

# TIMER LE4SA

M A N U A L



Thank you very much for selecting Autonics 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

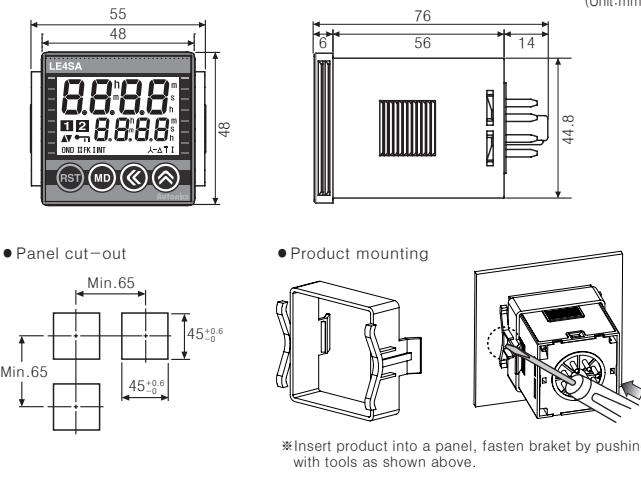
- In case of using this unit with machineries (Nuclear power control, medical equipment, vehicle, train, airplane, combustion apparatus, entertainment or safety device etc.), it requires installing fail-safe device or contact us for information on type required.
- This unit must be mounted on panel. It may give an electric shock.
- Do not repair or checkup when power on. It may give an electric shock.
- Do not disassemble and modify this unit, when it requires. If needs, please contact us. It may give an electric shock and cause a fire.

### Ordering information

Output	Time limit contact 1c
A	Time limit contact 2c, Instantaneous contact 1c + Time limit contact 1c (Selectable)
Size	S DIN W48mm x H48mm
Digit	4 9999 (4 Digit type)
Item	E Timer
Display	L LCD Display

\* 8 Pin socket (PG-08, PS-08): Sold separately

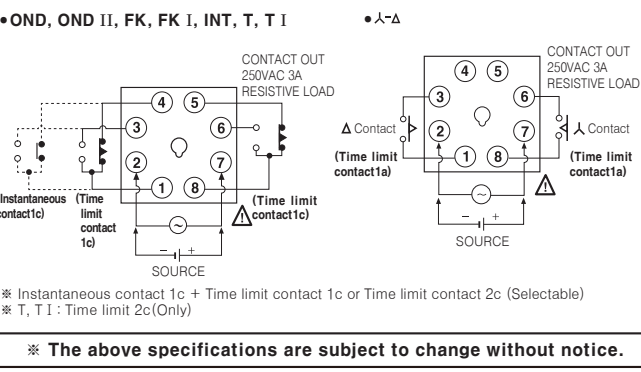
### Dimensions



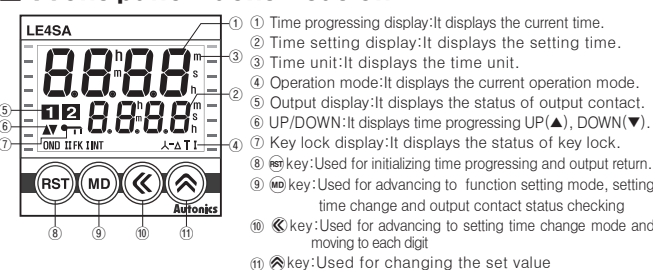
### Specifications

Model		LE4SA
Power supply		24-240VAC 50/60Hz, 24-240VDC
Display method		LCD Display (Backlight)
Allowable voltage range		90 ~ 110% of rated voltage
Power consumption		24-240VAC: Max. 4VA, 24-240VDC: Max. 1.6W
Return time		Max. 100ms
Control output	Con-tact	Time limit DPDT(2c), Time limit SPDT(1c) + Instantaneous contact SPDT(1c): Selectable
	Type	Capacity
		250VAC 3A resistive load
Repeat Setting Temperature error		Max. ±0.01% ±0.05 sec
Ambient temperature		-10 ~ 55°C (at non-freezing status)
Storage temperature		-25 ~ 65°C (at non-freezing status)
Ambient humidity		35 ~ 85%RH
Insulation resistance		Min. 100MΩ (500VDC megger)
Dielectric strength		2,000VAC 50/60Hz for 1 minute
Vibration	Mechanical	0.75mm amplitude at frequency of 10 ~ 55Hz in each of X, Y, Z directions for 1hour
	Malfunction	0.5mm amplitude at frequency of 10 ~ 55Hz in each of X, Y, Z directions for 10 minutes
Shock	Mechanical	300m/s <sup>2</sup> (30G) X, Y, Z directions for 3 times
	Malfunction	100m/s <sup>2</sup> (10G) 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)
Approval		CE, C, US
Weight		Approx. 98g

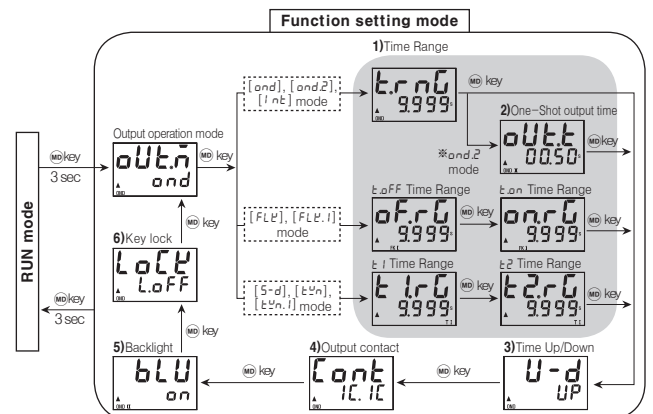
### Connection



### Front panel identification



### Function Setting Mode Descriptions



#### 1) Time Range

Parameter	Time range specification
9.999~(9.999s)	0.010 sec ~ 9.999 sec
99.99~(99.99s)	0.01 sec ~ 99.99 sec
999.9~(999.9s)	0.1 sec ~ 999.9 sec
9999~(9999s)	1 sec ~ 9999 sec
99.59~(99m59s)	0 min 01 sec ~ 99 min 59 sec
999.9~(999.9m)	0.1 min ~ 999.9 min
9999~(9999m)	1 min ~ 9999 min
99.59~(99h59m)	0 hour 01 min ~ 99 hour 59 min
99.99~(99.99h)	0.01 hour ~ 99.99 hour
999.9~(999.9h)	0.1 hour ~ 999.9 hour
9999~(9999h)	1 hour ~ 9999 hour

#### 2) One-Shot output time setting

It will be activated when selecting ON Delay 2 [ond.2] output operation mode (One-Shot-output mode). (Time setting: 0.01 sec ~ 99.99 sec)

#### 3) Time progress UP/DOWN setting

UP [UP]: Time progressed from 0 to setting time.  
DOWN [DN]: Time progressed from setting time to 0.

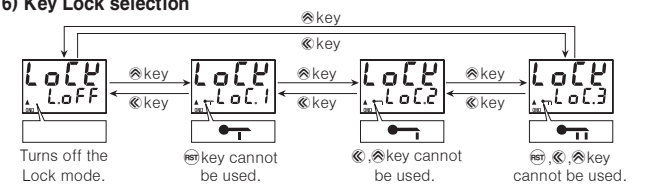
#### 4) Output contact setting

Set the relay contact (No.1, 3, 4 pin) to Instantaneous or Time limit. [1C, 1C]: Instantaneous 1c, [2C]: Time limit 2c. It is fixed to Time limit 2c in star-delta, Twin and Twin 1 modes.  
\* If key press on RUN mode, [1C, 1C] or [2C] will be displayed depend on the status of output contact on time setting display.

#### 5) Backlight setting

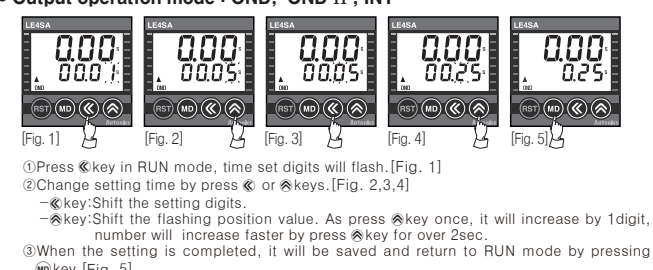
Set Backlight (ON [on], OFF [off]).

#### 6) Key Lock selection

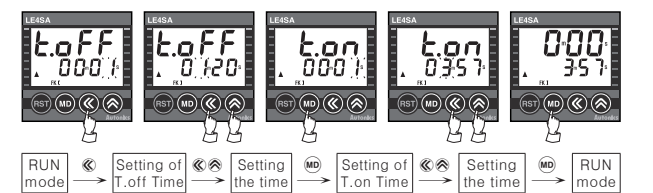


### Time setting

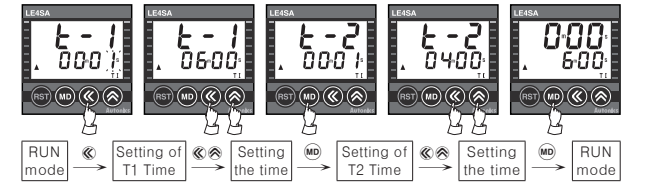
#### Output operation mode : OND, OND II, INT



#### Output operation mode : FK, FK I



#### Output operation mode : $\Delta$ - $\Delta$ , T, T I

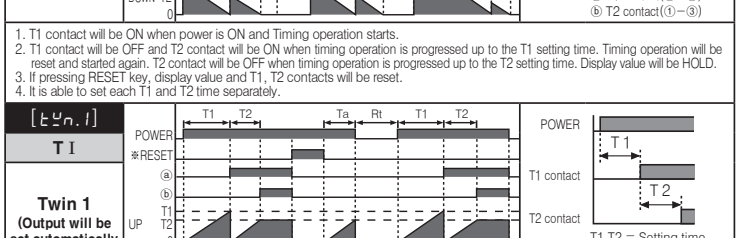
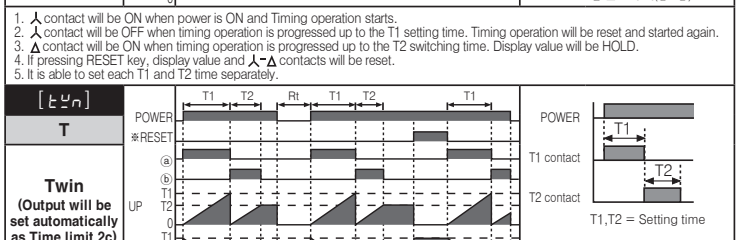
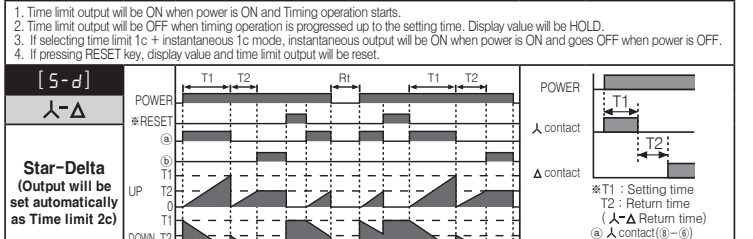
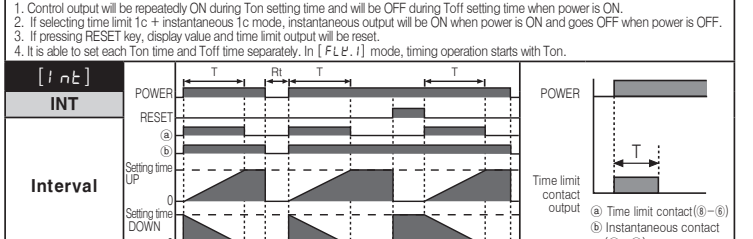
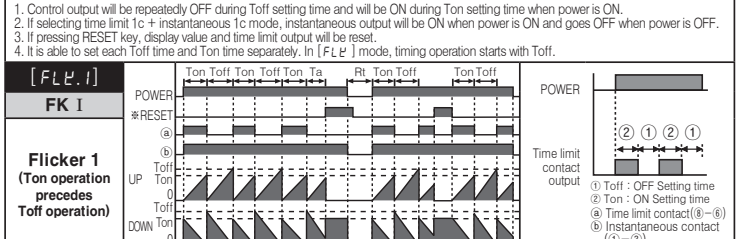
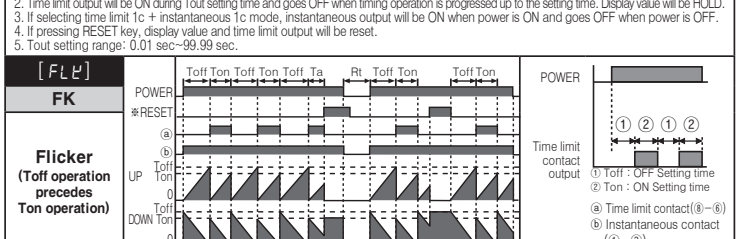
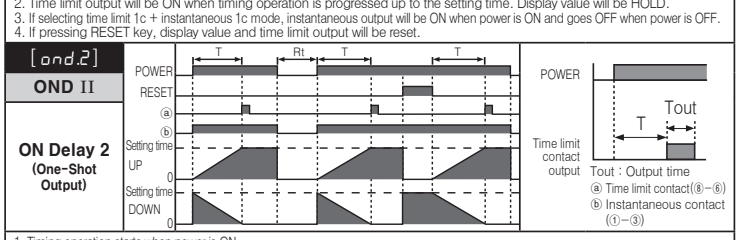
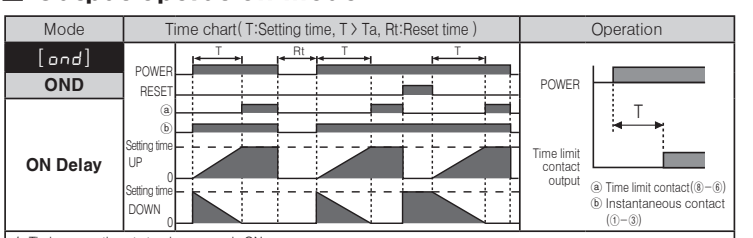


\* Setting time changes can be made during timing operation. Make sure that timing operation is continuously progressed while changing the setting time.  
\* If pressing key while setting time is shorter than min. setting time, setting value will be flickering three times and it will be returned to setting mode again, not to RUN mode.  
\* If there is no additional key operations after entering into setting mode, it will be return to RUN mode. (Setting value is not saved.)  
\* Min. Setting time: 0.01 sec. (In case of OND and OND II modes, it is able to set 0 since no min. setting time is applied.)

### Factory Default

NO.	Parameter	Default
1	Output operation mode	oUt.n
2	Time Range	99.99s
3	Time Up/Down	UP
4	Output contact	1C.1C
5	Backlight	on
6	Key Lock	LoFF
7	Setting time	50.00s

### Output operation mode



\* Reset: Up mode → Display value is "0", Output is "OFF".  
DOWN mode → Display value is "setting time", Output is "OFF".

### 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 (2) ← (-), (3) ← (+).
  - It can be operating stably due to free power voltage type. (Please connect the power lind 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.
- Do not use this unit at below places because of product damage.
  - 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 (2) Altitude Max. 2000m
  - Pollution Degree 2 (4) Installation Category II

\* It may cause malfunction if above instructions are not followed.

### Major products

- Proximity sensors
- Pressure sensors
- Rotary encoders
- Fiber optic sensors
- Photoelectric sensors
- Graphic/Logic panels
- Field network devices
- Door/Door side sensors
- Temperature controllers
- Tachometer/Pulse(Rate) meters
- Temperature/Humidity transducers
- Switching power supplies
- Stepping motors/drivers/motion controllers
- Laser marking system (CO<sub>2</sub>, Nd:YAG)
- Laser welding/soldering system
- Counters
- Timers
- Area sensors
- Display units
- Panel meters
- Sensor controllers
- Power controllers

**Autonics Corporation**  
http://www.autonics.com

Satisfiable Partner For Factory Automation

HEAD QUARTERS :  
41-5, Yongdang-dong, Yangsan-si, Gyeongsang, 626-847, Korea

OVERSEAS SALES :  
Bldg. 402 3rd FL., Bucheon Techno Park, 193, Yakdae-dong, Wonmi-gu, Bucheon-si, Gyeonggi-do, 420-734, Korea  
TEL : 82-32-610-2730 / FAX : 82-32-329-0728  
E-mail : sales@autonics.com

The proposal of a product improvement and development : product@autonics.com

EP-KE-02-058A