

HG Series Timer Relay User's Manual



Features:

- ⊙ Dual line 4 digit LED display;
- ⊙ High timing accuracy;
- ⊙ Multi-ranges can be selected freely (9 kinds)
- ⊙ Different mounting size can be chosen.
- ⊙ Multi starting modes and output modes

For your safe, please read the below content carefully before you use the timer relay !

■ Safe Caution

※ Please read the manual carefully before you use the timer relay .

※ Please comply with the below important points.

⚠ **Warning** An accident may happen if the operation does not comply with the instruction.

⚠ **Notice** An operation that does not comply with the instruction may lead to product damage.

※ The instruction of the symbol in the manual is as below.

⚠ An accident danger may happen in a special condition.

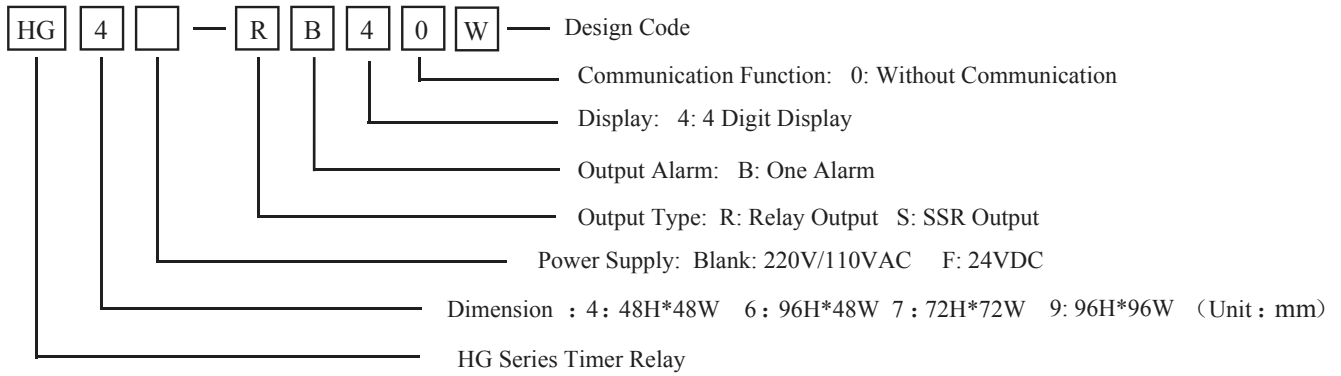
⚠ Warning

1. A safety protection equipment must be installed or please contact with us for the relative information if the product is used under the circumstance such as nuclear control, medical treatment equipment, automobile, train, airplane, aviation and equipment etc. Otherwise, it may cause serious loss, fire or person injury.
2. A panel must be installed, otherwise it may cause creepage (leakage).
3. Do not touch wire connectors when the power is on, otherwise you may get an electric shock.
4. Do not dismantle or modify the product. If you have to do so, please contact with us first. Otherwise it may cause electric shock and fire.
5. Please check the connection number while you connect the power supply wire or input signal, otherwise it may cause fire.

⚠ Caution

1. This product cannot be used outdoors. Otherwise the working life of the product will become shorter, or an electric shock accident may happen.
2. When you connect wire to the power input connectors or signal input connectors, the moment of the No.20 AWG (0.50 mm) screw tweaked to the connector is 0.74n.m - 0.9n.m. Otherwise the connectors may be damaged or get fire.
3. Please comply with the rated specification. Otherwise it may cause electric shock or fire, and damage the product.
4. Do not use water or oil base cleaner to clean the product. Otherwise it may cause electric shock or fire and damage the product.
5. This product should be avoid working under the circumstance that is flammable, explosive, moist, under sunshine, heat radiation and vibration. Otherwise it may cause explosion.
6. In this unit it must not have dust or deposit, otherwise it may cause fire or mechanical malfunction.
7. Do not use gasoline, chemical solvent to clean the cover of the product because such solvent can damage it. Please use some soft cloth with water or alcohol to clean the plastic cover.

1. Model Illustration



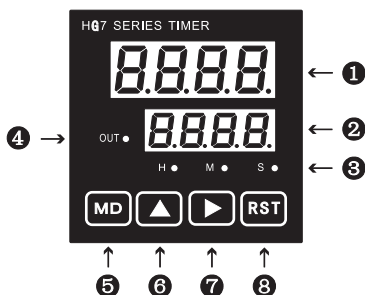
2. Ordering Model

| Model | Display | Power Supply | Dimension (mm) | Alarm |
|----------|-------------|------------------------|----------------|-------|
| HG4-RB40 | 4 digit LED | 100-240V AC/DC | 48H*48W | One |
| HG6-RB40 | 4 digit LED | 220/110VAC±10% 50/60Hz | 96H*48W | One |
| HG7-RB40 | 4 digit LED | 220/110VAC±10% 50/60Hz | 72H*72W | One |

3. Technical Specification

| | |
|-------------------------|--|
| Power Supply | 220/110VAC±10% 50/60Hz |
| Power Consumption | ≤3VA |
| Mounting Mode | Panel Mounting |
| Timing Range | 0.01-99.99S、0.1-999.9S、1-9999S、1-99M59S、0.01-99.99M、0.1-999.9M、1-9999M、1-99H59M、0.01-99.99H、0.1-999.9H、1-9999H |
| Timing Accuracy | ±0.1%±0.05sec |
| Reset Mode | Panel reset (Manual reset), External signal reset, Auto Reset or Power OFF Reset can be chosen |
| Input Signal | Low level (voltage) |
| Terminal Capacity | 3A/250VAC or 6A/30VDC |
| Pulse Interference (AC) | ±1.8KV |
| Dielectric | AC 1500V 1min |
| Insulation Impedance | DC 500V ≥ 100MΩ |
| Ambient Humidity | ≤85% RH |
| Ambient Temperature | 0~50℃ |

4. Panel Indication



- ① :Timing Value Display Window
- ② :Setting Value Display Window
- ③ :Hour (H), Minute (M), Second (S) Indicate Light
- ④ :Relay Output Indicate Light
- ⑤ : Function, SET Key
- ⑥ :Increase Key
- ⑦ :Right Shift Key
- ⑧ : Reset Key

5. Operation Sequence

- Function Menu

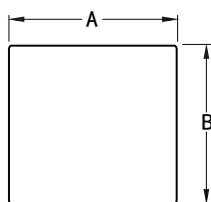
| Menu Sequence | Menu Function | Setting Range |
|---------------------------|---|--|
| Timing Status | Under the condition of timing status, press MD more than 3S to enter into function menu, after modifying parameters , press MD for a long time to back to timing status. If there is no any operation for more than 10S, the meter will return back to the timing status automatically (the modification will not be saved) | |
| <p>Press MD 3S</p> | <i>rAn1</i> :Timing value range choose menu, lower line LED display Max timing value, H,M,S indicate light seperately to show the relative units. | <p>99.99S → 999.9S → 9999S → 99M59S → 99.99M 9999H ← 999.9H ← 99.99H ← 99H59M ← 9999M ← 999.9M</p> |
| | <i>rAn2</i> :Delay time range choose menu, lower line LED display Max delay time value, H,M,S indicate light seperately to show the relative units. (F,N mode without this menu) | <p>99.99S → 999.9S → 9999S → 99M59S → 99.99M 9999H ← 999.9H ← 99.99H ← 99H59M ← 9999M ← 999.9M</p> |
| | <i>U-d</i> :Timing mode choose menu | <p>U Add Timing Mode: Timing count value increase from 0 to setting value</p> <p>d Minus Timing Mode: Timing count value decrease from setting value to 0</p> |
| | <i>i n t</i> : Effective pulse width of Input signal choose menu. | <p>1 : 1mS</p> <p>20 : 20mS</p> |
| | <i>o u t</i> : Output Mode choose menu | <p>n : N Mode → F : F Mode</p> <p>C : C Mode ← r : R Mode</p> |
| | <i>5 t A</i> : Start function | <p>5 t A : With start function, after power should press ▲ or short connect PAUSE terminal, the meter start to work.</p> <p>n o : Without start function, the meter will work after power on.</p> |
| | <i>H o l d</i> : Power OFF data save choose menu | <p>4 E 5 : Power Off Data save function</p> <p>n o : Without Power Off Data save function</p> |
| | <i>L o c k</i> : Lock key menu | <p>L-0 : Without Lock function</p> <p>L-1 : Lock Panel reset</p> <p>L-2 : Lock setting value menu + function menu</p> <p>L-3 : Lock panel reset + setting value menu + function menu</p> |

● Setting Value Modify Menu

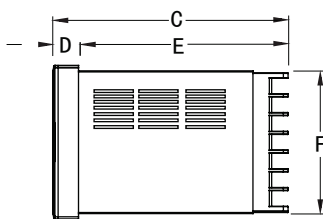
| Menu Sequence | Menu Function | Setting Range |
|---|---|---|
| <p>Timing Status</p> <p>T.off 8888</p> <p>T.on 8888</p> | <p>Under the condition of Timing status, press ▶ to enter into setting value modify menu.</p> | |
| | <p>T.off: Relay Timing value setting menu When Timing value \geq T.off setting value, Relay contact closure</p> | <p>The parameter can be setting freely between 0.01S-9999H according to the diffenret timing range that you choosed in function menu $r \bar{A} \bar{n} \bar{1}$</p> |
| | <p>T.on: Output delay setting menu . Relay will reset when Relay contact closure time \geq T.on setting value. (N,F mode without this menu)</p> | <p>The parameter can be setting freely between 0.01S-9999H according to the diffenret timing range that you choosed in function menu $r \bar{A} \bar{n} \bar{2}$</p> |

6. Dimensions (mm)

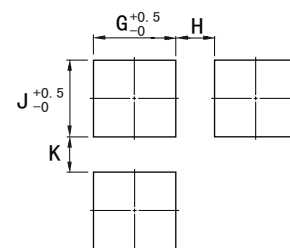
Panel Size



Side Face Size



Mounting Size

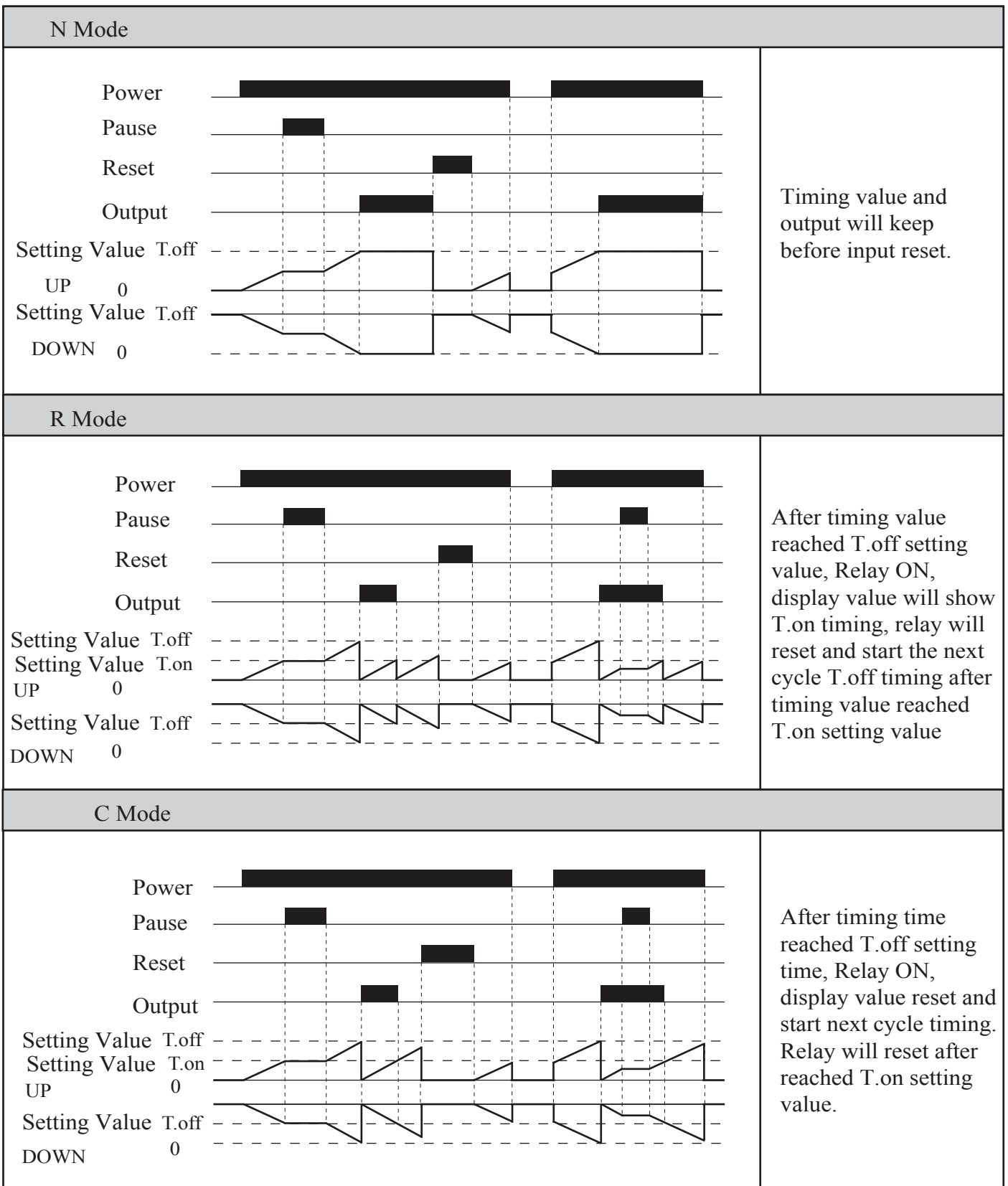


| Model | A | B | C | D | E | F | G | H(Minimum) | J | K(Minimum) |
|-----------|----|----|------|-----|------|------|------|------------|------|------------|
| 4:(48*48) | 48 | 48 | 97.5 | 6.5 | 91 | 45 | 45.5 | 25 | 45.5 | 25 |
| 6:(96*48) | 48 | 96 | 97.5 | 9 | 88.5 | 89.5 | 45 | 25 | 90 | 25 |
| 7:(72*72) | 72 | 72 | 97.5 | 9 | 88.5 | 67 | 67.5 | 25 | 67.5 | 25 |

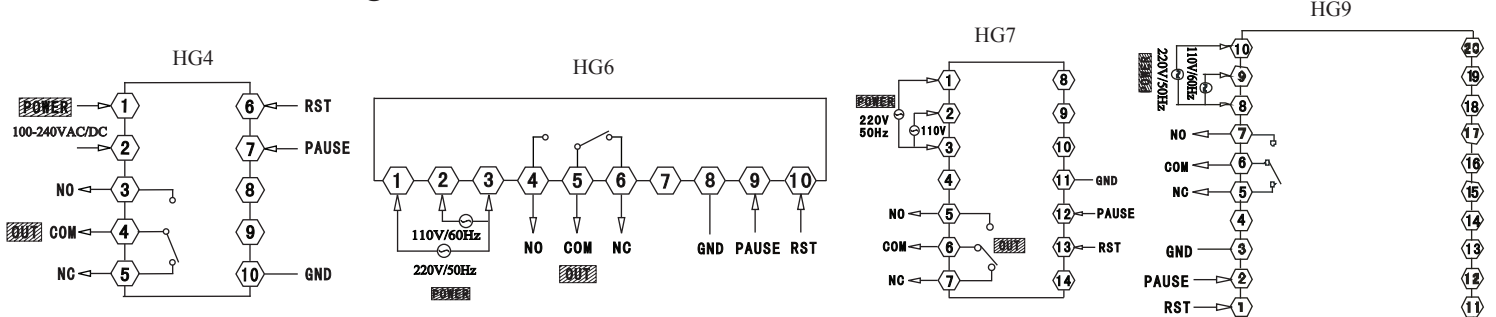
7. Output Logic Table

| F Mode | |
|----------------------------|--|
| Power | |
| Pause | |
| Reset | |
| Output | |
| Max Timing Value | |
| Setting Value T.off UP 0 | |
| Setting Value T.off DOWN 0 | |

Timing Value continue to increase or decrease, output will keep before input reset.



8. Connection Drawing



Note: If there are any changes, please subject to the drawing on the actual meter