

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.
- ase 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. **\(\Delta\) caution**: Injury or danger may occur under special conditions.

∧ Warning

- 1.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.
- 2. This unit must be mounted on panel. It may give an electric shock
- 3.Do not repair or checkup when power on
- 4. Do not disassemble and modify this unit, when it requires. If needs, please contact us.

⚠ Caution

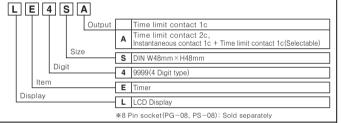
- 1. This unit shall not be used outdoors.
- It may give an electric shock.

 2.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. It may result in malfunction or fire due to contact failure 3.Please observe specification rating.
- t might shorten the life cycle of the product and cause a fire
- 4.Do not use the load beyond rated switching capacity of Relay contact. It may cause insulation failure, contact melt, contact failure, relay broken, fire etc
- 5.In cleaning the unit, do not use water or an oil-based detergent.
- It might cause an electric shock or a fire.

 6.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.
- It may cause explosion or a fire.

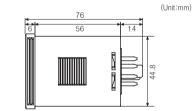
 7.Do not inflow dust or wire dregs into inside of this unit. It may cause a fire or mechanical trouble.

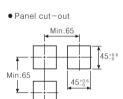
Ordering information



Dimensions











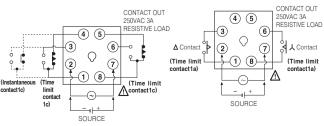
*Insert product into a panel, fasten braket by pushing with tools as shown above.

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	Con- tact	Туре	Time limit DPDT(2c), Time limit SPDT(1c)+Instantaneous contact SPDT(1c): Selectable		
output		Capacity	250VAC 3A resistive load		
Repeat · Setting · Voltage · Temperature error			Max. ±0.01% ±0.05 sec		
Ambient temperature			-10 ~ 55℃ (at non-freezing status)		
Storage temperature			-25 ~ 65℃ (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 Mech		nical	0.75mm amplitude at frequency of 10 ~ 55Hz in each of X, Y, Z directions for 1hour		
VIDIALIOIT	Malfunction		0.5mm amplitude at frequency of 10 ~ 55Hz in each of X, Y, Z directions for 10 minutes		
Shock	Mechanical		300m/s² (30G) X, Y, Z directions for 3 times		
Snock	Malfunction		100m/s ² (10G) X, Y, Z directions for 3 times		
Relay	Mechanical		Min. 10,000,000 times		
life cycle	Electrical		Min. 100,000 times(250VAC 3A resistive load)		
Approval			(€ 2 P2 3)		
Weight			Approx 98a		

Connection

•OND, OND II, FK, FK I, INT, T, T I



人-∆

* Instantaneous contact 1c + Time limit contact 1c or Time limit contact 2c (Selectable) * T, T I : Time limit 2c(Only)

* The above specifications are subject to change without notice.

Front panel identification

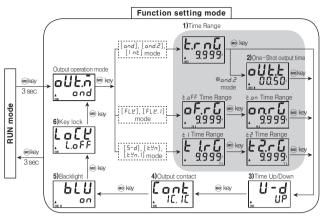


- ① ① Time progressing display:It displays the current time.
 ② Time setting display:It displays the setting time.
- Time unit:It displays the time unit.
 Operation mode:It displays the current operation mode. ⑤ Output display: It displays the status of output contact.
 ⑥ UP/DOWN: It displays time progressing UP(▲), DOWN(▼).
 - The status of key lock.
 Wey lock display: It displays the status of key lock.
 Wey key: Used for initializing time progressing and output return (9) (m) key: Used for advancing to function setting mode, setting

time change and output contact status checking

moving to each digit ♠ key:Used for changing the set value

Function Setting Mode Descriptions



1) Time Range

Parameter	Time range specification			L5.
9.999s (9.999s)	0.010 sec	~	9.999 sec] [.
99.99s (99.99s)	0.01 sec	~	99.99 sec	, 5.5 5 5°
999.9s (999.9s)	0.1 sec	~	999.9 sec	
9999s (9999s)	1 sec	~	9999 sec	
99m59s (99m59s)	0 min 01 sec	~	99 min 59 sec	ot.ru on.ru
999.9m (999.9m)	0.1 min	~	999.9 min	I. 9999 I. 9999
9999m (9999m)	1 min	~	9999 min	RI RI
99 ^h 59 ^m (99h59m)	0 hour 01 min	~	99 hour 59 min	
99.99h (99.99h)	0.01 hour	~	99.99 hour	
999.9h (999.9h)	0.1 hour	~	999.9 hour	
9999h (9999h)	1 hour	~	9999 hour] [* 2222;] [* 2222;

2) One-Shot output time setting

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

3) Time progress UP/DOWN setting



4) Output contact setting



Set the relay contact (No.1, 3, 4 pin) to Instantaneous or Time limit.

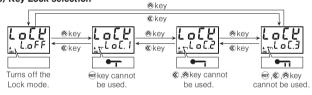
| It is fixed to Time limit 2c in star-delta. Twin and Twin 1 modes

※ If · ® key press on RUN mode, [IC. IC] or [≥C] will be displayed depend on the status ** ** The content of the status of the content of the cont of output contact on time setting display

5) Backlight setting



6) Key Lock selection



Time setting

Output operation mode : OND, OND II, INT

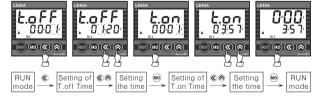


②Change setting time by press or keys. [Fig. 2,3,4]

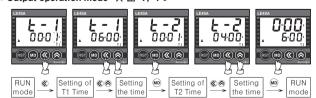
- ≪key:Shift the setting digits.
- ≪key:Shift the flashing position value. As press ≪key once, it will increase by 1digit, number will increase faster by press ≪key for over 2sec.

@When the setting is completed, it will be saved and return to RUN mode by pressing mo key.[Fig. 5]

• Output operation mode : FK, FK I



• Output operation mode: 人-△, 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 (we) 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.

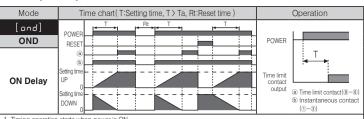
*If there is no additional key operations after entering into setting mode, it will be return to RUN mode. (Setting

★ Min. Setting time: 0.01 sec.(In case of OND and OND II modes, it is able to set 0 since no min.

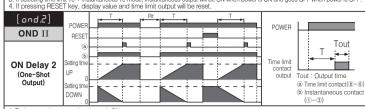
Factory Default

NO.	Param	Default	
1	Output operation mode	oUŁ.ñ	ond
2	Time Range	t.rnG	99.99s
3	Time Up/Down	U - d	UP
4	Output contact	Cont	IE. IE
5	Backlight	ЬЬШ	on
6	Key Lock	LoCY	LoC.1
7	Setting time	-	50.00s

Output operation mode

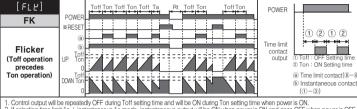


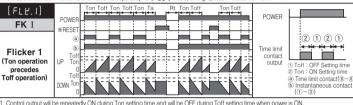
. Timing operation starts . Time limit output will be



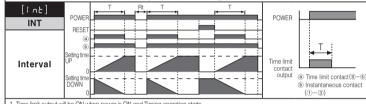
Timing operation starts when Time limit output will be ON durir 1-11/2 HING CUILLUN WILD BE UN GUING TOUT setting time and goes OFF when timing operation is progressed up to the setting time. Display value will be HOLD If selecting time limit 1c + instantaneous 1c mode, instantaneous output will be ON when power is ON and goes OFF when power is OFF. If pressing RESET key display value and time limit output will be reset.

Tout setting rance: Off 1ser-240 Oc occ

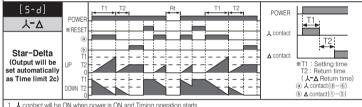




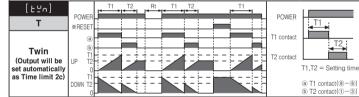
ill be OFF during Toff setting time when power is ON. output will be ON when power is ON and goes OFF when power is OFF. and Toff time separately. In [FLE.I] mode, timing operation starts with Ton.



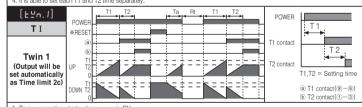
g time. Display value will be HOLD. ON when power is ON and goes OFF when power is OFF



A contact will be ON when power is ON and Timing operation starts.
A contact will be OFF when timing operation is progressed up to the T1 setting time. Timing operation will be reset and started again. A contact will be ON when timing operation is progressed up to the T2 switching time. Display value will be HOLD. If pressing RESET key, display value and A_A contacts will be reset.
It is able to set each T1 and T2 time separately.



1. T1 contact will be OR when power is ON and Timing operation starts.
2. T1 contact will be OFF and T2 contact will be ON when timing operation is progressed up to the T1 setting time. Timing operation will be reset and started again. T2 contact will be OFF when timing operation is progressed up to the T2 setting time. Display value will be HOLD.
3. If pressing RESET key, display value and T1, T2 contacts will be reset.
4. It is able to set each T1 and T2 time separately.



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

Timing operation starts when power is ON.
 The contact will be ON when timing operation is progressed up to the T1 setting time. Timing operation will be reset and started again.
 To contact will be ON when timing operation is progressed up to the T2 setting time. Display value will be HOLD.
 To pressing RESET key, display value and T1 and T2 contacts will be reset.
 It is able to set each T1 and T2 time separately.

Caution for using

1. Power connection

(1) 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 $@\leftarrow \leftarrow >$, $@\leftarrow \leftarrow >$. (2) It can be operating stably due to free power voltage type. (Please connect the power lind seperate from high voltage line in order to avoid inductive noise) 2. Input signal line

(1) Shorten the cable distance between the sensor and this product

(2) Please shielded wire for input signal needed to be long. (3) Please wire input signal line separated from power line.

3. When test dielectric voltage and insulation resistance of the control panel with this unit installed. (1) Please isolate this unit from the circuit of control panel.

(2) Please make all terminals of this unit short-circuited.

4. Do not use this unit at below places because of product damage (1) Place where there are severe vibration or impact

(2) Place where strong alkalis or acids are used

(3) Place where there are direct ray of the sun (4) Place where strong magnetic field or electric noise are generated

5. Installation environment (1) It shall be used indoor (2) Altitude Max. 2000m

(4) Installation Category II (3) Pollution Degree 2 *It may cause malfunction if above instructions are not followed.

Major products

■ Proximity sensors■ Pressure sensors■ Counters■ Timers

Fiber optic sensors

Photoelectric sensors

Panel meters

■ Temperature controllers

Tachometer/Pulse(Rate) meters ■ Temperature/Humidity transducers

■OVERSEAS SALES :

Bldg. 402 Yard FL., Bucheon Techno Park, 193, Yakdae-dong, Wonni-gu, Bucheon-si, Gyeonggi-do, 420-734, Korea TEL: 82-32-610-2730 / FAX: 82-32-329-0728

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■ Field network devices ■ Power controllers

■ Door/Door side sensors

Switching power supplies

Stepping motors/drivers/motion co ■ Stepping motors/drivers/motion controllers
■ Laser marking system(CO₂, Nd:YAG) ■ Laser welding/soldering system

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

HEAD QUARTERS