

HORSE POWER RATED

HIGH CURRENT TIMING MODULE

FULLY SOLID STATE ENCAPSULATED
 RATED TO 15 AMPERE / 1HP
Series M643 - INTERVAL ON
 CMOS DIGITAL CIRCUITRY

UL **SP**
 E98340 LR46938

- Life Expectancy –unlimited
- Environment Protected
- Tamper Proof
- No False Operate
- Switches 1800W @120V, 3600W @ 240V
- Small Size – 2"x 2" x 15/16"
- Lightweight – approximately 2.5 oz.
- Rugged
- Transient Protected to 6000V
- Choice of 5, 10, 15 Amp. Load Rating

Application of power simultaneously initiates timing of the preset interval and turns ON the load. At the end of the timed period the timer's switch opens, turning the load OFF. Power to the timer must be applied continuously throughout the timing period. Removal of power causes the timer to reset. The next cycle can then be initiated by application of power.

Control the timing of high power electric heaters, motors, lamps, transformers and other high current loads rated less than 15 amps (150 amps inrush). CMOS digital circuitry is combined with a high current solid state switch. P/C board and internal components are encapsulated in a flame retardant molded housing, fitted with quick connect wiring terminals. Available in all standard voltages and frequencies. Fixed or adjustable timing from .1 seconds to 24 hours.

TIMING DIAGRAM



SPECIFICATIONS

1. Repeat Accuracy: $\pm 0.25\%$
2. Combined Effect of Temperature and Voltage upon Repeat Accuracy: $\pm 2\%$
3. Reset Time: 150 ms.
4. Operating Voltage Tolerance: $\pm 20\%$
5. Load Current: Steady State – 80 ma. Min., 5 Amps, 10 Amps, or 15 Amps Max.
- 6 Voltage Drop: 2.5V Typical at 15 Ampere
7. Leakage Current: 7 ma. max.
8. Dielectric Strength: 1500 VRMS
9. Insulation Resistance: 100 Megohms Min.
10. Input Transient Protection: 3000V 120V UNITS, 6000V 240V units
11. Temperature Ambients: Operating -40°C to +70°C Storage -55°C to +70°C
12. Humidity-Operating: 95% Relative
13. Linearity(Option A or D): $\pm 5\%$ Minimum from 10% to 90% of range
14. Timing Tolerance: $\pm 9\%$ + Tolerance of Rt Std., $\pm 5\%$ Special (Fixed)
15. Maximum Allowable Bracket Temperature: 80°C
16. Isolation Output Switch to Bracket: 2500 VRMS
17. Maximum Inrush: 10 Times Rated Load Current

HOW TO ORDER M643(I) – (T) (V) (P)

SERIE	(I) = CURRENT	(T) = TIME RANGE	(V)=VOLTAGE	(P) = OPTIONS
M643	A = 5 AMP B = 10 AMP C = 15 AMP	P = 0.1 - 5 SEC. 1 = 0.1 - 10 SEC. L = 0.2 - 20 SEC. J = 0.3 - 30 SEC. M = 0.6 - 60 SEC. 2 = 1 - 100 SEC. K = 1.2 - 120 SEC. F = 2 - 180 SEC. E = 3 - 300 SEC. 3 = 10 - 1000 SEC. 4 = 0.1 - 10 MIN. G = 0.3 - 30 MIN. H = 0.6 - 60 MIN. 5 = 1 - 100 MIN. V = 3 - 300 MIN. 6 = 10 - 1000 MIN. D = 1 - 24 HRS.	4 = 24VAC 5 = 120VAC 6 = 240VAC	O - CUSTOMER SUPPLIES OWN POTENTIOMETER OR RESISTOR A - POTENTIOMETER SUPPLIED AS LOOSE PART *B - EXTERNALLY INSTALLED RESISTOR *C - FACTORY FIXED INTERNAL D - TRIMMER POTENTIOMETER INSTALLED ON TERMINALS R - INTERNAL POTENTIOMETER WITH THRU SHAFT S - INTERNAL POTENTIOMETER WITH SCREWDRIVER SLOT
	* For Fixed Time Specify The Value In Seconds, Minutes, Or Hours			MADE IN USA

EXAMPLE P/N: M643B-450 This is an INTERVAL ON 10A Rated Solid State Timer with an adjustable .1 – 10 minute DELAY and an INPUT VOLTAGE of 120 VAC. The customer will supply the time adjust potentiometer or resistor.

AMERICAN CONTROL PRODUCTS
 A DIV. OF PRECISION TIMER CO., INC.
 47 WESTBROOK INDUSTRIAL PARK ROAD
 WESTBROOK, CT. 06498

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TECHNICAL BULLETIN

SOLID STATE TIMING MODULE

PAGE 1
OF 2

DATE
6-4-01

M643

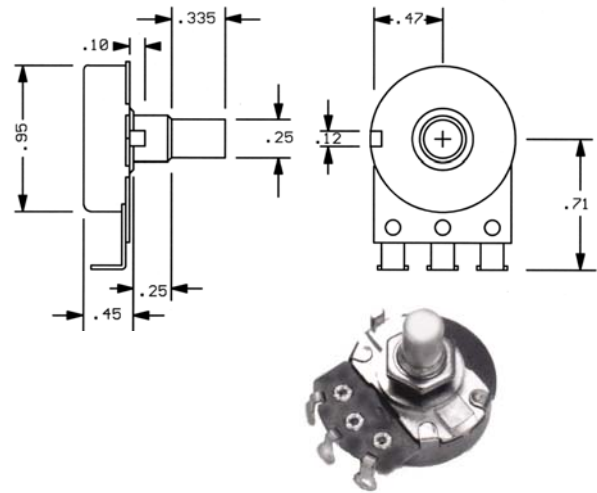
REV
B

CALIBRATION RESISTANCE VS TIME



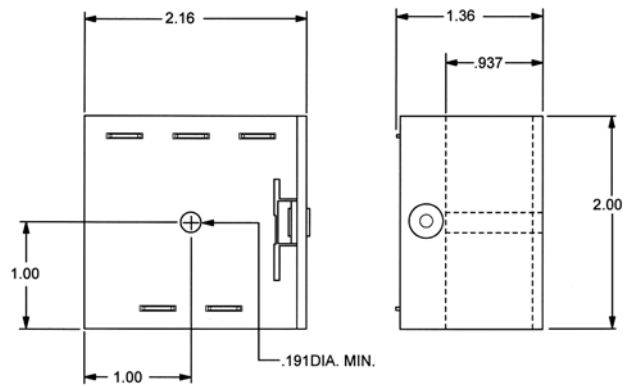
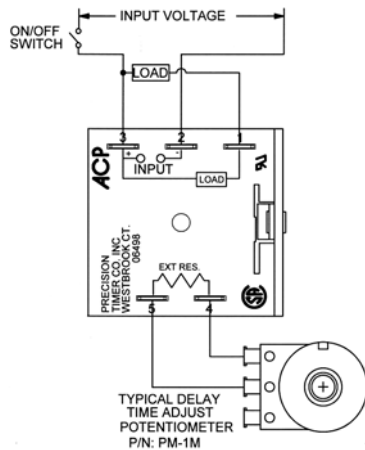
ACCESSORIES – AVAILABLE FROM STOCK

ORDER P/N: **PM – 1M 1 MEGOHM ± 20%**
PM – 100K 100 KOHM ± 20%



OUTLINE DRAWING

TYPICAL WIRING



TYPICAL DERATING

Current Designation	HORSEPOWER	
	120 V	240V
A	1/8	1/6
B	1/4	1/2
C	1/3	1

NOTE: Thermal joint compound is necessary to insure proper heat transfer from the Timing Module mounting surface to the heat sink.

AMBIENT TEMPERATURE °C

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