

# OUTPUT TRANSDUCERS



## UNIVERSAL SEQUENCER CONTROL MODULE MODEL UCS-621

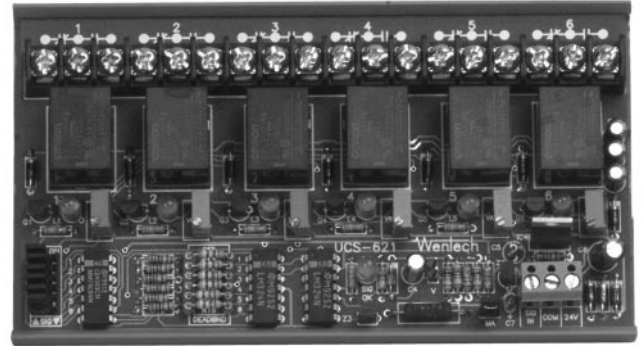


### DESCRIPTION

The **Model UCS-621** is a solid-state device used for multi-stage control in HVAC systems, sequencing boilers or chillers, or floating control of VAV boxes from a single analog signal. The **UCS-621** can be used to obtain a digital output from a voltage or current producing sensor. The **UCS-621** is supplied with mounting track for easy installation.

### FEATURES

- **6 stages of relay control**
- **Voltage or current input**
- **24 VAC or 24 VDC power**
- **LED indication of relay status**
- **Adjustable relay setpoints**
- **Adjustable relay differentials**
- **Snap-track mounted**

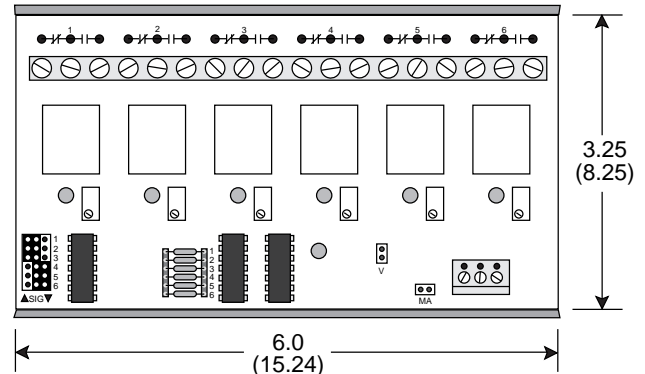


### OPERATION

The **UCS-621** accepts a 0.5-20 mA or 0.375-15 VDC signal to produce up to six stages of relay output. Each relay has a multi-turn potentiometer adjustment to set the pull-in point. Each of the six relays is jumper-selectable to pull in on either a rise or fall in signal. Individual relay differential is easily adjusted by using different value plug-in differential resistors. The **UCS-621** considers an input signal below 0.5 mA or 0.375 V to be a loss of signal and all relays will de-energize.

### DIMENSIONS

in  
(cm)



### SPECIFICATIONS

<b>Supply voltage</b>	24 VAC $\pm 10\%$ @ 300 mA 24 VDC $\pm 10\%$ @ 150 mA	<b>Operating temp range</b>	32° to 158°F (0° to 70°C)
<b>Input signal</b>	0.5-20 mA or 0.375-15 VDC jumper-selectable	<b>Humidity limit</b>	5-95% RH noncondensing
<b>Output</b>	6 SPDT relays	<b>Dimensions</b>	3.25"H x 6.0"W x 1.375"D (8.25 cm x 15.24 cm x 3.49 cm)
<b>Relay rating</b>	5A @ 120 VAC	<b>Relay differential</b>	0.5 mA or 0.375V (adjustable by plug-in differential resistors - see wiring diagram)
<b>Accuracy &amp; repeatability</b>	$\pm 1\%$	<b>Weight</b>	0.7 lb (0.32 kg)
<b>Setpoint adjustment</b>	25-turn potentiometers		
<b>Input impedance</b>	250 $\Omega$ (mA input), 30 k $\Omega$ (V input)		

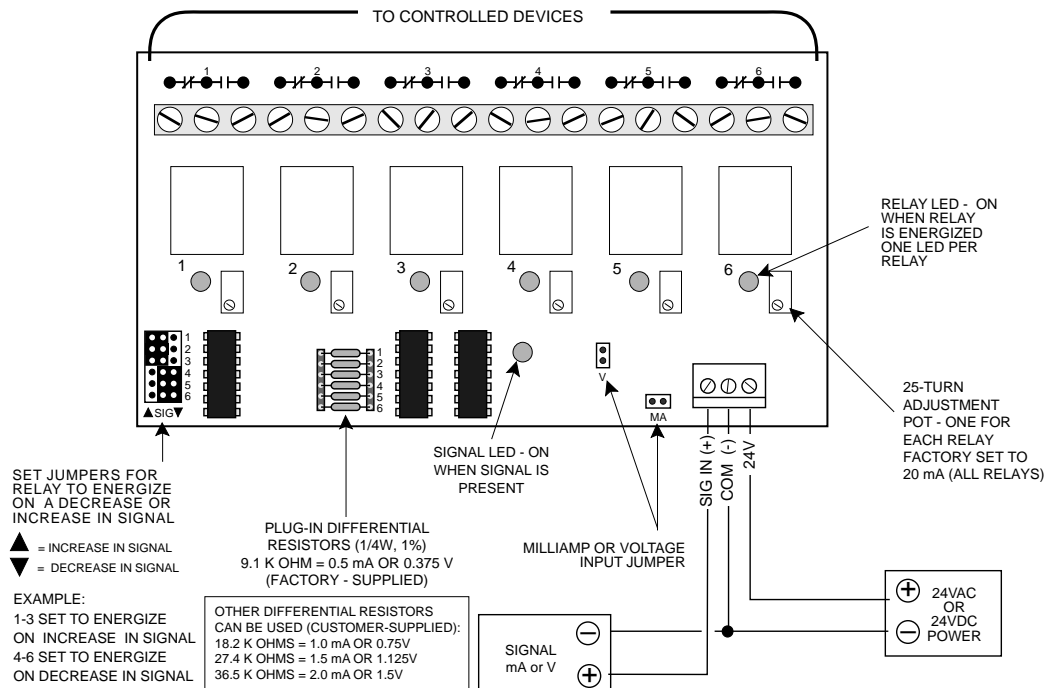
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### WIRING

Make all connections according to the diagram below or as shown on the job diagrams and in compliance with national and local codes. Make all connections with power removed. Failure to do so could result in circuit board damage. Use shielded #18-gauge cable for connections from the **UCS-621** to the controller, shield grounded at the controller.



### INSTALLATION

#### SET-UP AND CALIBRATION

Set jumpers to desired position as follows:

- SIG jumpers (1-6)** - In the 1 positions, each relay energizes on a decrease in signal. In the j positions, each relay energizes on an increase in signal.  
**Input jumpers (V, mA)** - Select mA position for a 0.5-20 mA input, or V position for a 0.375-15 VDC input.
- Connect a meter in series with the SIG IN (+) terminal and the 0.5-20 mA (+) signal to read a current input. To read a voltage input, connect across COM (-) and SIG IN (+). SIG LED will illuminate when signal is present.
- Adjust the input signal to the desired pull-in current or voltage for Relay 1.
- If Relay 1 LED is on, turn its setpoint adjustment clockwise (counter-clockwise if "SIG" jumper is set to "decrease in signal") until it de-energizes. If Relay 1 LED is off, proceed to step 5.
- Adjust Relay 1 pull-in point by turning its setpoint adjustment counter-clockwise (clockwise if relay "SIG" jumper is set to "increase in signal") until the relay energizes.  
(Setscrews 1-6 are 25-turn potentiometers.)
- Repeat steps 3, 4, & 5 for Relays 2-6 using corresponding setpoint adjustments.

### ORDERING INFORMATION

<b>UCS-621</b>	<b>Universal Sequencer Control Module - 6 Relay Outputs, field calibrated</b>
<b>UCS-621-C</b>	<b>Universal Sequencer Control Module - Factory Set Custom Relay Settings (Specify settings when ordering)</b>