

# **[GAS DETECTOR & SHUTOFF SYSTEM]**

## **REFERENCE MANUAL**

MODEL: EWS125. EWS150

MODEL: EWS200. EW250

### **[ NOTICE ]**

- Surely be aware of the specifications by skilled worker prior to using the product.
- Surely keep the specifications to where you are always able to see.

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**\*User's manual is not responsible for unauthorized changes.**

# 1. SPECIFICATIONS

## 1-1. CONTROL PANEL

Model & Diameter of gas pipe	EW12503	EW12503	EW12503	EW12503
	125A	150A	200A	250A
Power supply	AC220V 60Hz	AC220V 60Hz	AC220V	AC220V
Operating temperature	0°C~40°C	0°C~40°C	0°C~40°C	0°C~40°C
Operating Humidity	0~95%	0~95%	0~95%	0~95%
Working voltage(open/close)	DC 90V	DC 90V	DC 90V	DC 90V
Visual alarm	Yellow LED blinking			
Audible alarm	Buzzer sound (above 70dB)			
Current input	DC 5~18V			
Signal input	3 Gas Detector			
Dimensions	152x258x86mm			
Weight	2,718g			

## 1-2. SHUTOFF DEVICE

Diameter of gas pipe	125A	150A	200A	250A
Operating power	DC 90V standby 0mA max 2A			
Valve type	Flange type ball valve			
Torque	550 N.m		650 N.m	
Opening/closeing time	25sec		25sec	
Opening and shutting angle	90°			
Gear material	SM45C			
Body material	Body: aluminum. Case: stainless Clamp: aluminum		Body: steel. Case: stainless Clamp: aluminum	
Operating temperature	-20°C~50°C			
Operating humidity	0~95% RH			
Mounting method	Flange at pipe			
Dimensions	242x185x402mm		444x163x283mm	
Weight	25.5kg		48.8kg(200A) 58.8kg(250A)	

## 2. PART & FUNCTIONS

### 2-1. STANDARD CONTROL PANEL



①Graphic lamp: Displays the current valve status during open/close operation. If the breaker is not connected (less than a certain load) or if the fuse is disconnected, the lamp

It does not light up.

②Power light: Turns on when AC 220V power is supplied.

③Open/Close: Manually when opening or closing the circuit breaker It is a button that works by blocking.

④Buzzer stop warning light: It flickers when the buzzer stop button is pressed. At this time, the alarm does not sound even though it is an alarm condition. Press the buzzer stop button again to turn it off⑤ Buzzer stop button: To mute the alarm sound and As a button to play, press once to silence the alarm. If the alarm is pressed again in the state where the alarm is not returned, an alarm sound is emitted.

⑥Alarm return button: When a gas leak alarm occurs, the alarm on the control side is maintained even if the alarm signal on the alarm side is returned. Therefore, after returning the alarm on the alarm side, you need to press the alarm return button on the control side separately. If you press the button, The signal lamp and alarm lamp return, and the valve can be opened by pressing the open/close button.

⑦Alarm light: When an alarm signal is input from alarm 1.2.3, a buzzer sounds and the alarm lamp turns on at the same time.

⑧ASV connection: When the circuit breaker operates normally, it is turned off, and when the output load of the circuit breaker is abnormal, the green lamp turns on. (In case the breaker output load is abnormal: the breaker is not connected, the line is disconnected, the fuse is disconnected)

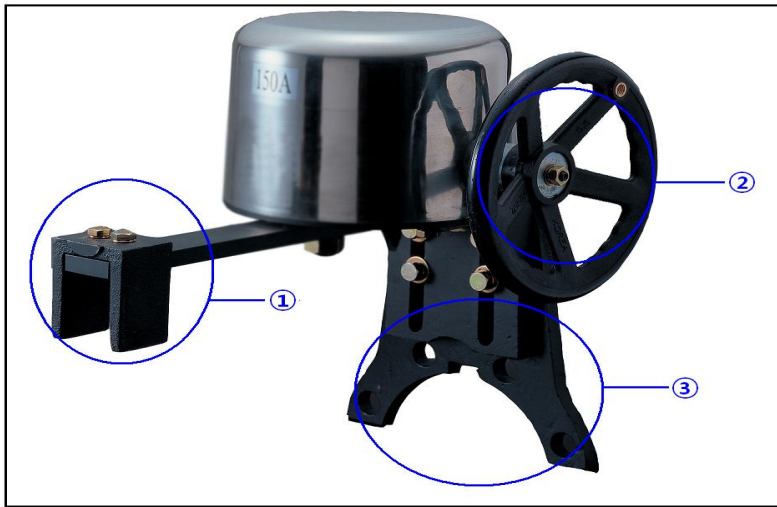
⑨Alarm signal: When the alarm signal is input (DC12V), the alarm signal lamp red turns on and the red lamp turns on at the same time as the signal 1.2.3. When the alarm signal DC12V is cut off, the alarm signal lamp turns off and the signal 1.2.3 is restored You can.

⑩Overload lamp: When more than 1.5A current flows through the control unit PCB (breaker overload), the current sensor detects this and the overload lamp (Red LED) lights up, and if the overload condition is maintained for more than 3 seconds, the operation output to the circuit breaker is cut off.

⑪Load meter: Displays the amount of current (A) generated when the circuit breaker is driven.

⑫ Signal lamp: When an alarm signal is received from an alarm (DC 5V-18V), the signal lamp is turned on. At this time, the alarm lamp of the control unit flickers and an operation signal is output to the circuit breaker at the same time.

## 2-2. 125~150A SHUTOFF DEVICE



### ① Holding clamp

This metal device holds Pipe firmly. And the shutoff device can be used regardless of Shape of valve because you can control the location of the shutoff device by controlling This clamp, And please adjust the shutoff device to be horizontal with valve

### ② Hand driven handle

Manually available handle for emergency shut-off

### ③ Actuating clamp

It's one end is connected with the central axis of the shutoff device and the other end is Holding valve so that the clamp is able to control the valve, If you are to actuate valve Manually Please loosen the bolt on the clamp and remove the clamp

## INSTALLATION (SHUTOFF DEVICE)

### Before installation

- ① Please check the voltage of power supply for the control panel before using  
(The rated voltage: AC 220V)
- ② Please check the connection between the detector and the control panel and between the Control panel and the shutoff device
- ③ Please confirm whether the valve meets the standard diameter of the product you purchased
- ④ Open & Close button allows you to make the audible alarm mute

(But while the alarm signal is input continuously. The shutoff device can't be opened  
You can only make the audible alarm mute during this time)

### Installation

- ① Please pull the lower bolt. Then insert shutoff device into valve
- ② Please correspond the location of the spindle of valve handle with that of the Shutoff device exactly
- ③ Tighten up the two bolts for the shutoff device not to move. And check fixing

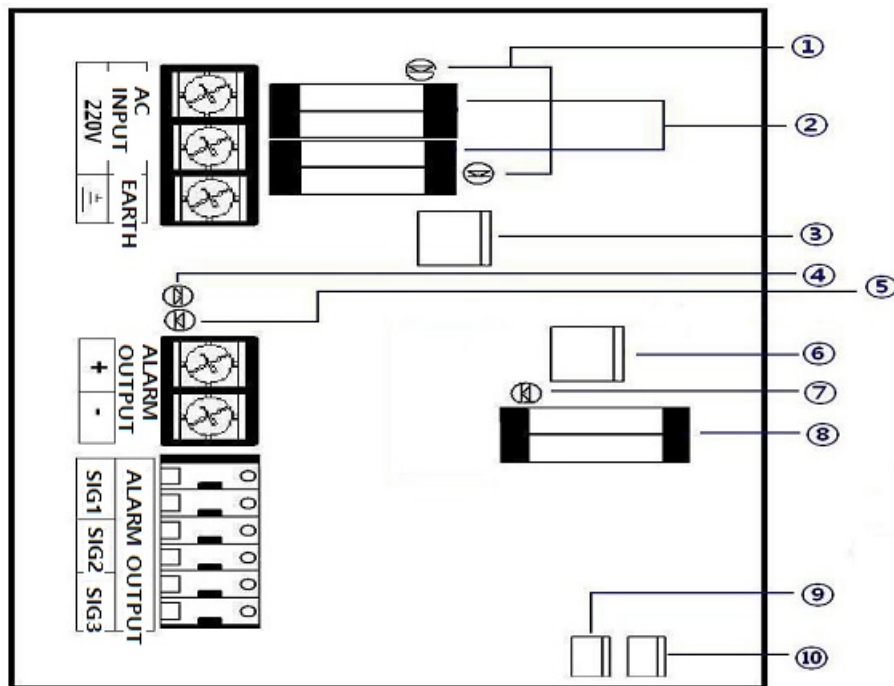
### 2-2. 200A~250A SHUTOFF DEVICE



### 3. How to install the blocking part

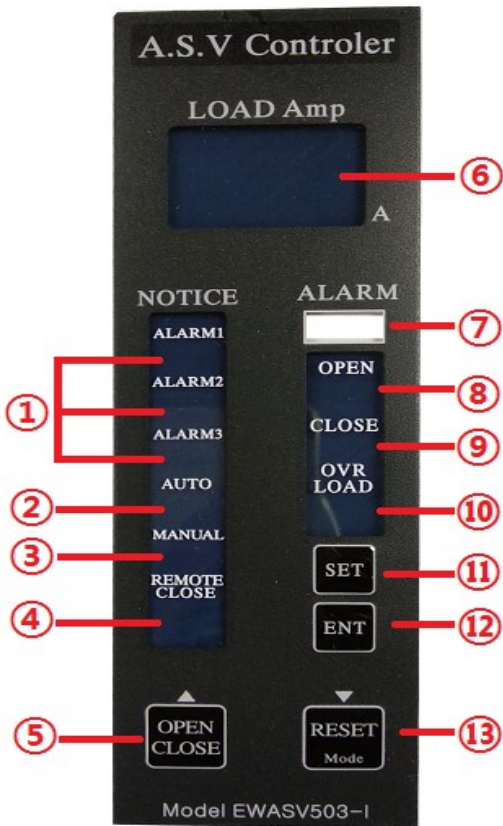
- ① Check whether the purchased gas leak alarm shutoff device and the pipe valve have the same size.
- ② After slightly fixing the mounting clamp to the pipe, adjust the position of the rotation shaft of the driving clamp and the rotation shaft of the valve handle. match exactly. At the same time, make sure that the driving clamp and the valve handle are horizontal, and then Tighten the clamps.
- ③ Check the fixing condition of each bolt again.

#### 4. Control Function diagram



- ① AC Power Protection Fuse Monitoring Lamp: Illuminates when the AC Power Protection Fuse is shorted.
- ② AC power protection fuse: 250V 2A
- ③ Spare power connector: DC 90V (blocker output)
- ④ Open (yellow) output check lamp: Illuminates when the output is open (90 seconds).
- ⑤ Close (green) output check lamp: illuminated when closed (90 seconds) output
- ⑥ Spare power connector: DC 12V (power supply to control unit)
- ⑦ DC output fuse monitoring lamp: Illuminates when DC output fuse is shorted.
- ⑧ DC output connection fuse (250A2A): fuse short circuit when circuit breaker is overloaded.
- ⑨ Force Close (option)
- ⑩ Closing check (option)

## 5. UNIT PANEL (EW503 TYPE)



① Signal 1. Signal 2. Signal 3: Signal illuminated when an alarm signal (DC 5V-18V) is received from the alarm. When the alarm signal is input, the alarm lamp of the control unit flashes and an operation signal is output to the circuit breaker at the same time.

② Automatic: In the event of an alarm, the automatic closing LED is illuminated and an operating signal is output (DC12V) to close the shut-off

③ Manual: When an alarm occurs, only the signal LED and alarm lamp operate, and the blocking unit does not operate.

④ Remote closing (forced closing): The breaker close signal is output by the contact input, so the breaker cannot be operated by operating the front open/close button.

⑤ Open/Close button: Each time the button is pressed, an open → close/ close → open signal is output, and the circuit breaker operates. Also, 'beep' (one time) means open, 'beep' (double) means close action.

(Even if you do not look directly at the lamp, you can hear the opening/closing by pressing the button)

⑥ Load meter: Displays the amount of current (A) generated when the circuit breaker is driven.

⑦ Alarm light: When an alarm signal is input from alarm 1.2.3, a buzzer sounds and the alarm lamp turns on at the same time.

⑧ Open lamp: Lights when the circuit breaker is open or open.

(Output from the internal microcomputer. When the relay operates, the open lamp in the PCB is turned on)

⑨ Close lamp: Lights up when the circuit breaker is closing or is closed.

(For the actual output lamp, the lamp in the internal board is turned on, refer to 4. Control function diagram)

⑩ Overload: When more than 1.5A of current (overload) flows from the current sensor, the overload lamp turns red and the overload is over 3 seconds. If the state is maintained, the breaker output is blocked

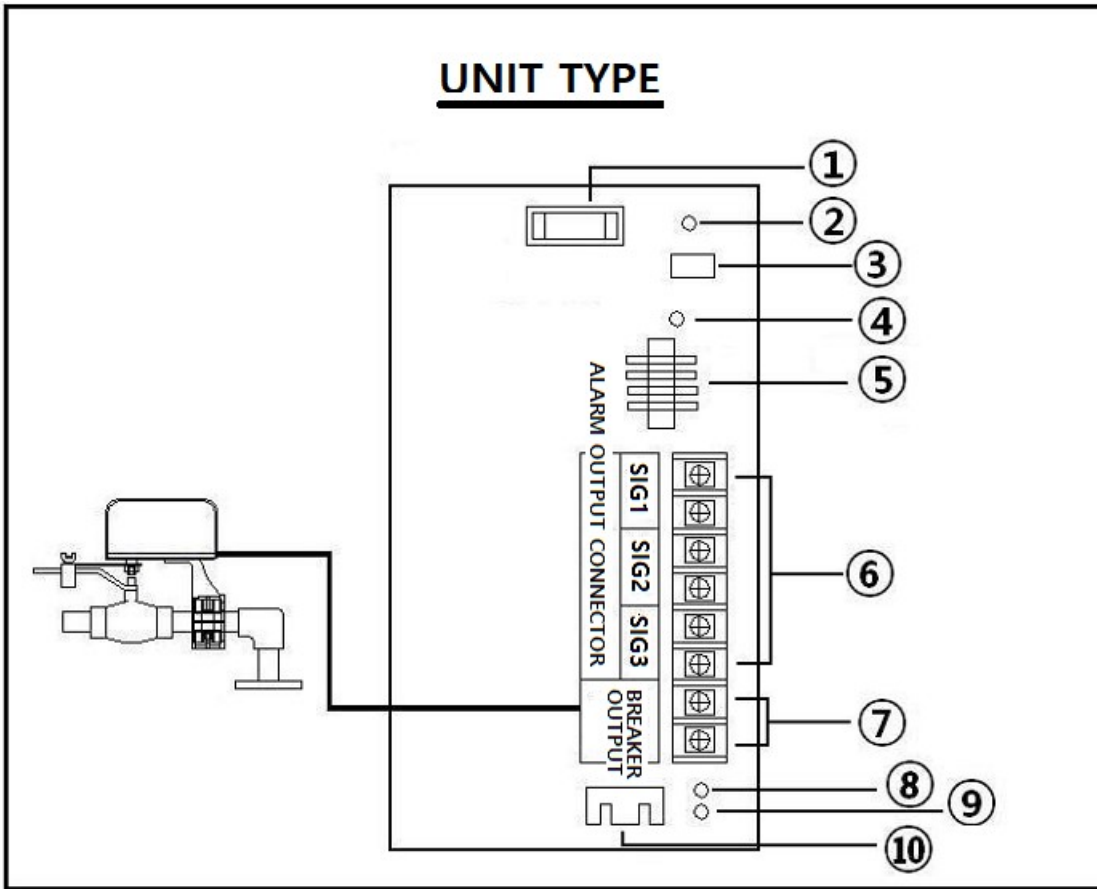
⑪ SET button This is a product setting button. [Resetting is prohibited except for those designated by our company]

⑫ [ENT] button: It is a function button to save settings when product setting is completed.

⑬ Return button: When a gas leak alarm occurs, the alarm on the control side is maintained even if the alarm signal on the alarm side is restored. Therefore, after returning the alarm on the alarm side, you need to press the alarm return button on the control side separately. If you press the button,

Signal lamp and alarm lamp return and open. The valve can be opened by pressing the close button.





- ① AC power FUSE (250V 2A)
- ② AC power fuse monitoring light  
-When AC power FUSE is short-circuited / Lamp is turned on
- ③ AC 220V power input terminal
- ④ AC 220V power check light
- ⑤ MAIN DC input power. Control unit LED display power
- ⑥ Alarm signal input terminal (Signal 1.2.3)
- ⑦ Breaker output terminal
- ⑧ Breaker output status LED (green): Breaker closed
- ⑨ Breaker output status LED (yellow): Breaker open
- ⑩ Relay contact output. Forced close output

## 6. OPERATIONAL SYSTEM



## 7. CHECKS RIGHT AFTER INSTLLING

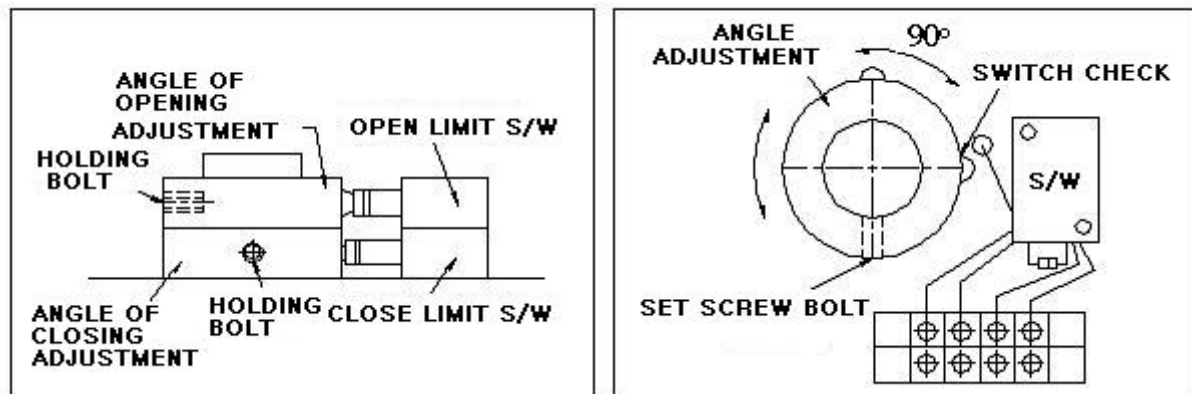
1. Check the entire connections and then please switch on the power supply.

examinations. First, confirm whether the visual and audible alarms of the control panel are raised when you emit the standard gas to the Sensor.

Second, confirm whether the OPEN, CLOSE light conform to the direction of shutoff device operating (If it operate reversely, reverse the +, - wire)

2. Please check the angle of the actuating clamp. If the angle is not a right angle, open the cover of the shutoff device and loosen the holding bolt and make it a right angle by controlling the tuning RING.

(Refer to Installation Company.)



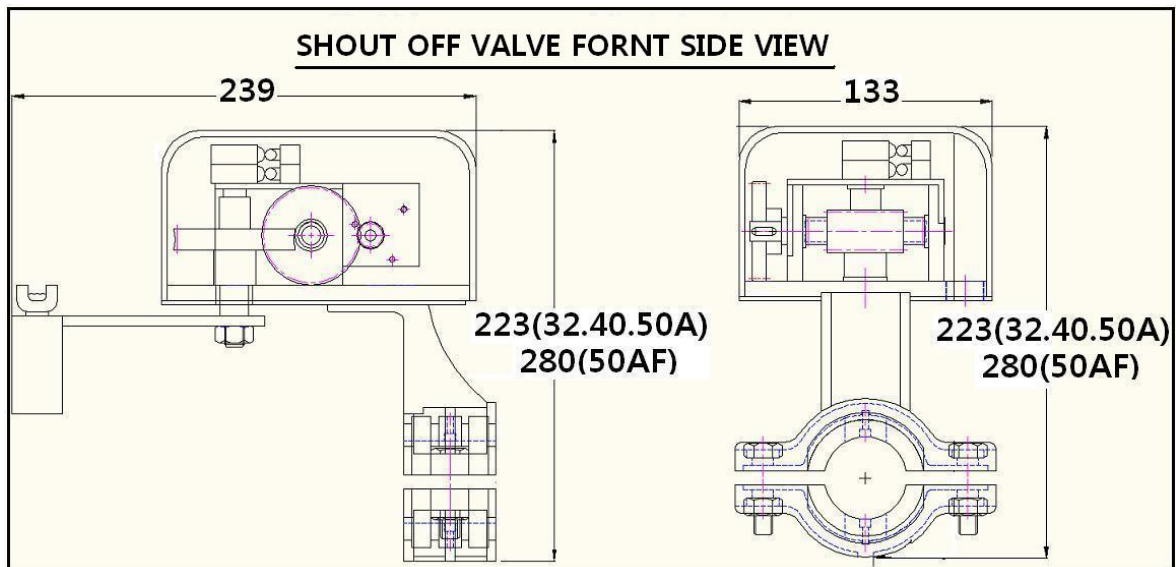
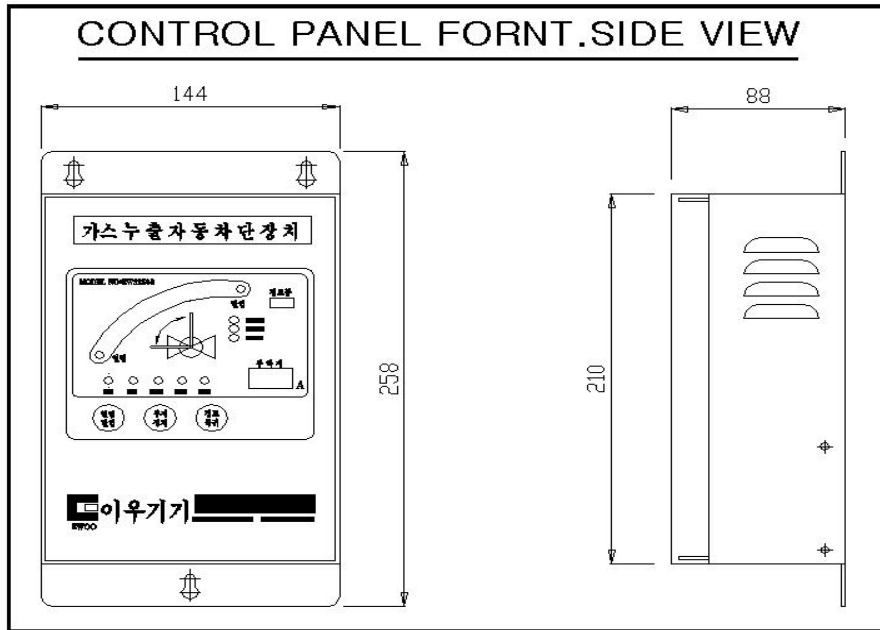
## **8. Precautions for handling and use**

1. When the Control panel raises visual and audible alarms and, signal light and CLOSE light gets lit -> Check the closure of valve for yourself.
2. When signal light on the Control panel gets lit, confirm whether gas is being leaked actually or not. If gas is not being leaked actually, after resetting the Gas Detector, reset the control panel. And then open the valve by pressing the Open & Close button.  
(Refer to Gas Company to confirm the gas leak exactly.)
3. When alarm of the Gas Detector is not reset so the control panel does not operate though gas is not being leaked -> Contact us
4. If there are troubles at the circuit of the Control panel or, Visual and Audible alarm is raised ->Check the leakage thoroughly and refer to us or shop where you purchased or Installation Company.
5. The control panel should be at the place where it is able to be watched.  
(Area to avoid: a humid, filthy or dusty place.)

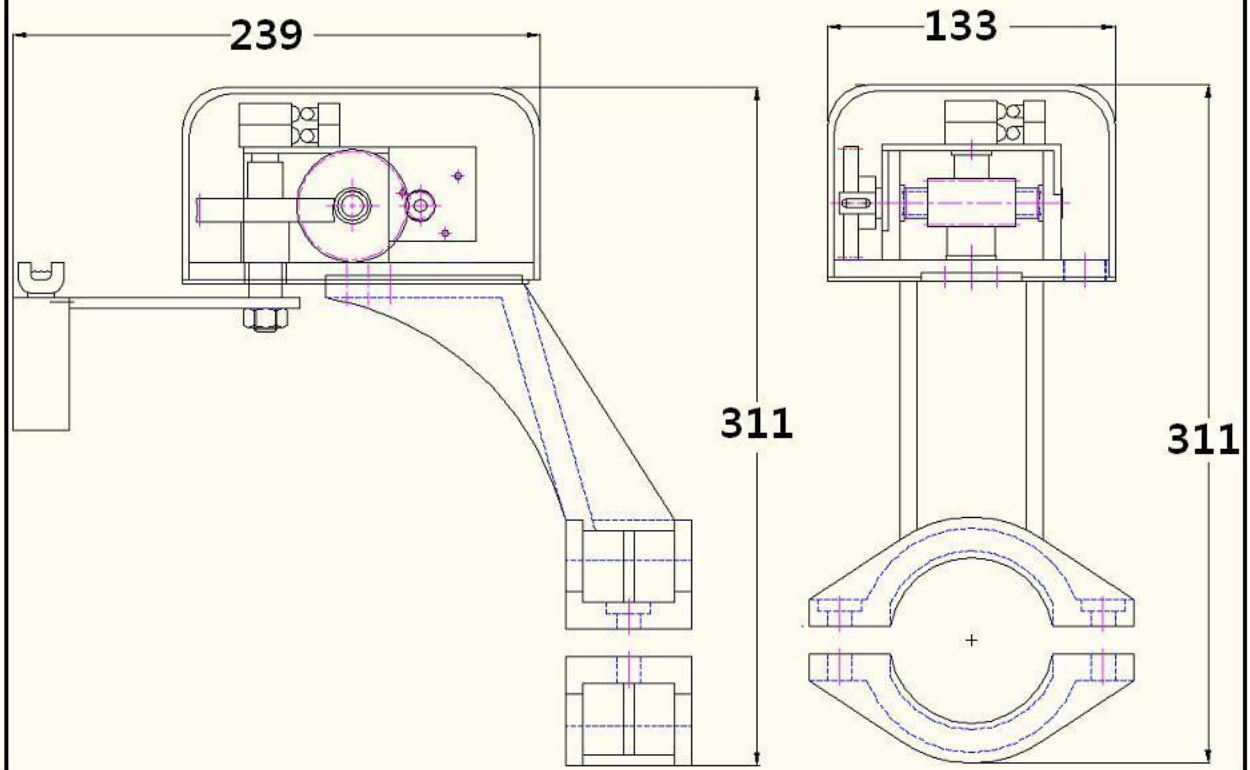
## **9. CAUTIONS**

1. Please use the shutoff device after earthing. (There are sign and terminal for earth on the control panel and shutoff device.)
2. Do not touch the shutoff device and valve while the shutoff device is operating.
3. Please check the voltage of power supply before using.
4. If you are to unplug the power cord, grasp the plug firmly and then unplug the cord.
5. Be careful not to damage the power cord.
6. Be cautious about using the silicon glue which could affect the Sensor. Silicon glue could cause malfunctioning.
7. Please use the rated voltage (AC 220V) written on the product.
8. If you ignore these cautions, you might be seriously injured or lead to death.

# 10. Dimension



**SHUT OFF VALVE FORNT SIDE VIEW 65A**



**SHUT OFF VALVE FORNT SIDE VIEW (80A.100A)**

