

Autronics

TIMER LE4S

M A N U A L



Thank you very much for selecting Autronics products.
For your safety, please read the following before using.

Caution for your safety

- Please keep these instructions and review them before using this unit.
- Please observe the cautions that follow:
- Warning** Serious injury may result if instructions are not followed.
- Caution** Product may be damaged, or injury may result if instructions are not followed.

The following is an explanation of the symbols used in the operation manual.
Caution: Injury or danger may occur under special conditions.

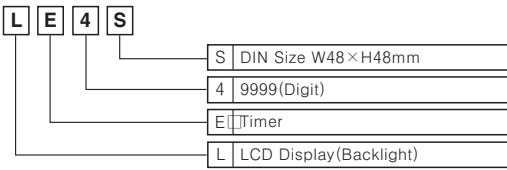
Warning

- In case of using this unit with machineries (Nuclear power control, medical equipment, vehicle, train, airplane, combustion apparatus, entertainment or safety device etc), it requires installing fail-safe device or contact us for information on type required.
- This unit must be mounted on panel.
- Do not repair or checkup when power on.
- Do not disassemble and modify this unit, when it requires.
- Lithium battery is used for memory retention in this product, therefore do not disassemble or burn up. Please contact Autronics to replace battery.

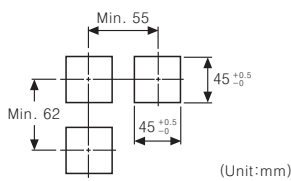
Caution

- This unit shall not be used outdoors.
- When wire connection, No.20AWG(0.50mm²) should be used and screw bolt on terminal block with 0.74N·m to 0.90N·m strength.
- Please observe specification rating.
- Do not use the load beyond rated switching capacity of Relay contact.
- In cleaning the unit, do not use water or an oil-based detergent.
- Do not use this unit at place where there are flammable or explosive gas, humidity, direct ray of the sun, radiant heat, vibration, impact etc.
- Do not inflow dust or wire dregs into inside of this unit.

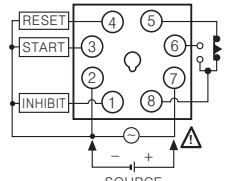
Ordering information



Panel cut-out

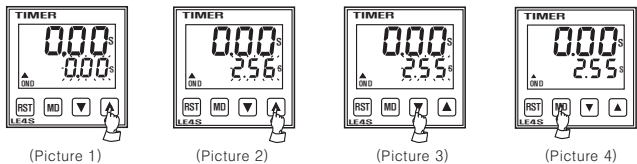


Connection



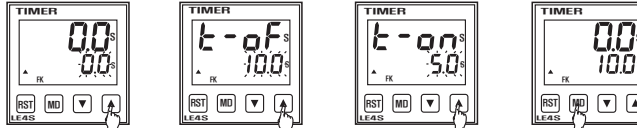
The time setting

- Output operation mode : [ON D], [ON D I], [ON D II], [INT], [INT I], [ON OFF D], [ON OFF D I], [OFF D]



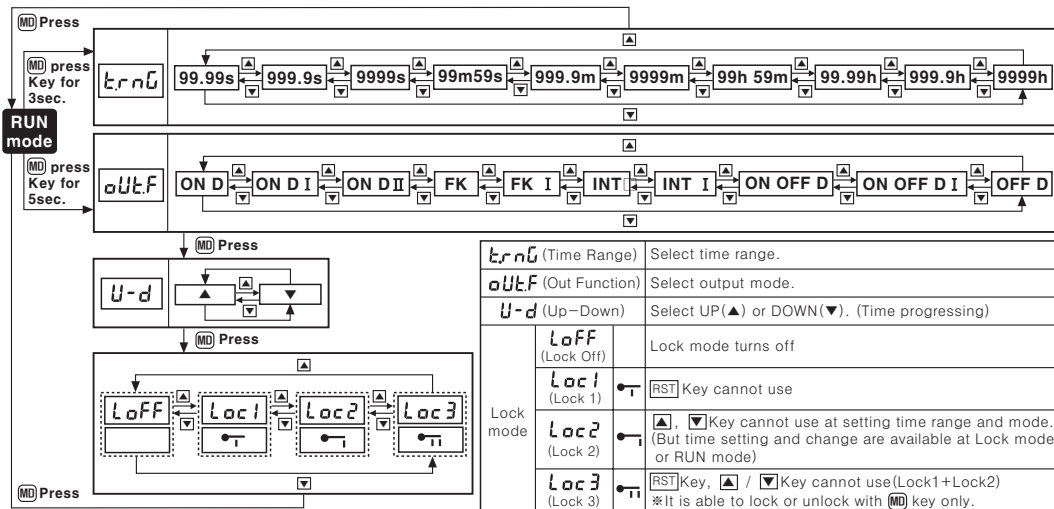
- Display of setting time will be flickering when press [MD] or [Key] at RUN mode. (Picture 1)
- And then set the setting time with [MD] or [Key]. If press [Key] once, it will increase as number of pressing, but if keep pressing more than 2sec., it will increase faster. (Picture 2)
- When complete the setting, it will be saved and return by pressing [MD] key. (Picture 4)

Output operation mode : [FK], [FK I]



- It is able to change the setting time during the time progressing, but be sure about the time progressing while changing of the time.

Time range and function setting

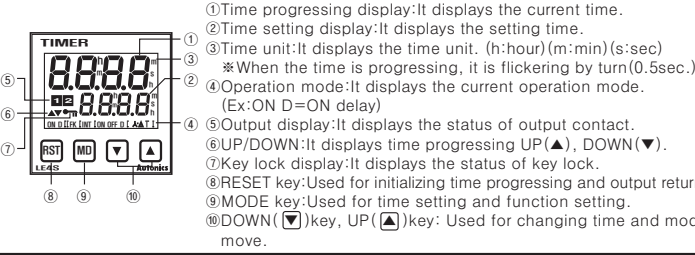


*The above specifications are changeable without notice anytime.

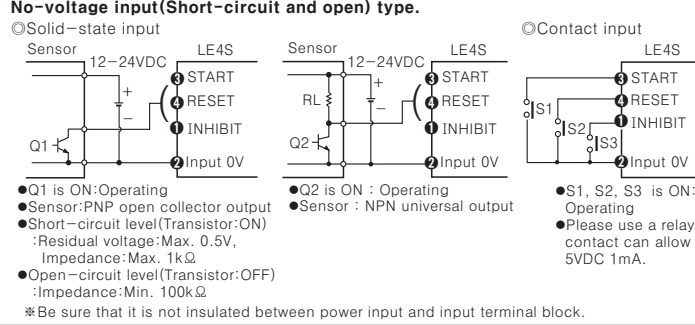
Specifications

Model	LE4S
Power supply	24-240VAC 50/60Hz, 24-240VDC
Display method	LCD Display(Backlight)
Allowable voltage range	90 to 110% of rated voltage
Power consumption	Max. 2.8VA(240VAC 50/60Hz), Max. 1.2W(240VDC)
Return time	Max. 300ms
Min. input signal	START input: Min. 20ms
Input	START input, RESET input, INHIBIT input
Control output	Con-tact: 250VAC 3A resistive load
Output mode	10 kinds of operating mode(See operation mode)
Ambient temperature	-10 to 55°C (at non-freezing status)
Storage temperature	-25 to 65°C (at non-freezing status)
Ambient humidity	35 to 85%RH
Repeat error	Signal Start : Max. ±0.005% ±0.03sec
Setting error	Power Start : Max. ±0.01% ±0.08sec
Voltage error	
Temperature error	
Memory retention	10 years at 25°C and when LCD and input key turns OFF, 40 days at 25°C and when LCD and input key turns ON continually
Insulation resistance	Min. 100MΩ (at 500VDC)
Dielectric strength	2000VAC 50/60Hz for 1 minute
Noise strength	±2kV the square wave noise(pulse width:1μs) by the noise simulator
Vibration	Mechanical: 0.75mm amplitude at frequency of 10 to 55Hz in each of X, Y, Z directions for 1hour Malfunction: 0.5mm amplitude at frequency of 10 to 55Hz in each of X, Y, Z directions for 10 minutes
Shock	Mechanical: 300m/s ² (30G) in X, Y, Z directions for 3 times Malfunction: 100m/s ² (10G) in X, Y, Z directions for 3 times
Relay life cycle	Mechanical: Min. 10,000,000 times Electrical: Min. 100,000 times(250VAC 3A resistive load)
Weight	Approx. 126g

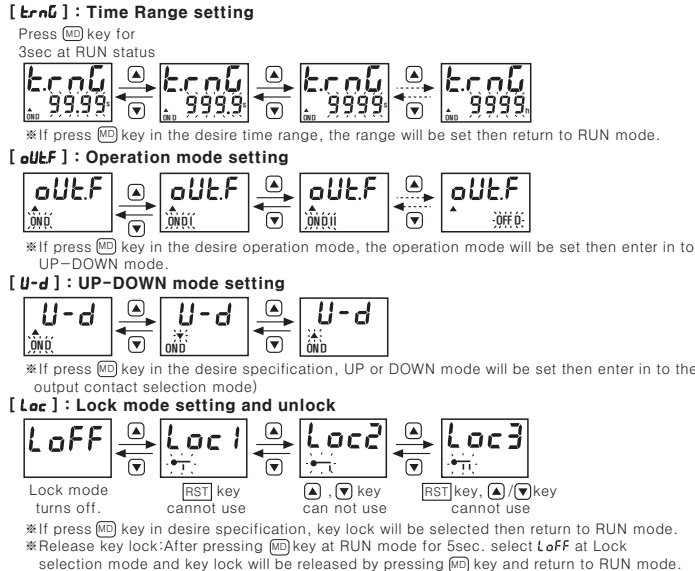
Front panel identification



Input connection



Mode setting



Time Range

Time range specification	Time range
99.99s	0.01sec ~ 99.99sec
999.9s	0.1sec ~ 999.9sec
9999s	1sec ~ 9999sec
99m59s	0min01sec ~ 99min 59sec
999.9m	0.1min ~ 999.9min
9999m	1min ~ 9999min
99h59m	0hour01min ~ 99hour 59min
999.9h	0.01hour ~ 99.99hour
999.9h	0.1hour ~ 999.9hour
9999h	1hour ~ 9999hour

Operation mode

NO	Indication	LE4S
1	ON D	ON DELAY
2	ON D I	ON DELAY1
3	ON D II (+1)	ON DELAY2(One-shot out)
4	FK (+2)	FLICKER
5	FK I (+2)	FLICKER1
6	INT	INTERVAL-DELAY
7	INT I	INTERVAL-DELAY1
8	ON OFF D	ON-OFF DELAY
9	ON OFF D I	ON-OFF DELAY1
10	OFF D	OFF DELAY

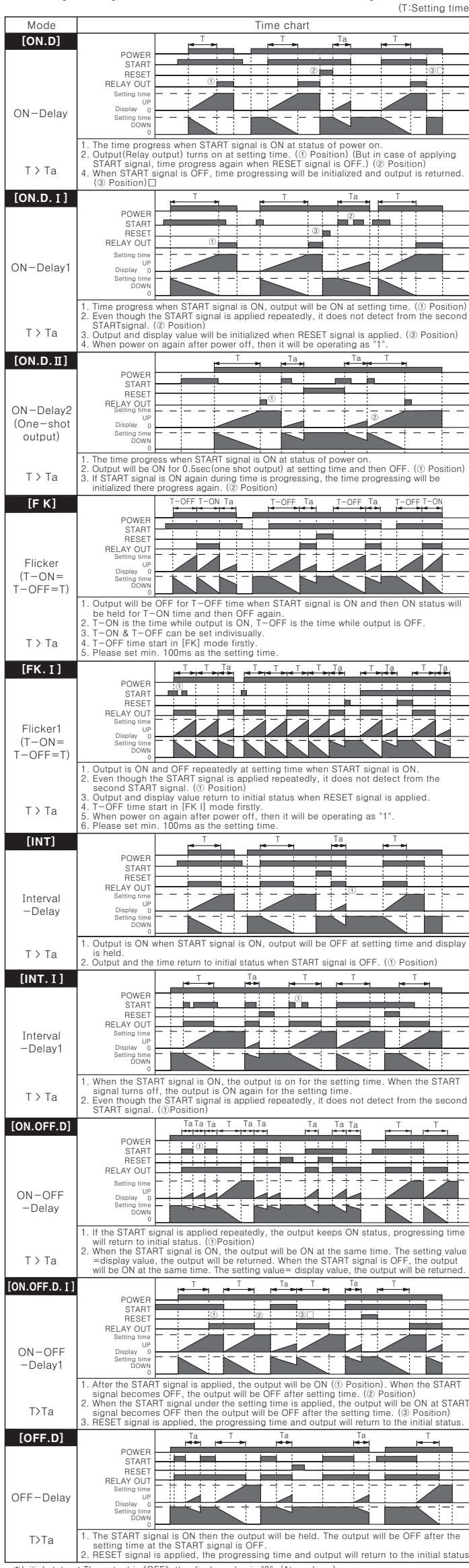
Factory specification

- OUT MODE : ON delay
- UP/DOWN mode : UP
- Output contact : Time limit 1c
- Timer Range : 99.99sec
- Lock key : LoFF(Lock mode turns off)

The setting and status when cut power off

- LCD display and output will be OFF when power off.
- If press any keys in front, previous setting mode and setting time will be displayed.
- After LCD is ON, if no key touched for 30sec., then LCD will be OFF.
- When setting power again, the mode and setting value changed in above status will be saved, the time progressing value will be initialized.

Output operation in each mode(Output mode)



Caution for using

- Power connection
 - AC Power : It is able to connect power to the terminals(2 to 7) without distinguish the polarity.
 - DC Power : Be sure the polarity of (+, -), (+, +)
 - It can be operating stably due to free power voltage type. (Please connect the power line separate from high voltage line in order to avoid inductive noise)
- Input signal line
 - Shorten the cable distance between the sensor and this product.
 - Please shielded wire for input signal needed to be long.
 - Please wire input signal line separated from power line.
- When test dielectric voltage and insulation resistance of the control panel with this unit installed.
 - Please isolate this unit from the circuit of control panel.
 - Please make all terminals of this unit short-circuited.
 - Place where there are severe vibration or impact.
 - Place where strong alkalis or acids are used.
 - Place where there are direct ray of the sun
 - Place where strong magnetic field or electric noise are generated.
- Installation environment
 - It shall be used indoor
 - Altitude Max. 2000m
 - Pollution Degree 2
 - Installation Category II.

Main products

- COUNTER
- TIMER
- TEMPERATURE CONTROLLER
- PANEL METER
- TACHO/LINE SPEED/PULSE METER
- DISPLAY UNIT
- PROXIMITY SENSOR
- PHOTOELECTRIC SENSOR
- FIBER OPTIC SENSOR
- PRESSURE SENSOR
- ROTARY ENCODER
- SENSOR CONTROLLER
- POWER CONTROLLER
- STEPPING MOTOR & DRIVER & CONTROLLER
- LASER MARKING SYSTEM(CO₂, Nd:YAG)

Autronics Corporation
http://www.autronics.com

Satisfiable Partner For Factory Automation

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