

# E10 SERIES

## ELECTRONIC PRESET COUNTER

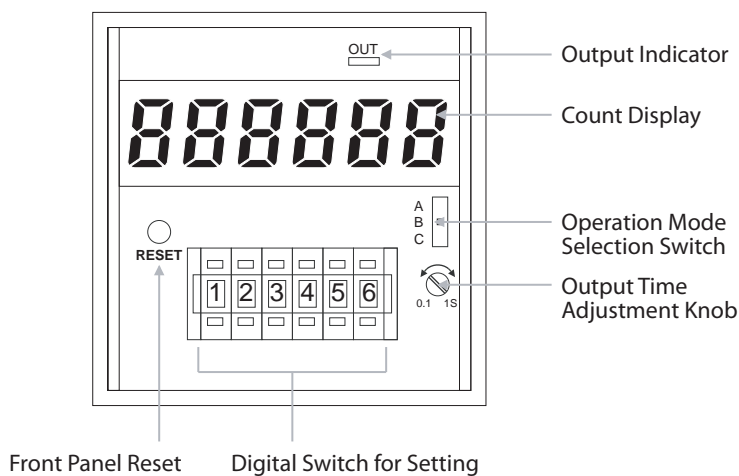
- DIN 72 x 72
- LARGE LED DISPLAY
- 6 DIGIT MODEL
- 1 LEVEL
- HIGH COUNT SPEED
- ADD / SUBTR COUNTER



### MODELS

MODEL	NO. OF DIGITS	PRESET LEVEL	MEMORY	FRONT RESET
E10-166M	6	1	○	—
E10-166MR				○

### FRONT PANEL(E10-166MR)

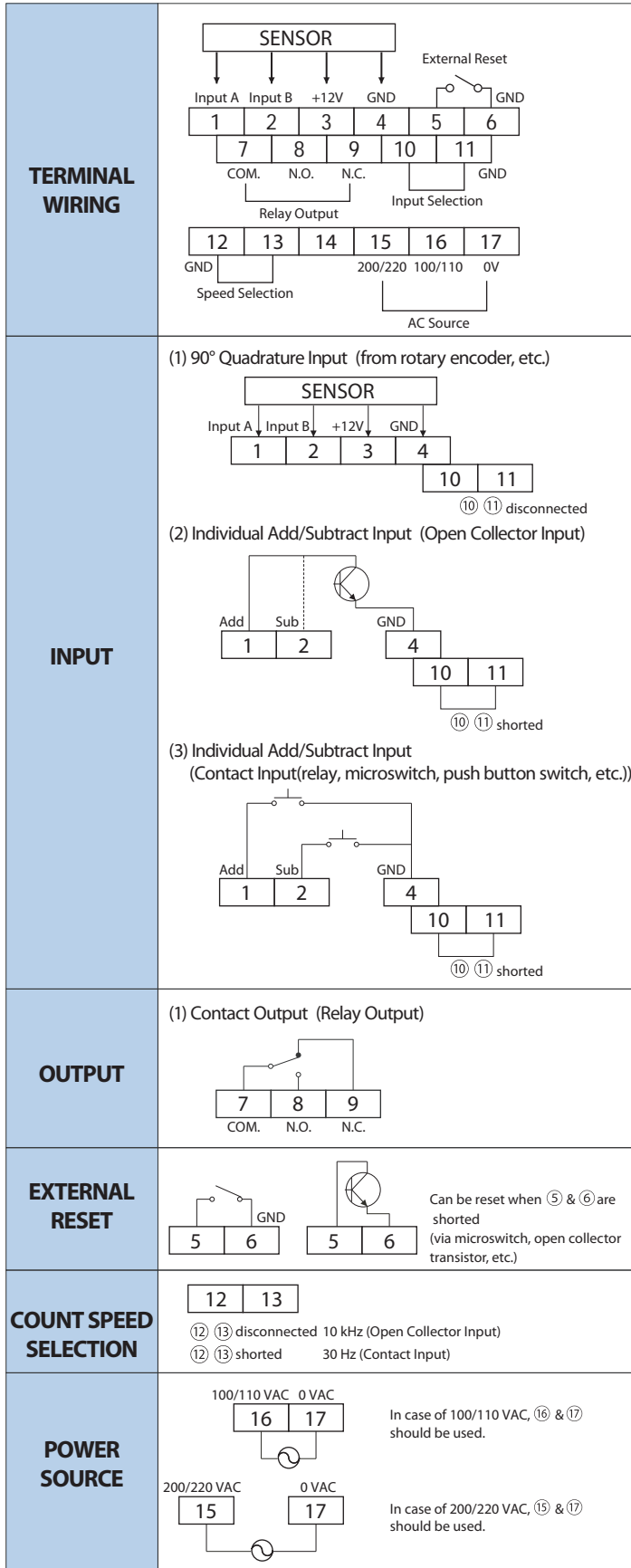


### SPECIFICATIONS

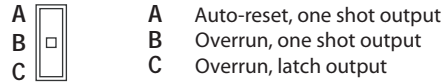
<b>Display</b>	6 Digits 7-Segment Red LED 10.16 mm (H) x 5.54 mm (W)
<b>Power Source</b>	100/110 VAC or 200/220 VAC, 50/60 Hz
<b>Power Consumption</b>	4.3 VA
<b>Preset Level</b>	1 Level
<b>Setting Range</b>	0 - 999999*
<b>Input Mode</b>	Open Collector Input L : 0 to 2 V (sink current 7mA max.) Contact Input: Relay, Microswitch, etc. (sink current 7mA max.)
<b>Count Mode</b>	90° Quadrature Input / Individual Add/Subtract Input (simultaneous input of add and subtract is not possible)
<b>Count Speed</b>	Open Collector Input: 10 kHz / Contact Input: 30 Hz
<b>Pulse Width</b>	Open Collector Input: 50 μs / Contact Input: 16.6 ms
<b>Duty</b>	1 : 1
<b>Output</b>	Relay Type 1C, 250 VAC, 2A (125VA), 220 VDC 2A (60W) cosφ = 1
<b>Output Display</b>	Red LED (ON when output is actuated)
<b>Output Time</b>	0.1 to 1 second per shot (adjustable via front panel knob) or latch output
<b>Reset Input</b>	Contact (100 ms min.) Open Collector (sink current 10mA max.)
<b>Reset Mode</b>	Remote Reset, Auto-Reset, Front Panel Reset (E10-166MR)
<b>Operation Mode</b>	Auto-reset (display resets when preset value is reached) Overrun (counting continues even after preset value is reached)
<b>Memory</b>	EEPROM Data Retention: approximately 20 years Memory Frequency: 100,000 times max.
<b>Power Source for Sensor</b>	12 VDC, 60mA max.
<b>Operating Temperature</b>	-10°C to +50°C (should not be frozen)
<b>Operating Humidity</b>	35 to 85 % RH (non-condensing)
<b>Hi-pot Test</b>	1500 VAC (1 minute)
<b>Insulation Resistance</b>	100 MΩ min. (500 VDC Megger) (on Power leads and between non-charged metal parts)
<b>Noise Immunity</b>	Square wave noise from Noise Simulator ±2.0 kV (PowerTerminals), ±500 V(Input Terminals)
<b>Vibration Immunity</b>	Malfunction: 10 to 55 Hz, double amplitude 0.5mm Destruction: 16.7 Hz, double amplitude 4mm
<b>Shock Immunity</b>	Malfunction: 100 m/s <sup>2</sup> (10G) Destruction: 300 m/s <sup>2</sup> (30G)
<b>Weight</b>	550g

\* When set to 0, counter will count down from displayed value to 0, when output signal occurs.

## WIRING



## OPERATION MODE SELECTION



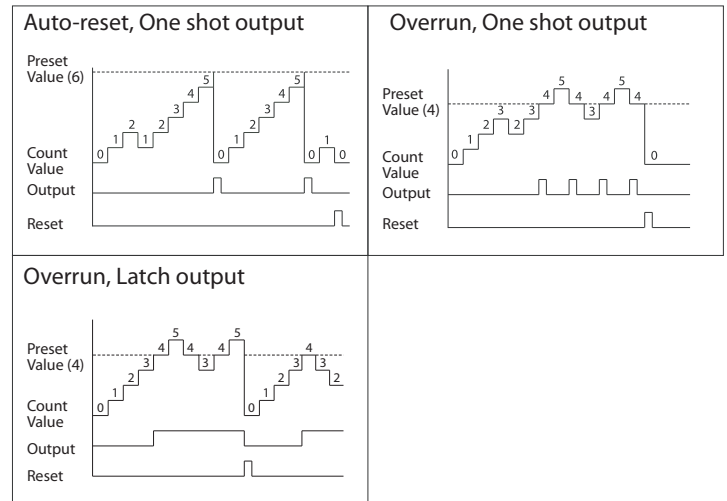
Prior to operation, please select both display mode and output mode by slide switch on front panel.

## ADJUSTMENT OF OUTPUT TIME



When operation mode A or B is selected, please adjust output time from 0.1 to 1 second by turning the knob below the slide switch.

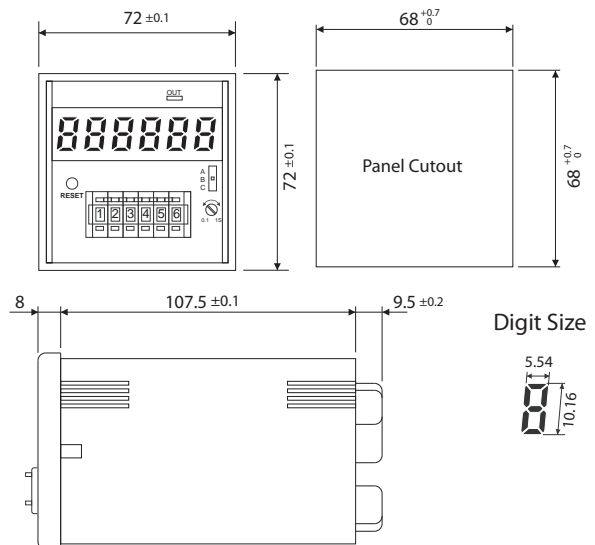
## OPERATION EXAMPLE



## CAUTION

- The counter will not accept count or reset signals during the first 100 ms after power-up.
- In case Individual Add/Subtract Input is selected, additive and subtractive signals cannot be input simultaneously.
- Shielded wires should be used for input/output leads.
- Input/output leads should be separated from power leads as much as possible.
- Wires for short circuit (jumpers) should be as short as possible.
- When noise is observed on input or power leads, noise suppressor or power source noise filter should be used.

## DIMENSIONS



## DUSTPROOF COVER (OPTION)

In case the counter will be used in a bad environmental conditions (e.g. dust / splash), a dustproof cover should be used.  
If the cover is to be used, the panel cutout should be 70 x 70 mm

**LINE SEIKI CO., LTD.**

Head Office

37-7 Chuo-cho, 2-Chome Meguro-ku,  
Tokyo JAPAN 152-0001

Contact  
E-mail  
URL

TEL: 03-3716-5151 FAX: 03-3710-4552  
webtrade@line.co.jp  
http://www.lineseiki.com