God's Own Switching

NATURE SWITCH

KAKATIYA

SAVE ENERGY SAVE NATURE

INTRODUCTION

Energy Saving can reduce Global Warming:

Global warming is a serious issue today directly affecting population in many countries in the form of increased floods, droughts, famines and in various other forms. Paradoxically global warming is caused mainly due to human activities. Human activities are increasing manifold as the civilization progresses. The tools of productivity are becoming more complex and energy intensive. The increasing productivity is leading to an increased consumption of goods and services. This is raising the general standard of living. A major consequence of this is a progressive increase in the use of energy leading to an increased global warming.

Global warming and Climate Change:

The link between global warming and climate change is well understood and has been agreed upon calling for steps to reduce carbon foot print. Global warming refers to the warming of the earth's surface based upon worldwide temperature records. Climate change refers to changes in the long term climate related factors like temperature, precipitation etc. The average air and ocean temperatures are increasing leading to melting of snow and ice resulting in a rising sea level. There are changes in the hydrological cycle leading to floods and famines. There is an urgent need to take steps towards energy conservation to prevent global warming.

The means of Energy conservation or energy saving:

Conservation is the practice of decreasing the quantity of energy used in every sphere of human activity. It may be achieved through efficient energy use, in which case energy use is decreased while achieving a similar outcome, or by reduced consumption of energy dependant products or services. For example by using an efficient Air Conditioner in a room we may ensure the same comfort by using a lesser energy. Similarly we can also use the Air Conditioner for lesser time by opting to turning it OFF when nobody is present in the room. The end result is a reduction in the energy usage. Energy conservation or energy saving is also achieved by opting for substitute materials or processes to meet the human needs leading to a lesser usage of energy. For example by opting for using of materials with lesser carbon foot print in construction we can reduce the overall impact on climate. It represents a shift in the thinking of mankind to protect the nature.

Energy Conservation in Lighting:

Lighting is estimated to consume about 19% of the global electricity and hence offers a substantial scope for saving. Kakatiya Energy System Pvt Ltd is offering Lighting controls for energy conservation in outdoor and indoor lighting. We offer products to eliminate wastages in the use of lighting while meeting the planned objectives of lighting.

PROFILE

KAKATIYA

SAVE ENERGY SAVE NATURE

Kakatiya Energy Systems Pvt Ltd, incorporated in the year 1999 has been specialising in the manufacture of Lighting controls using advanced and innovative patented technology to offer energy conservation and automation. The company's approach is always to develop products based on a zero base concept and to adopt new methods of manufacturing and offering unique and new products to the customer.

The company has in house capabilities in the applicative technology areas of Infrared sensing, Digital micro controller, DC power switching, AC power switching, Voltage sensing, Current sensing, duration based digital timing with rechargeable battery based memory back up, Analogue processing, HMC for mixed signal processing, Low level light detection capabilities, Selective spectral response processing using multi spectral sensors etc.

The Company also has teams capable of designing systems based on GSM/GPRS/RF/LORA/LORAWAN/Wi-fi/Bluetooth communication technologies for IOT applications. The web and mobile application teams provide the needed applications for the user to interface with the database and to monitor, analyze and control devices remotely.

The company also has mechanical design capabilities to offer aluminum, plastic and SMC moulded enclosures offering Ingress Protection upto 65 apart from thermal dissipation. The company has a support base of vendors who specialise in mass manufacturing of metal and plastic enclosures, mechanical parts and processes.

The company has a team of dedicated staff who are associated with the company from it's inception. The company's development and manufacturing teams interact with each other regularly so that the design objectives are practical and are realised fully in manufacturing.

KESPL is an equal opportunity employer and the atmosphere is employee oriented to ensure a bonding between the company and the staff.



MISSION

To consistently engage in development and production of products useful to the society on a global scale leading to global recognition as a reliable supplier of innovative and quality products leading to a sustained growth of the organization.

CORPORATE VALUES

1. Always follow ethical practices while dealing with stakeholders
2. Always engage in productive activities offering real value addition to the society
3. Encourage innovation and reward productive contributions of organizational participants to sustain relationships
4. Practice good corporate governance in letter and spirit so that the company can grow on a global scale
5. Maintain good relationship with both business and non-business stakeholders

QUALITY POLICY

To continually develop, improve and maintain products of latest technology to maintain highest satisfaction levels of our clients.



Certificate of Registration

This certificate has been awarded to

Kakatiya Energy Systems Private Limited

D-2, Industrial Estate, Moula Ali, Hyderabad, Telangana, 500040, India

in recognition of the organization's Quality Management System which complies with

ISO 9001:2015

The scope of activities covered by this certificate is defined below

Design, Manufacture, Marketing, Supply, Installation and Servicing of Electronic Automatic Control Systems

Certificate Number:	Date of Issue: (Original)	Date of Issue:
107957/A/0001/UK/En	10 October 2019	10 October 2019
Issue No:	**Expiry Date:**	
1	09 October 2022	

Issued by: *On behalf of the Scheme's Manager*

PRODUCTS

Stand alone products:

We have developed a range of products based on an intelligent light sensing technique coupled with a micro controller based duration clock to automatically control the outdoor lamps like street lights, campus lights, tower lights, signage lighting, hoarding lighting etc. These products are offered in various models to cater to different categories of customers and for different lighting loads. The models are Nature Switch™-01, Nature Switch™-02, Nature Switch™-03, Nature Switch™-Indoor and Nature Switch™-Smart Timer.



IOT Products:

All the integrated products listed above are offered along with controllers equipped with remote communication capability based on 2G,4G,NB-IoT, LoRa, LoRaWAN for monitoring, analysis and control of a variety of devices deployed in variety of applications like lighting, water metering, energy metering, motor control, Aircon control etc. to name a few.



Integrated products:

The stand alone products mentioned above are also offered along with Power contactor for load switching, MCB/MCCB for protection all packed in an SMC enclosure along with pole fixing arrangements based on a unique universal mechanical arrangement. The ratings range from 3kW single phase to 25 kW 3 phase or as desired by customers.



MAKE IN INDIA

NATURE SWITCH™- SMART TIMER

Nature Switch™ Smart Timer is a genie with versatile options based on light, time or even Astro for automatic switching of small electrical loads like shop board lighting, corridor lighting, path way lighting, Air conditioner, factory lighting, platform lighting, office load etc. The core intelligence was tested and proven over years. The product offers options based on real time, astronomical or a combination of the above. This is suitable for direct switching of all loads of up to 1000 Watts.



Features

Auto switch ON based on Lux / Local SUNSET / Real Time.

Auto switch OFF based on Lux / Local SUNRISE / Real Time.

Two selectable Real Timer cycles.

Blue tooth-based interface though a mobile app

Dimming signal to the LED driver as an optional feature.

Immunity to moon and other street/artificial lighting.

Immunity to dust, bird sittings and cloud cover.

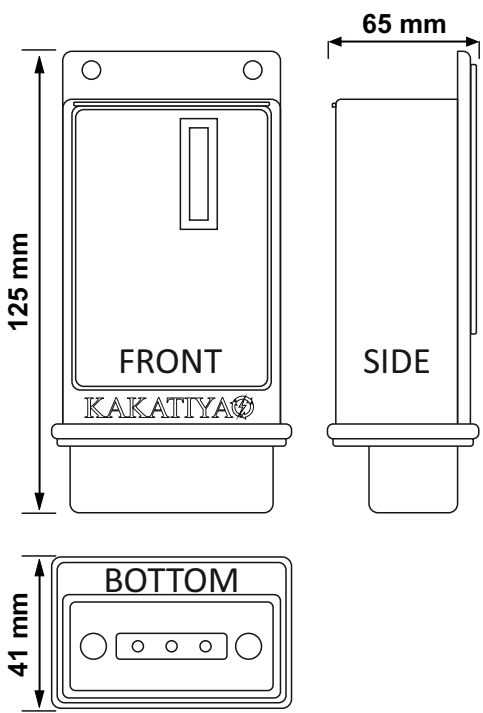
Can switch up to 1000W load directly.

Easy installation on DIN Rail / Wall Fixing.

Integral Electrical Terminal for simple electrical connection.

Immune to outdoor elements like dust and water.

Degree of protection conforms to IP 65.





"Specifications are subject to change with out advance notice"

www.natureswitch.com

NATURE SWITCH-01

This model is particularly suitable to all those outdoor loads or lights, which are ON during the entire night like street lamps, campus lamps, yard lamps etc. The product is offered with extra protective features like OVER / UNDER VOLTAGE sense, trip and auto reset etc.



Features

Automatic switch ON at DUSK.

Automatic switch OFF at DAWN.

No need of seasonal resetting.

Wide operating voltage range : 120-440 vac

Switching load : 16 Amp.

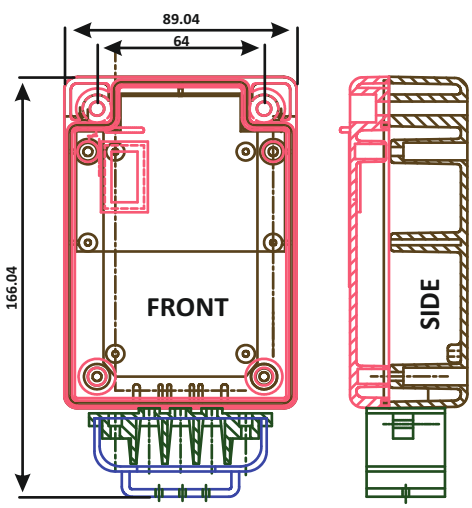
Over/Low Voltage sense, trip and auto reset.

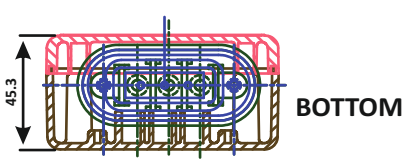
Immunity to dust, bird sittings and cloud cover.

Immunity to moon and other street lights.

Automatic overload sense trip recheck and latch.

Degree of protection conforms to IP 65.









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NATURE SWITCH-02

This model is specially developed for applications like hoarding control, sign board control etc which needs to be operated only for part night. This helps in saving energy more intensely for such loads. The design provides for a drift free clock which is immune to all power failures/outages.

Features

Automatic switch ON at DUSK.

Automatic switch OFF at DAWN.

Wide operating voltage range 120 -440 VAC.

Switching load 16 Amp with over load trip.

Over/LowVoltage sense, trip and auto reset.

Immunity to dust, bird sittings and cloud cover.

Immunity to moon and other street light.

Switch OFF selection from 4-8 hrs or at DAWN.

Override facility for Continuous ON and Continuous OFF

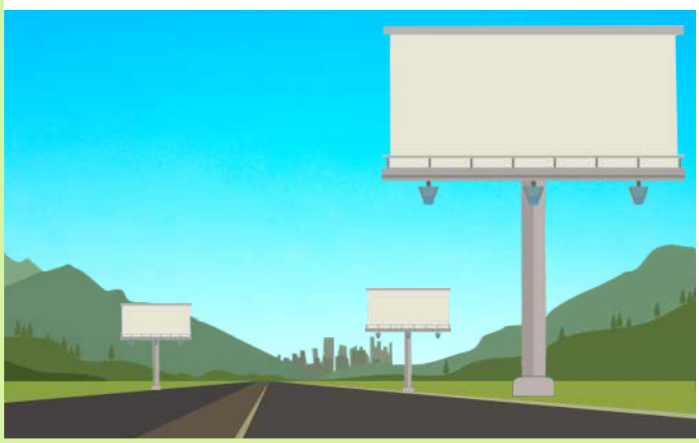
Degree of protection conforms to IP 65.

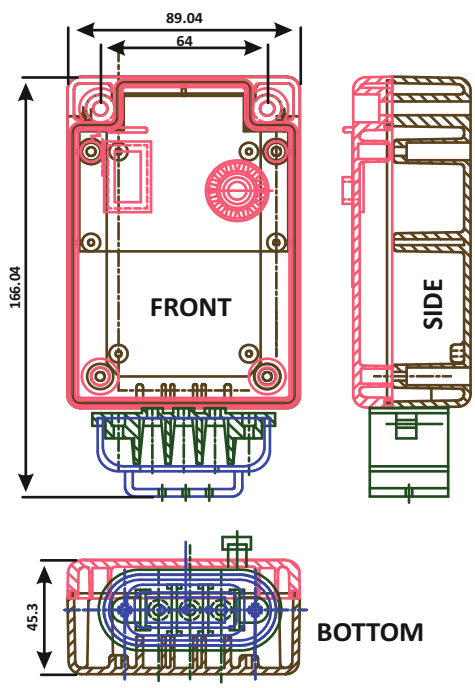


Nature Switch-02E

Nature Switch-02 is also offered as a pole mountable unit in an SMC enclosure along with an MCB to control coil of a Contactor in an existing distribution box.







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NATURE SWITCH™- SMART ASTRO

This model is a genie with autonomous Astro acquisitioning capability to offer a unique feature of automatic switching of outdoor lighting loads like signage, street lighting, campus lighting etc. based on local sunrise and local sunset times coupled with sensor. The product was used and proven over years for its superior judgement based on unique Infrared sensing offering immunity to artificial lighting. This is suitable for direct switching of all loads of up to 1000 Watts.

Features

Automatic switch ON at < 60 lux after local SUNSET time.

Automatic switch OFF at > 10 Lux before local SUNRISE time

Immunity to moon and other street/artificial lighting.

Immunity to dust, bird sittings and cloud cover.

Can switch up to 1000W load directly.

No time settings and no more seasonal re-settings.

Easy installation on DIN Rail / Wall Fixing.

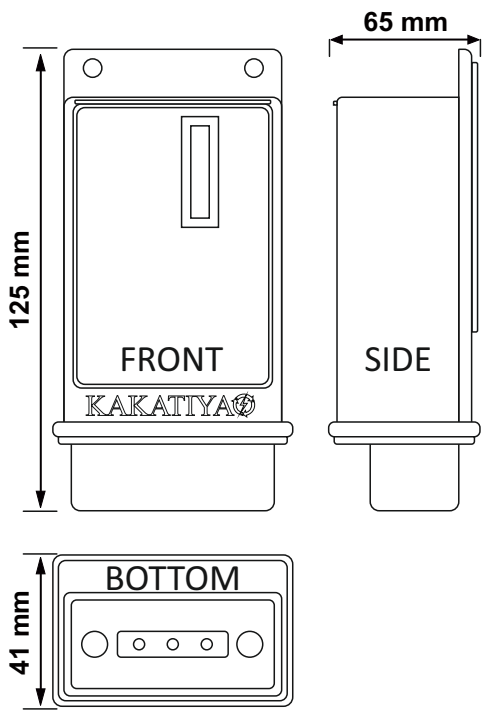
Integral Electrical Terminal for simple electrical connection.

Immune to outdoor elements like dust and water.

Degree of protection conforms to IP 65.







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NATURE SWITCH-IOT

This model is offered for automation of electrical loads with remote management. It is applicable for any type of electrical load such as lighting, air conditioning, motors and other electrical appliances. The control unit is rated for IP65 which houses the SIM card. Once programmed it follows the switching cycle every day until changed. It Supports 2G/4G/NB-IoT/LoRa/LoRaWAN.



Features

Automatic switching ON and OFF as per selected setting.

Remote access through SMS or internet.

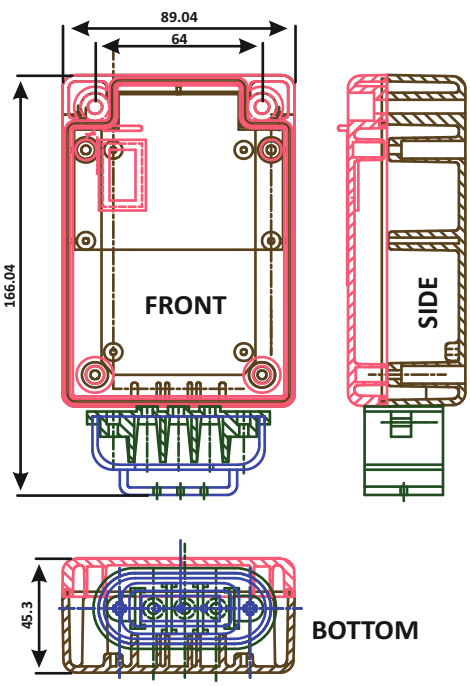
Automatic Over voltage trip and auto reset.

Automatic Low voltage trip and auto reset.

Wide operating voltage range- 120-440 VAC.

Remotely Programmable switching options based on

1. Sunset-Sunrise
2. Timer options (upto 3 on/off cycles)
3. Combinations of timer and Sunset/Sunrise



Automatic Alerts through SMS or Internet for High voltage trip, Low voltage trip, Power failure MCB trip, Contactor failure and TRIP recovery.

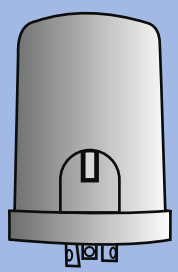


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NS-INDIVIDUAL LED LAMP CONTROL

This comes for each individual LED lamp and offers automated schedules for Switching and Dimming. The user can interact with the device remotely. Apart from switching and dimming each device is equipped with an energy IC and so can record all electrical parameters like energy consumption of each lamp and generates alerts in real time for all field abnormalities.

Features for all three models



Option - 1

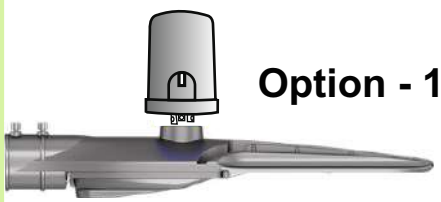


Option - 2

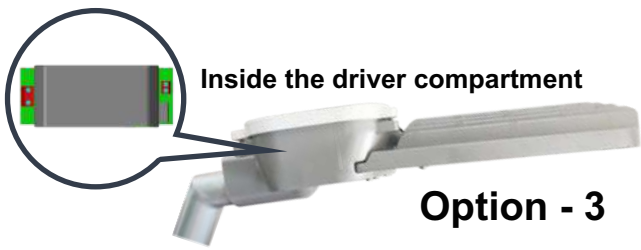


Option - 3

- Automatic switch ON/OFF of the lamp based on selected schedule.
- Automatic dimming of the LED lamp as per selected schedule.
- Automatic high/low voltage trip and auto reset.
- Wide operating voltage range 120-440 VAC.
- No need of seasonal time settings or re-settings.
- Supports 2G/4G/NB-IoT/LoRa/LoRaWAN/Wi-Fi/Bluetooth.
- Degree of protection conforms to IP 65.
- Option 1 is NEMA twist lock plug.
- Option 2 is an external fitment at junction box.
- Option 3 is an ADD on module to the dimmable driver.



Option - 1



Option - 3



Option - 2



NATURE SWITCH-REMOTE

This model offers remote monitoring and control of any electrical load. Enabled with SIM card & Blue tooth technology, NS-Remote can be controlled and monitored via smart phone application or via website. This product offers multiple outputs that can be connected to air-conditioners, lights, fans or any electrical load. Operation schedule can be set for each output individually. Any deviation in the operation due to external fault will be notified to the user immediately.

Features

Remote control and monitoring via the Internet/Smartphone application

Automatic over voltage trip and reset

Automatic under voltage trip and reset

Wise operating voltage range: 120 to 440 VAC

Remotely configurable operation schedule:

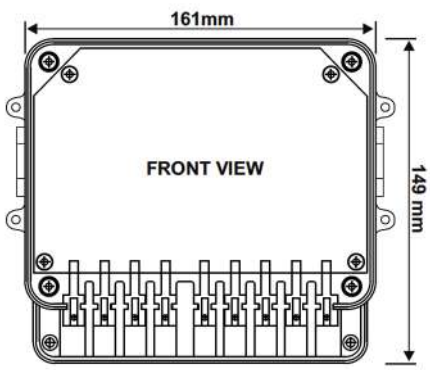
-- Upto 5 real-time clock cycles in a day

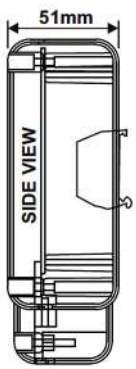
– Astronomical clock cycle (sunset to sunrise)

– Continuous ON/OFF









NATURE SWITCH™ SMART ASTRO - EC

SINGLE PHASE

Nature Switch™ Smart Astro EC is an integral model consisting of contactor, MCB along with the unique Nature Switch™ Smart Astro or Nature Switch™ Smart Timer as desired. Housed in a Pole mountable PC enclosure with latch provision. Available in 3kWrating for Single phase load Configurations. The enclosure offers IP rating of IP65 and facilitates an easy installation and the entire unit comes in a compact size where space is the premium.

Features

Automatic switch ON at Astronomical SUNSET time.

Automatic switch OFF at Astronomical SUNRISE time.

Wide operating voltage range 150 -320 VAC.

Load ratings of 3kW (Single ø)

PC enclosure with outdoor endurance.

Direct pole mountable enclosure.

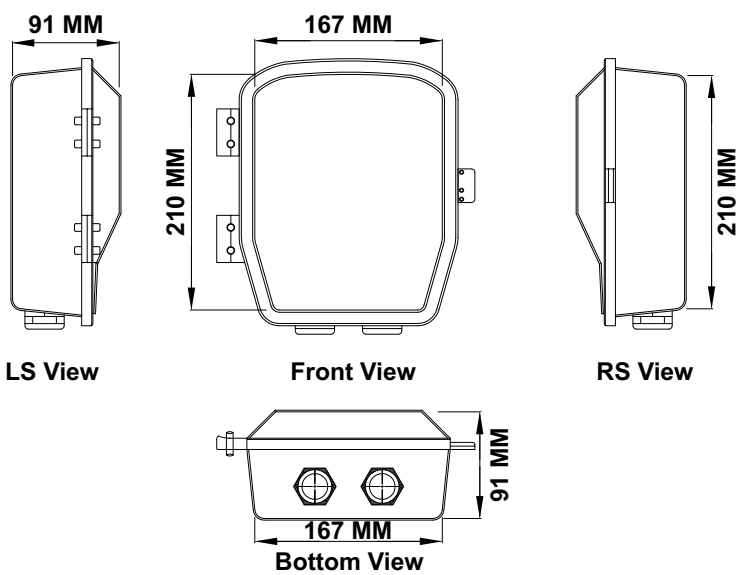
Universal LATCH arrangement.

Degree of protection conforms to IP 55.









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SWADEEP 02 EC
SINGLE / THREE PHASE

Swadeep 02 EC is an integral model consisting of contactor, MCB along with Nature Switch-02 housed in a Pole mountable SMC enclosure with lock & key provision. Available in various ratings for Single and Three phase load Configurations.

Features



Automatic switch ON at DUSK.

Automatic switch OFF at DAWN.

Wide operating voltage range 150 -280 VAC.

Load ratings of 3kW/5kW/8kW/12 kW (Single ø)

Load ratings of 5kW/8kW/12 kW/25 kW (Three ø)

Over and Low Voltage sense, trip and auto reset.

Switching OFF selection from 4-8 hrs or at DAWN.

SMC enclosure with outdoor endurance.

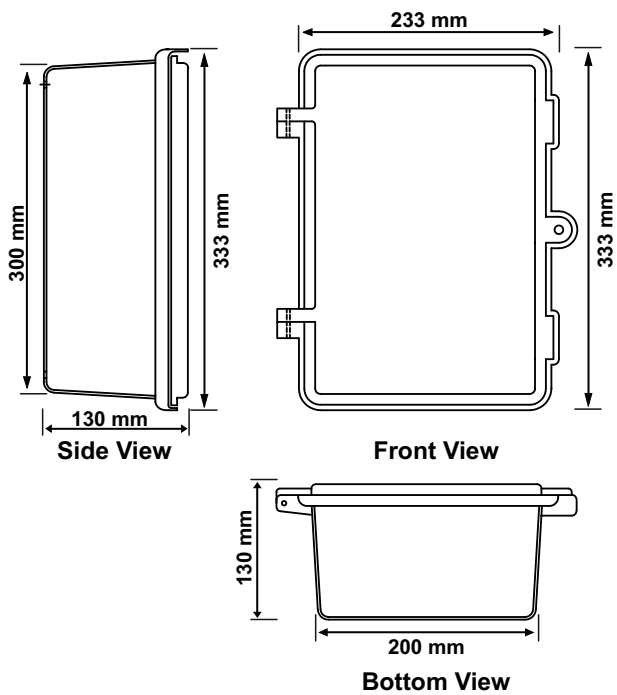
Direct pole mountable enclosure.

Universal lock and key arrangement.

Degree of protection conforms to IP 54.







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NATURE SWITCH

CCMS SINGLE PHASE

NATURE SWITCH-CCMS series is offered as a pole mountable enclosure consisting of NATURE SWITCH-GSM, power Contactor for load switching, MCB, Energy Meter and terminal blocks. The enclosure comes complete with mounting brackets, cableglands, and openable door with lock and key. Remote interface via SMS or Mobile app will enable an easy interface to the user.



Features

Core functions

- Automatic switching of street lighting
- Interactive web page for remote interaction
- Automated meter reading
- Automated real-time fault reporting

Selectable Switching Modes

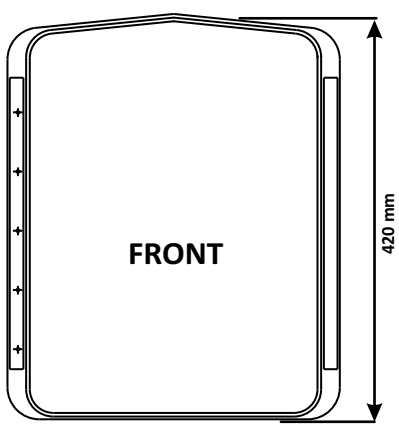
- Lux level based operation
- Astronomical clock
- Real-time clock

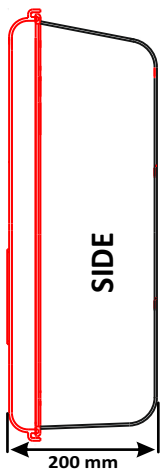
Alters & Logs

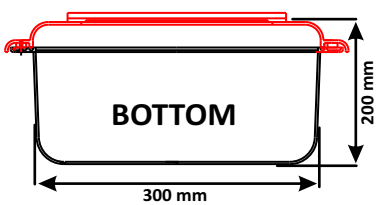
- User can interact with system via SMS in GPRS based variants
- Energy meter and communication log

Additional functions

- Interactive database for statistics and analytical report and field visualization,
- Remote MCB reset mechanism











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NATURE SWITCH

CCMS THREE PHASE

NATURE SWITCH-CCMS series is offered as a pole mountable enclosure consisting of NATURE SWITCH-GSM, SPD, Isolator, Power Contactor for load switching, MCB, Energy Meter and terminal blocks. The enclosure comes complete with mounting brackets, cableglands, and openable door with lock and key. Remote interface via SMS or Mobile app will enable an easy interface to the user.



Features

Core functions

- Automatic switching of street lighting
- Interactive web page for remote interaction
- Automated meter reading
- Automated real-time fault reporting

Selectable Switching Modes

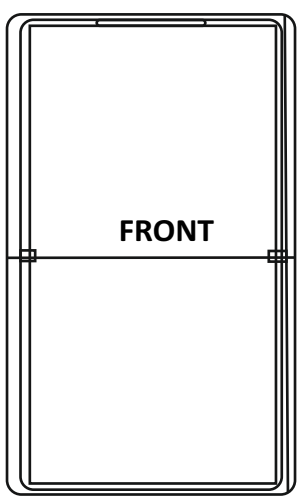
- Lux level based operation
- Astronomical clock
- Real-time clock

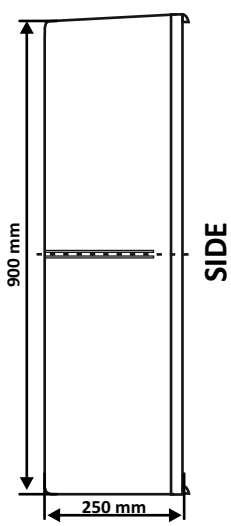
Alters & Logs

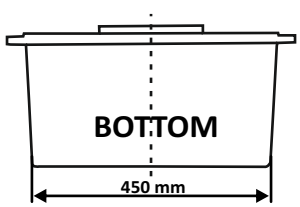
- User can interact with system via SMS / GPRS.
- Energy meter and communication log

Additional features

- Interactive database for statistics and analysis.
- Built in arrangement for SPD and Isolator.
- Automatic Phase failure detection and auto changeover.







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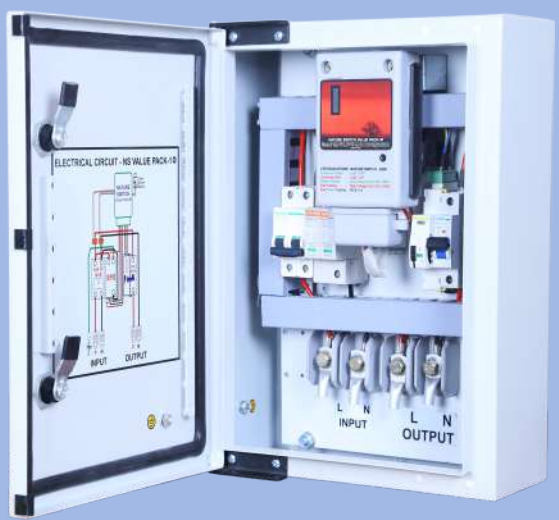


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NS - SMART PANEL

SINGLE PHASE

NATURE SWITCH-SMART PANEL is offered as a pole/wall mountable enclosure conforming to IP 65 consisting of NATURE SWITCH-SMART, SPD, Isolator, MCB drive for load switching, Energy Metering and terminal blocks. The enclosure comes complete with mounting brackets, cableglands, and openable door with lock and key. Remote interface via Web app, SMS or Mobile app will enable an easy interface to the user.



Features

Core functions

- Automatic switching of Electrical loads
- Interactive web page for remote interaction
- Built in Energy Metering and reading
- Automated real-time fault reporting

Selectable Switching Modes

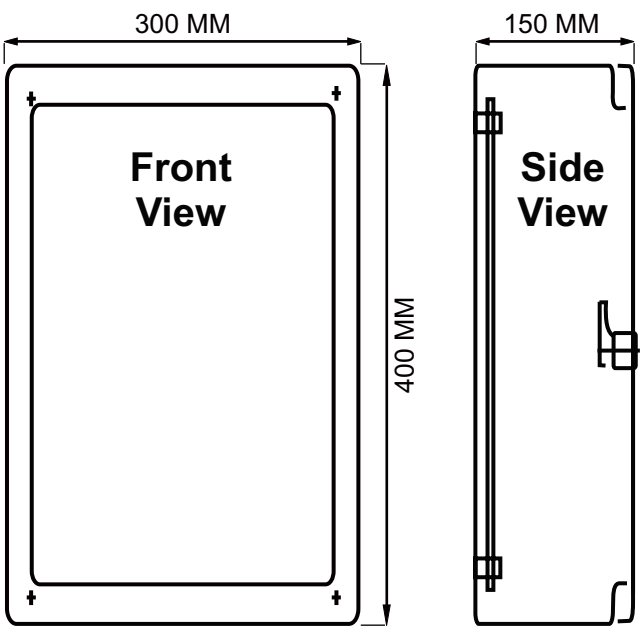
- Lux level based operation
- Astronomical clock or
- Real-time clock

Alters & Logs

- User can remotely interact with system
- Energy meter and communication log
- Alerts for all faults or abnormalities

Additional functions

- Interactive database for statistics and analysis.
- Built in arrangement for SPD and Isolator
- Remote MCB reset feature and auto reset







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NS - SMART PANEL

THREE PHASE

NATURE SWITCH-SMART PANEL is offered as a pole/wall mountable enclosure conforming to IP 65 consisting of NATURE SWITCH-SMART, SPD, Isolator, MCB drive for load switching, Energy Metering and terminal blocks. The enclosure comes complete with mounting brackets, cableglands, and openable door with lock and key. Remote interface via Web app, SMS or Mobile app will enable an easy interface to the user.



Features

Core functions

- Automatic switching of Electrical Loads
- Interactive web page for remote interaction
- Built in Energy Metering and reading
- Automated real-time fault reporting

Selectable Switching Modes

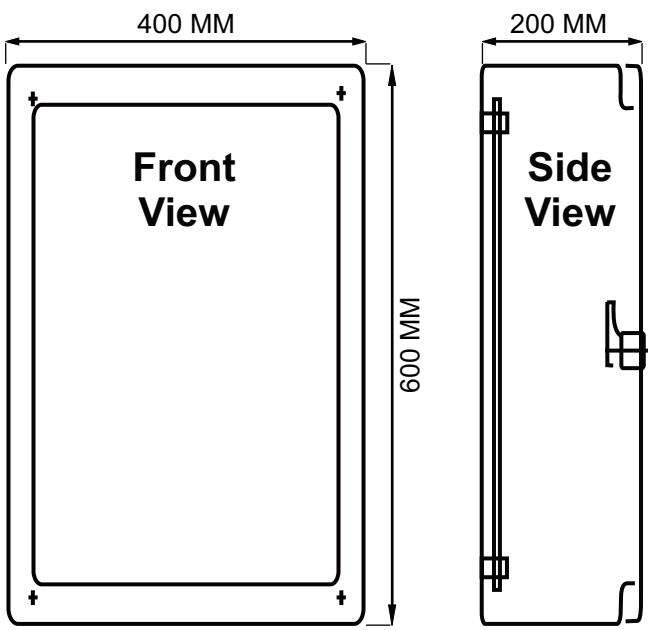
- Lux level based operation
- Astronomical clock Real-time clock

Alters & Logs

- User can remotely interact with system
- Energy reading and communication log

Additional features

- Interactive database for statistics and analysis. Built in arrangement for SPD and Isolator.
- Automatic Phase failure detection and auto changeover.
- Remote MCB reset feature and auto reset







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OUR SATISFIED CUSTOMERS



KAKATIYA

SAVE ENERGY SAVE NATURE

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