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ANALOG MODULES, INC.

Specialists in Analog and Laser Electronics

MODEL 8261C POCKELS CELL DRIVER
Operating Notes

The Model 8261C is a high voltage Pockels cell driver designed to drive a floating Pockels cell. The following precautions should be observed when installing and operating the Model 8261C.

1) Since the Model 8261C is a push-pull type driver, the outputs must be balanced. DO NOT connect a probe to or load only one output of the driver. Doing so will result in an excessive voltage being generated in one polarity and may damage output FETs. The low voltage monitor pin (P2-5) should be used to measure the voltage at the output of the pulser. If the actual high voltage output must be measured, the proper method includes using two high impedance (≥20MΩ), HV (4kV) probes. Connect one probe to one contact of the Pockels cell and the second probe the other contact of the Pockels cell. The ground leads of two probes should be connected together. The HV output pulses can be observed using the subtract function of the oscilloscope. When the scope is set in the subtract mode and the driver set for a 5.5kV push-pull output, the scope will display a 0 to 5.5kV unipolar transition.

2) Apply +24V power to the driver prior to providing a trigger pulse.

3) The HV output leads are connected to the edge of the PC board. It is essential that the output connections on the PCB are properly shielded while installed in the customer's platform. Also, the use of nylon mounting screws is required to prevent HV arcing to the mounting hardware. Mounting the output connections of the driver in close proximity to a metal surface (i.e. chassis or metal screws) may result in HV arcing and damage the driver.

4) Do not provide a command voltage or turn the trimpot voltage adjust such that the output voltage would exceed the rated value (5.5kV). CW rotation of the tripmot will increase the output voltage and CCW rotation will decrease the output voltage. If using an external control voltage, the trimpot must be set fully CCW.

5) DO NOT short either output lead to ground.

6) Allow a minimum air gap of 8mm (or equivalent insulation) around the PC board to prevent arcing to laser housing or other conducting material.

7) CAUTION: Mounting hardware must be Non-Conductive. Nylon hardware is provided.

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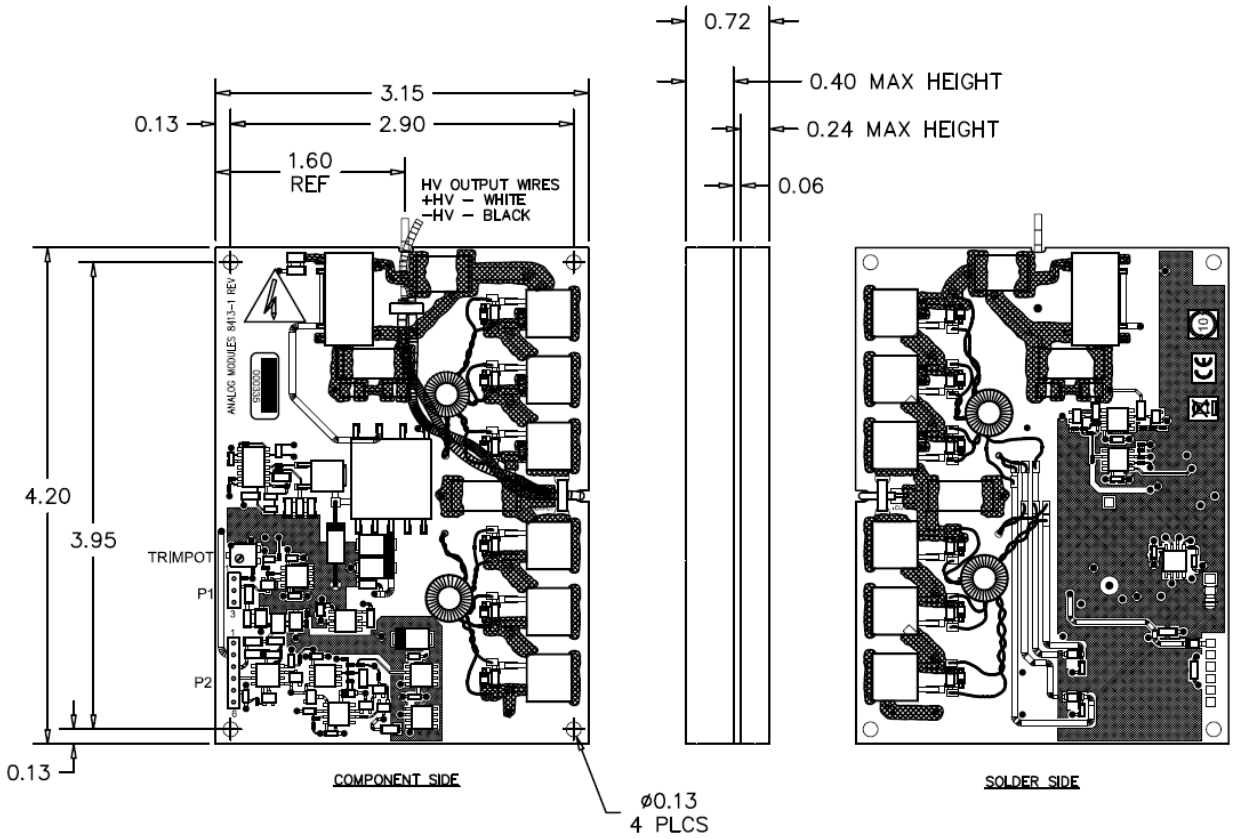

Pin Connections

CON	FUNCTION
P1–1	EXT CONTROL CW (OPT)
P1–2	EXT CONTROL WIPER (OPT)
P1–3	EXT CONTROL CCW (OPT)
P2–1	INPUT VOLTAGE (+24VDC)
P2–2	RTN
P2–3	TRIGGER
P2–4	TRIGGER RTN
P2–5	VOUT MONITOR
P2–6	EXTERNAL CONTROL (0–5.5VDC)