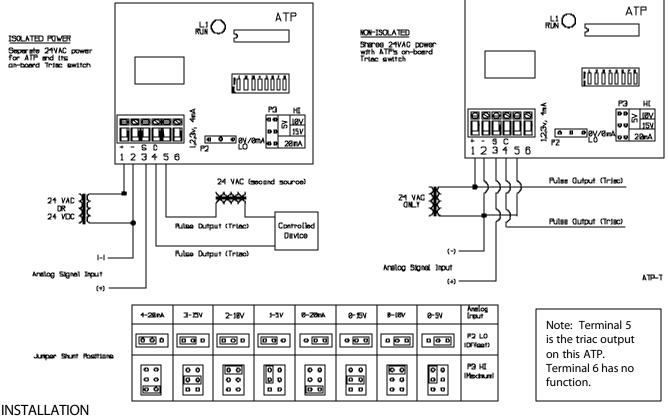


Analog Input to Triac (AC) Pulse Output



READ THESE INSTRUCTIONS BEFORE YOU BEGIN INSTALLATION.

Ground yourself before touching board. Some components are static sensitive.

Circuit board may be mounted in any position. If circuit board slides out of snap track, a non-conductive "stop" may be required. Use only fingers to remove board from snap track. Slide out of snap track or push against side of snap track and lift that side of the circuit board to remove. Do not flex board or use tools.

POWER CONNECTIONS - THIS PRODUCT ACCEPTS 24 VDC or 24 VAC POWER.

Be sure to follow all local and electrical codes. Refer to wiring diagram for connection information. Be sure to make all connections with power off.

- 1) DC Power Refer to wiring diagram for connection information.
 - $Olf the 24\,VDC\ power is\ shared\ with\ devices\ that\ have\ coils\ such\ as\ relays,\ solenoids,\ or\ other\ inductors,\ each\ coil\ such\ as\ relays,\ solenoids\ for\ other\ inductors\ for\ other\ induc$ must have an MOV, DC Transorb, or diode placed across the coil or inductor. The cathode, or banded side of the DC Transorb or diode, connects to the positive side of the power supply.
- 2) AC Power Refer to wiring diagram for connection information.
 - Check the wiring configuration of any other loads that may be connected to this transformer. If required by BAS or controller specification, the 24 VAC neutral can be earth grounded at the transformer. Analog input, digital input, and the transformer is a controller specification of the controller sand analog output circuits should not be earth grounded at two points. Any field device connected to this transformer must use the same common. If you are not sure of other field device configuration, use separate transformers for isolation.
 - If the 24 VAC power is shared with devices that have coils such as relays, solenoids, or other inductors, each coil must have an MOV, AC Transorb, or other spike snubbing device across each of the shared coils. Without these snubbers, coils produce very large voltage spikes when de-energizing that can cause malfunction or destruction of electronic circuits. Refer to wiring diagram for connection information.
- 3) You should measure the actual voltage output of the secondary. If the output is not fully loaded you may read a higher voltagethan the circuit board can handle.

ATP PULSE TIMING

The ATP converts an analog signal into a digital pulse output signal (triac AC only). The analog input signal into a digital pulse output signal (triac AC only). The analog input signal into a digital pulse output signal (triac AC only). The analog is put a digital pulse output signal (triac AC only). The analog is put a digital pulse output signal (triac AC only). The analog is put a digital pulse output signal (triac AC only). The analog is put a digital pulse output signal (triac AC only). The analog is put a digital pulse output signal (triac AC only). The analog is put a digital pulse output signal (triac AC only). The analog is put a digital pulse output signal (triac AC only). The analog is put a digital pulse output signal (triac AC only). The analog is put a digital pulse output signal (triac AC only). The analog is put a digital pulse output signal (triac AC only). The analog is put a digital pulse output signal (triac AC only). The analog is put a digital pulse output signal (triac AC only) is put a digital pulse output signal (triac AC only). The analog is put a digital pulse output signal (triac AC only) is put a digital pulse output signal (triac AC only) is put a digital pulse output signal (triac AC only) is put a digital pulse output signal (triac AC only) is put a digital pulse output signal (triac AC only) is put a digital pulse output signal (triac AC only) is put a digital pulse output signal (triac AC only) is put a digital pulse output signal (triac AC only) is put a digital pulse output signal (triac AC only) is put a digital pulse output signal (triac AC only) is put a digital pulse output signal (triac AC only) is put a digital pulse output signal (triac AC only) is put a digital pulse output signal (triac AC only) is put a digital pulse output signal (triac AC only) is put a digital pulse output signal (triac AC only) is put a digital pulse output signal (triac AC only) is put a digital pulse output signal (triac AC only) is put a digital pulse output signal (triac AC only) is put arange is selected by the jumper shunts P2 and P3 (see diagram above).

Pulse timing consists of an "ON" pulse and an "OFF" interval. "OFF" interval is 1 second on standard and custom

The standard ranges for Version 1 or 2, are selected by dip switch 1 "ON" and proper settings of switches 2 and 3, allows for four different output timing ranges. Switches 4 through 8 are not active when switch 1 is on. Version $2 \circ perates the same as Version 1 except when the input falls at or below 10\% of the input signal range, no pulse$ output occurs, allowing for "OFF" setting of electric heat Solid State Relays (SSR's).

			Inpi	ut Sign	al			Standard Output Range					
	0-5 V	1-5 V	0-10 V	2-10 V	0-15 V	3-15 V	0-20 mA	4-20 mA	STEPS	DIP: 1, 3 20ms/step ON	1 23ms/step ON	1, 2 100ms/step ON	1, 2, 3 9ms/step ON
	0	1	0	2	0	3	0	4	0	0	0	0.1	0.59
F	1.25	2	2.5	4	3.75	6	5	8	64	1.3	1.5	6.5	1.18
F	2.5	3	5	6	7.5	9	10	12	128	2.5	3	12.8	1.76
	3.75	4	7.5	8	11.25	12	15	16	191	3.8	4.5	19.2	2.35
F	5	5	10	10	15	15	20	20	255	5	6	35.5	2.93
	e is output when Version 2 input falls at or 0% of the input signal range.										S O L I D Y N	A N D O V E R	N O V A R

The custom mode (refer to chart below) allows for a variety of pulse timing ranges. The custom mode, selected by dip switch 1 "OFF", allows switches 2 through 8 to select "ON" pulse timing ranges. These "ON" times are cumulative and multiple switches can be selected.

Example: 0-10V signal input to an output pulse range of 150ms to 38.4 seconds.

- 1. To obtain a starting pulse width signal of 150 milliseconds(ms) turn switches 2 & 3 ON, all others OFF (dip switch 2 on = 50ms at 0 volts, and dip switch 3 on = 100ms at 0 volts).
- 2. By looking at the bottom chart note that at 10 volts input signal, the values for switches 2 & 3 "ON" are 12.8 and 25.6 seconds respectively, totalling 38.4 seconds.

The output range selected is now 150ms to 38.4 seconds.

All times on the charts are shown in seconds (or portion o f) with a maximum 6.4 seconds. A pulsing "RUN" LED indicates pulse width signal output.

Input Signal									Custom Output Range (DIP Switch Values if ON)							
0-5 V	1-5 V	0-10 V	2-10 V	0-15 V	3-15 V	0-20 mA	4-20 mA	STEPS	2 50ms/step ON	3 100ms/step ON	4 200ms/step ON	5 400ms/step ON	6 800ms/step ON	7 1.6s/step ON	8 3.2s/step ON	2-8 6.35s/step ON
0	1	0	2	0	3	0	4	0	0.05	0.1	0.2	0.4	0.8	1.6	3.2	6.4
1.25	2	2.5	4	3.75	6	5	8	64	3.3	6.5	13	26	52	104	208	413
2.5	3	5	6	7.5	9	10	12	128	6.5	12.9	25.8	52	103	206	413	819
3.75	4	7.5	8	11.25	12	15	16	191	9.6	19.2	38.4	77	154	307	614	1219
5	5	10	10	15	15	20	20	255	12.8	25.6	51.2	102	205	410	819	1626

No pulse is output when Version 2 input falls at or below 10% of the input signal range.

PowerSupply: Voltage: 24 VAC or 24 VDC, +/- 10%

Current: 50 mA

Voltage/Impedance: 0-15VDC/1,000,000 ohms

Digital Output: Triac - Voltage: 22-28 VAC only

Current: 3 amps

Current/Impedance: 0-20 m A /250 ohms

Analog Input: