

365C Series

Automatic Timing & Controls

automatictiming.com

800.727.5646



LONG-RANGER Timer

The ATC 365C is the latest generation in the popular long-ranger timer series. The microprocessor-based digital timer is equipped with three rotary knobs for setting and adjustment of the Preset. The Preset can be any three-digit value from .01 SEC to 999 HR. 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.

COMPUTATION: Through its internal microcomputer, the 365B keeps track of the set point throughout the time cycle. Whenever there is a change in set point, even during a cycle, it instantly re-computes the time remaining and accurately determines time-out. This unique capability is especially valuable in the time-down modes as it allows you to shorten a cycle without loss of accuracy.

POSITIVE RESET TIME AND PULSE LENGTH: Digitally clocked by the micro-computer, the 365C's reset time is consistently of the same duration, regardless of variations in line voltage, power supply or time cycle. As a result, the 365C is not subject to false reset from momentary power interruptions (less than 30 mSEC). When the 365C operates in repeat-cycle mode, the output pulse is also digitally clocked so that both its occurrence and duration are consistent.

WIDE RANGE: Each 365C Long-Ranger covers the overall span of 0.01 SEC to 999 HR, in nine switch-selected ranges of 0 to 9.99,99.9 or 999 SEC, MIN or HR. The timer can be optimized within any selected range simply by removing appropriate selector knobs (e.g. with the timer in the 9.99 SEC range, you can obtain a tamper-proof span of 0.99 by setting the left selector at 0 and removing the knob).

PROGRAMMABLE DISPLAY: Depending on the position of an internal jumper, the 365C's three-digit cycle progress display will time UP to or DOWN from the set point; after time-out, it will either STOP or GO (i.e. display the time elapsed after time-out). To the right of the three-digit display, a timing bar "■" blinks once per second during the timing cycle and rapidly after time-out. At left, a marker "▼" turns on when the delayed relay is energized. The 365C is also available without display but with a pilot light that blinks once per second during the cycle and rapidly after time-out.

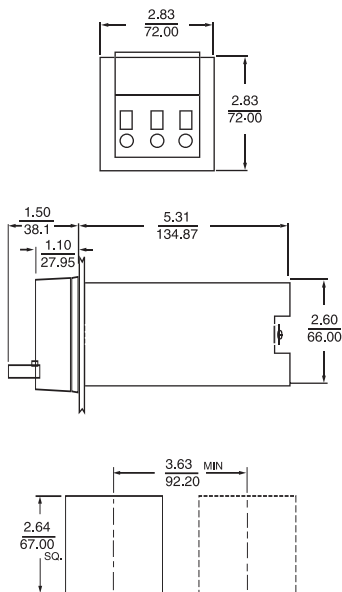
NOISE IMMUNITY: The 365C has formidable defenses against noise: transformer power supply, full-wave bridges, buffered logic. Furthermore its microcomputer detects; and rejects; noise pulses that manage to penetrate its defenses. No industrial timer has ever offered greater noise immunity.

RELIABILITY AND RUGGEDNESS: ATC firmly believes that no industrial timer has ever achieved a higher level of reliability and ruggedness. The 365C's electronic components have no moving parts and are assembled, virtually without hand wiring, from computer-tested circuit boards. Its few mechanical components have been selected for reliable service; the two load relays have a life expectancy of 100,000,000 operations and heavy-duty contacts rated at 7 amps; and the three rotary set point selector switches exhibit extremely low wear.

COMPACT, PLUG-IN AND DUST-TIGHT: Packaged in a 72mm² DIN housing, the 365C occupies 40% less panel space than conventional timers. It is a true plug-in timer that can be replaced in seconds without disturbing housing or wiring. The 365C is also fully gasketed and O-ring sealed to be dust and water-tight.

SELF DIAGNOSTICS: The time will display "FAIL" anytime there is a problem or the knobs are in between digits.

DIMENSIONS (INCHES/MILLIMETERS)

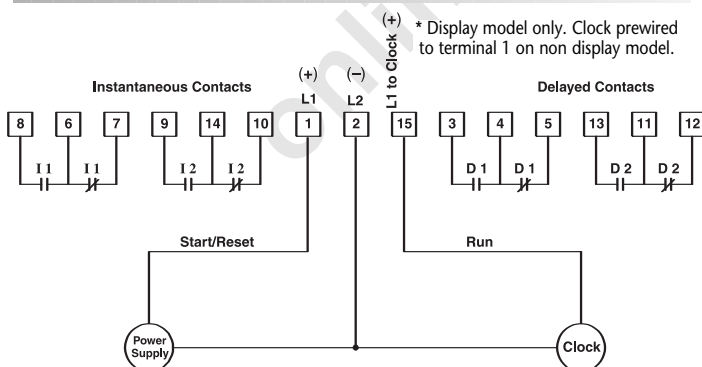


PANEL CUTOUT
SHOWING DISTANCE BETWEEN
ADJACENT CUTOUTS.

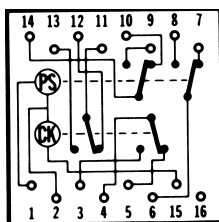
SPECIFICATIONS

MODELS	Arrangement "30," with digital display available for On-Delay operation at 120, 240 or 24 VAC; and 24, 48 or 125 VDC		120 VAC	95-132 VAC, 50 or 60 Hz. Inrush — .3A. Running 0.06A at 120 VAC
RANGES	Switch-selectable ranges of 0-9.99, 0-99.9 and 0-999 SEC, MIN or HR		240 VAC	90-264 VAC, 50 or 60 Hz. Inrush — .15A. Running — 0.03A at 240 VAC
TIMING MODES	Single Cycle	interval or delayed.	24 VAC	19.2-26.4 VAC, 50 or 60 Hz Inrush — 1A. Running — 0.25A at 24 VAC
	Repeat Cycle	pulse-clocked at 50 to 80 mSEC (will be constant for a given unit)	24 VDC	19.2-26.4 VDC, 5% ripple Running — .120A AT 24 VDC
RESET TIME	Clocked at 60 mSEC		Number	one instantaneous and one delayed
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		Type	DPDT, Form C.
	TIME-OUT	▼ display (left); energized at time-out.	Operate Time	P 13 mSEC, max.
TIMING BAR	display (right); blinks once per second during cycle, rapidly after time-out.		Release Time	10 mSEC, max.
CLOCK INPUT (terminal 15) VOLTAGE MODEL	120VAC Model	95-132VAC, 10mA max. current at 120V	Contact Ratings	7A at 120, 240 or 24 VAC 1/6 HP
	240VAC Model	190-264VAC, 10 mA max. current at 240V	Life	100 million operations (no load)
	24VAC Model	19.2-26.4VAC, 20 mA max. current at 24V	REPEAT ACCURACY	± .001% ±.010 SEC of setting
	24VDC Model	19.2-26.4VDC (5% ripple), 5 mA max. current at 24V	SETTING ACCURACY	±.01% + .030 SEC of setting
	125 VDC Model	19.2 to 26.4 VDC 50mA DC Max.	TERMINALS	16 screw terminals accessible at rear
TEMPERATURE RATING	32 to 140°F (0 to 60°C)		HOUSING	72mm ² DIN size; plug-in design; fully gasketed, dust and water-tight in panel mounted installations.
MOUNTING ACCESSORIES (See Accessory section of catalog)	Standard	hardware is provided for front-of-panel mounting.		
	Optional	Surface-mounting brackets with front-facing terminals.		
WEIGHT	NET: AC 1 lb., 6 oz., DC 14 oz.	Shipping: AC 2 lbs. DC 1 lb., 8 oz.		

WIRING



TERMINAL WIRING



MODEL NUMBER >>>>>	365C			P
Range				
0 to 9.99, or 99.9 or 999 SEC, MIN, or HR	300			
Special	000			
Voltage & Frequency				
125 VDC	L			
24 VDC	N			
120 VAC 50-60 Hz	Q			
240 VAC, 50-60 Hz	R			
24 VAC, 50-60 Hz	T			
Special	K			
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				
353-260-27-00:	Surface Mounting Bracket Kit			
305-265-61-70:	Retrofit Kit			

THE 365C DIRECTLY REPLACES 365BA.

Panel Mounted Digital Timers // 365C Series

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OPERATION

As soon as power is applied to terminals 1 & 2 of the timer, the instantaneous relay is energized and changes the states of its associated contacts (8-6-7 & 9-14-10). The timer then looks for terminal 15 (the clock terminal) to receive power. When terminal 15 is powered, the internal clock circuit is enabled and the timer starts to time. When the internal clock time equals the time set on the front face, the delayed relay energizes and changes the states of its associated contacts (3-4-5 & 13-11-12). The timer is reset by removing power from terminal 1 for at least 60 msec. At reset, both relays revert back to their shelf (without power) state.

SPECIAL NOTE FOR UNITS WITHOUT DISPLAYS: On non-display units, terminals 1 & 15 are jumpered together internally. As soon as power is applied, the instantaneous relay energizes and the timer starts to time immediately.

DISPLAY INFORMATION: The digital display can be set to operate in any of 4 modes by simply moving a jumper on the circuit board.

MODE:

- UP & STOP (30PX Time up to time set, transfer delayed relay, and stop timing).
- UP & GO (50PX Time up to time set, transfer delayed relay, and continue timing until unit is reset).
- DOWN & STOP (30PX Time down to zero from time set, transfer delayed relay, and stop timing).
- DOWN & GO (50PX Time down to zero from time set, transfer delayed relay, and continue timing up from zero giving a direct overshoot reading. Timing will continue until unit is reset). All 365C timers are shipped from the factory in the UP & STOP mode.

TYPICAL INSTALLATIONS

KEY SYMBOLS

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

All timers shown in "before start" position. Diagrams shown with power off unless otherwise marked.

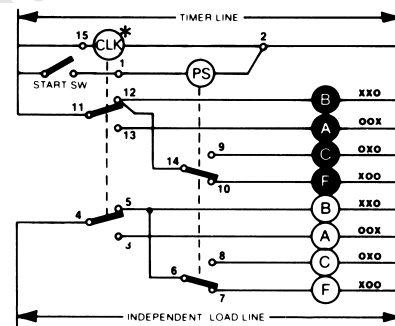
Maximum load current through any load carrying contact is 7 amperes.

ON DELAY Reset on power failure.

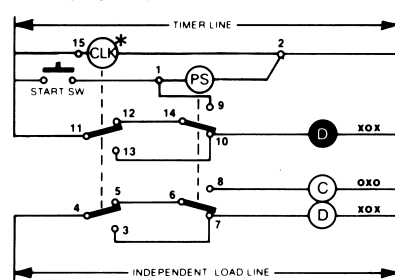
- DELAYED CONTACTS
Contacts transfer simultaneously when unit "times out".

- INSTANTANEOUS CONTACTS
Contacts are transferred when power supply is energized, transferred back as shown when de-energized.

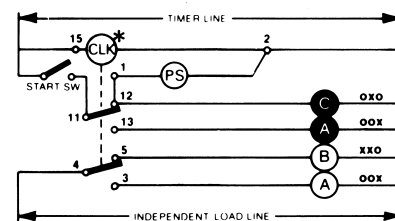
SUSTAINED START



MOMENTARY START



REPEAT CYCLE PULSE



Load A pulses on for approximately 50 mSEC.