

UNIVERSAL SERIES - DELAY ON MAKE, INTERVAL & FLASHERS

"UNIVERSAL" voltage in-line Time Capsules are now available in three different timing modes Delay on Make, Interval and Flasher. All models operate with input voltages from 24 to 240 volts AC/DC. They differ only in the timing ranges and how the timing is set. There is no need to observe polarity with any of this series.

438U, 438UI, 438UF - The timing is set by adding a resistor across the middle two terminals. A jumper across the timing terminals produces a one second delay, add 10K per second to increase time. 438USA, 438USAI, 438USA-INT, 438USAF - timing is set by the binary coded ten position DIP switch which enables the time to be set over the entire timing ranges. 438UP, 438UPI, 438PF - timing is controlled by a sealed potentiometer located between the terminals.

Universal Delay on Make 1 Ampere Output, Voltage Drop of 4 Volts

438U (UL/CSA)	19 - 288 VAC/DC	1 - 1000 Seconds
438 UP (UL/CSA)	19 - 288 VAC/DC	1 - 480 Seconds
438USA (UL/CSA)	19 - 288 VAC/DC	1 - 1024 Seconds
P438USA	24 - 240 VAC/DC	1 - 1024 Seconds (3 amp output)
P438USA-1	24 - 240 VAC/DC	2 - 2048 Seconds (3 amp output)



Universal Interval Time Capsule .25 Ampere Output, Voltage Drop of 10 Volts

438UI	24 - 240 VAC/DC	1 - 1000 seconds
438UI-1	24 - 240 VAC/DC	0.1 - 100 Seconds
438UI-2	24 - 240 VAC/DC	10 - 10,000 Seconds
438USAI	24 - 240 VAC/DC	1 - 1024 Seconds
438USA-INT	24 - 240 VAC	1 - 1024 Seconds (1 amp output)
438UPI	24 - 240 VAC/DC	5 - 480 Seconds



Universal Flashers .25 Ampere Output, Voltage Drop of 10 Volts

438UF	19 - 288 VAC/DC	2 - 2000 Flashes Per Second
438USAF	19 - 288 VAC/DC	2 - 2048 Flashes Per Second



438A DELAY ON MAKE TIME CAPSULE

The 438 Time capsule is an all solid state timing module for delay on make control of any one ampere or DC load device. Simply connect the timer in series with the load, there is no need to observe polarity. The timer is available in specified voltages - 12, 24, 48, 115 & 230 V AC or DC. There are five timer ranges available which span 0.1 to 8000 seconds depending on the range selected. Connect a fixed resistor or adjustable potentiometer across the middle two terminals. When power is applied, the 438A will start the time delay period. At the end of this period, full load current is allowed to flow, energizing the load. UL/CSA Listed.

<u>Part Number</u>	<u>Operating Voltage</u>	<u>Timing Ranges/Seconds</u>
438A	-12	-1 (0.1 - 30)
	-24	-2 (1 - 300)
	-48	-3 (2 - 1000)
	-115	-4 (10 - 4500)
	-230	-5 (30 - 8000)





FREEDOM 10 TIME DELAY RELAY

The Freedom 10 Time Delay Relay features CMOS IC control circuitry and operates from any supply voltage from 24 to 240 volts AC or DC, 50/60 Hz. DPDT output contacts are rated from 5 Amps resistive or 1/10 HP motor load at 120/240 VAC. Timing is adjustable from 1 seconds to 15 minutes by using two calibrated controls together in any combination desired. The Freedom 10 is available with either octal or spade termination. UL/CSA Listed.



Freedom 10 Plug In Time Delay Relay 5 Ampere DPDT Output, Octal or Spade

Specify either FREEDOM 10/OCTAL or FREEDOM 10/SPADE

4210 AC FLASHER / 423 DC FLASHER

The model 4210 is an all solid state flasher for use in AC circuits only for loads up to 1 ampere. The output switch is On for as long as it is Off, and is available with fixed flash rates from 1 to 300 flashes per minute. To order, specify:



<u>Part Number:</u>	<u>Voltage</u>	<u>Flash Rate</u>
4210	-12VAC -24VAC -48VAC -115VAC -230VAC	Specify fixed flash rate 1-300 flashes per minute

The model 423 switches the high side of the DC operating voltage when it is "ON." The flash rate can be specified from 1 to 600,000 flashes per minute, with a 50% duty cycle, handling loads to 0.5 amperes. In ordering, specify 423 - operating voltage from 5 - 48 VDC Flash rate in flashes per minute.



<u>Part Number:</u>	<u>Voltage</u>	<u>Flash Rate</u>
423	-5VDC -12VDC -24VDC -48VDC	Specify fixed flash rate required from 1-600,000 flashes per minute

MODEL 4608 ON-OFF REPEAT CYCLE TIMER

The model 4608 operates a set of 20 Ampere high power contacts on a repeat cycle basis. The adjustable ON and OFF times are set by the means of a ten position binary coded dip switch on the front of the timer. Both the ON and OFF times can be set from 1 - 1024 seconds in one second increments. Setting the ON portion of the cycle time will not affect the OFF portion and likewise setting the OFF Portion will not affect the ON time setting. It is available in either 115 or 230 volts AC. The output is a set of SPST - NO contacts U/L rated at 20 amperes.

Specify either 4608A-115, or 4608A-230.

4310 INTERVAL / SINGLE SHOT TIMER

The model 4310 can perform as either an interval timer, or as a single shot timer. To use as a single shot timer, jumper across terminals 6 & 7, the load will remain ON for the full timing duration even if the initial switch closure is momentary. Without the jumper, the initial switch must be closed longer than the timing period. The 4310 model controls DC load circuits to 1 Ampere, and AC load circuits up to 10 Amperes with zero voltage switching. This model is available in 12, 24, 48 volts DC, 24, 48, 115, & 230 volts AC in five timing periods. UL, CSA listed.



<u>Part Number</u>	<u>Operating Voltage</u>	<u>Output Rating</u>	<u>Timing in seconds</u>
4310A	-2 (12V DC)	-A (1 Amp)	-1 (0.1 - 30)
	-3 (24V DC)		-2 (1 - 300)
	-4 (48V DC)		-3 (2 - 1000)
	-6 (24V AC)	-B (5 AMP)	-4 (10 - 4500)
	-7 (48V AC)		-5 (30 - 8000)
	-8 (115VAC)		
	-9 (230VAC)		

4710 DELAY ON BREAK SOLID STATE TIMER

The model 4710 is a Delay-On-Dropout timer. Closure of the initiate switch will energize the load. The timing period begins when the initiate switch opens and resets when the switch is reclosed. The load circuit remains energized until the timing period has elapsed, then de-energizes. The model 4710 controls DC loads to 1 ampere, and AC loads to 10 amperes.



<u>Part Number</u>	<u>Operating Voltage</u>	<u>Output Rating</u>	<u>Timing in seconds</u>
4710A	-2 (12V DC)	-A (1 Amp)	-1 (0.1 - 30)
	-3 (24V DC)		-2 (1 - 300)
	-4 (48V DC)		-3 (2 - 1000)
	-6 (24V AC)	-B (5 AMP)	-4 (10 - 4500)
	-7 (48V AC)		-5 (30 - 8000)
	-8 (115VAC)		
	-9 (230VAC)		

4600 & 4610 REPEAT CYCLE TIMERS

This series of timers are a true repeat cycle timer, not an ON-OFF cycle timer. They are used to "turn on" a load circuit for a predetermined period of time, turns off for a period of time and then repeats this cycle for as long and voltage is applied. Once the repeat cycle time window has been established, the energized time can be moved in and out without effecting the length of the repeat cycle time. The model 4600 can control 1 ampere loads and is available in both AC and DC voltages. The model 4610 controls only AC loads upto 10 amperes. There are two different energized ranges available. (-A) has an adjustable energized time in seconds from 0.1 to 50% of the Repeat Cycle time. With the (-B) model the energized time can be set from 50 to 100% of the Repeat Cycle Time. Both models are UL and CSA listed.



<u>Part Number</u>	<u>Operating Volt.</u>	<u>RCT Time Range</u>	<u>ET Time Range</u>	<u>ET Restriction</u>
4600A (1amp)	-1 (12VDC)	-1 (0.2 - 60)	-1 (0.1 - 30)	-A
	-2 (24VDC)	-2 (2 - 600)	-2 (1 - 300)	Energize Time
	-3 (48VDC)	-3 (4 - 2000)	-3 (2 - 1000)	1 - 50% RCT
	-4 (24VAC)	-4 (20 - 9000)	-4 (10 - 4500)	-B
	-5 (48VAC)	-5 (60 - 16,000)	-5 (30 - 8,000)	Energize Time
4610A(10Amp)	-6 (115VAC)			50 - 100% RCT
	-7 (230VAC)			

MODEL 4980 PROGRAMMABLE ON-OFF REPEAT CYCLE TIMER

The model 4980 is a microcontroller based ON-OFF Cycle timer with digital display of timing. There are four internal time base selections - tenths of seconds, seconds, minutes & seconds and hours & minutes. The 4980 controls a SPDT set of contact rated for 20 amperes. During an ON cycle the output relay is energized and the display will count down to zero, at which time the relay de-energizes and the OFF period begins. During an ON portion of the cycle an LED indicator on the front panel will be on. To set the ON or OFF times, simply press the SET TIME switch while holding down either the ON or OFF buttons until the programmed time is reached. The cycle time program is kept in memory. Should power fail during a timing cycle the internal memory will back up the time to the last five seconds and upon restoration of power the timer will complete the cycle. The 4980 always remembers the last interval time selected and when first powered up resets to that time. It is available with a choice of three operating voltages of 12 VDC, 120 or 230 volts AC.

Specify: 4980 -1 (12VDC), -2(120VAC) or -3 (230VAC).



4970 / 4972 INTERVAL COUNTDOWN TIMERS

The 4970/4972 are microcontroller based countdown interval timers with digital display of time controlling SPDT power relay contacts rated for 20 amperes. During a timing cycle the output relay is energized and the display counts down to zero, at which time the output relay contacts de-energize. Both of these timers feature four internal time basis - tenths of seconds, seconds, minutes and seconds, and hours and minutes. UP/DOWN buttons are used to adjust time which is displayed on a four digit red LED. Preset time is kept in non-volatile memory. The 4970 is available with input voltages of 12VDC, 115 and 230VAC.

To order, specify 4970 (-1) 12VDC, (-2) 115VAC, (-3) 230VAC.

The 4972 has the same specifications as the 4970, but the control of the starting, stopping and resetting is accomplished by a remote switch, 20 amp SPST contacts. It also features a voltage selection switch on the back which can be set at either 115VAC or 230VAC.

To order, specify 4972



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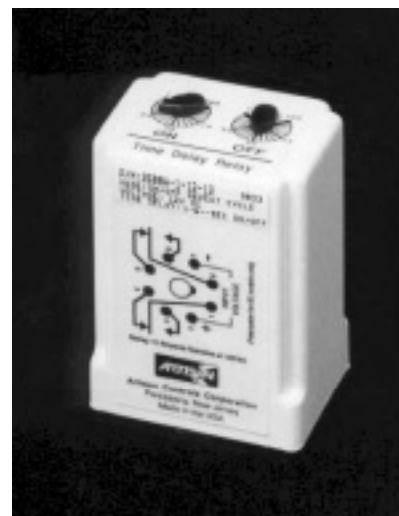
TIMERS & FLASHERS

"NEW"

INTRODUCING ARTISAN'S 2000 SERIES TIME DELAY RELAYS

"NEW"

- * Low Cost
- * 12 Amp Output Contacts
- * Digital Circuitry
- * Transient Protected
- * Potentiometer Adjustable
- * Coarse & Fine Timing Calibration
- * Wide Voltage Selection
- * UL/Cu/CE Pending
- * Timing Repeatability +/-2%
- * Five Modes of Operation
 - * Interval (2300 Series)
 - * Single Shot (2310 Series)
 - * Delay on Make (2410 Series)
 - * Repeat Cycle (2600 Series)
 - * Delay on Break (2710 Series)


"NEW"

The new 2000 Series timers are here! Designed to be both rugged and reliable, these timers are also competitively priced. Dual Pot Timing Adjustments on each timer make it very easy to setup the time delays. The 2300, 2410 and 2600 have 12 Amp, DPDT relay contact, the 2310 and 2710 series have SPDT contacts @ 12 Amps. The 2000 Series timers are available in standard octal terminations. Octal din rail sockets are not included with timers and are sold separately.

Specify modes of operation, voltage and time range when ordering.

TIMING MODE:	MODEL NO .	OPERATING VOLTAGE	TIME RANGE (in seconds)
Interval	2300A	-2 (12VDC)	-1 (0.1-30)
Single Shot	2310A	-3 (24VDC)	-3 (2-1000)
Delay On Make	2410A	-6 (24VAC)	-5 (30-8000)
Cycle Timer	2610A	-8 (115VAC)	
Delay on Break	2710A		