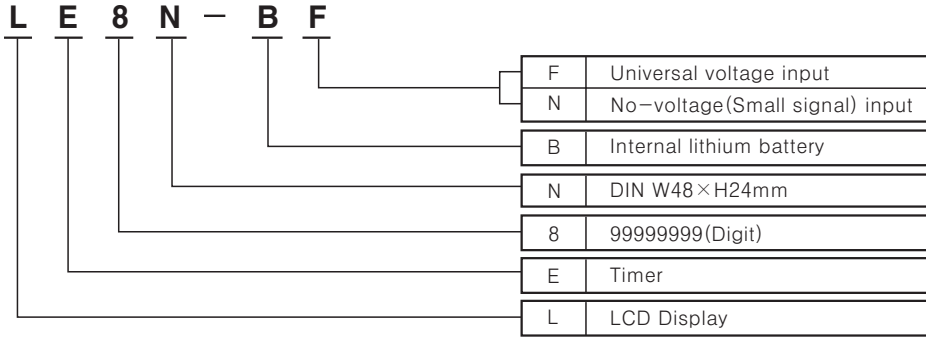




# Selection Guide

## HOURLY METER (COMPACT LCD TIMER)

### Ordering information



### Specifications

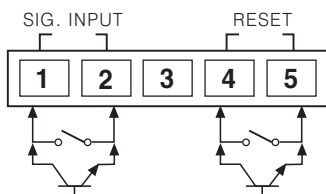
Model	LE8N-BN	LE8N-BF
Digit	8	
Appearances & Dimensions	  [W48×H24×L54mm]	
Display	LCD Zero Blanking type (Height : 8.7mm)	
Operation method	Count up mode	
Power supply	Internal lithium battery	
Input type	No-voltage input	Universal voltage input
Start input	Residual voltage at short-circuit : Max. 0.5V	Start : 24-240VAC / 6-24VDC Hold : 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% (Repeat error, Time error, Temperature error)	
Battery life cycle	Over 10 years (at 20°C)	
External switch	SW1 (Front reset key for Lock), SW2 (Selectable time switch)	
Insulation resistance	Min. 100MΩ (at 500VDC)	
Dielectric strength	(★2)	2000VAC 60Hz for 1 minute
Vibration	Mechanical	0.75mm amplitude at frequency of 10 ~ 55Hz in each of X, Y, Z directions for 1 hour
	Malfunition	0.3mm amplitude at frequency of 10 ~ 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
	Malfunition	100m/s <sup>2</sup> (Approx. 10G) in X, Y, Z directions for 3 times
Ambient Temperature	-10 ~ +55°C (at non-freezing status)	
Storage Temperature	-25 ~ +65°C (at non-freezing status)	
Ambient humidity	35 ~ 85%RH	

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

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

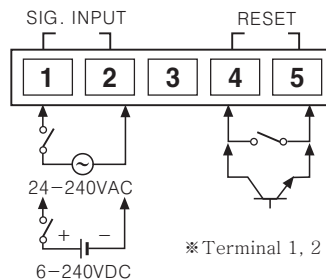
### Connection

#### No-voltage input



- ※ Use reliable contacts enough to flow 10mA of current.
- ※ Terminal 2 and 5 are connected inside. (Non-isolation)

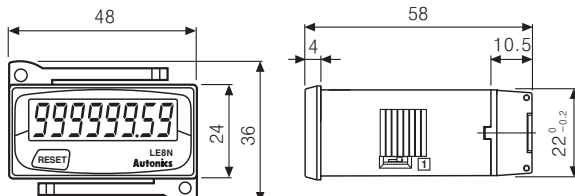
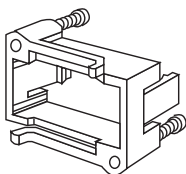
#### Universal voltage input



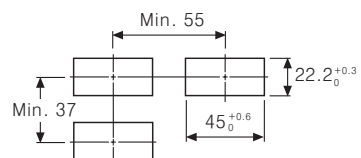
※ Terminal 1, 2 and 4, 5 are isolated.

### Dimensions

#### Bracket



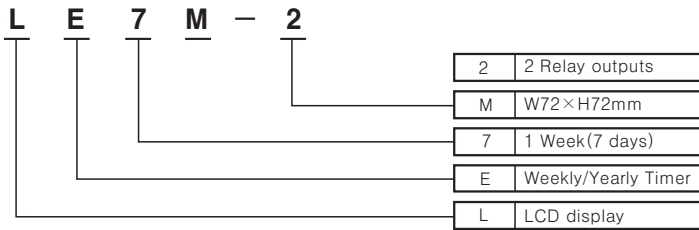
#### Panel cut-out



Unit:mm

## WEEKLY/YEARLY TIMER

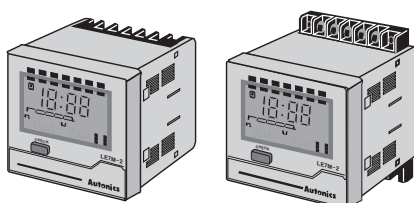
### Ordering information



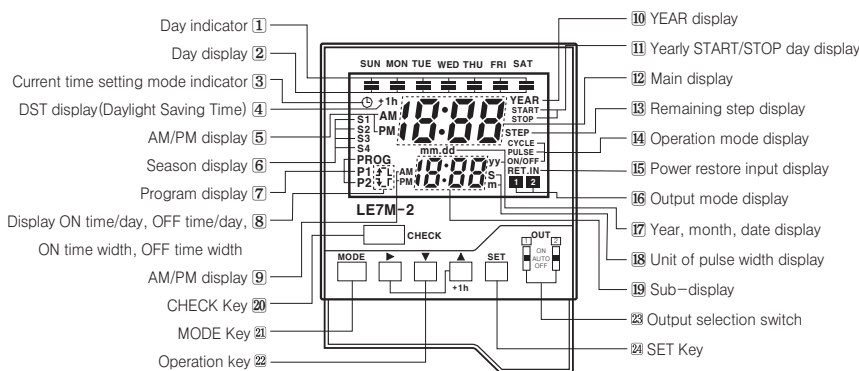
### Features

- Easy to check and change the program setting.
- Customizable weekly or yearly unit time setting and control by user
- Includes Daylight Saving Time function
- 2 Independent control output. (Relay)
- Flush and Surface mounting are in one unit.
- Enable to mount on DIN Rail with base plate.

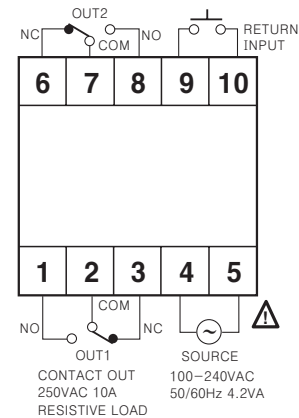
### Specifications

Model		LE7M-2
Appearances & Dimensions		 <div style="float: right; border: 1px solid black; padding: 2px; font-weight: bold;">NEW</div> <p>[W72×H72×L60mm]</p>
Power supply		100-240VAC 50/60Hz
Allowable voltage range		90 ~ 110% of power supply
Power consumption		4.2VA
RETURN input		Short-circuit or open by switch or relay
Timing program		48 steps for weekly, 24 steps for yearly
Operation mode		ON/OFF mode, Cycle mode, Pulse mode
Temperature error		0.01% ±0.05sec
Mounting		Front panel, Surface, DIN rail
Time deviation		±15sec/month(25°C) (±4sec/week)
Memory protection		Over 5 years(at 25°C)
Control output	Contact type	SPDT (Single Pole Double Contact)
	Contact capacity	250VAC 5A resistive load
	Output number	Independent 2 output(1c × 2)
Relay life cycle	Mechanical	Min. 5,000,000 operations(Switching capacity 30 times/minute)
	Electrical	50,000 operations<Switching capacity 20 times/1 minute, at 250VAC 10A(resistive load)>

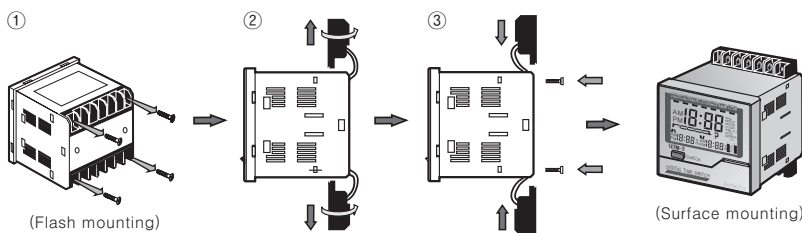
### Front panel identification



### Connections

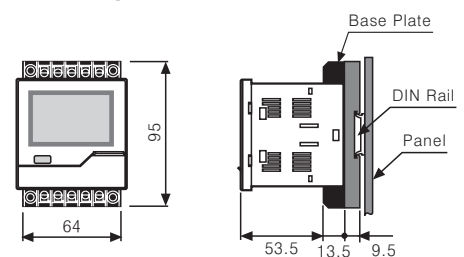


### How to switch from the flash mounting to surface mounting type



- ① Unscrew 4 bolts from terminal block.
- ② Detach terminal block from case and then rotate it 180 degree.
- ③ Assemble terminal block to case by using the 4 bolts.

### Mounting ON DIN Rail

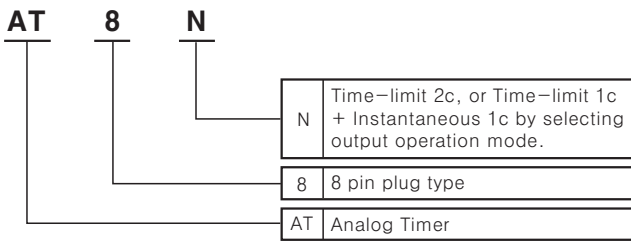


Unit:mm

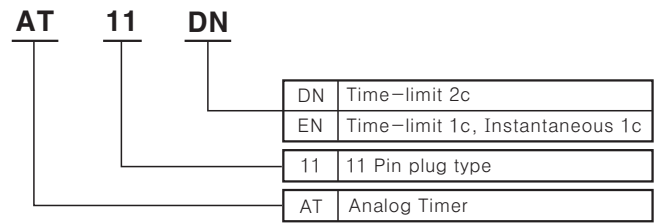


## ANALOG TIMER

### Ordering information






\*Socket required : PG-08, PS-08

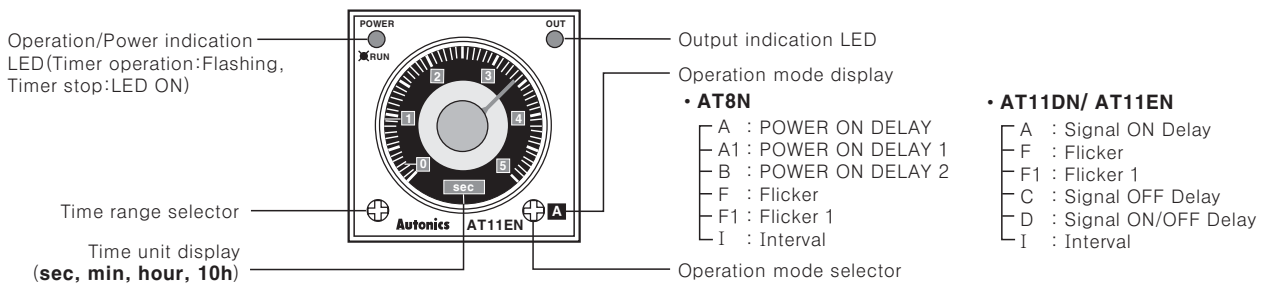


\*Socket required : PG-11, PS-11

### Specifications

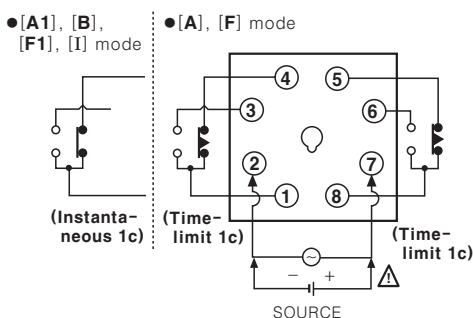
Type	Multi Timer		
Model	AT8N	AT11DN	AT11EN
Appearances & Dimensions	 [W48×H48×L65mm]	 [W48×H48×L65mm]	 [W48×H48×L65mm]
Operation	Multi time range, Power ON Start function	Multi time range, Multi function, Signal ON Start	
Power supply	24-240VAC 50/60Hz / 24-240VDC, 12VDC (Option) [90~110% of power supply]		
Input	START input	No voltage input	
	INHIBIT input	• Impedance at short-circuit : Max. 1kΩ	
	RESET input	• Residual voltage at short-circuit : Max. 0.5VDC	
Control output	Contact type	Time-limit 2c	Time-limit 1c, Instantaneous 1c
	Contact capacity	NO : 250VAC 3A resistive load NC : 250VAC 2A resistive load	250VAC 3A resistive load
Repeat error	Max. ±0.3%		
Setting error	Max. ±5% ±0.05sec		
Voltage error	Max. ±0.5%		
Temperature error	Max. ±2%		

### Front panel identification

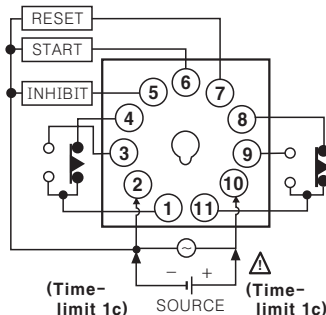


### Connections

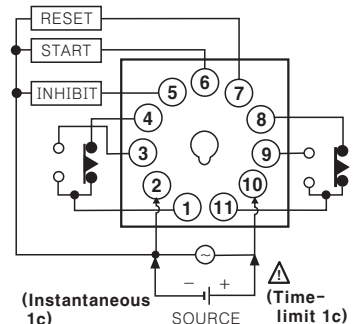
#### AT8N



#### AT11DN



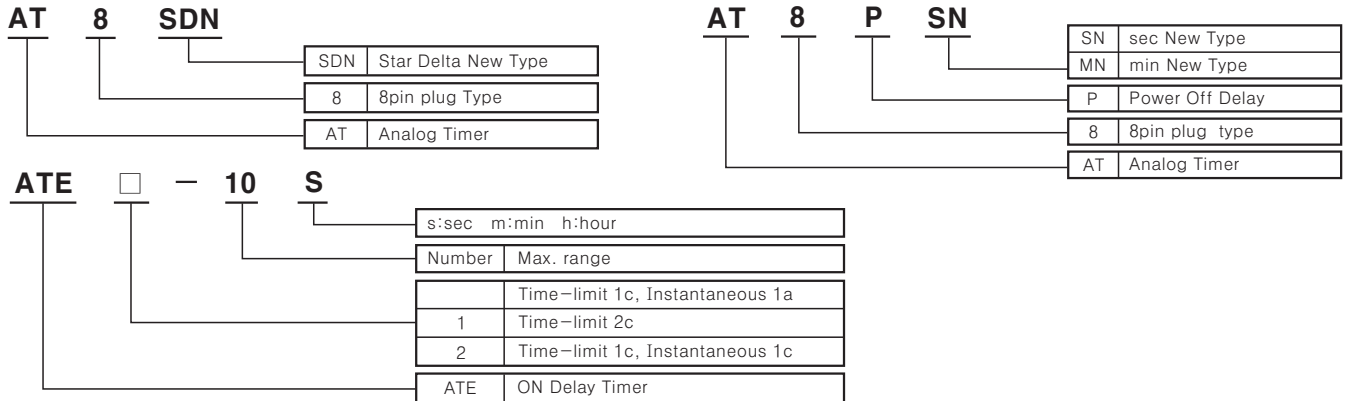
#### AT11EN






# Selection Guide

## ANALOG TIMER

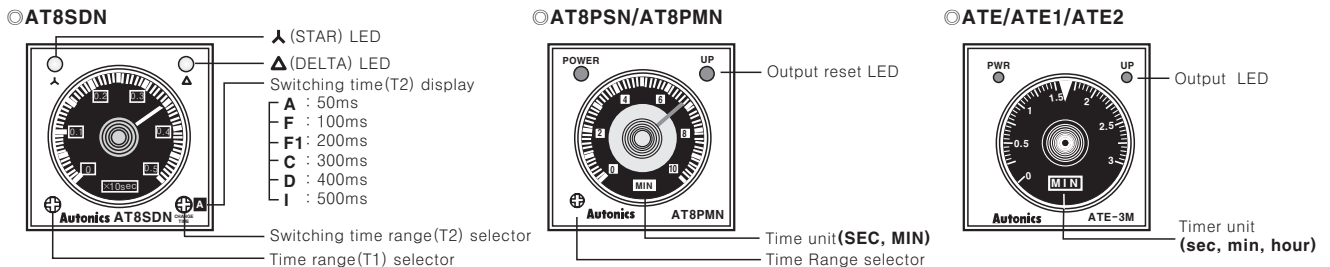
### Ordering information



### Specifications

Type	Star delta timer	OFF Delay timer	Single range timer		
Model	AT8SDN	AT8PSN / AT8PMN	ATE-sec, min, hour	ATE1-sec, min, hour	ATE2-sec, min, hour
Appearances & Dimensions	 [W48×H48×L65mm]	 [W48×H48×L65mm]	 [W48×H48×L65mm]	 [W48×H48×L79mm]	 [W48×H48×L79mm]
Function	Star-Delta TIMER	Power OFF Delay	Power ON Delay		
Control time setting range	0.5sec~100sec(Max. time)	AT8PSN : 0.5, 1, 5, 10sec AT8PMN : 0.5, 1, 5, 10min	1sec, 3sec, 6sec, 10sec, 30sec, 60sec, 3min, 6min, 10min, 30min, 60min, 3hour, 6hour, 12hour, 24hour		
Power supply	24~240VAC 50/60Hz / 24~240VDC, 12VDC(Option)	• 100~120VAC 50/60Hz • 100/110VDC • 48VDC • 200~240VAC 50/60Hz • 24VDC	110/220VAC 50/60Hz	110VAC, 220VAC 50/60Hz, 12VDC, 24VDC(Option)	
Allowable voltage range	90 ~ 110% of power supply				
Power consumption	Approx. 4VA (240VAC 60Hz), Approx. 1.3W (240VDC), Approx. 0.5W (12VDC)	• Approx. 0.5VA (120VAC 60Hz), Approx. 0.9VA (240VAC 60Hz), • Approx. 0.5W (110VDC), Approx. 0.2W (48VDC), Approx. 0.1W (24VDC)	Approx. 10VA (240VAC 60Hz), Approx. 2W (24VDC, 12VDC)		
Return time	Max. 100ms		Max. 200ms		
Control output	λ contact : SPST (1a), Δ contact : SPST (1a)	Time-limit DPDT (2c)	Time-limit SPDT (1c), Instantaneous SPST (1a)	Time-limit DPDT (2c)	Time-limit SPDT (1c), Instantaneous SPST (1c)
Relay life cycle	Mechanical: Min. 10,000,000 times Electrical: Min. 100,000 times (250VAC 3A resistive load)				
Repeat error	Max. ±0.3%				
Setting error	Max. ±5% ±0.05sec.				
Voltage error	Max. ±0.5%				
Temperature error	Max. ±2%				

### Front panel identification



### Connections

