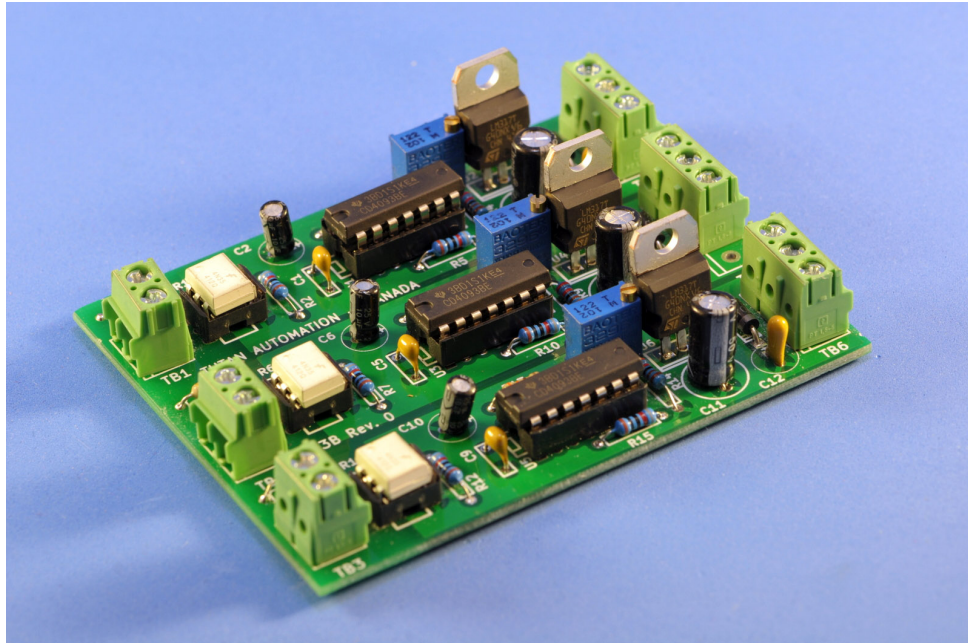# Isolated 3 channel PWM to Analogue Converter

This board houses three independent PWM to 0-10V analogue converters with optical input-output isolation. It is suitable to interface controllers with PWM (TTL level) outputs to standard Variable Frequency Drives (VFD) or similar devices that require analogue input set-points to control an operational parameter (i.e speed, torque, etc.)

SPECIFICATIONS

- Number of channels: 3
- PWM input: TTL level. Max frequency 1 KHz
- Output: Adjustable 0 to 5..12V
- Linearity: 2% FSD
- Isolation: Min. 500 Vac
- Power: Nominal 24 Vdc (Acceptable range 17 to 30Vdc)[1]
- Dimensions: 3.400 x 1.300 in. (87 x 33 mm)
- Weight: 1.7 oz (0.05 Kg)

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[1] The maximum voltage when the power regulator is bypassed (jumpers JP1, JP2 or JP3 closed) is 15Vdc.

INSTRUCTIONS

The following instructions apply to each channel

POWER SUPPLY

- Leave jumper JP(n) open for 24Vdc operation. The maximum output level can be adjusted with the trim-pot RV(n) in the range 5 – 15 V (approx).

- Close jumper JP(n) to use the VFD wetting voltage (typically 10Vdc). The maximum output is the supply voltage. Do not exceed 15V to prevent damage to the CMOS circuit.

EXAMPLE WIRING

PWM2B – TYPICAL WIRING
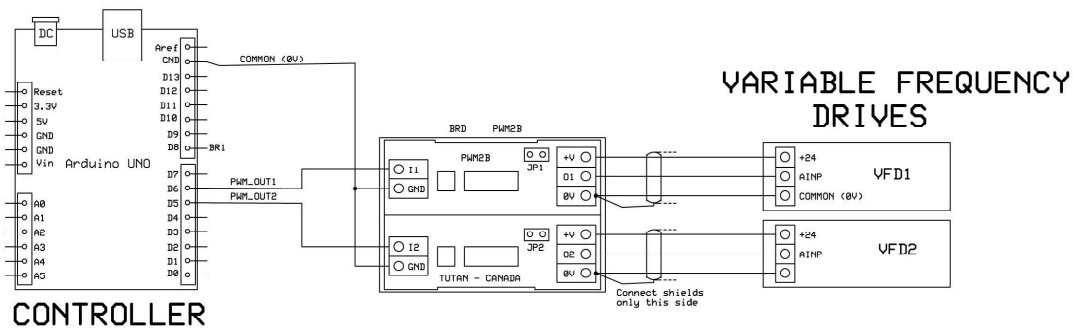
OUTPUT LEVEL ADJUST

Apply 5V to input (PWM=100%) and adjust trim-pot RV(n) to desired value.
Verify that the output is 0-10mV with the input open (PWM=0%).

NOTE: It is recommended to adjust the output voltage with the board connected to the device in order to compensate for the voltage drop caused by the input resistance.

Open voltage calculation:

$$V_{open} = V_{inp} (1 + 1K / R_{inp})$$