

UIRO UNIVERSAL INPUT RESISTANCE OUTPUT

FEATURES

- ❖ Jumper selectable analog input
- ❖ DIP switch selectable pulse input type
- ❖ DIP switch selectable time bases
- ❖ 256 step output resolution
- ❖ Field changeable resistance output module

APPLICATIONS

- ❖ 0 - 20mA to resistance
- ❖ 0 - 10V to resistance
- ❖ PWM to resistance
- ❖ Three point floating to resistance
- ❖ Phase cut to resistance

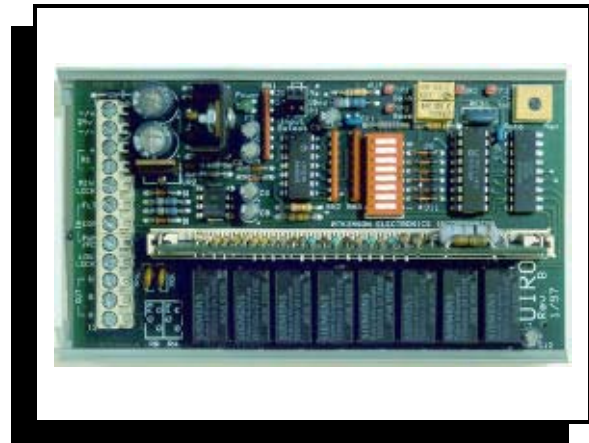
DESCRIPTION

The UIRO accepts all standard analog input signals as well as digital PWM and three point floating inputs and converts them to a linear 256 step resistance output. The UIRO is useful when interfacing to resistance input damper positioners and chillers. It uses state of the art micro controller technology that gives it superior control system performance. The universal input allows the user to utilize the same unit in virtually all applications. When a field change is required, the UIRO can be user reconfigured without requiring a complete change out. Resistance output changes are accomplished by replacing the resistor module.

OPERATION

The UIRO uses two half-wave bridge rectifiers, filtered and regulated supplies to provide power to an embedded micro controller and relay circuitry. The micro controller interprets the input signals and provides a corresponding eight bit output signal. This signal is used to drive output relays that switch through a binary weighted resistance ladder. The analog input may be configured to accept 0 to 10V DC or 0 to 20 mA signal by making a jumper selection. The pulse inputs will accept pulse width modulated, or 3 point floating signals at time bases of 2.5, 5, 10, 25, 60, 120 and 255 seconds.

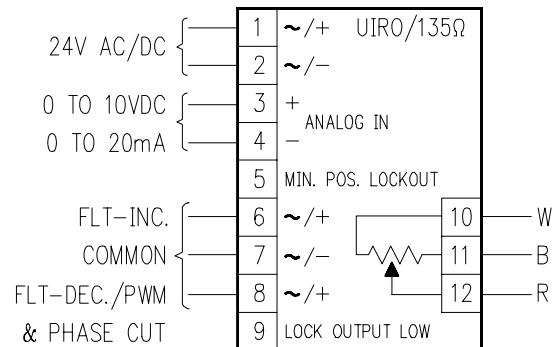
The PWM input can be configured to accept a 10 to 90% phase cut input with a jumper in either J1 or J2 position and DIP switch selection. DIP switch settings also select pulse input type and time base. Zero and Span adjustments are available for adjustments to input signals or for sequencing applications. The UIRO has a manual position pot and a minimum position lock. To lock out or disable the manual position function short terminal #5 to terminal #4, to lock the resistance output to it's minimum value, short terminal #9 to terminal #4.



SPECIFICATIONS

SIZE:	5.5" L x 3" W x 1.5" H
MOUNTING:	3" RDI snap-track (supplied)
POWER:	24V AC, ± 10%, 50/60hz, 4.5VA
INPUT SIGNALS:	0 - 20mA, 0 - 5V, 0 - 10V DC, (4 - 20mA upon request). 10 - 90% Phase Cut PWM or 3 Point Floating @ 2.5, 5, 10, 25, 60, 120, 255 sec.
OUTPUT SIGNALS:	Custom and standard resistance ranges. Standard ranges are: 0 - 135Ω 0 - 1KΩ 0 - 270Ω 0 - 5KΩ 0 - 500Ω 0 - 10KΩ
ADJUSTMENTS:	Zero - 256 step absolute Span - 64 step approximated 1/3x to 3x
AMBIENT TEMP:	0 to 50° C

WIRING CONFIGURATION



ORDERING INFORMATION

UIRO/SEL/XXX STD RANGE UIRO
 L L Std Resistance Output Option Code
 L Onboard Universal Selectable input

UIRO/SEL/XXX-XXX CUSTOM RANGE UIRO
 L L Ending Resistance
 L Beginning Resistance
 L Onboard Universal Selectable Input

ONBOARD UNIVERSAL SELECTABLE INPUT

- PC - 10-90% Staefa Phase Cut
- mA - 0-20mA input (JP1)
- 5V - 0-5V DC input (no JP)
- 10V - 0-10V DC input (JP2)
- PWM - Pulse Width Modulation input
- FLT - 3 Point Floating (Tri-State) input

STANDARD RESISTANCE OUTPUT CODES

- 135Ω - 0-135Ω 3-wire resistance output
- 270Ω - 0-270Ω 3-wire resistance output
- 500Ω - 0-500Ω 3-wire resistance output
- 1KΩ - 0-1000Ω 3-wire resistance output
- 5KΩ - 0-5000Ω 3-wire resistance output
- 10kΩ - 0-10,000Ω 3-wire resistance output

To order just the standard Resistance output Module use part # **RM_XXX** (XXX standard resistance value).
 To order a custom output Resistance output Modules use part # **RM_XXX-XXX** (XXX-XXX being the beginning and ending resistance values).

ORDERING CODE EXAMPLES

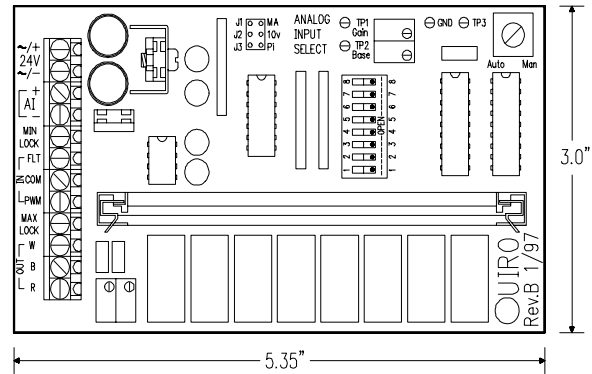
- UIRO//135Ω - Universal input to Std. 135Ω
- UIRO//1KΩ - Universal input to Std. 1000Ω
- UIRO//270-Adj. - Universal input to custom output (Std RM_270 W/UIRO 2k adj. Start/stop points).
- UIRO//1450-1720 - Universal input to custom output (Custom RM_1450 to 1720Ω).
- RM_/500Ω - Replacement Resistor Module Std. 0 to 500Ω range.
- RM_/1100-1430 - Replacement Resistor Module Custom 1100 to 1430Ω range.

UIRO CALIBRATION INSTRUCTIONS FOR 4 TO 20mA OPERATION

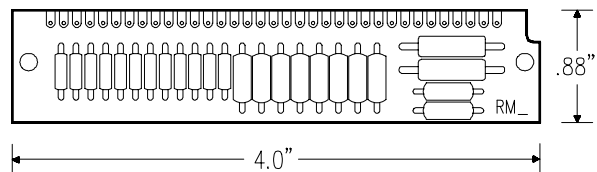
The UIRO is factory configured for 0 to 100% of selected input (0 to 10V or 0 to 20mA). The factory settings for the Base & Gain potentiometers are as follows. [Gain Pot set for 2.5V (Tp1) and the Base pot set for 0V (Tp2)]. When a 4 to 20mA signal is to be inputted into the UIRO, select mA input; and then set the Gain pot for 3.0V (Tp1) and Base pot for 1.0V (Tp2).

Call for other calibration ranges and versions.

PHYSICAL CONFIGURATION



RM PHYSICAL CONFIGURATION



WIRING CONFIGURATION

