WF-501LCD Coin Operated Timer Control Board

USER MANUAL

(Plastic box is optional,contact seller for detail)

WF-501LCD is used for the electric device coin opearted timer control. And that is widely used for the massage chair, washing machine, TV, game machine , Microwave oven and so on. And that is very easy to change a normal electric equipment to a coin operated electric equipment.

WF-501LCD has two pulse input port,can be used to connect two pulse interface payment device, coin acceptors or bill validators.

1. Technical Specification：

 ✧ Power Input: +12VDC ;
 ✧ Output: Relay COM and NO output (Relay Power Maximum: 250V 30A)
 ✧ Main Board Size: 100mm * 116mm ;
 ✧ Display Board Size: 75mm * 33mm
 ✧ Digital Timer: Four bits LED Timer ;
 ✧ Maximum credit timer: 9999 minutes ;
 ✧ Minimum start coin pulse: 1-99
 ✧ Maximum timer per coin pulse:99 minutes

2. Adjustable parameters list:

 ♦ Credit value per coin pulse for show
 ♦ Work timer value per coin pulse
 ♦ Minimum pulse for start working
 ♦ Auto start or Manual start
 ♦ Save credit or not when accidentally power off during running
 ♦ Display will show the rest credit or the rest timer

3. How to setup：

There are three Buttons on the main board,named: **KEY1**,**KEY2** and **KEY3**.

KEY3 is the function button to select the items to be setup, **KEY2** and **KEY1** are the data select button, user can use **KEY2** or **KEY3** to increase or decrease the value of this items.

Press the **KEY3** at a short time (around one second), then will enter into the check mode, then will show the total1 income, and then you can press the **KEY2** or **KEY1** to check all the income data from COIN1 and COIN2.

Press the **KEY3** and hold it at a long time (around 5 seconds), then will enter the parameters setup mode,
 ✓ The first parameter is:Timer credit value per coin pulse
   (Data can selected as the following: 0,05, 0.10, 0.20, 0.50, 1.00, 2.00, 5.00, 10.00),
   This data will be used for income value converted or reset credit value for timer counting.
 ✓ Press the KEY3 again to enter the next parameters to setup the work timer per pulse: minutes and seconds
   (Data can be selected from 00:00 to 99:59)
 ✓ Press the KEY3 again to enter the next parameters to setup the minimum work pulse
   (Data can be selected from 01 to 99)
 ✓ Press the KEY3 to enter the last parameter to setup Auto Start or not
   You can use the KEY1 or KEY2 to select yes or not.

4. Main board size Connectors and Input Wires：
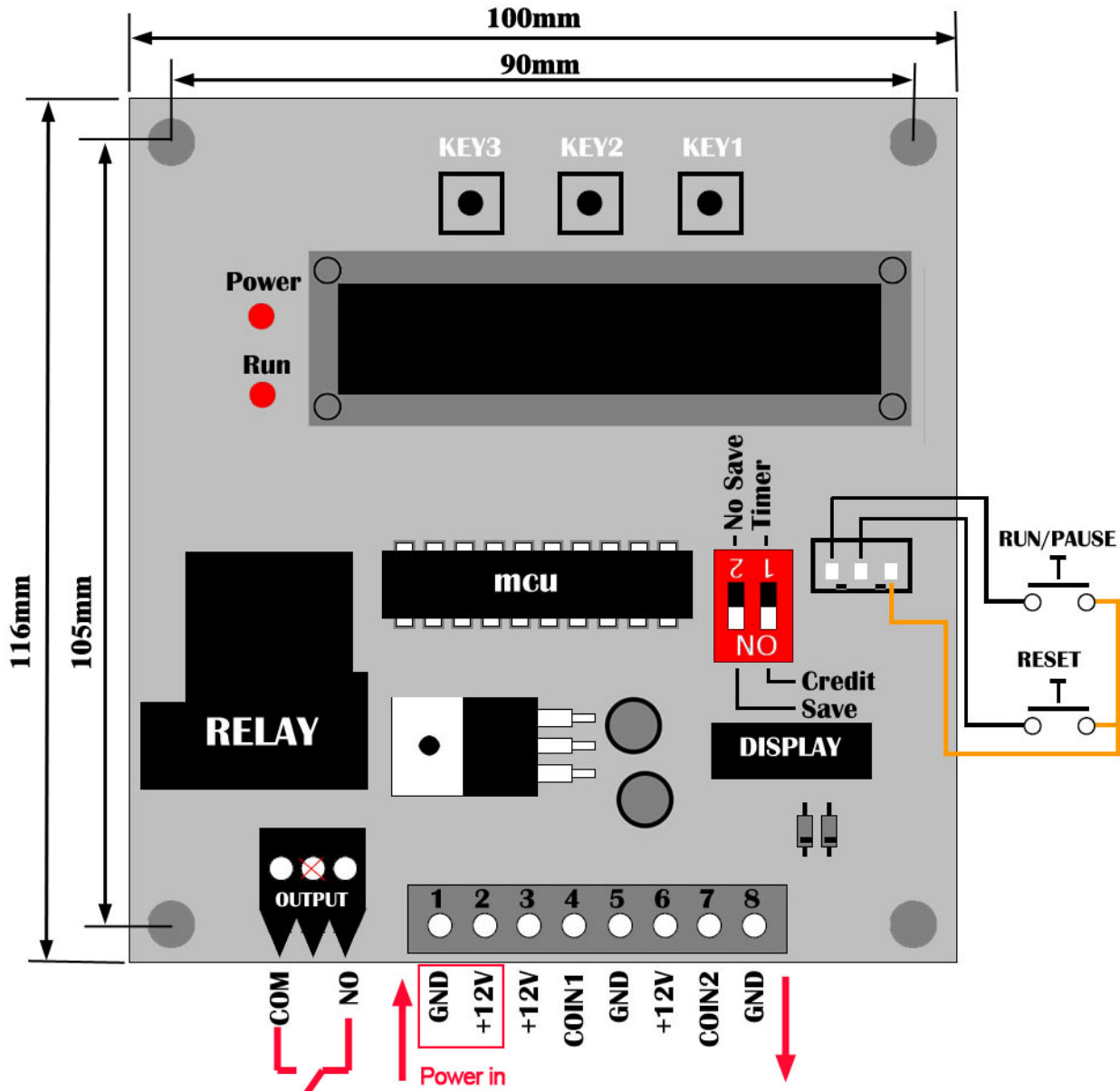
（1）Power Input：

Two pin connector at the left side, that should be connected to the +12V power supply.

（ Do not connect the wrong positive and negative wires, otherwise it will cause permanent damage to the control board ）

（2）Wires to pulse type coin acceptor：(The right side 6 pin connectors)

(Two groups of +12V and GND,that is DC12V output for coin acceptors)

There are two group connectors , both with three pin connectors with : Red wire, Black wire and White wire and that is specified as following :

Red： To power wire of coin acceptor (need to connect to the +12V pin)

Black： To power Ground of coin acceptor (need to connect to GND)

White： Coin Pulse input (NO Type Pulse input)

- If have other wires from coin acceptor, normally that no need to connect
- Important to use the payment device with NO type pulse output

（3）Start Button Input:

That is used to manually start the timer even when the coin pluse is add to the board.

The board will keep the value and wait the start button to be pressed.

（4）Timer Reset Input:

That is used to reset the timer with you need to reset the timer when the timer is runing.

（5）DIP switch:

One is for display: Coin pulse or timer remaining,

Two is for timer save or no.

5. How to connect the output to control：

What is WF-501LCD Relay Terminals?

WF-501LCD main board have SPDT (Single Pole Double Throw) style relay on board.and the output is two outputs: COM and NO

COM = Common

NO = Normally-Open contacts connect the circuit when the relay is activated; the circuit is disconnected when the relay is inactive.

You must provide an external power source to the device you want to control. No voltage is present at the output terminals (remember it is just a switch). The relay is normally connected in series with the positive (+) power wire of the device you want to control.

In this case, the positive wire from the power source should be connected to Common. Then either the NO or NC terminal (as appropriate for your purpose) is connected to the positive (+) wire going to the device you want to control. The negative (-) wire does not connect to the relay at all. It goes directly from the power source negative output to the device negative (-) terminal.

Typical Relay connection diagram:
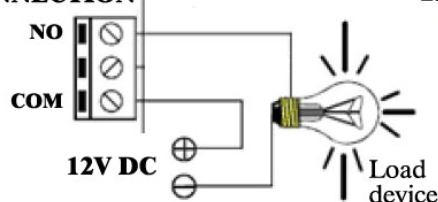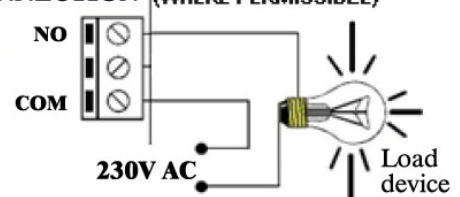
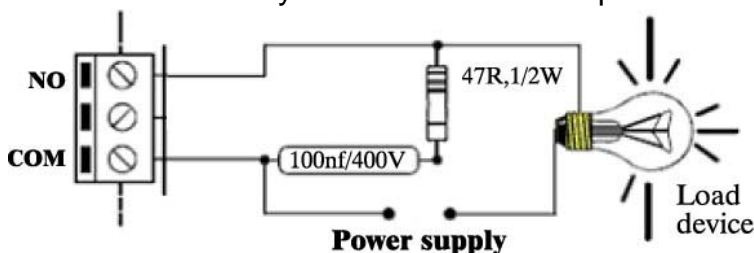**Anti-spark Relay connection diagram:**

Sometimes the connected equipment can cause arcing across the relay contacts.This must be corrected by installling a resistor and capacitor (not supplied)between the two contacts of the relay as shown below.component values are for 230v mians.

6. How to use the magnetic ring to eliminate the interference from the motor or electric valve load ?

When use this timer control board to control a big power motor or a electromagnetic valve,when insert the coin it start, but maybe more time credit added and also when timer is out and when motor stop,but the timer will restart agan , what is the problem happen ?

Actually for the motor and electromagnetic valve,these equipments are all Inductive load, When starting and stopping, it will generate large electromagnetic interference to the board throught the power cable.So we have to add a magnetic ring to smooth or eliminate interference on the power cable.

Below picture is the magnetic ring. this is a very cheap component,but very very useful.

Magnetic ring is used to prevent motor interference

Put the DC12V power supply cable two or three times around the magnetic ring