

## DIN W48 × H24mm, Indication only, LCD timer

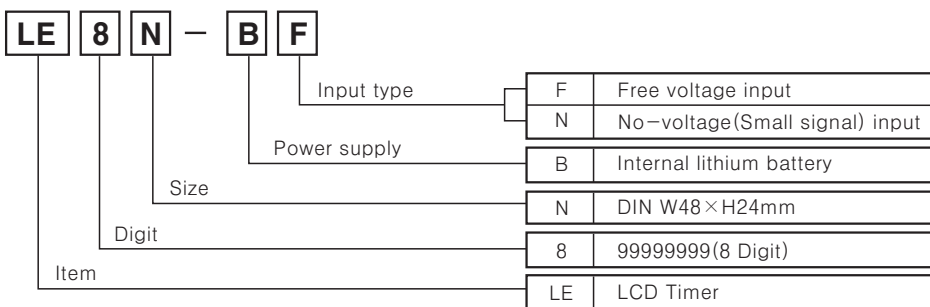
### Features

- Upgraded version of LE7N series
- Compact size indicator
- Internal lithium battery
- Screw terminal type (Terminal protection cover)
- LCD display
- Built-in microprocessor
- Protection structure IP66 (Front panel only)

**⚠ Please read "Caution for your safety" in operation manual before using.**



### Ordering information



### Specifications

Series	LE8N-BN	LE8N-BF
Digit	8 Digits	
Display	LCD Zero Blanking type (Height : 8.7mm)	
Operation method	Count up mode	
Power supply	Built-in lithium battery	
Input type	No-voltage input	Free voltage input
Start input	<ul style="list-style-type: none"> <li>Residual voltage : Max. 0.5VDC</li> <li>Impedance at short-circuit : 10kΩ</li> <li>Impedance at open-circuit : 750kΩ</li> </ul>	High : 24-240VAC / 6-240VDC Low : 0-2VAC / 0-2.4VDC
RESET input	No-voltage input	
Min. signal width of RESET	Min. 20ms	
Time range (TS1)	(★1) 9999.59.59 (h.m.s), 99999.59.9 (h.m), 999999.59 (h.m)	
Time range (TS2)	(★1) 9999H59.9 (h.m), 99999H59 (h.m), 999999H.9 (h)	
Time error	±0.01% ±50ms (Repeat error, Time error, Temperature error)	
Battery life cycle	Approx. over 10 years (at 20°C)	
External switch	SW1 (Front reset key Lock switch), SW2 (Time range selection switch)	
Insulation resistance	Min. 100MΩ (at 500VDC megger)	
Dielectric strength	(★2) 2000VAC 60Hz for 1 minute	
Vibration	Mechanical	0.75mm amplitude at frequency of 10 to 55Hz in each of X, Y, Z directions for 1 hour
	Malfunction	0.3mm amplitude at frequency of 10 to 55Hz in each of X, Y, Z directions for 10 minutes
Shock	Mechanical	300m/s <sup>2</sup> (Approx. 30G) in X, Y, Z directions for 3 times
	Malfunction	100m/s <sup>2</sup> (Approx. 10G) in X, Y, Z directions for 3 times
Protection	IP66 (When using waterproof rubber for front panel)	
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	
Approval		
Unit weight	Approx. 58g	

※ (★1) Select TS1, TS2 using inner jump pin (JP1).

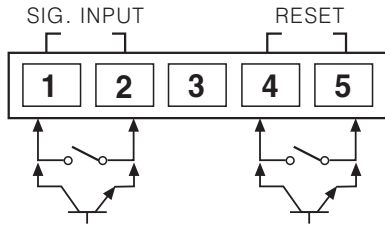
※ (★2) No-voltage input : Between all terminals and case, Free voltage input : Between input terminal and reset input terminal, all terminals and case

- (A) Photo electric sensor
- (B) Fiber optic sensor
- (C) Door/Area sensor
- (D) Proximity sensor
- (E) Pressure sensor
- (F) Rotary encoder
- (G) Connector/Socket
- (H) Temp. controller
- (I) SSR/Power controller
- (J) Counter
- (K) Timer
- (L) Panel meter
- (M) Tacho/Speed/Pulse meter
- (N) Display unit
- (O) Sensor controller
- (P) Switching power supply
- (Q) Stepping motor & Driver & Controller
- (R) Graphic/Logic panel
- (S) Field network device
- (T) Production stoppage models & replacement

# LE8N Series

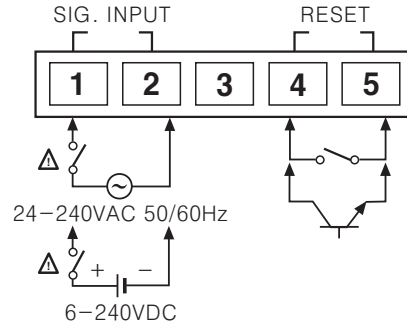
## Connections

### ●No-voltage input



- ※Use reliable contacts enough to flow  $5\mu\text{A}$  of current.
- ※Terminal 2 and 5 are connected inside. (Non-isolation)

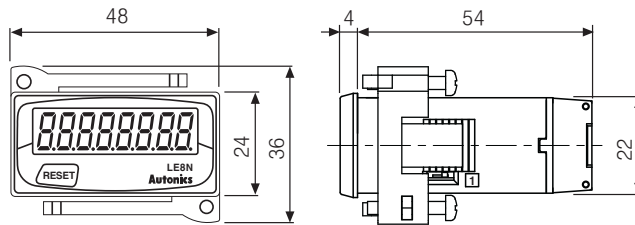
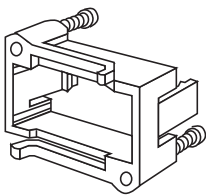
### ●Free voltage input



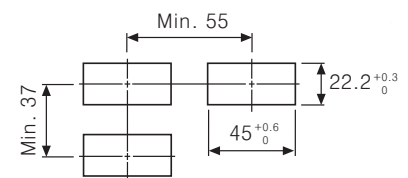
- ※Terminal 1, 2 and 4, 5 are isolated.

## Dimensions

### ●Bracket



### ●Panel cut-out

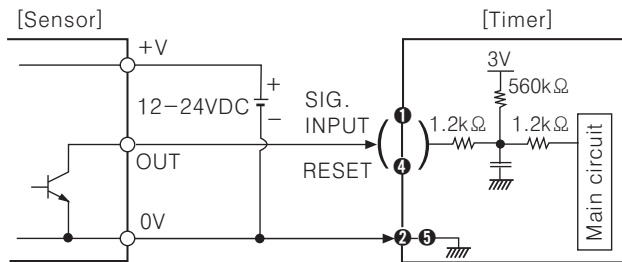


(Unit:mm)

## Input connections

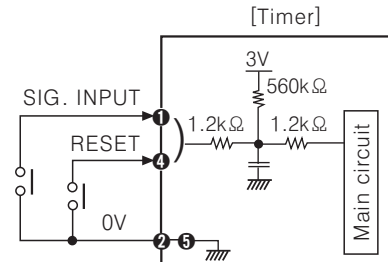
### ○No-voltage input (Standard sensor: NPN open type sensor)

#### ●Solid-state input



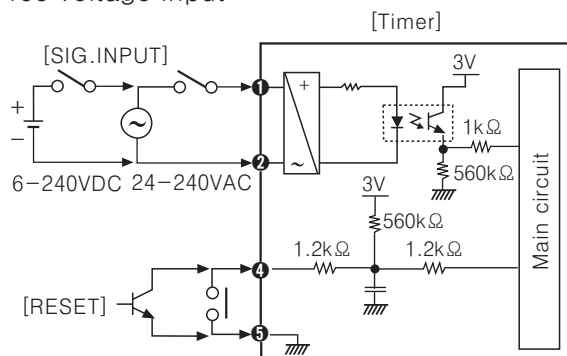
- ※When power is applied to terminal No ① and ④, input terminal circuit can be broken and a malfunction can occur. (NPN output, PNP output, PNP open collector output type sensor cannot be used.)
- ※② and ⑤ are connected inside.

#### ●Contact input



- ※Please use reliable contacts enough to flow 3VDC  $5\mu\text{A}$  of current.

### ○Free voltage input

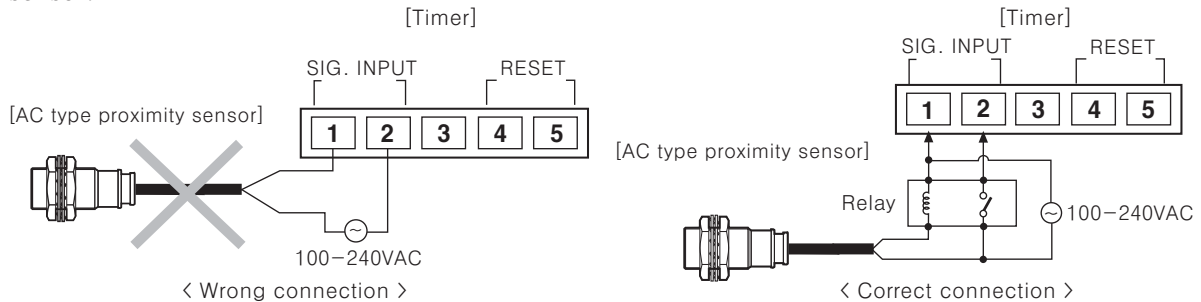


- ※AC type proximity sensor cannot be used as the source of count input signals.
- ※Input terminal ①, ② and Reset terminal ④, ⑤ are insulated inside.
- ※It is not possible to reset with AC power or DC power.
- ※When relay contact is used as the source of RESET signal, please use reliable contacts enough to flow 3VDC  $5\mu\text{A}$  of current.

# Compact LCD Timer

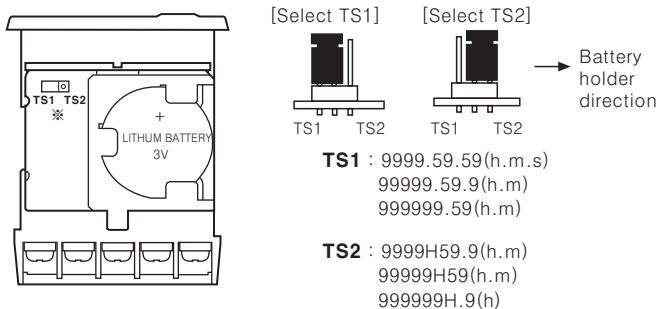
## ○Input from AC type proximity sensor

Please add input relay as shown below to prevent malfunction caused by current leakage of the proximity sensor.



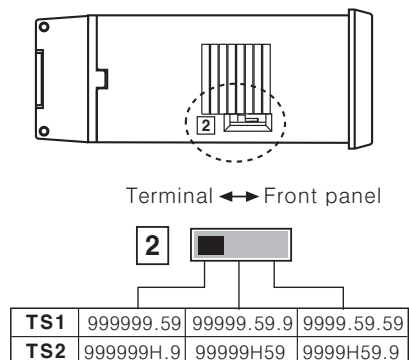
## ■Time specification(TS1, TS2) and time range

### ●Selection of time specification(TS1, TS2)

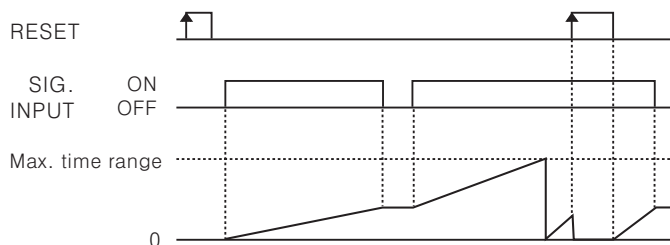


※Please supply RESET signal(Front or external RESET terminal) after change time range during the operation.

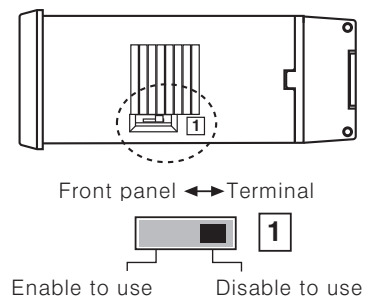
### ●Selection of time range



## ■Time operation

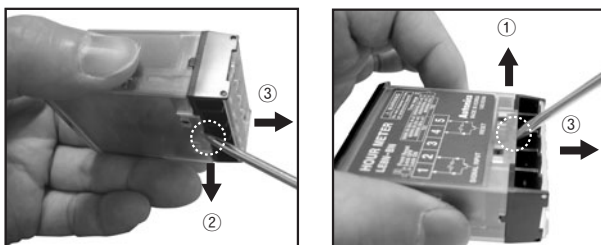


## ■Enable / Disable front reset key



## ■Case detachment and battery replacement

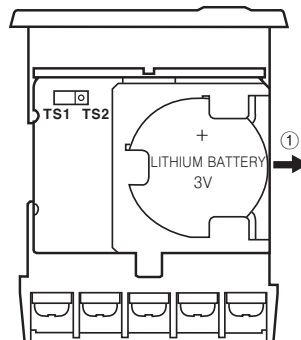
### ●Case detachment



※Hold up Lock part toward ①, ② of the product with the tool and pull toward ③, the case is detached.

▲ Please be careful of the injury caused by tools.

### ●Battery replacement



- 1) Detach the case.
  - 2) Push the battery and detach toward ①.
  - 3) Insert new battery with correct alignment of polarity pushing toward opposite of ①.
- ※Battery is sold separately.  
※Do not burn up or disassemble the lithium battery.

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