

CTF5

LED Preset Add/Subtr. Counter, Timer, Frequency Meter

Features

- 5 Digit Counter, Timer or Frequency Meter
- Input Scaling (0.001 to 9.999) Multiplier
- Bright LED Display .295" (7.5 mm) High
- Count & Preset Range of -19999 to 99999
- Add or Subtract Count Control
- AC or DC Operation
- 10 Year Data Memory
- 24VDC to Power Peripherals

Applications:

Preset batch counting, length measuring, simple positioning, time control, speed control, rate control.

Description:

The CTF5 is a LED preset counter, timer or frequency meter. The following features are programmable: operating mode (output at 0 or preset, with or without autoreset), decimal point, polarity of input (NPN or PNP), output signal latched or timed, gate time (frequency meter), time resolution (Hrs., Min., Sec; timer)

Inputs:

Input A, Input B: Count inputs. Max. count speed is 30 Hz or 10 kHz separately selectable for both inputs.

Gate: Voltage level gate input;

Counter & Freq. Mode - inhibits counts when activated.

Timer Mode - Starts timing when activated.

Reset: Edge triggered reset input; it is connected in parallel with the front reset key and resets the counter to 0 (add) or preset (sub).

Latch: Voltage level input for display hold; when activated, the display "freezes" the current count value while counting continues in the background. The display updates when this input is de-activated.

Key: Voltage level keyboard lock input; when activated, all front keys are disabled.

Selection of Basic Function:

1. Impulse Counter
2. Frequency Meter
3. Timer

IMPULSE COUNTER

Decimal Point: 0 to 3 (for display only)

Scaling Multiplier: 0.001 to 9.999

Output Signal: Timed signal (0.01 to 99.98 sec) or Latched signal (00.0) selectable. (99.99 setting gives inverted latched output- output activates at power on and deactivates when preset is reached)



Polarity: Negative (NPN) or positive (PNP) polarity of inputs. Polarity selected applies to all inputs.

Input Modes:

E1: One count input (Input A) and one count direction input (Input B). If direction input is open, the counter adds, if it is activated the counter subtracts.

E2: Separate inputs, one up input (Input A) & one down input (Input B).

E3: Quadrature input, accepts two pulse inputs 90° ($\pm 15\%$) out of phase for direction control.

E4: Quadrature (x2) input, counts leading and falling edge of input A.

FREQUENCY METER

Gate: Gate time selectable from (0.01 to 99.99 sec) All pulses counted during this time will be displayed for one gate time (i.e. gate time of 1 will display Hz).

Decimal Point: 0 to 3 (for display only)

Polarity: Negative (NPN) or positive (PNP) polarity of inputs. Polarity selected applies to all inputs.

Input Modes: As described under Impulse Counter.

Scaling Multiplier: 0.001 to 9.999

Output Signal: Output activates for selected time (0.01 to 99.98 sec) when display reaches or exceeds preset value; If output time setting is 00.00, the output will activate when display reaches or exceeds the preset and deactivate when below preset. (99.99 output setting gives inverted latched output- output activates at power on and deactivates when preset is reached)

TIMER

Time Resolutions: Times in sec., min. or hrs. with resolution in 0.001, 0.01, 0.1 or 1.0 (depending on decimal).

Polarity: Negative (NPN) or positive (PNP) polarity of inputs. Polarity selected applies to all inputs. (Gate controls timing)

Output Signal: Timed signal (0.01 to 99.98 sec) or Latched signal (00.0) selectable. (99.99 output setting gives run time control latched output- output activates only while timer is running and deactivates when preset is reached.)

Specifications:

Operating Voltage: (All voltages $\pm 10\%$)

- A: 115VAC 50/60Hz
- B: 220VAC 50/60Hz
- C: 11 to 30 VDC
- D: 24VAC 50/60Hz

Power Consumption:

- DC: 100 mA max.
- AC: 4 VA max.

Display: 7 segment LED 5 digit 0.295" (7.5 mm) high.

Count Speed: 30 Hz or 10 kHz (7.5 kHz for input mode E4 "Quad x2"); 1 kHz for autoreset without count loss (600 Hz for input mode E4 "Quad x2") separately dip-switch selectable for both inputs.

Min. Pulse width for Control Inputs: 5 msec

Input Impedance: Approx. 10 kOhm

Input Sensitivity:

- Logic "0": 0 to 1 VDC
- Logic "1": 4 to 30 VDC

Control Output:

Relay: SPDT 3A relay, 250 VAC / 300 VDC max. Switching current for DC min. 30 mA

Opto-Isolated Output: Open collector and emitter.

Max. Voltage: 30 VDC

Max. Current (ON state): 5 mA @ 0.4 V drop; 15mA @ 2.0 V drop

Response Time:

Relay: Approx. 6 msec

Opto-Isolated: Approx. 1 msec

Output Power (AC powered units): 24 VDC -40% / +15%, 80mA, unregulated

Memory: min. 10 years or 10^6 memory cycles

Operating Temperature: 32° F to + 122° F (0° C to +50° C)

Noise Immunity: EN 55011 class B and prEN 50082-2

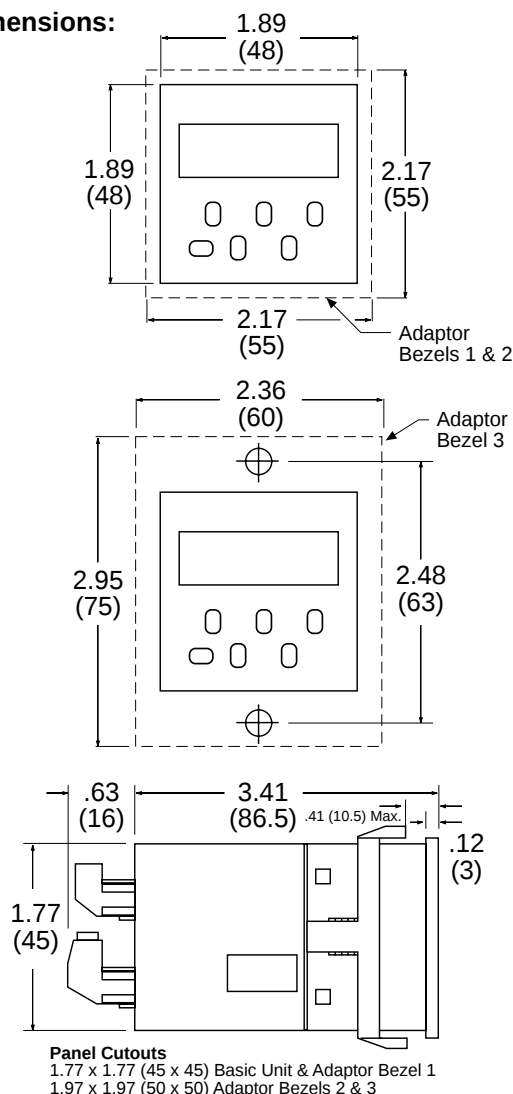
Storage Temperature: - 13° F to + 158° F (-25° C to +70° C)

Weight: Approximately 9 oz. (240g) (AC version with relay)

Protection: NEMA 4 /IP65 (front)

Approvals: UL File# E167238, CE Pending

Dimensions:



Adaptor Bezels 1, 2 & 3 Supplied

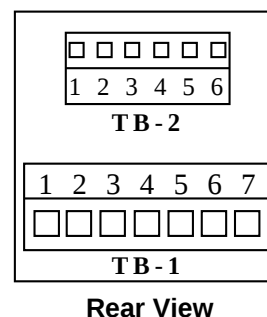
Terminal Designations:

AC Supply Wiring

TB-1		TB-2	
Term. #	Description	Term #	Designation
1	+24 VDC Output	1	INPUT A
2	0 VDC (Ground)	2	INPUT B
3	Relay - C (Opto Emitter)	3	GATE INPUT
4	Relay - NO	4	RESET
5	Relay - NC (Opto Collector)	5	LATCH
6	AC Input	6	KEY
7	AC Input		

DC Supply Wiring

TB-1		TB-2	
Term. #	Description	Term #	Designation
1	No Connection	1	INPUT A
2	No Connection	2	INPUT B
3	Relay - C (Opto Emitter)	3	GATE INPUT
4	Relay - NO	4	RESET
5	Relay - NC (Opto Collector)	5	LATCH
6	(+) 11-30 VDC Supply	6	KEY
7	(-) 0VDC Supply (Ground)		



How To Order:

EXAMPLE CTF5 A 1

Series

Operating Voltage

- A = 115 VAC
- B = 230 VAC
- C = 11 to 30 VDC
- D = 24 VAC

Outputs

- 0 = Relay
- 1 = Opto-Isolated collector and emitter