

Specifications

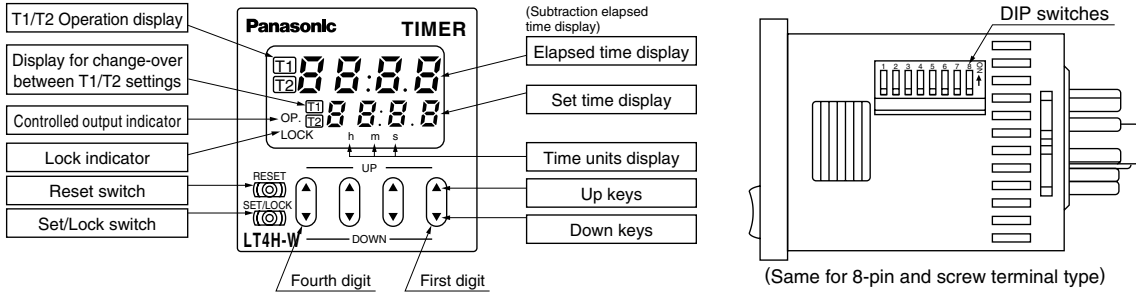
Item	Type	Relay output type		Transistor output type	
		AC type AC/DC type	DC type	AC type AC/DC type	DC type
Rating	Rated operating voltage	100 to 240 V AC, 24 V AC, 24 V AC/DC	12 to 24 V DC	100 to 240 V AC, 24 V AC, 24 V AC/DC	12 to 24 V DC
	Rated frequency	50/60 Hz common	—	50/60 Hz common	—
	Rated power consumption	Max. 10 V A	Max. 3 W	Max. 10 V A	Max. 3 W
	Rated control capacity	5 A, 250 V AC (resistive load)		100 mA, 30 V DC	
	Time range	9.999 s, 99.99 s, 999.9 s, 9999 s, 99 min 59 s, 999.9 min, 99 h 59 min, 999.9 h (selected by DIP switch)			
	Time counting direction	Addition (UP)/Subtraction (DOWN) (2 directions selectable by DIP switch)			
	Operation mode	A (Power ON delay 1), A2 (Power ON delay 2), B (Signal ON delay), C (Signal OFF delay), D (Pulse one-shot), E (Pulse ON delay), F (Signal Flicker), G (Totalizing ON delay) (selectable by DIP switch)			
	Start/Reset/Stop input	Min. input signal width: 1 ms, 20 ms (2 directions by selected by DIP switch) (The 8-pin type does not have a stop input.)			
	Lock input	Min. input signal width: 20 ms (The 8-pin type does not have a lock input.)			
	Input signal	Open collector input Input impedance: Max. 1 kΩ; Residual voltage: Max. 2 V Open impedance: 100kΩ or less, Max. energized voltage: 40V DC			
	Indication	7-segment LCD (LT4H, LT4H-L common), Elapsed value (backlight red LED), Setting value (backlight yellow LED)			
Power failure memory method	EEP-ROM (Min. 10 <sup>5</sup> overwriting)				
Time accuracy (max.)	Operating time fluctuation	± (0.005 % + 50 ms) in case of power on start ± (0.005 % + 20 ms) in case of input signal start		[ Operating voltage: 85 to 110% Temperature: -10 to +55°C +14 to +131°F Min. input signal width: 1ms ]	
	Temperature error				
	Voltage error				
	Setting error				
Contact	Contact arrangement	Timed-out 1 Form C	Timed-out 1 Form A (Open collector)		
	Contact resistance (Initial value)	100 mΩ (at 1 A 6 V DC)	—		
	Contact material	Ag alloy/Au flash	—		
Life	Mechanical (contact)	Min. 2 × 10 <sup>7</sup> ope. (Except for switch operation parts)		—	
	Electrical (contact)	1.0 × 10 <sup>5</sup> ope. (At rated control voltage)		Min. 10 <sup>7</sup> ope. (At rated control voltage)	
Electrical	Allowable operating voltage range	85 to 110 % of rated operating voltage			
	Breakdown voltage (Initial value)	2,000 Vrms for 1 min: Between live and dead metal parts (11-pin) 2,000 Vrms for 1 min: Between input and output 1,000 Vrms for 1 min: Between contacts		2,000 Vrms for 1 min: Between live and dead metal parts (Pin type) 2,000 Vrms for 1 min: Between input and output	
	Insulation resistance (Initial value)	Between live and dead metal parts Min. 100 MΩ: Between input and output (At 500V DC) Between contacts		Min. 100 MΩ: Between live and dead metal parts Between input and output (At 500V DC)	
	Operating voltage reset time	Max. 0.5 s			
	Temperature rise	Max. 65° C (under the flow of nominal operating current at nominal voltage)		—	
Mechanical	Vibration resistance	Functional	10 to 55 Hz: 1 cycle/min single amplitude of 0.35 mm .014 inch (10 min on 3 axes)		
		Destructive	10 to 55 Hz: 1 cycle/min single amplitude of 0.75 mm .030 inch (1 h on 3 axes)		
	Shock resistance	Functional	Min. 98 m 321.522 ft./s <sup>2</sup> (4 times on 3 axes)		
		Destructive	Min. 294 m 964.567 ft./s <sup>2</sup> (5 times on 3 axes)		
Operating conditions	Ambient temperature	-10° C to 55° C +14° F to +131° F			
	Ambient humidity	Max. 85 % RH (non-condensing)			
	Air pressure	860 to 1,060 h Pa			
	Ripple rate	—	20 % or less	—	20 % or less
Connection	8-pin/11-pin/screw terminal				
Protective construction	IP66 (front panel with rubber gasket)				

Applicable standard

Safety standard	EN61812-1	Pollution Degree 2/Overvoltage Category II
EMC	(EMI)EN61000-6-4 Radiation interference electric field strength	EN55011 Group1 ClassA EN55011 Group1 ClassA
	Noise terminal voltage (EMS)EN61000-6-2 Static discharge immunity	EN61000-4-2 4 kV contact 8 kV air
	RF electromagnetic field immunity	EN61000-4-3 10 V/m AM modulation (80 MHz to 1 GHz) 10 V/m pulse modulation (895 MHz to 905 MHz)
	EFT/B immunity	EN61000-4-4 2 kV (power supply line) 1 kV (signal line)
	Surge immunity	EN61000-4-5 1 kV (power line)
	Conductivity noise immunity	EN61000-4-6 10 V/m AM modulation (0.15 MHz to 80 MHz)
	Power frequency magnetic field immunity	EN61000-4-8 30 A/m (50 Hz)
	Voltage dip/Instantaneous stop/Voltage fluctuation immunity	EN61000-4-11 10 ms, 30% (rated voltage) 100 ms, 60% (rated voltage) 1,000 ms, 60% (rated voltage) 5,000 ms, 95% (rated voltage)

# LT4H-W

## Part names



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		AC type	DC type	AC type	DC type
Rating	Rated operating voltage	100 to 240 V AC, 24 V AC	12 to 24 V DC	100 to 240V AC, 24V AC	12 to 24 V DC
	Rated frequency	50/60 Hz common	—	50/60 Hz common	—
	Rated power consumption	Max. 10 V A	Max. 3 W	Max. 10 V A	Max. 3 W
	Rated control capacity	5 A, 250 V AC		100 mA, 30 V DC	
	Time range	99.99s, 999.9s, 9999s, 99min59s, 999.9min, 99h59min, 999.9h, 9999h (selected by DIP switch)			
	Time counting direction	Addition (UP)/Subtraction (DOWN) (2 directions selectable by DIP switch)			
	Operation mode	Pulse input: Delayed one shot, OFF-start flicker or ON-start flicker Integrating input: Delayed one shot, OFF-start flicker or ON-start flicker			
	Start/Reset/Stop input	Min. input signal width: 1 ms, 20 ms (2 directions by selected by DIP switch) (The 8-pin type does not have a stop input.)			
	Lock input	Min. input signal width: 20 ms (The 8-pin type does not have a lock input.)			
	Input signal	Open collector input Input impedance: Max. 1 kΩ; Residual voltage: Max. 2V Open impedance: 100 kΩ or less, Max. energized voltage: 40 V DC			
Indication	7-segment LCD, Elapsed value (backlight red LED), Setting value (backlight yellow LED)				
Power failure memory method	EEP-ROM (Min. 10 <sup>5</sup> overwriting)				
Time accuracy (max.)	Operating time fluctuation	$\pm (0.005\% + 50 \text{ ms})$ in case of power on start $\pm (0.005\% + 20 \text{ ms})$ in case of input signal start [ Operating voltage: 85% to 110% Temperature: $-10^{\circ}\text{C}$ to $+55^{\circ}\text{C}$ $+14^{\circ}\text{F}$ to $+131^{\circ}\text{F}$ Min. input signal width: 1ms ]			
	Temperature error				
	Voltage error				
	Setting error				
Contact	Contact arrangement	Timed-out 1 Form C		Timed-out 1 Form A (Open collector)	
	Contact resistance (Initial value)	100 mΩ (at 1 A 6 V DC)		—	
	Contact material	Ag alloy/Au flash		—	
Life	Mechanical (contact)	Min. $2 \times 10^7$ ope. (Except for switch operation parts)		—	
	Electrical (contact)	Min. 10 <sup>6</sup> ope. (At rated control voltage)		Min. 10 <sup>7</sup> ope. (At rated control voltage)	
Electrical	Allowable operating voltage range	85 to 110 % of rated operating voltage			
	Breakdown voltage (Initial value)	2,000 Vrms for 1 min: Between live and dead metal parts (11-pin type only) 2,000 Vrms for 1 min: Between input and output 1,000 Vrms for 1 min: Between contacts		2,000 Vrms for 1 min: Between live and dead metal parts (Pin type only) 2,000 Vrms for 1 min: Between input and output	
	Insulation resistance (Initial value)	Min. 100 MΩ: Between live and dead metal parts Between input and output (At 500V DC) Between contacts		Min. 100 MΩ: Between live and dead metal parts Between input and output (At 500V DC)	
	Operating voltage reset time	Max. 0.5 s			
	Temperature rise	Max 65° C (under the flow of nominal operating current at nominal voltage)		—	
Mechanical	Vibration resistance	Functional	10 to 55 Hz: 1 cycle/ min single amplitude of 0.35 mm .014 inch (10 min on 3 axes)		
		Destructive	10 to 55 Hz: 1 cycle/ min single amplitude of 0.75 mm .030 inch (1 h on 3 axes)		
	Shock resistance	Functional	Min. 98 m 321.522 ft./s <sup>2</sup> (4 times on 3 axes)		
		Destructive	Min. 294 m 964.567 ft./s <sup>2</sup> (5 times on 3 axes)		
Operating conditions	Ambient temperature	$-10^{\circ}\text{C}$ to $55^{\circ}\text{C}$ $+14^{\circ}\text{F}$ to $+131^{\circ}\text{F}$			
	Ambient humidity	Max. 85 % RH (non-condensing)			
	Air pressure	860 to 1,060 h Pa			
	Ripple rate	—	20 % or less	—	20 % or less
Connection	8-pin/11-pin/screw terminal				
Protective construction	IP66 (front panel with rubber gasket)				