

## Raise/Lower to Analogue Module

### Features

- Current or Voltage Output
- Relay, Transistor, or Triac Input
- 255 Step Resolution



### Specification

Input	Relay contact, transistor, triac, 24Vac & 50/60Hz
Output:	
Voltage	0-10Vdc - 3.3kohms min.
Current	4-20mA - 750ohms max.
Resolution	255 steps
Power supply	24 to 35Vdc 21.6 to 28Vac @ 50/60Hz
Power consumption	208mA max.
Connections	Screw terminals for 0.5-2.5mm <sup>2</sup> cable
Dimensions	96 x 58 x 30mm
Ambient range:	
Temperature	0°C to +50°C
RH	10 to 95% non-condensing
Country of origin	U.S.A.

### Product Codes

#### IO-AUD

Raise/Lower to Analogue Module 45, 60, 120 or 240 seconds selectable

## Technical Overview

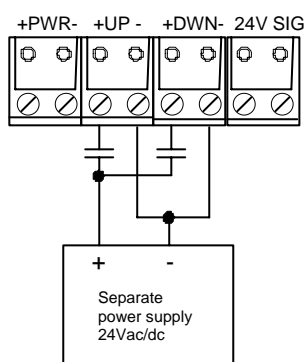
The IO-AUD accepts a raise/lower relay signal and provides a 0-10Vdc output. Additional features include manual over-ride jumper, LED status indication and selectable hysteresis.

## Signal Inputs

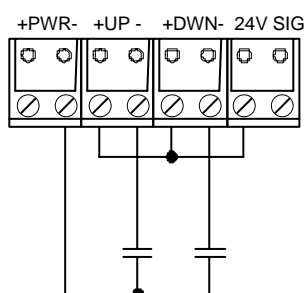
The IO-AUD accepts either pulsed relay contact inputs, pulsed DC, or pulsed AC voltage inputs.

### Pulsed relay contacts:

#### E1 (optically isolated)

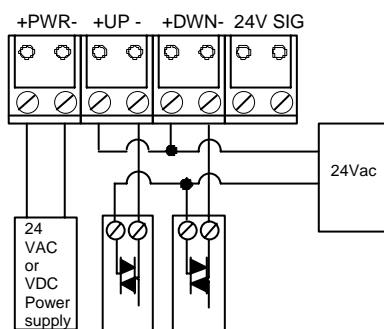


#### E2 (not isolated)



### Controller/triac output:

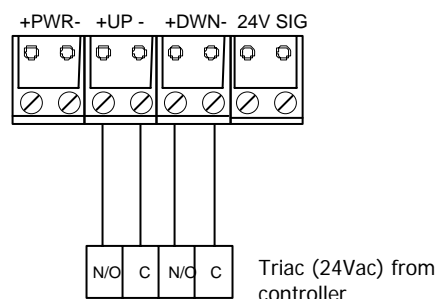
#### E3



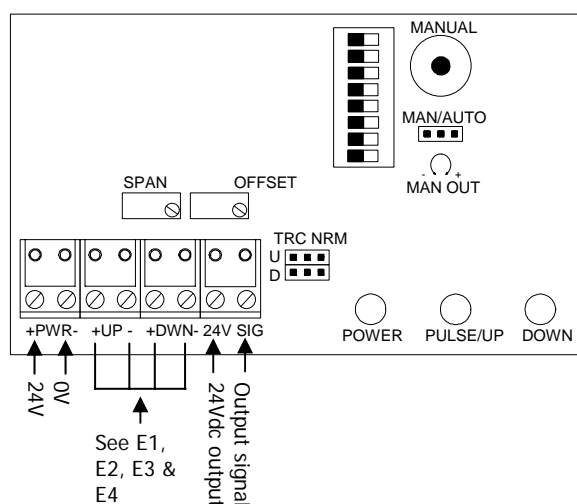
## Signal Inputs (continued)

### Wiring for Siemens TEC controller:

#### E4



## Connections



## Power Supply

When using 24Vac supply, check the wiring configuration of any other loads that may be connected to this transformer. The secondary supply voltage to the interface should be isolated from earth ground, chassis ground, and neutral leg of the primary winding. Any field device connected to this transformer must use the same common. If you are not sure of other field device configurations, use separate transformers.

If the 24 volt ac or dc power is shared with other devices that have coils such as relays, solenoids, or other inductors, each coil must have an MOV (if AC), a diode (if DC), AC or DC 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.

## Power Supply (continued)

It is highly suggested that the 24Vac neutral of all transformers be earth grounded at the transformer. Analogue input, digital input, and analogue 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.

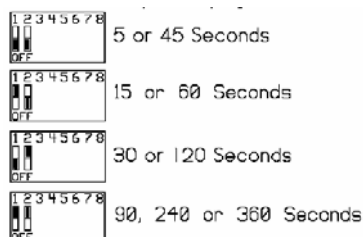
## Configuration

### Setting output rate of change:

Select the rate of change by setting the DIP switch as shown in Fig A. The rate of change is the time it takes for the analog output to go from minimum to maximum. Rate of change selections are as follows:

45, 60, 120, and 240 seconds

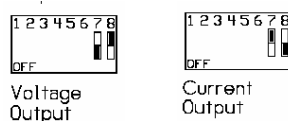
Changing the timing range with power on will result in reset to minimum.



### Setting output signal type:

Select either current or voltage output with the two switches.

NEVER have both switches on or off at the same time while powered, or the IO-AUD may be damaged.



### Setting output offset and range:

The minimum output signal will be equal to the offset. The maximum output signal will be equal to the offset plus the span.

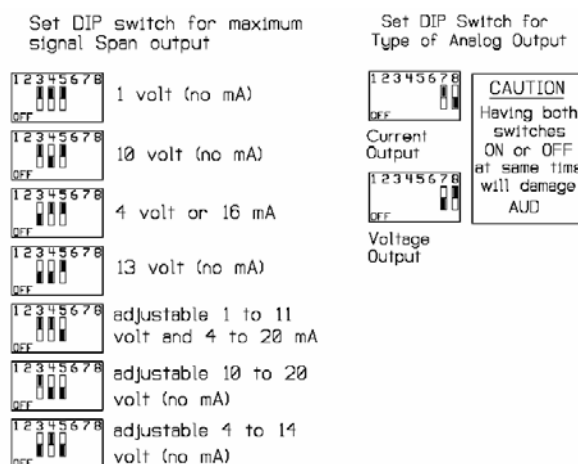
Select offset of 1 volt / 4mA or adjustable offset by switch 6 as shown in Fig C.

## Configuration (continued)

To use adjustable offset setting, set DIP switch 6, and set Offset Pot by turning counter clockwise to decrease and clockwise to increase offset.

Select the desired span by setting the three switches as shown in Fig D.

To use adjustable span setting, set Span Pot by turning counter clockwise to increase and clockwise to decrease span.



### Manual Override:

The output can be set manually using J2 for testing or setting up adjustable offset and span. When setting offset, set output to minimum by adjusting override potentiometer fully counter clockwise. Do this first if you are going to adjust the span as well. When setting span, set output to maximum by adjusting override potentiometer fully clockwise.

Be sure to return Jumper J2 to AUTO position after testing.

NB: If powered when making DIP switch settings, power must be reset to allow DIP switch settings to be recognized.

After all connections have been made, activate the power source. The "POWER" LED should light. The "UP" and "DOWN" LED's will light when the AUD is receiving input signals.