

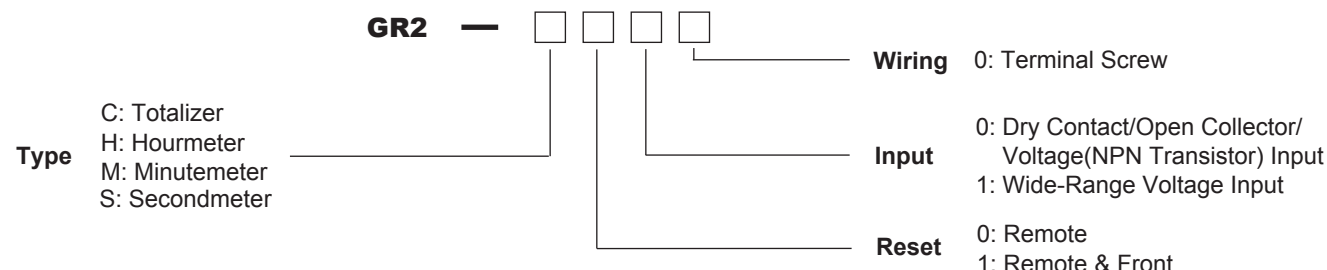
# GR2 Series Manual

Thank you for purchasing this Line Seiki product. Read this instruction manual carefully before using to ensure correct usage of this product. Keep this instruction manual for future reference.

## ● Main Features

- Panel mount ( 22.2 x 45mm Panel Cut-out)
- 7 digits LCD display
- Lithium Battery included
- 7 years battery life
- IP54 Front Panel Protection
- CE (EMC) and RoHS and UL 863 compliant

## ■ Models



## ■ Specifications

TYPE	GR2 - C □□□ TOTALIZER	GR2 - H □□□ HOURMETER	GR2 - M □□□ MINUTEMETER	GR2 - S □□□ SECONDMETER
DISPLAY	7 Digits, 7-Segment LCD, 8 mm (H)			
DISPLAY DIGIT	0 - 9999999	0.0 - 999999.9		
INPUT	Dry Contact/Open Collector/Voltage (NPN Transistor) Wide-Range Voltage	L: < 0.8V L:DC/AC 0 - 5V H:DC/AC 20 - 250V	H: 2 - 30V Input Impedance: Ω300k	Sink Current: 8 μA
COUNT SPEED	30Hz 20Hz (Wide-Range Voltage Input Only)	—		
RESOLUTION	—	1 count per 1/10 hour	1 count per 1/10 minute	1 count per 1/10 second
RESET	Front Reset Remote Reset	Dry Contact/Open Collector/Voltage (NPN Transistor) L: < 0.8V H: 2 - 30V Sink Current: 8 μA Wide-Range Voltage L:DC/AC 0 - 5V Input Impedance: Ω300k H:DC/AC 20 - 250V		
RESET PULSEWIDTH	6ms minimum			
POWER	3.6V 1/2AA Lithium Battery (replaceable), 7 years min. with continuous input at 25°C *The battery life is not a guaranteed value.			
NOISE IMMUNITY	Electrostatic Discharge: IEC-61000-4-2 8kV Electromagnetic Field: IEC-61000-4-3 10V/m EFT/BI/O Leads: IEC-61000-4-4 1.0kV			
EMC STANDARD	EMI: EN50081-2 EMS: EN50082-2			
AMBIENT TEMP. : OPERATING	-10 - +55°C (Should not be Frozen)			
AMBIENT TEMP. : STORAGE	-20 - 65°C (Should not be Frozen)			
AMBIENT HUMID. : OPERATING	25 - 85% RH (Non-Condensing)			
VIBRATION / SHOCK RESISTANCE	Operation : Single Amplitude 0.35mm, Frequency: 10 - 55Hz, X, Y, Z Axis (3 Axis) / 100m/s <sup>2</sup> Storage : Single Amplitude 0.75mm, Frequency: 10 - 55Hz, X, Y, Z Axis (3 Axis) / 300m/s <sup>2</sup>			
ALTITUDE	2,000m max.			
INSTALLATION ENVIRONMENT	Over-voltage category II , Pollution degree 2 (IEC61010-1)			
PROTECTION	IP54			
WEIGHT	50g (Battery included)			
WIRING	M3 Terminal Screw			
COMPLIANCE	RoHS and CE and UL863			



## WARNING

Misuse of this device may lead to injury to the user or damage to the device.

## Customer Service



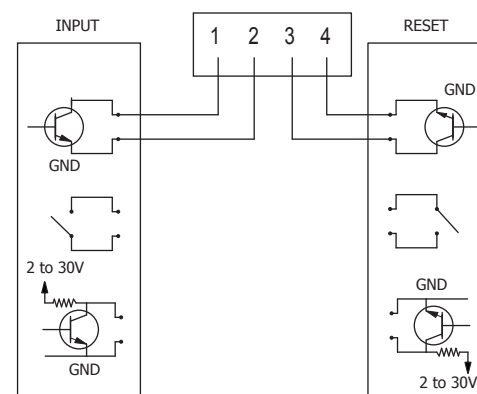
## LINE SEIKI CO., LTD.

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Meguro-ku, Tokyo 152-0001 Japan  
Contact : Tel: +81-3-37165151 Fax: +81-3-37104552  
E-mail : webtrade@line.co.jp  
Web : http://www.line-seiki.com

## ■ Wiring

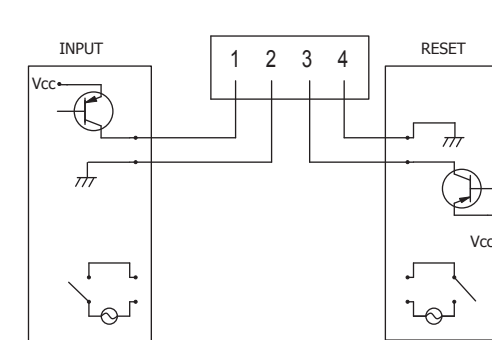
<GR2-□□00>

- Dry Contact/Open Collector / Voltage (NPN Transistor) Input Type



<GR2-□□10>

- Wide-Range Voltage Input Type



## Input Theory of GR2 Series

<GR2-□□00>

- Dry Contact / Open Collector / Voltage(NPN transistor) Input

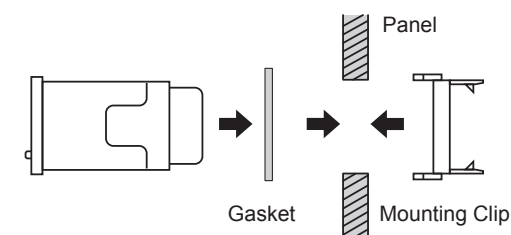
Input terminal No.1 Count at Hi→Lo  
Sensor/Contact 0V→

<GR2-□□10>

- Wide-Range Voltage Input

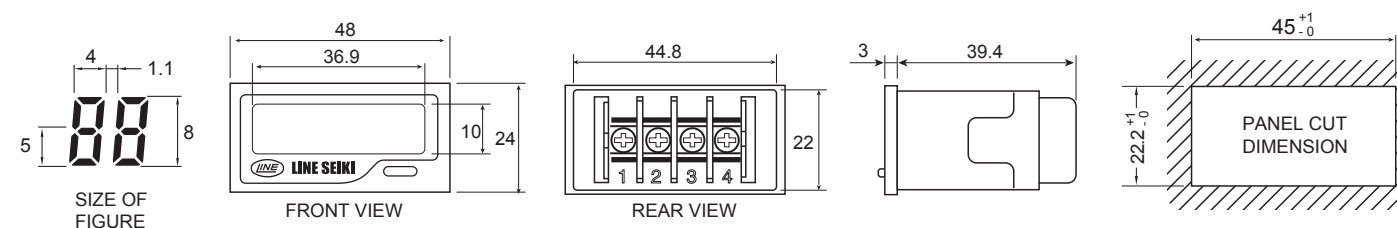
Input terminal No.1 Count at Lo→Hi  
Input Voltage Vc→ 0V

## ■ Mounting

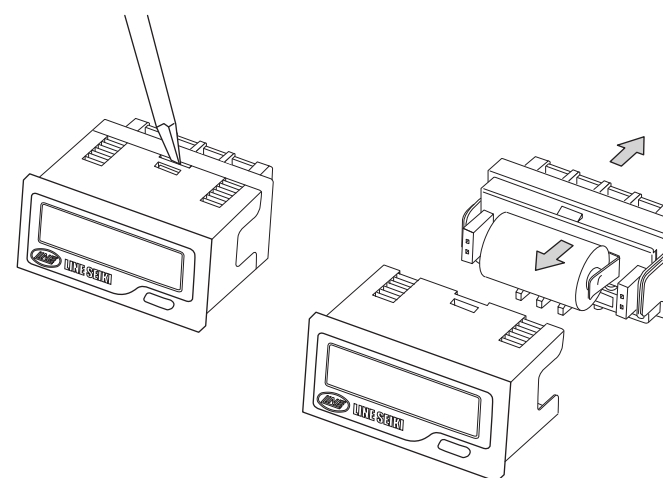


1. Insert gasket into the device.
2. Insert the device into the panel. Use the correct panel cut-out size.
3. Insert the mounting clip to the back of the device.
4. Push the mounting clip until it locks the device tightly against the panel.

## ■ Dimensions



## ■ Battery Replacement



## ! ATTENTION!!!

### Precautions when replacing the battery:

- Disconnect the wiring before changing the battery. Do not touch areas subject to high voltages as this could result to an electric shock.
- Make sure that your body is free from static electricity before changing the battery.
- Make sure to follow the procedures carefully as described below.

- 1) Use a flat screwdriver or any appropriate tool to lift the groove in order to unfasten rear case from front case.
- 2) Pull out the rear case from the main body.
- 3) Replace with a new battery. Make sure that the positive and negative terminals of the battery are positioned correctly.
- 4) Replace the rear case to the main body. Make sure that the case hooks click properly in place.

\* Use only 3.6V 1/2AA Lithium Battery for this device.



## WARNING!



EXPLOSIVE!

- This device uses Lithium battery. Properly dispose the battery after use. Do not short the positive and negative terminals, recharge, disassemble, deform, or dispose the battery to fire as this may seriously damage it or may cause explosion.
- Do not attempt to disassemble or modify this device.
- Mount to the front panel when using this device. (Indoor use)
- Do not use organic solvents such as thinners etc. to clean the front panel.
- Internal circuit may be destroyed if a voltage outside the rated voltage is applied.