

# P4490 Kill A Watt® Edge Operation Manual

Thank you for purchasing the P4490 Kill A Watt® Edge. This operating manual will provide an overview of the product, safety instructions, a quick guide to operation, and complete instructions for correct usage. Take the time to completely review these instructions as well as safety warnings to ensure your best use of the product.

You can use the Kill A Watt® Edge unit to check your appliances electric consumption, cost to run, equivalent CO<sub>2</sub> emissions, and as a standby killer to shut down your appliances when they are not used, and are in standby mode. The unit combines human motion detection by PIR (Passive Infrared) sensor detection, and sensing the appliance's standby power level, to control the flow of AC power automatically. AC power will be provided automatically when users are present and standby power will be cut off automatically when they leave the room to save energy, save CO<sub>2</sub> emissions to help protect the earth. A power killer function is available so that the unit operates as a conventional motion-activated switch. The power killer mode will shut off power to appliances regardless of standby power after a settable delay. The power killer function is ideal for space heaters, humidifiers, etc.

The Kill A Watt® Edge is also easy to read thanks to a tether feature that allows you to perch your meter nearby the item you are measuring without having to bend over or unplug the device to view data. Keep the housing mated together in a single unit for compact use – or separate the two modules to allow for easy reading or precise placement of the PIR motion sensor.

Advanced features also included :

- Monitoring Voltage, Amperage, Watt, KWH, Elapsed Time, Costs and CO<sub>2</sub> emissions.
- Displaying Amperage, Watt, KWH, Elapsed Time, Costs and CO<sub>2</sub> emissions savings.
- Over current protection to provide safe power to your expensive equipment.
- Zero power crossing switches provide a spike free ON/OFF relay control to prolong your appliances life.

Now you'll know how much power your appliances are using, and begin saving power with the Kill A Watt® Edge.

With the innovative Kill A Watt® Edge you'll have peace of mind in more ways than one.

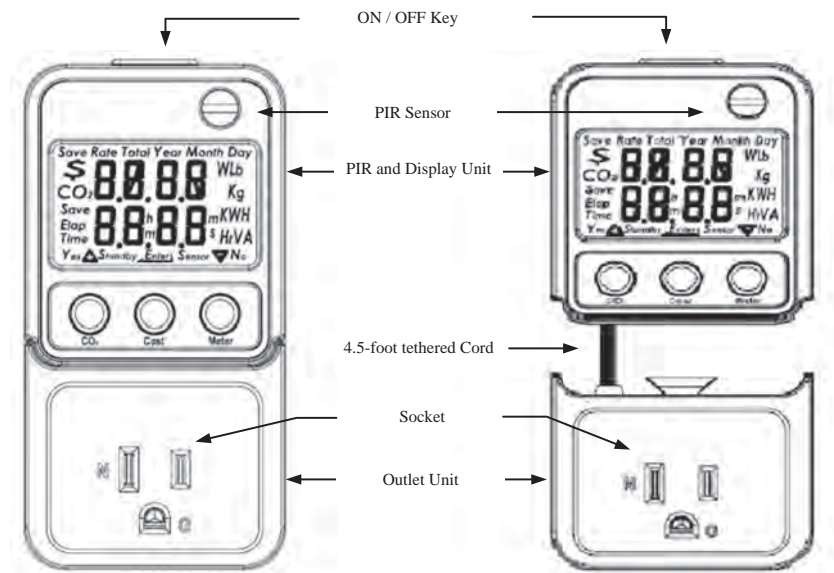
## Safety Instructions :

- The operating voltage is limited to +/- 10% of Line voltage 110Vac. Do not use it in other voltage rating.
- The maximum output current is 15A.
- To reduce the risk of electric shock, do not remove cover. No user-serviceable parts inside. Refer servicing to qualified service personnel.

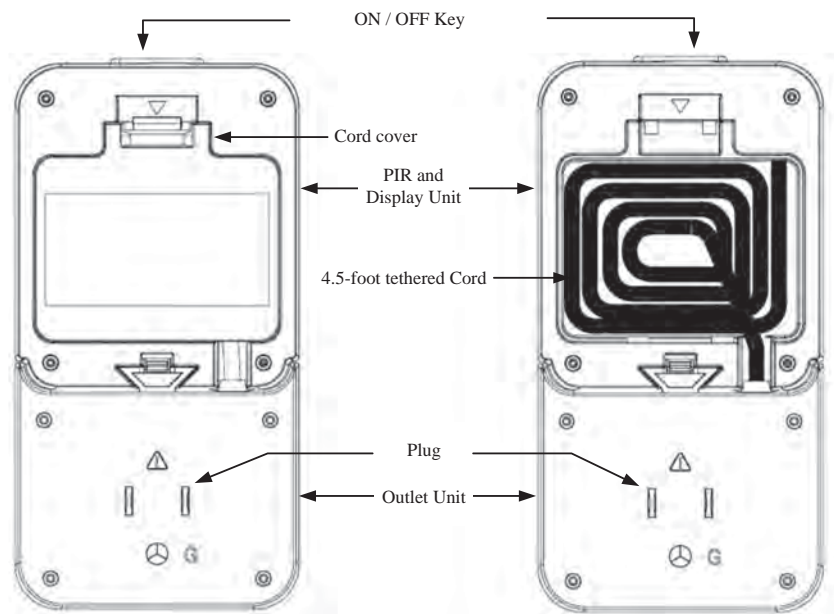
## Warning :

- To reduce the risk of fire or electric shock, do not expose this appliance to rain or moisture.

## Feature Locations :

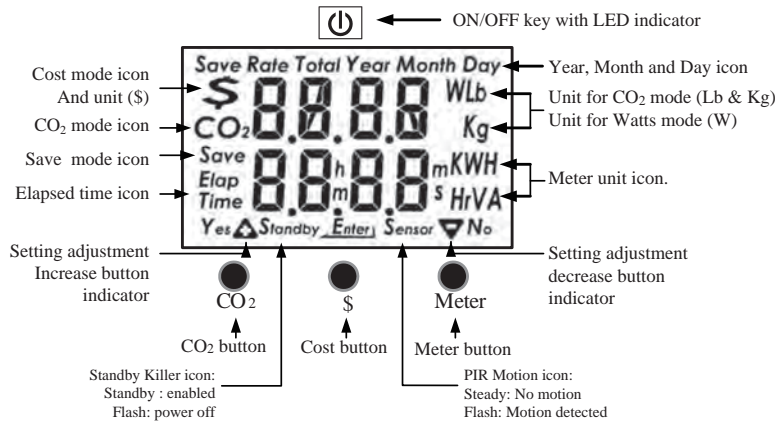


Front View



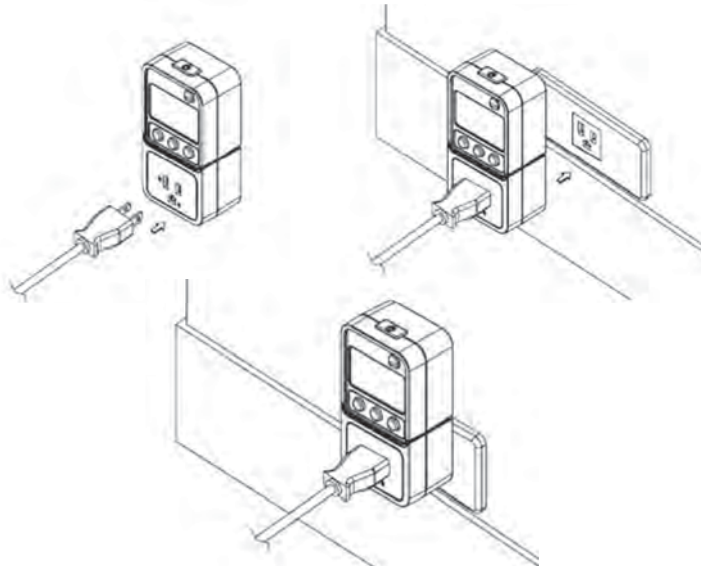
Rear View

## Display Panel :



## Installation:

1. Before connection to the unit, turn off the appliance and remove the power cord from the outlet.
2. Plug the appliance's power cord into the Kill A Watt® Edge unit socket, and then connect the Kill A Watt® Edge into the outlet.
3. If there are many appliances, please use a power strip, plug all the appliance's power cords into power strip's sockets and plug the power strip into Kill A Watt® Edge socket, and then connect the Kill A Watt® Edge into the outlet.
4. Turn on the appliance within 10 seconds. This time limit is important to ensure correct standby power detection.
5. Now the Kill A Watt® Edge will measure appliance standby power, the ON/OFF key on the top of the Kill A Watt® Edge will flash in green once per second, which indicates the standby power is being measured. After 30 to 40 seconds, the standby power measuring is finished. The ON/OFF key's light will be solid green. Now, the unit is working and in PIR motion detection mode.



## ON, OFF and PIR detect function :

1. Pressing the ON/OFF key will turn off power to the outlet at once. The key will illuminate in red. The unit will continue to measure power (e.g. Voltage, Time) and the function keys and LCD display will continue to operate.
2. Pressing the ON/OFF key again will turn power on to outlet at once. The key will illuminate in green. The unit features a spike-free switch function which activates at zero-crossing and will present clean power to your connected appliance. The unit will measure power and the function keys and LCD display will operate. The unit will be in PIR motion detection mode.
3. If there is no motion in the PIR effective area, and the appliance is in standby mode, the unit will cut off power according to off power delay time setting. For example, with a 30 minute setting, after 30 minutes, the unit will shut down power, the LED will flash green every 3 seconds, and the unit will be in PIR motion detection mode. When somebody moves into the effective PIR area, the unit will turn power on to outlet at once. The LED will illuminate in green.

### 3.1 There are 3 conditions that must be true to cut off power:

- A, No motion in the PIR effective area,
- B, The appliance is in standby condition, and the unit standby off power level is larger than appliance instant standby power,
- C, The off power delayed time setting value must have elapsed.

### 3.2 Please refer to **Standby power, Off power delayed time and PIR sensor detecting distance settings** for detailed information.

4. The shorter the off power delayed time setting, the more energy will be saved but the AC power on/off cycles will occur more frequently. The appropriate setting for off power delayed time will be to balance appliance use and save energy. 1 hour for office, 30 minutes for home, is a suggested starting point.

### 5. Summary:

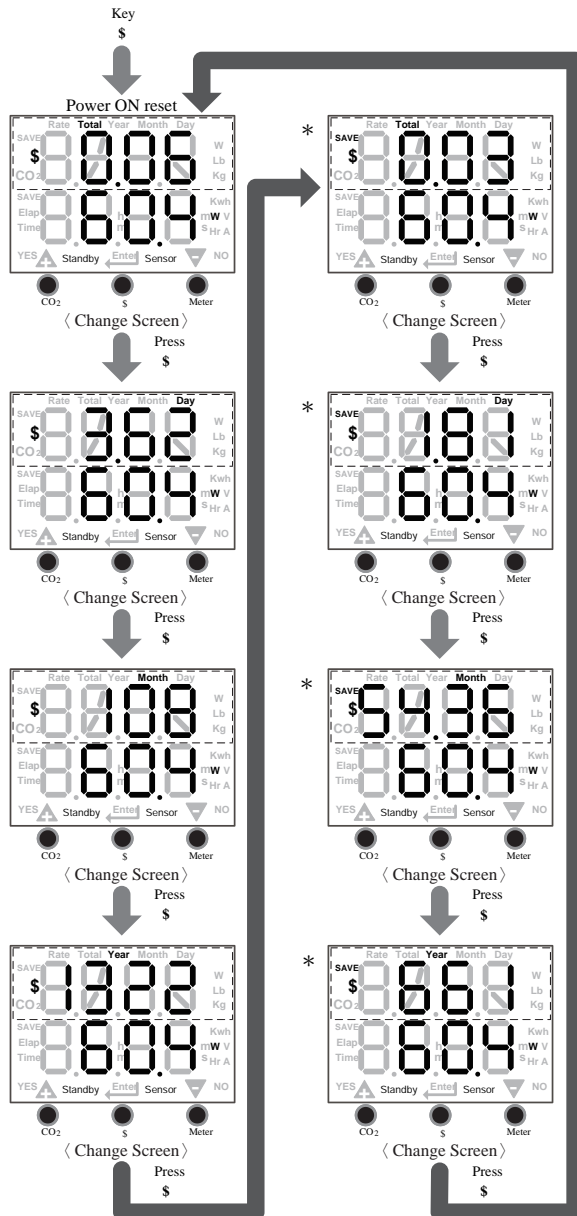
- 4.1 green light = power on, and PIR motion detect function on.
- 4.2 red light = power off, and PIR motion detect function off.
- 4.3 green light every 3 second = power off, and PIR motion detect function on.
- 4.4 green light every second = standby power is measuring, don't touch.

## Remark :

Flashing segments on the LCD display indicate that this item can be re-set.

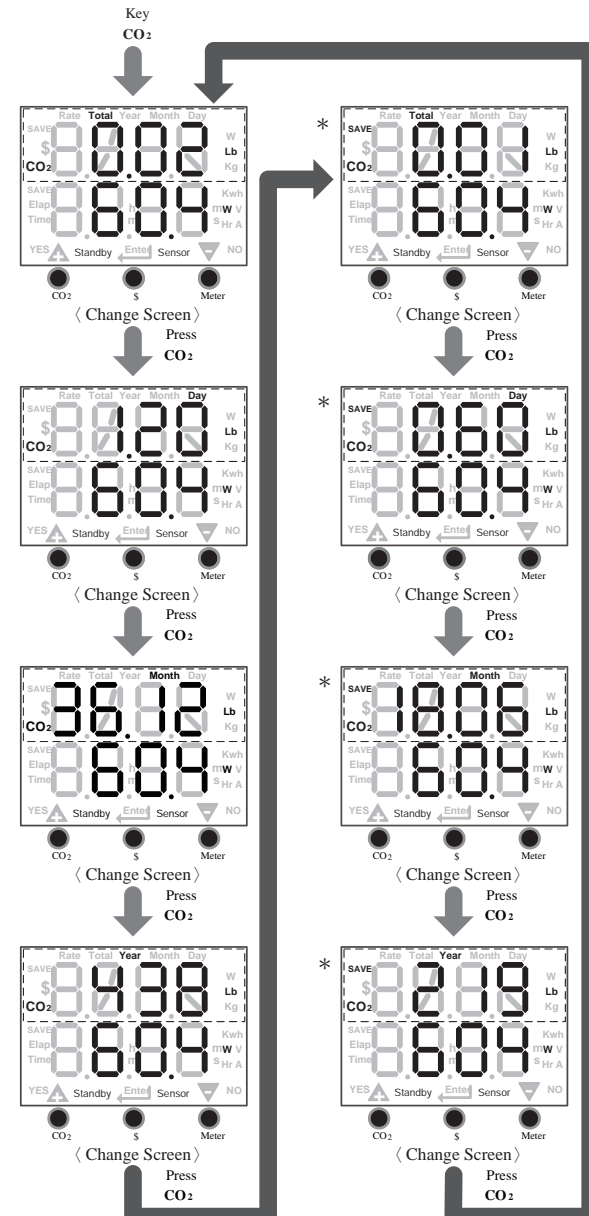
**Cost mode : pressing the center “Cost” (\$) key.**

- The Cost mode display can include \$, Total, Day, Month, Year and SAVE. Repeated presses will change displays.
- LCD display default will show Total cost (\$) and W (Watts).
- “\*” indicates there will be no display in the Power Kill mode.



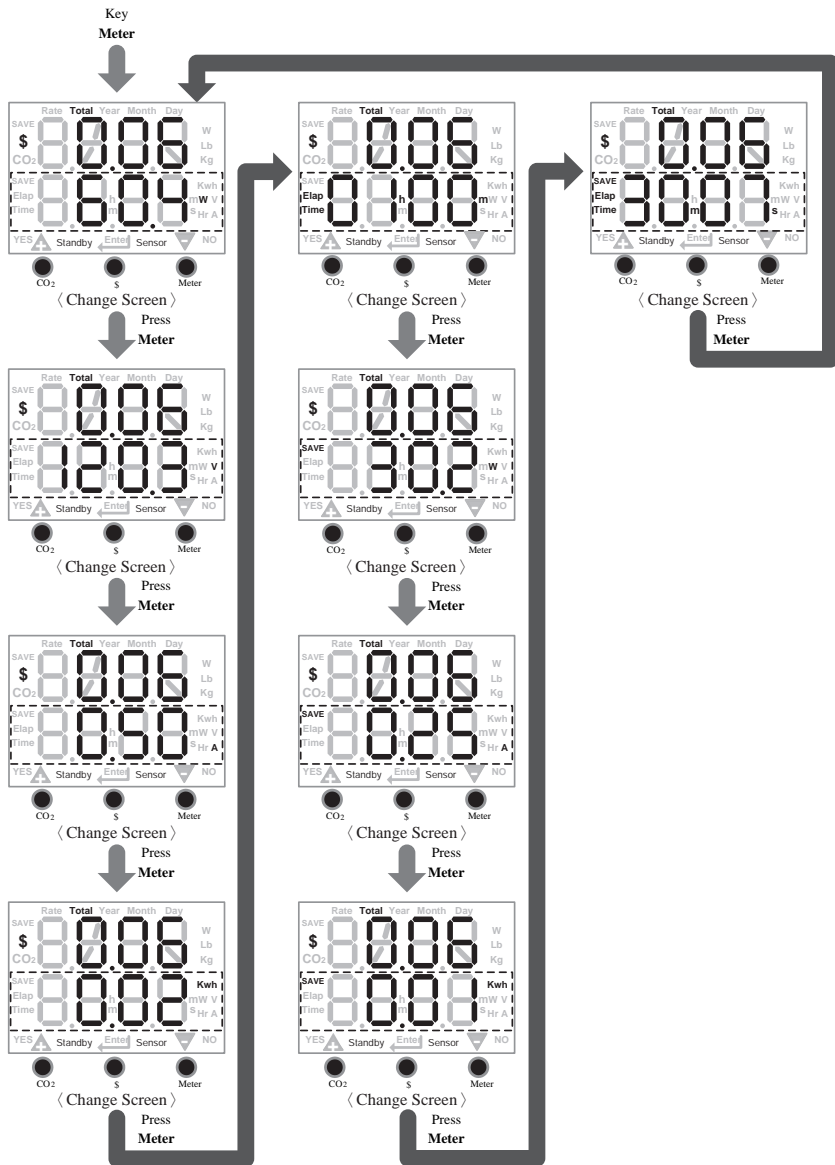
**CO<sub>2</sub> mode : pressing the left “CO<sub>2</sub>” key.**

- The CO<sub>2</sub> mode display can include CO<sub>2</sub>, Total, Day, Month, Year, SAVE, and Lb/Kg. Repeated presses will change displays.
- “\*” indicates there will be no display in the Power Kill mode.

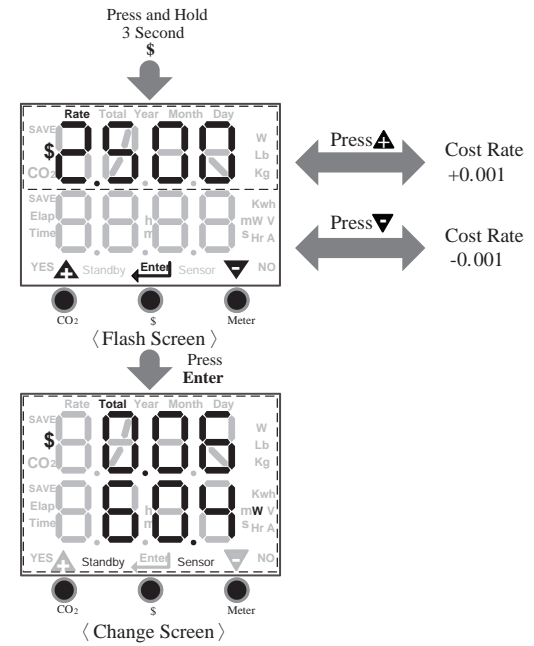


### Meter mode :

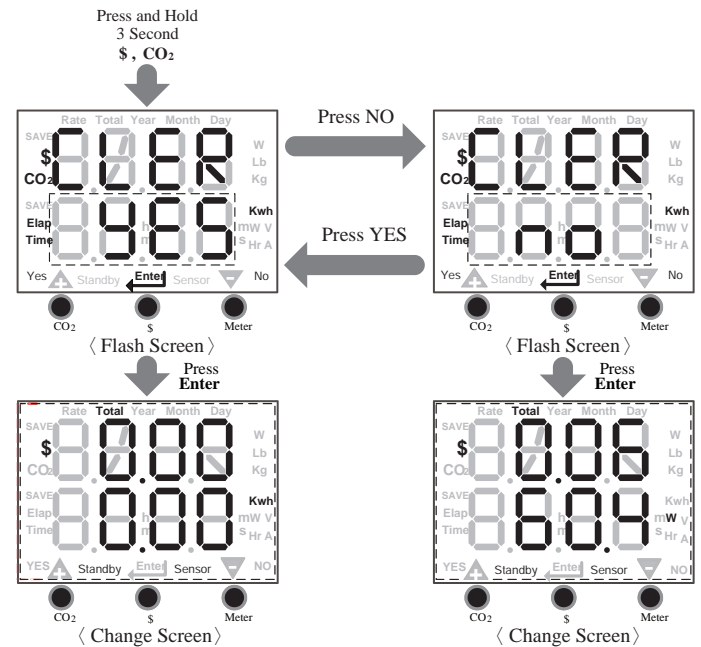
- The Meter mode display includes W, V, A, Kwh, Elapsed Time and SAVE. Repeated presses will change displays.



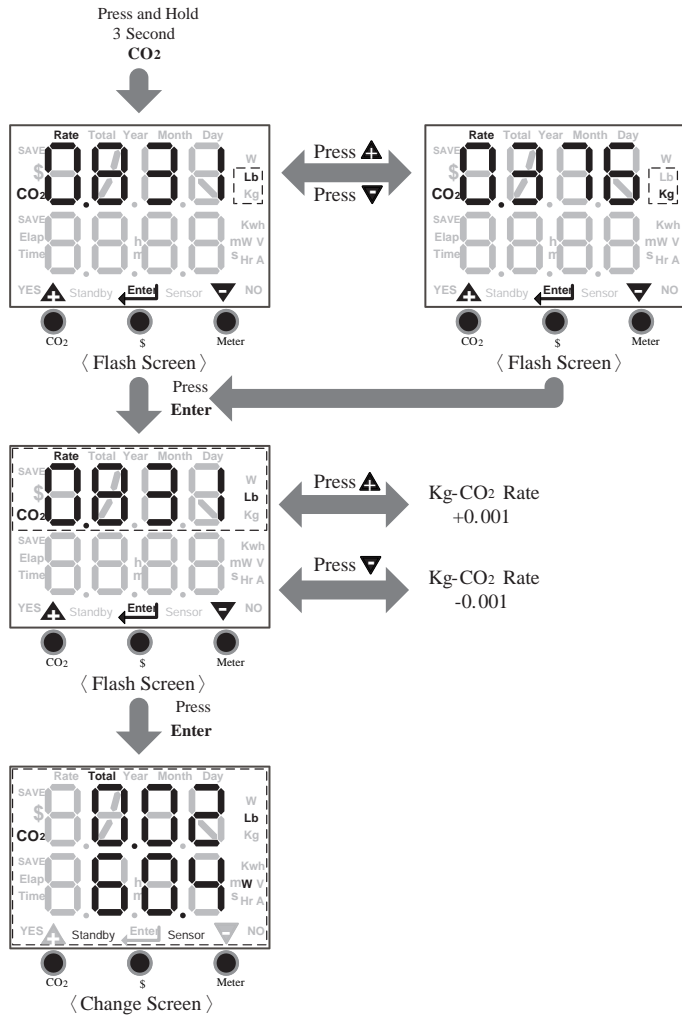
### \$ Rate setting :



### Reset (Clear) :

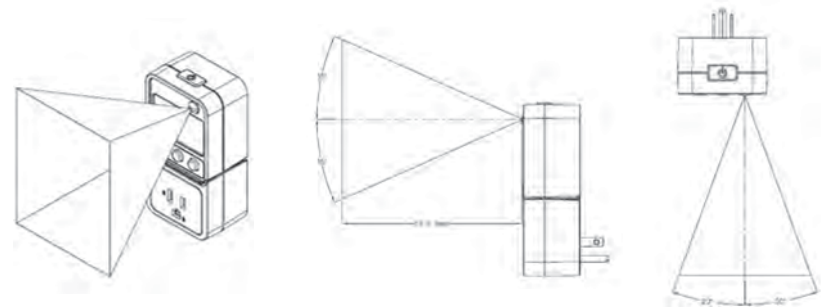
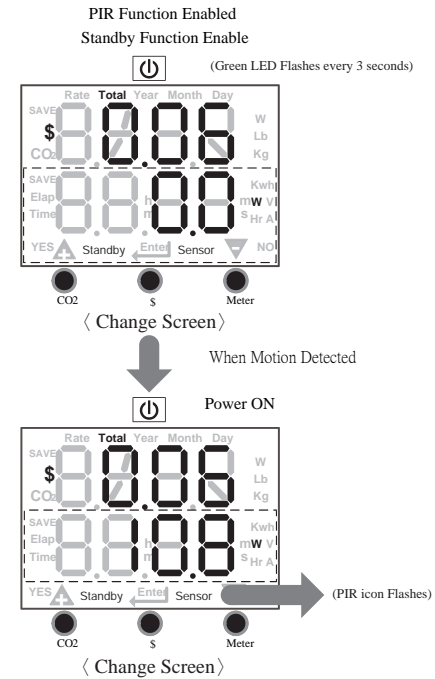


## CO2 Rate and Lb/Kg setting :



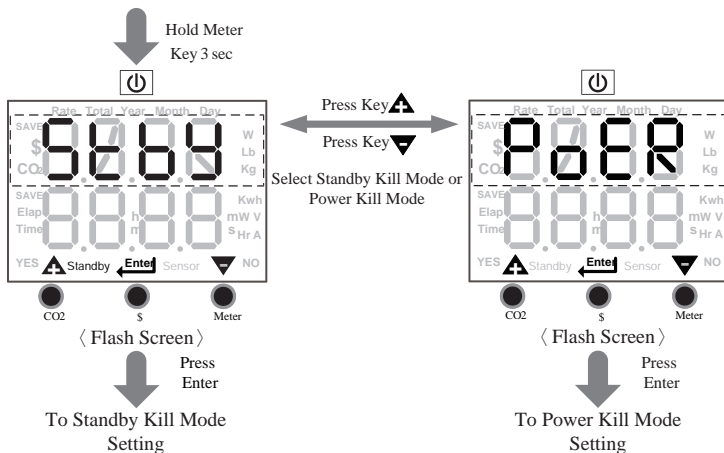
## in PIR motion detection mode. :

- The ON/OFF key will flash green every 3 seconds; the unit will turn off power to outlet, and also activate the PIR motion detection function. When somebody moves into the effective PIR area, the unit will turn power on to outlet once. The key will illuminate in green.
- PIR sensor :  
The motion detection effective area is a 3-D zone as per the following description, when it is not blocked by machines or furniture. Please install the PIR and display unit at the appropriate place which can cover thoroughly the appliances use area. Distances: 15 feet (max.), horizontal angle: 40 degree (max.), vertical angle: 70 degree (max.).



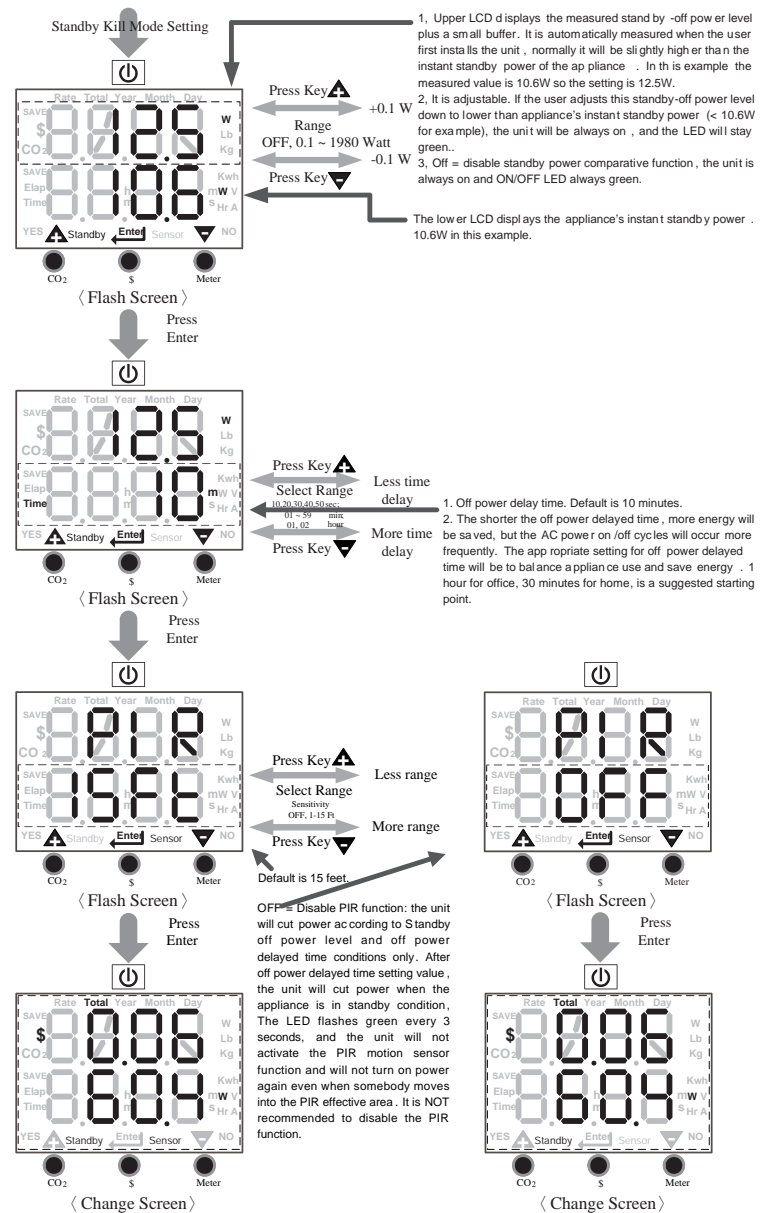
## Standby kill mode and power kill mode setting :

- Kill mode select and setting. Choose the mode which best suits your present requirements.
- Standby kill mode will cut off power when the appliance is in standby mode (turned "off") and no motion is detected for the programmed off power delay time. Use this mode for appliances such as televisions which typically consume power even when switched "off". This use will save energy by ensuring zero power is consumed by the appliance when it is not in use. The motion sensor will ensure the appliance will respond to the user and remote controls when you need it. This mode will not cut power to an appliance that is turned on – regardless of detected motion.
- Power kill mode will cut off power to the appliance regardless if it is turned ON or OFF after no motion is detected for the programmed off power delay time. Use this mode for appliances that you want to operate only when motion is detected and the user is present such as space heaters and humidifiers. This use will save energy by ensuring the connected appliance will only operate when the user is present. Use the off power delay time setting to adjust for periods where you want the appliance to continue to operate despite the lack of motion. For example, sleeping periods.



## Standby kill mode : Standby power, Off power delayed time and PIR sensor detecting distances setting :

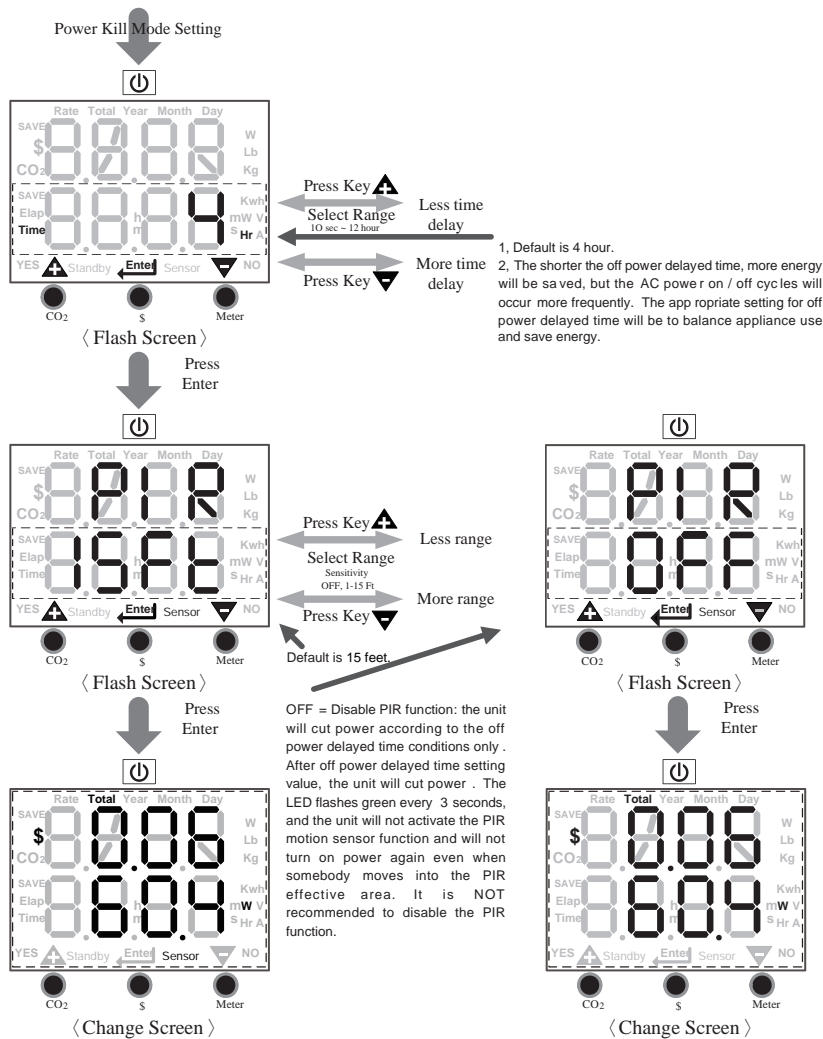
- Standby power : Off, 0.1W to 1980W.
- Off power delayed time : 10 seconds to 2 hours, default is 10 minutes.
- PIR sensor detecting distances : Off (disable PIR function), 1 foot to 15 feet, default is 15 feet.





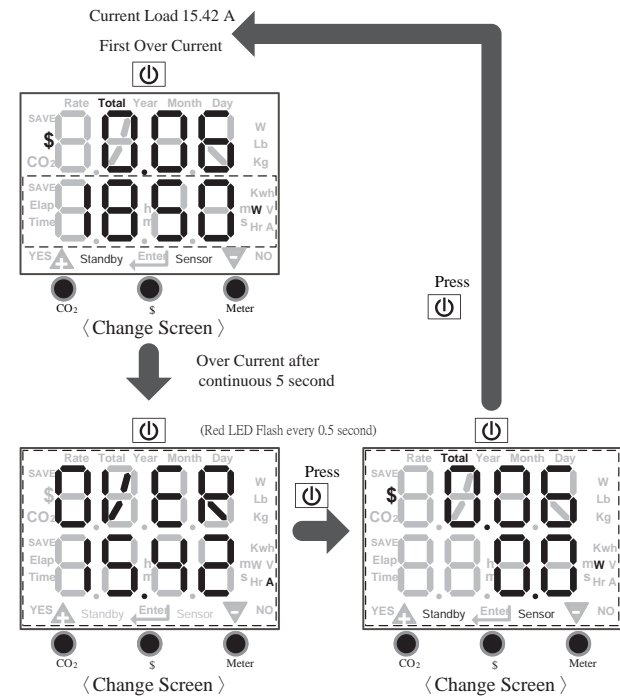
**Power kill mode : Off power delayed time and PIR sensor detecting distances setting :**

- Off power delayed time : 10 seconds to 12 hours, default is 4 hours.
- PIR sensor detecting distances : Off (disable PIR function), 1 foot to 15 feet, default is 15 feet.



**Alarm mode :**

- **Over Current :** When the current load presented by the connected appliance exceeds the max. Current (15A), the unit will switch to Over Current mode. The power will be switched off to the outlet. The key will illuminate in red. LCD will display the OVER icon and protected current value. Remove the appliance; press the key to erase the main display, Over icon and protected current value. Then press the key to turn the power back on.



**Retained measurements :**

1. When power to the unit is interrupted, cumulative power consumption KWH, Elapsed Time, Cost, and CO<sub>2</sub> will be retained automatically into EEPROM. All user settings, Rates, Standby power, Off power delay time, PIR distances are retained in EEPROM after every user setting. This feature allows settings to be programmed one time only without loss during power interruptions or when the unit is moved from outlet to outlet.
2. When the AC power is restored or when the unit is plugged into another outlet, cumulative power consumption KWH, Elapsed Time, Cost, CO<sub>2</sub>, Rate, Standby power, Off power delay time, and PIR distances will be retrieved automatically from memory.

## Specifications :

Item	Specification		Accuracy		Response Time
	Range	Res.	Typ	Max	Action/Recovery
<b>Voltage</b>	108.0 ~ 132 Volt	0.1V	0.5%	1%	1sec
<b>Current</b>	0.00~15.00 Amp	0.01A	0.5%	1% ± 0.1A	1sec
<b>Active power</b>	0.0~99.9 Watt	0.1W	1%	2% ± 5W	1sec
	100~1980 Watt	1W		2% ± 5W	
<b>KWH</b>	0.00~99.99 KWH	0.01KWH	1%	2% ± 5W	1sec
	100~9999 KWH	1KWH			
<b>Elapsed Time</b>	00:00~59:59	1sec	30 ppm		1 sec
	00:00~99:59	1min			
	100~9999	1hour			
<b>Cost (\$)</b>	0.00~99.99	0.01	1%	2% ± 5W	1sec
<b>Total/Day/Month/Year</b>	100~9999	1			
<b>Saved (\$)</b>	0.00~99.99	0.01	1%	2% ± 5W	1sec
<b>Total/Day/Month/Year</b>	100~9999	1			
<b>Cost Rate</b>	0.000~9.999	0.001	--	--	--
<b>Kg-CO2 or Lb-CO2</b>	0.000~9.999	0.01	1%	2% ± 5W	1sec
<b>Total/Day/Month/Year</b>	100~9999	1			
<b>Kg-CO2 Rate</b>	0.000~9.999	0.001	--	--	--
<b>Kg ↔ Lb</b>	1 Kg = 2.2046 Lbs	—	—	—	—
	1 Lb = 0.45359 Kg	—	—	—	—
<b>OCP</b>	17A 20A	0.01A	0.5%	1% ± 0.1A	3 minute 30 sec
<b>Outlet</b>	1	—	—	—	—
<b>Output status LED</b>	Output ON : Green Output OFF : Red	—	—	—	—
<b>Standby Off Power</b>	Level Set	OFF, 0.1~99.9 Watt	0.1W	—	—
		100~1980 Watt	1W		
	Delay Time Set	10,20,30,40,50	sec		
		1 ~ 59,	min		
	1, 2	hour			
<b>Spike free switch</b>	Spike free switch	—	—	—	—

### GENERAL SPECIFICATIONS

<b>Power Rating</b>	120 Vrms ± 10% , 50/60Hz
<b>Power Consumption</b>	Max. 0.6 Watt; Output OFF: 0.3W
<b>Ratings</b>	15Amp (1980 Watts) , Resistive and Inductive , 600 Watts Tungsten , 1/3 H.P. 120 V.A.C.

## Maintenance

- Protect the meter from adverse weather conditions. The meter is not waterproof. Do not expose the LCD display to direct sunlight for long periods of time.
- CAUTION : To avoid damage to the meter, do not expose it to sprays, liquids, or solvents.
- Clean the exterior of the meter by removing dust with a lint-free cloth.
- Use care to avoid scratching the clear plastic display filter.
- For further cleaning, use a soft cloth or paper towel dampened with water. You can use a 75% isopropyl alcohol solution for more efficient cleaning.
- CAUTION : To avoid damage to the surface of the meter, do not use abrasive or chemical cleaning agents.

## P3 INTERNATIONAL CORPORATION LIMITED WARRANTY

P3 INTERNATIONAL CORPORATION ("P3") warrants to the original retail purchaser only, that its product is free from defects in material or workmanship under the condition of normal use and service for a period of six (6) months from the date of purchase. In the event that a defect, malfunction or failure occurs or is discovered during the warranty period, P3 will repair or replace at its option the product or component part(s) which shall appear in the reasonable judgment of P3 to be defective or not to factory specifications. A product requiring service is to be returned to P3 along with the sales receipt or other proof of purchase acceptable to P3 and a statement describing the defect or malfunction. All transportation costs shall be borne by the owner and the risk of loss shall be upon the party initiating the transportation. All items repaired or replaced thereunder shall be subjected to the same limited warranty for a period of six (6) months from the day P3 ships the repaired or replaced product. The warranty does not apply to any product that has been subject to misuse, tampering, neglect, or accident or as a result of unauthorized alterations or repairs to the product. This warranty is void if the serial number (if any) has been removed, altered, or defaced. This warranty is in lieu of all warranties expressed or implied, including the implied warranties of merchantability and fitness for a particular purpose which are expressly excluded or disclaimed. P3 shall not be responsible for consequential, incidental or other damages, and P3 expressly excludes and disclaims liability for any damages resulting from the use, operation, improper application, malfunction or defeat of any P3 product covered by this limited warranty. P3's obligation is strictly and exclusively limited to the replacement or repair of any defective product or component part(s). Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. P3 does not assume or authorize anyone to assume for it any other obligation whatsoever. Some states do not allow limitation on how long an implied warranty lasts, so the above limitations may not apply to you. It is the owner/user's responsibility to comply with local, state, or federal regulations, if any, that may pertain to P3 products or their use. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

If you experience difficulty in the operation of your unit, or if your unit requires repair please contact :  
P3 INTERNATIONAL CORPORATION  
TECHNICAL SUPPORT  
Tel: 212-741-7289  
Fax: 212-741-2288  
Email: [techsupport@p3international.com](mailto:techsupport@p3international.com)

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