

**USER MANUAL**  
**JEOSYSMIC DS-101**  
**EARTHQUAKE-GAS SWITCH OFF SENSOR**

## **1-ESSENTIALS OVER MECHANICAL INSTALLATION**

Selection of installation area is very important for the device to operate efficiently. Here are some essential points to be followed during the installation

- 1.1.** Main Columns (load carrying), main beams or retaining walls are the most appropriate areas for the installation
- 1.2.** Keep the device out of humidity, moisture or wet. Direct exposure of heat must be avoided
- 1.3.** Minimum height of installation should be 2 meters or more.
- 1.4.** A 30cm space in between gas pipes and the place of installation must be secured
- 1.5.** Get the solenoid valve into a lockable metallic enclosure in order to avoid any unauthorized interference.
- 1.6.** Solenoid Valve must be located in a place of natural gas pipe line entering through the building (central gas network of a building). Device must be securely installed in such a way of not to sense the movements may be caused by dynamic reactions / effects of building

## **2-INSTALLATION/ASSEMBLING PROCEDURE**

- 2.1.** Use the key that comes with the package to unlock. Displace the front panel connection cable and move the front panel from the trunk
- 2.2.** Mark the required points over the load carrying system via the use of template (see inside of package) and then drill them through with 8mm drill head. Locate the wall plugs and screws that they come with the package. Install the device well-balanced and smoothly
- 2.3.** Assemble the bottom metal sheet and front panel
- 2.4.** Make sure that a proper solenoid valve in good quality is chosen

## **3-ELECTRICAL INSTALLATION**

- 3.1.** Connect earthing terminal of device to the earthing line of building. There are 3 cable lines which are brown-black and green-yellow in color (in buildings of Turkey). "Green-Yellow" indicates earthing line. Locate a copper plate on a convenient place out of building to get the earth connected to if in case of no earthing line already constructed.
- 3.2.** Use a 3X0.75mm cable with multi-layers to go through a conventional cable trunk or within protection shield against humidity and wet.
- 3.3.** Cable with protection shield is vital for the wall-pass and preventive measures against possible cable damage should be taken.
- 3.4.** Cable size for solenoid valve is 2X0.75mm and must be in comply with the international standards like(CE, VDE, EN, etc).
- 3.5.** Make sure that whole connection cable must be in one-piece. Any addition or connection joints for extension should be avoided. Cable with insufficient length must be replaced with a cable having full one piece in length.
- 3.6.** Input Connections for supply(220V) and control (12V) should be conducted as per wiring diagram. Use 3-6Amp MCB (Miniature Circuit Breaker) for the supply voltage connection of the mains. Check with an appropriate meter whether supply voltage corresponds with the network voltage or not.

## **4.OPERATING**

Device is ready for operation after its mechanical and electrical installations are successfully completed. Connection of 220V for supply and of 12V for battery are proceeded while the MCB is deactivated. The LED on the front indicating "device is on and battery activated" is "On" when the device operates with its in-built battery at 12V. In following to that, supply voltage(220V) is applied once the MCB is activated. Hence, Battery LED is switched off and network(supply voltage) is turned on. The LED indications under normal(healthy) condition are shown as

Battery Power is "Off" (Battery activated)  
Network Power is "On" (Supply Voltage applied)  
Earthquake Alarm is "Off"  
Solenoid Valve Failed is "Off"  
Battery Failed is "Off"

Keep pressing test button for 3 sec is conducted to test the performance of solenoid valve and its connections. Solenoid valve is triggered and be alarmed respectively. Consequently, resetting is followed as a final stage for the operation start-up.

#### 4.1. Resetting and Testing

Pressing on a reset button on the mother board(card) and/or inside of cover is used to reset the system before using the device for operation. Keep pressing on a test button on the mother board for 3 sec is conducted for testing of Solenoid Valve and its connections.

#### 4.2. Error Indications

Solenoid Valve Failed :Continually "On" (Buzzered Alarm). Check connection/wiring. Replace the solenoid valve with the new one if provided that no any problem with the cables/wiring found  
Battery Failed:Continually "On" (lasting more than 25min.). Device auto check the in-built battery status in every 5 minutes. Error Indication LED is switched "On" if the battery voltage drops under 10V. Call for the maintenance in case of the said error indication lasts more than 25minutes despite having the supply voltage(220V) been applied.

### 5. JEOSYSMIC DS-101 CONNECTION DIAGRAM

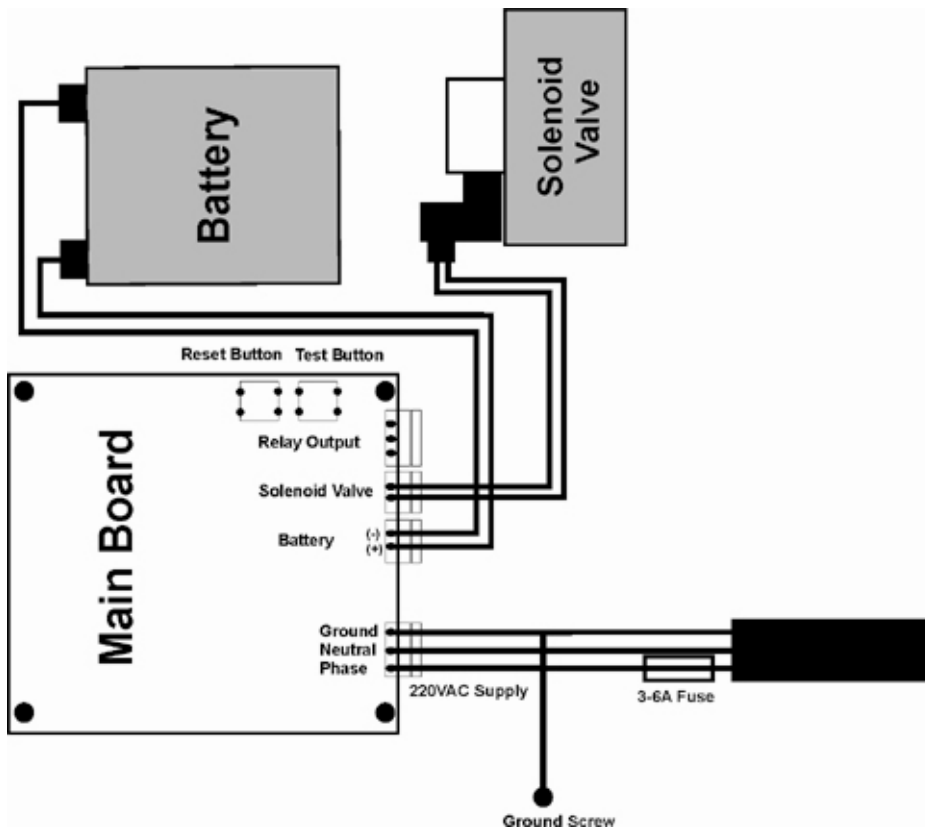


Figure 5.1 Display of mother board outputs connections.

Electrical wiring should be proceeded as per what shown in the diagraeme. Relay output is optional and can be used if needed.

## 6. TECHNICAL FEATURES

<b>Operating Voltage</b>	150-265VAC/50 Hz-12VDC
<b>Tranquil Current</b>	80 mA
<b>Relay Contact Output</b>	3A-250VAC
<b>Solenoid Valve Relay Output</b>	3A-12VDC
<b>Battery Capacity</b>	12V 4,5 Ah
<b>Battery Operating Time</b>	24hour
<b>Sensing Level</b>	Horizontal
<b>Max.Acceleration Range of Sensing</b>	+1g / -1g
<b>Min.Acceleration Range of Sensing</b>	+/-150mg (at 1Hz)
<b>Frequency Range of Sensing</b>	TS12884
<b>Sensor Digital Output Resolution</b>	11 mg
<b>Operating Temperature</b>	0/+51.50°C
<b>Rated Humidity</b>	%0-90
<b>Interior Siren</b>	Piezoelectric Buzzer
<b>LED Indications</b>	Unit is "On" (mains/network is active), Battery is "On", Solenoid Valve is "Defected", Battery is "Out" and "Earthquake Alarm"
<b>Enclosure</b>	1mm Furnaced- Painted
<b>Weight</b>	4.3 kg.
<b>Dimension</b>	300x280x80mm.