



**365C Series**  
**Long Ranger Timer**

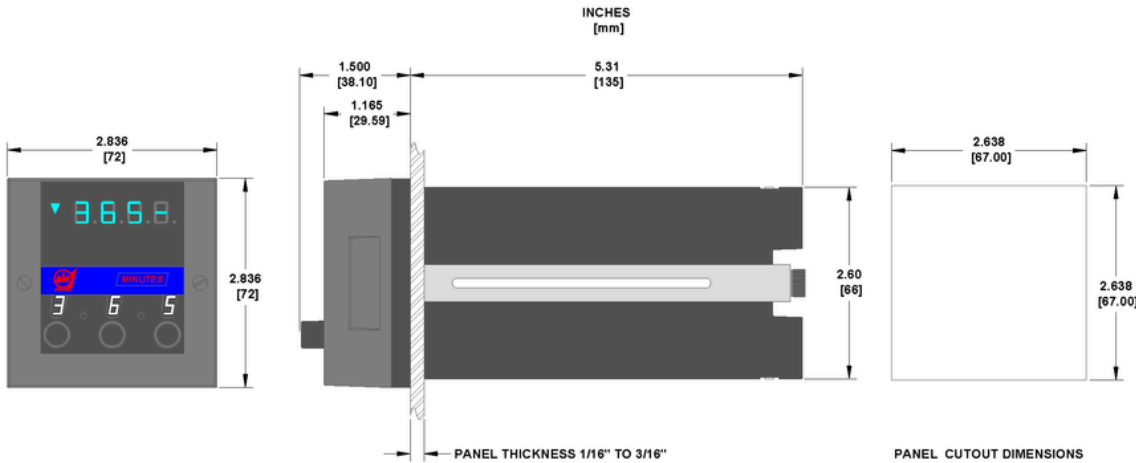
**Description**

The 365C Timer is a microprocessor based digital timer with three rotary switches for setting and adjustment of the Preset. The Preset can be any three-digit value from .01 Sec to 999 Hrs. The Decimal and Range are switch selectable. The high-intensity blue vacuum fluorescent display is DIP switch selectable to Timeup or Timedown. Two heavy duty 7A DPDT relays provide instantaneous, interval or delayed output control. Plug-in panel mounting allows easy replacement without the removal of field wiring.

**Mounting**

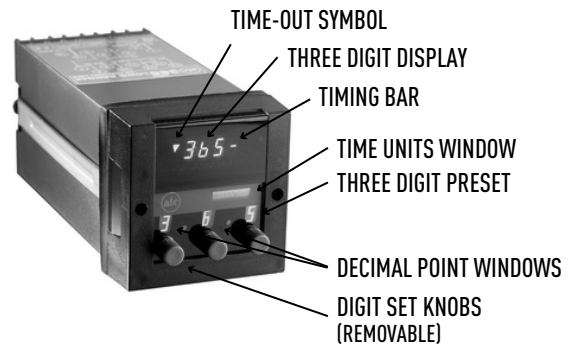
1. Cut out a 2 5/8" square mounting hole.
2. Mount timer to housing before mounting in the panel. Make sure the rubber gasket is flush with timer bezel before tightening the screws.
3. Slide housing with timer (as pictured above) through cut out until the gasket is against panel. Be sure there are no ripples in gasket and it is flat and flush to panel.
4. Holding the timer in place install the aluminum mounting bracket around the timer housing and slide it forward until the ends contact the rear of the panel.
5. Install the black insulator over rear of bracket using the two screws provided and hand tighten the two screws until the Timer housing is fastened securely to the panel.
6. The two (2) front screws securing the timer in the housing should be torqued to 4 inch pounds.

**Dimensions**



**The Display**

A high intensity blue vacuum fluorescent display consists of three digits and a decimal point. There is a horizontal timing bar "-" which appears to the right of the display and blinks once per second during timing. This is useful in showing that the timer is timing especially when the digits do not change rapidly as in the hours ranges. There is also a triangular timed out symbol ▼ which lights when the delayed relay is energized at time-out. The timing bar blinks rapidly at time-out as well.



## Changing the Display Mode of Operation

### (ARRANGEMENT 30 MODELS)

Depending on the position of an internal DIP switch, the 365's three-digit display will TIMEUP & STOP (Time up to the preset time, transfer delayed relay and stop timing. Showing elapse time).

TIMEDOWN & STOP (Time down to zero from the preset transfer delayed relay, and stop timing. Showing remaining time).

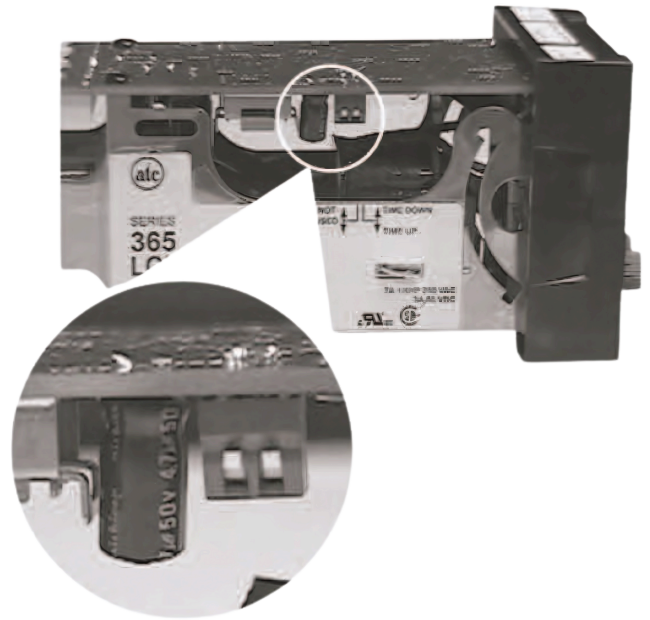
### (ARRANGEMENT 50 MODELS)

Depending on the position of an internal DIP switch, the 365's three-digit display will TIMEUP & GO (Time up to the preset time, transfer delayed relay, and continue timing until unit is reset).

TIMEDOWN & GO (Time down to zero from the preset time, transfer delayed relay and continue timing up from zero giving a direct overshoot reading. Timing will continue until reset).

### (ARRANGEMENT 10 MODELS)

These units do not have a DIP switch or digital display. The display is a blinking LED which blinks once per second during timing and blinks rapidly at time-out.



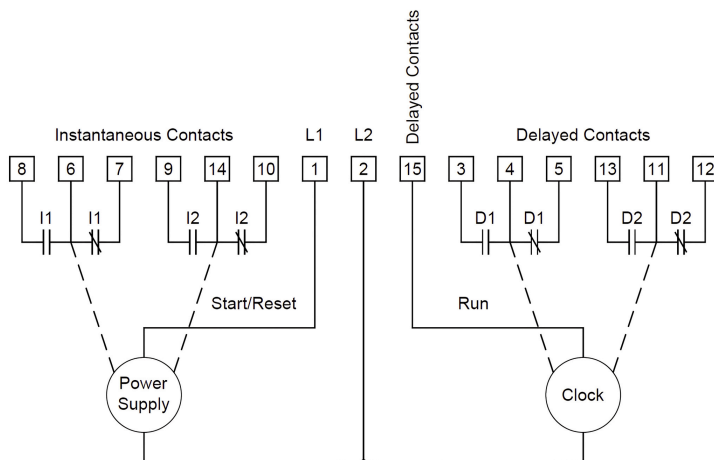
## Adjusting the Rotary Switches

The time preset is set with the rotary switch knobs located below each digit. These knobs can be rotated in either direction (CW or CCW). The time preset can be adjusted during timer operation, this will result in an immediate recalculated change in the timing cycle. Setting all three digits to zero will cause an instant time-out of the timer.

## Operation

When power is applied to terminals 1 & 2 and 15 of the timer, the instantaneous relay is energized and its contacts change state. The timer starts timing, indicated by the display. The timing bar "-" blinks slowly and the digital display indicates elapse time (Timeup & Stop) or time remaining (Timedown & Stop). When the preset value is reached, the display stops, the timing bar blinks rapidly, the triangular indicator "D" lights, and the delayed relay energizes and its contacts change state. The timer remains in this timed-out condition until reset by removing power from terminal 1 for at least 60 msec. At reset, both relays revert back to their shelf state (without power).

## Wiring

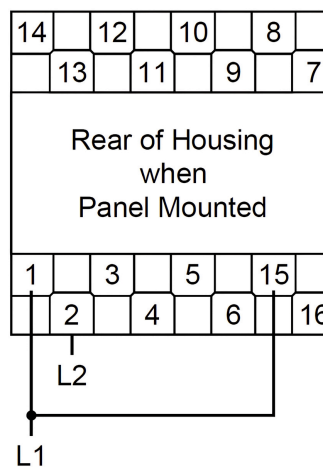


## Changing the Timing Ranges

Decimal Point Location can be changed with the white plastic lever arm mounted behind the front face of the timer. This lever arm moves into three positions (XXX, XX.X, X.XX). With finger force you can change the position and at the same time observe the front of the timer. This sets the decimal point electronically as well as mechanically.

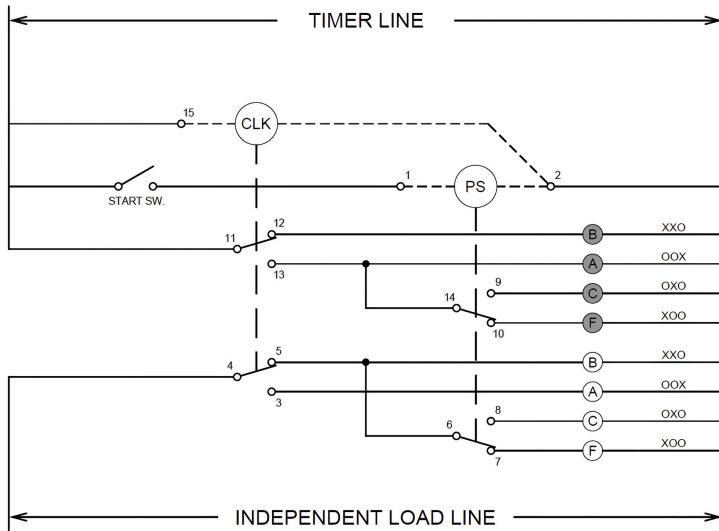
SEC-MIN-HRS can be changed by moving a small arm located in a slotted arc on the side plate of the timer. Depressing this arm slightly with a pencil or pen point allows selection of any one of three ranges. This sets the range electronically as well as graphically in the window on the front of the timer.

## Typical Housing

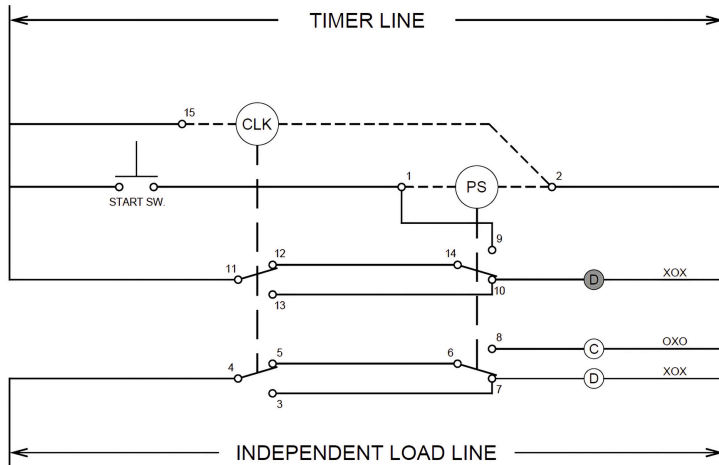


## Typical Installations

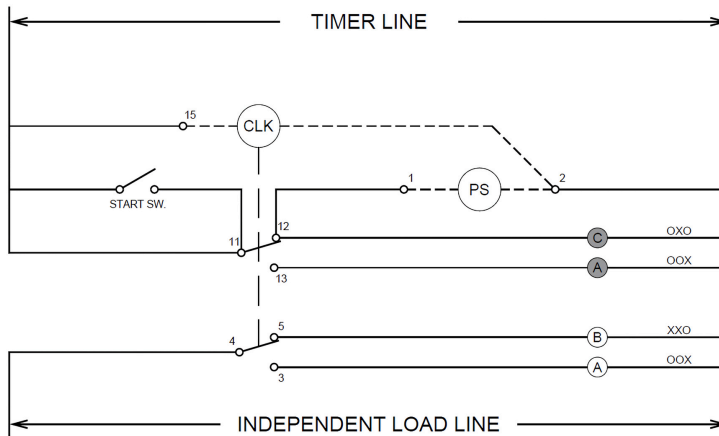
### SUSTAINED START



### MOMENTARY START



### REPEAT CYCLE PULSE

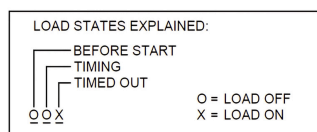


Load A pulses on for approximately 50ms.

### KEY SYMBOLS

- POWER SUPPLY
- CLOCK
- DEPENDENT LOADS
- INDEPENDENT LOADS
- LOAD DE-ENERGIZED
- LOAD ENERGIZED
- SUSTAINED SWITCH CONTACT
- MOMENTARY SWITCH CONTACT

**NOTE:**  
All timers shown in "before start" position.  
Diagrams shown with power off unless otherwise marked.  
Maximum load current through any load carrying contact is 7 amperes.



## Specifications

### Models

Arrangement "30," with digital display available for On-Delay operation at 120, 240 or 24VAC and 24VDC

### Timing Ranges

Switch-selectable ranges of 0-9.99, 0-99.9 and 0-999 SEC, MIN or HR

### Timing Modes

Single Cycle: interval or delayed

Repeat Cycle: pulse-clocked at 50 to 80 mSEC (will be constant for a given unit)

### Reset Time

Clocked at 60 mSEC

### Display Cycle Progress

3 digit display, 0.3 inch, high-intensity, blue

programmable: DOWN and STOP, DOWN and GO, UP and STOP, or UP and GO

Time Out Symbol: ▼ display (left); energized at time-out.

### Timing Bar

display (right); blinks once per second during cycle, rapidly after time-out

### Clock Input (terminal 15)

120VAC 95-132VAC, 10mA max. current at 120V

240VAC 190-264VAC, 10mA max. current at 240V

24VAC 19.2-26.4VAC, 20mA max. current at 24V

24VDC 19.2-26.4VDC (5% ripple), 5mA max. current at 24V

### Temperature Rating

32°F to 122°F (0° to 50°C)

### Power Requirements

120VAC, 95-132VAC, 50 or 60Hz | Inrush - .3A | Running - 0.06A at 120VAC

240VAC, 216-264VAC, 50 or 60Hz | Inrush - .15A | Running 0.03A at 240VAC

24VAC, 19.2-26.4VAC, 50 or 60Hz | Inrush - 1A | Running 0.25A at 24VAC

24VDC, 19.2-26.4VDC, 5% ripple | Running 0.120A at 24VDC

### Load Relay

Number: one instantaneous and one delayed

Type: DPDT, Form C

Operate Time: 13ms, max.

Release Time: 10ms, max.

Contact Ratings: 7A at 120, 240, or 24VAC 1/6 HP

Life: 5 million operations (no load)

### Repeat Accuracy

± .001% ± .010 SEC of setting

### Setting Accuracy

± .01% ± .030 SEC of setting

### Terminals

16 screw terminals accessible at rear.

### Housing

72mm x 72mm (9/64 DIN), plug-in design, gasketed, dust-resistant when panel mounted.

Standard: hardware is provided for front-of-panel mounting.

Optional: surface-mounting brackets with front-facing terminals.

### Weight

Net: AC 1lb. 6oz. | DC 14oz.

Shipping: AC 2lbs. | DC 1lb. 8oz.

## Model Number

MODEL NUMBER	365C				P	
RANGE						
0 to 0 to 9.99, or 99.9 or 999 SEC, MIN, or HR	300					
Special	000					
VOLTAGE & FREQUENCY						
24 VDC		N				
120 VAC, 50-60 Hz		Q				
240 VAC, 50-60 Hz		R				
24 VAC, 50-60 Hz		T				
ARRANGEMENT						
With display, ON-delay/Time up or down and stop (reset on power failure)		30				
Time up or down and go		50				
FEATURES						
Basic Plug-In Unit			P			
Standard Unit					X	
Special						K
ACCESSORIES						
Surface mounting bracket kit						353-260-27-00
Retrofit kit						305-265-61-70
48 VDC resistor kit						365-260-25-00
125 VDC resistor kit						365-260-26-00
1/4 DIN to 72mm Panel Mount Adapter						305-265-61-00

## A Word About Safety

Most of ATC's products are designed for general and not for specific applications. Because of this, we usually are not aware of how they eventually will be used. However, they are frequently employed in controlling automatic machinery or processes. Although ATC makes products of high reliability, every product, given enough time, can be expected to fail. Statistically, devices can fail after a short period of time or a long period of time or anything in between. In essentially all cases, failure means failure to provide a logic signal or power to an electric load when it should or to provide it when it should be absent. Less often, failure means failure to meet some other specification. But, in all cases, it means to do something unwanted or unexpected. Since the failure of automatic machinery or processes can create hazardous conditions for personnel or property, whatever the definition of failure might be, it is necessary to consider the consequences of failure and design in such a way that failure will not create a hazard to personnel or property. The design must insure that any failure will result in a fail safe condition and there will be no danger to personnel and/or property involved in the use of the product. Designs incorporating controls of any kind should be carefully considered to provide for their eventual failure.

## Warranty Statement

### LIMITED WARRANTY

A. Automatic Timing and Controls products are warrant to the first direct purchaser of its products against defective material and workmanship for a period of one (1) year from the date of purchase. The Company will either repair, replace, or refund the purchase price, at its option, if the product proves to be defective provided the purchaser notified The Company of the alleged defect within a reasonable time of its discovery and returns the products to The Company for evaluation, free of any liens and encumbrances. The purchaser shall return the alleged defective products and address notification of alleged defects to either of the addresses shown below.

Diversified Electronics products are warrant to the first direct purchaser of its products against defective material and workmanship for a period of ten (10) years from the date of purchase, with exceptions to some products denoted with a one (1) and three (3) year warranty respectively. The Company will either repair, replace, or refund the purchase price, at its option, if the product proves to be defective provided the purchaser notified The Company of the alleged defect within a reasonable time of its discovery and returns the products to The Company for evaluation, free of any liens and encumbrances. The purchaser shall return the alleged defective products and address notification of alleged defects to either of the addresses shown below.


B. This warranty is expressly in lieu of all other warranties expressed or implied, including the warranties of merchantability and fitness for use and all other obligations or liabilities on the part of The Company, and The Company neither assumes nor authorized any other person to assume for it, and other liability in connection with the sale hereunder. The Company disclaims any liability for product defects that are due to product misuse, improper product selection, or misapplication.

C. The company shall not be liable for customer's costs, lost profits, good will or other special or consequential damages. The Company's liability in all events is limited and shall not exceed, the value of merchandise involved.

D. Remedies- Any controversy or claim arising out of or relating to the contract, or the breach thereof, shall be settled by arbitration in Hancock County, State of West Virginia in accordance with the commercial arbitration Rule of the American Arbitration Association, and judgment on the award render by the arbitrator(s) may be entered in a court having jurisdiction thereof.

E. Title and ownership of the products will remain with The Company until such time that products are totally paid for and payment has been acknowledged by The Company for said products. Buyer accepts and agrees to retaining records relating to the transfer/sale of said products in event of non-payment by the buyer for the products in question.

### PROP 65 Compliance Statement

 **WARNING:** This product can expose you to chemicals including Lead and/or Chromium (hexavalent compounds) which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).