

ACTION PAK® AP4830 MODEL

Benefits

- Adjustable Ramp Rate & Setpoint
- Built-in Reference Supply for External Programming
- TTL Setpoint Status
- Easy Plug-in Installation/ Low Mean-Time-to-Repair
- AC Line Powered



DC Programmable Up/Down Ramp Generator

Provides an Output Ramp to Setpoint with Adjustable Ramp Rate

DESCRIPTION

The AP4830 provides a DC output that can be programmed to ramp up or down to a setpoint by supplying 0-5VDC to the Setpoint Control (pin 6) and the Ramp Rate Control (pin 10) inputs.

Table 1: AP4830 Ramp/Setpoint Programming

Control	+5V (Pin 11)	Common (Pin 12)	Open
Setpoint (Pin 6)	100% Output	0% Output	Hold
Ramp Rate (Pin 10)	100 x Base Rate	Base Rate (Fastest)	

An external potentiometer, typically 10KΩ or greater, may be used to attenuate the built-in +5V reference and provide intermediate setpoint and rate values (see Figure 1). Use a rotary switch or relay to select multiple potentiometers for different setpoint and rate selections. To 'hold' the output ramp indefinitely, disconnect the Setpoint Control input (pin 6).

The AP4830 may require an external timing capacitor to set the ramp base rate. Use one of the supplied capacitors or any polarized electrolytic or tantalum capacitor. An external contact closure from pin (13) to pin (15) or a +5V level to pin (15) will immediately reset the output to minimum. The setpoint status is an open collector output (pin 5) which will sink up to 20mA when the ramp reaches the setpoint.



*Protecting the
Integrity of
Industrial
Process Signals*



APPLICATION

Model AP4830 is useful in controlling process equipment requiring voltage or current ramp control. Typical applications include temperature cycling, PID controller setpoint control, motor control and bumpless control transfer.

OPTIONS

- CS** Canadian Standards Association Certification.
- U** Urethane coating of internal circuitry for protection from corrosive atmospheres

CALIBRATION

Top-accessed screwdriver adjustments provide typical $\pm 3\%$ zero and span adjustability. Calibration is referred to input in that adjustments are to correct for input/sensor variations. Zero is adjusted for the specified minimum output with the input at the desired minimum. Span is adjusted for the specified maximum output with the input at the desired maximum. Repeat adjustments for maximum accuracy.

FACTORY ASSISTANCE

For additional information on calibration, operation and installation please contact Action's Technical Services Group. Call toll-free:

800-767-5726

OUTPUT RANGES

Table 2: AP4830 Standard Outputs

0-1V	1-5V	0-1mA
0-5V	0-10V	4-20mA

Table 3: AP4830 Output Limits

Minimum Span		Maximum Output	
Voltage	Current	Voltage	Current
100mV	1mA	10V	50mA

Table 4: AP4830 Capacitor Selection (Nominal Times)*

Base Rate (fastest)	Capacitor (Pins 7, 9)
1 sec.	OPEN
15 sec.	10 μ F
100 sec.	47 μ F
180 sec.	100 μ F
245 sec.	470 μ F

** Slowest ramp = 100 x Base Rate*

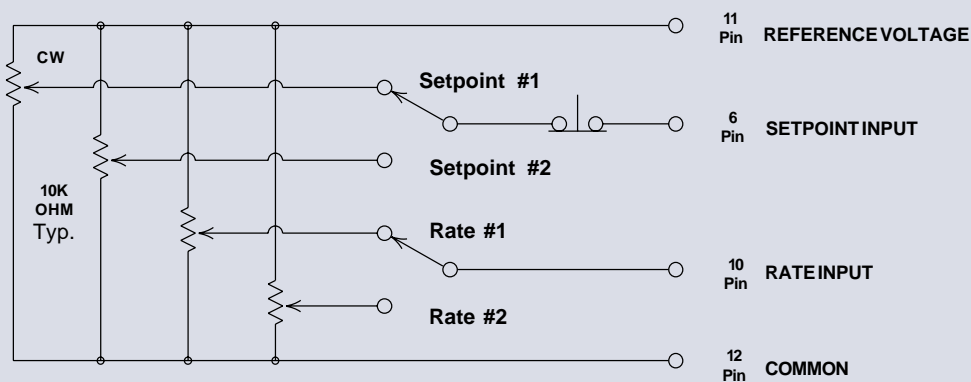


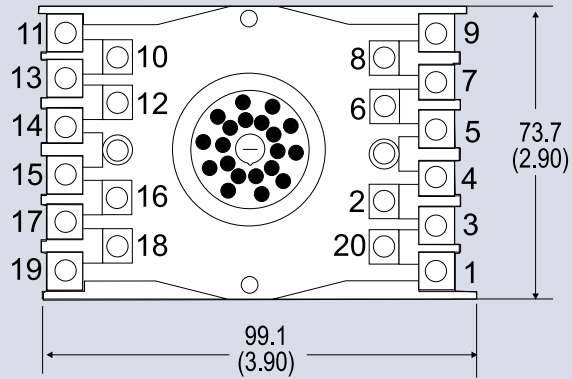
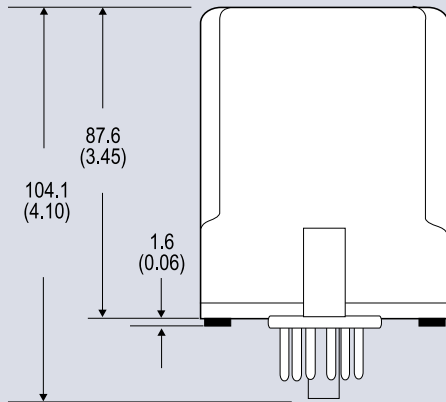
Figure 1: AP4830 Wiring Example

SPECIFICATIONS

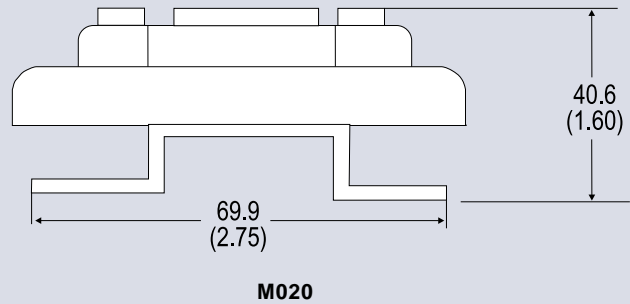
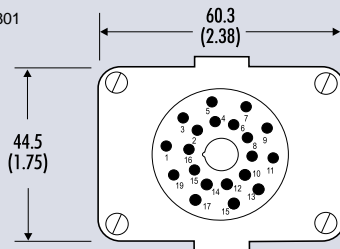
Output Impedance	Voltage Output: <math><10\Omega</math> Current Output: >100K Ω	Stability	Stability: <math><0.003\%/^{\circ}\text{C}</math> Loading: 10mA, max.
Output Drive	Voltage Output: 10mA, max. (1K Ω , min. @ 10V) Current Output: 15V compliance @ 20mA (750 Ω , max)	Setpoint Status	Open-collector, referenced to common. TTL compatible, 20mA sink, max
Stability (15-minute warm up)	$\pm 0.05\%/^{\circ}\text{C}$, typical	Temperature Range	Operating: 0 to 60 $^{\circ}\text{C}$ (32 to 140 $^{\circ}\text{F}$) Storage: -20 to 85 $^{\circ}\text{C}$ (-4 to 185 $^{\circ}\text{F}$)
Ramp Rate Range	100:1, min.	Power	Consumption: 3W typical, 5W max Standard: 120VAC ($\pm 10\%$, 50-400Hz) Available: 240VAC ($\pm 10\%$, 50-400Hz)
Repeatability	Within 1% of previous ramp or setpoint setting	Weight	0.58lbs
Reference Supply	Supply: 5VDC $\pm 5\%$		

DIMENSIONS

Dimensions are in mm (inches)



Retaining Spring
Available: Model M801



Mounting

All Action Paks feature plug-in installation. Model AP4830 uses a 20-pin base (M020).

Ordering Information

Specify:

1. Model: **AP4830**
2. Output Range (see Tables 2, 3)
3. Option: U (see text)

Pin Connections

- | | |
|--------------------------|-------------------------|
| 1 AC Power (Hot) | 12 Reference Common (-) |
| 2 Shield (Gnd) | 13 Reset (contact) |
| 3 AC Power (Neu) | 15 Reset (+5V/contact) |
| 5 Setpoint Status (TTL) | 17 Output (+) |
| 6 SETPOINT Control (+) | 19 Output (-) |
| 7 Timing Capacitor (+) | |
| 9 Timing Capacitor (-) | |
| 10 Ramp Rate Control (+) | |
| 11 +5V Reference | |

Note: To reset, momentarily short pins 13 and 15 or apply +5V to pin 15. Pins 4,8,14,16,18,20 are "No Connection" and may be used for spare termination.

大连爱克新仪器有限公司

地址:辽宁省大连市中山区七七街23号海鹰大厦403室 邮编:116001

电话:0411-82650498 82597851 传真:0411-82650478

网址:爱克新产品 <http://www.actionio.com.cn>

e-mail:sales@actionio.com.cn support@actionio.com.cn

网址: 欧陆产品 <http://www.eurotherm.com.cn>

e-mail:sales@eurotherm.com.cn support@eurotherm.com.cn

