LINE SEIKI

MDR SERIES

BIDIRECTIONAL ELECTRONIC COUNTER

MDR - 040M

MDR - 060M

- ■ **DIN 72X72 SIZE**
- ■ **BRIGHT LARGE LED DISPLAY (4 or 6 DIGITS)**
- ■ **SWITCH OR PULSE INPUT**
- ■ **WITH MEMORY**

■ MODEL SELECTION

Models	Digits	Memory	Weight
MDR - 040M	4	◯	530 grams
MDR - 060M	6	◯	530 grams

■ SPECIFICATIONS

Models	MDR - 040M	MDR - 060M
Display	Red LED, 14.22 x 8.13mm (Zero Supress)	Red LED, 10.16 x 5.54mm (Zero Supress)
Input Method / Signal	Contact Input : Relay, Microswitch Non-Contact Input : L: 0~1V ; H: +4.5~27V	
Count Mode	90°Quadrature (directional) / Add/Subtract	
Count Speed	Contact Input : 20 Hz max. / Non-Contact Input : 5000 Hz max.	
Pulse Width	Contact Input : 25 msec min. / Non-Contact Input : 100 μsec min.	
Make (Duty)	1:1	
Reset	Front reset (push button) Remote reset (100msec min.)	
Memory	E²PROM (10 yrs. retention, 10,000 times)	
Power Source for Sensor	DC12V 50mA maximum	
Input Impedance	5kΩ	
Power Source	AC100/110V or AC200/220V ±10%, 50/60 Hz	
Power Consumption	Approximately 3.5VA	
Operating Temperature	0 - +40°C (Non-freezing)	
Operating Humidity	45 - 85%RH (Non-condensing)	
Hi-pot Test	AC1500V (1 minute)	
Dielectric Test	20MΩ min. (DC500V megger)	
Connection	M3 Terminal Screw	

■ REAR TERMINALS & WIRING

Contact Input (Switch) — Add (1), Subtract (2)
Non-Contact Input (Pulse) — Add (4), Subtract (5)
+12V (3), IN A (4), IN B (5), GND (6)
Sensor Input (90°Quadrature)

Memory (7), GND (8), GND (9), Remote Reset (10), Input Type (11)

12 | 13 | 14 | 15 | 16 | 17
AC200/220V (15), AC100/110V (16), AC0V (17)
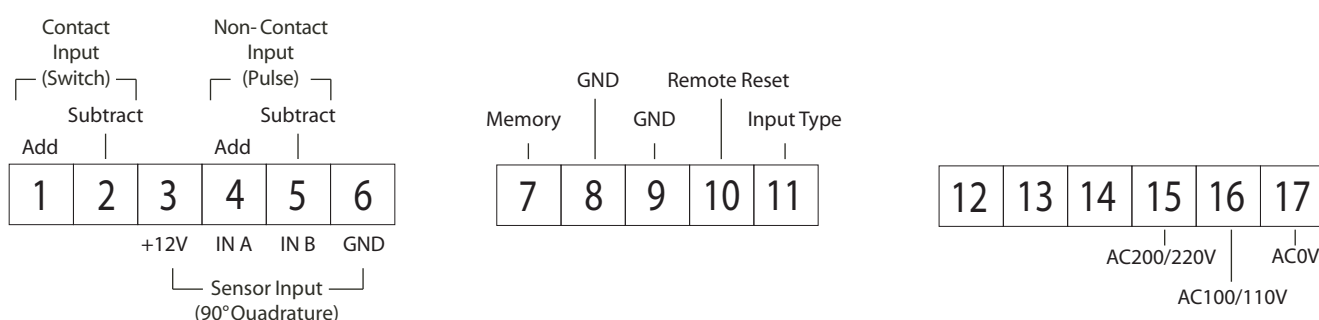
■ CONNECTIONS

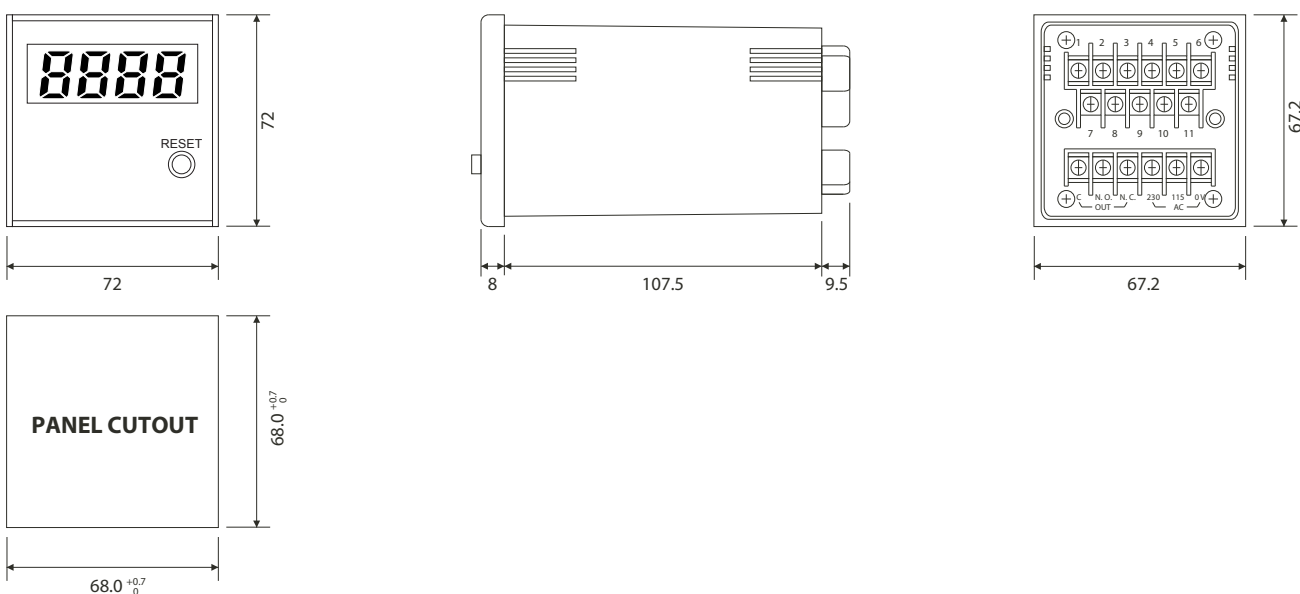|			
Power Supply		200/220 100/110 0V **15 16 17**	Power supply can be selected between AC100/110V or AC200/220V. For AC100/110V, use terminals 16 and 17. For AC200/220V, use terminals 15 and 17.
Input	Contact Input	Add / Sub / +12V **1 2 3**	For Contact Input (Relay, Microswitch, etc.): For Add count : Use terminals 1 and 3. For Subtract count : Use terminals 2 and 3.
	Non-Contact Input (Pulse)	Add / Sub / GND **4 5 6**	For Non-Contact (Pulse) Input: For Add count : Use Terminal 4 for (+) signal and 6 for (-) signal. For Subtract count : Use Terminal 5 for (+) signal and 6 for (-) signal.
	Non-Contact Input (Sensor)	Sensor **3 4 5 6** +12V IN A IN B GND	For Non-Contact (Sensor) Input, connect the sensor's: DC12V Power Supply : Terminal 3 Signal A (IN A) : Terminal 4 Signal B (IN B) : Terminal 5 GND : Terminal 6.
Input Type		**9 10 11** GND	The input type can be selected as follows: For Add/Subtract Input : no connection between terminals 9 & 11. For 90°Quadrature Input : connect terminals 9 and 11.
Remote Reset		Contact **9 10**	Resetting of the counter can be done remotely when terminals 9 and 10 are shorted with a Relay, Microswitch, etc.
Memory		**7 8** Memory / GND	To enable the memory feature, make sure to connect terminals 7 and 8.

■ CAUTION

1. Do not feed a voltage signal into the Contact Input and Remote Reset terminals. This may cause damage to the internal circuit of the unit.
2. Contact and Non-contact input cannot be used simultaneously. Please choose only one method of input.
3. During power failure, LED display will go off. At this time, the counter cannot detect input or reset signals even if signals are received.
4. Make sure to short terminals 7 and 8 to enable the memory function. When the counter will be shut down for a long period of time, disconnect terminals 7 & 8 to prevent discharge of internal battery. The internal battery is charged when power is supplied to the counter.
5. Simultaneous input of signals for the Add input and Subtract input is not possible. Use a multiplexer (ex. PS-41S) if such function is desired.
6. Use shielded leadwires for the Input terminal and Reset terminal. Also, make the lines from the power source as far as possible from the lines of the Input and Reset lines.

■ DIMENSIONS

PANEL CUTOUT

LINE SEIKI CO.,LTD.