

ENERGY SAVING PANELS FOR LIGHTING LOADS

Energy Saving Product - Beyond 13.5 KVA (3 PHASE)

We offer higher capacities beyond 13.5 KVA models that are manufactured by our principal company M/s.ES EIPL.

These systems save minimum 15 to 25% of Energy depending on the load condition. They are three phase systems which can handle lighting and mixed loads also in a combination.

APPLICATION OF ENERGY SAVER

Lighting Circuits - Gas Discharge Lamps, Fans, A/Cs etc.

Mixed Loads - Comprising Of Lighting, Air conditioners, Raw Plug Connected Equipments, etc.

FEATURES :

Efficiency of Energy Saver unit is 99% plus.

On Load Tap Changer for By-pass and Tap Selection.

Any special requirement / specification can be adopted in the Panel.

Bunching of lighting loads can be made from one Centralized Unit based on feasibility.

Under and Over Voltage By-pass (Optional)

Automatic By-Pass

GENERAL SPECIFICATION OF ENERGY SAVER

Energy Savers are rated in KVA with 3 Phase, 415V, 50 Hz. with three adjustable tapings mounted in a panel made out of 16 SWG CRCA sheet duly treated with 7 tank process, painted with Siemens Grey color powder quoting with oven drying.

ENERGY SAVING ANATOMY (INDICATIVE)

The Energy Saver panel consists of :

Energy Saving Coil - Impedance matching coil

Metering Panel

Ammeter Digital LED Display

Voltmeter - Digital LED Display

Energy Meter L & T/Cadel/Enercon make

Selector Switches - Salzer/ Kaycee

Indicating Lamps - Binay/ EsBee(LED Type)

Control Switch for Fan - Technic/Vaishno

HRC Control Fuses - Standard/Indo-Asian

Coaxial Fan - Rolex/Reputed make

Protection Devices:

MCB/MCCB (Incoming) Standard / Indo Asian

MCB/MCCB (Outgoing) Indokopp/Standard

Selector Switch Salzer /HPL

By Pass Switch Salzer / HPL

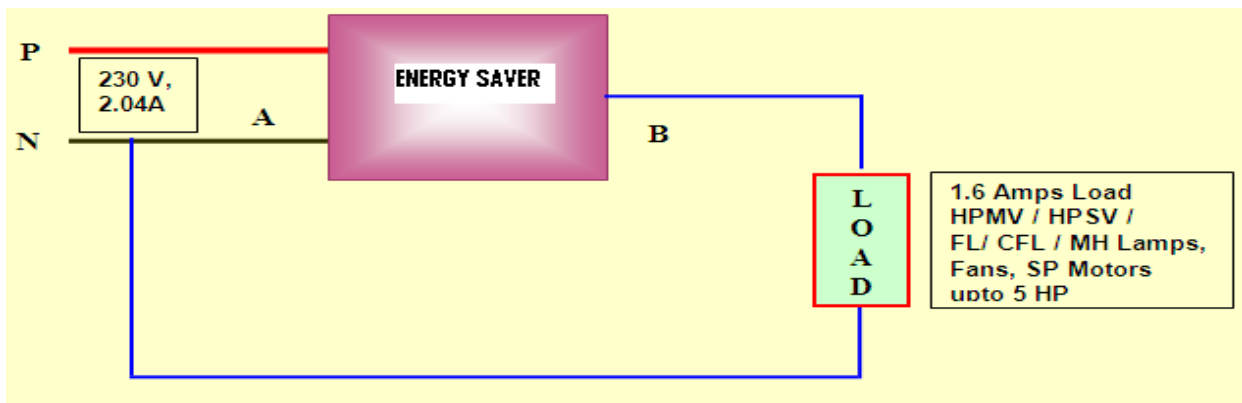
Connectors FRP/ Bakelite

Control Wiring Copper Cables – Finolex

WORKING PRINCIPLE OF ENERGY SAVER

This Energy Saver is a high efficiency device that optimizes the Voltage and Current (Static or dynamically) as the energy consumed increases in the approximately square of input voltage, hence the output energy would reach to an optimum level.

The diagram shows, the main winding A and secondary winding B, which is the inverse phase energy saving winding. When the supply current passes through winding A, magnetic restriction occurs in winding B, as B is connected in series to the load, the energy induced due to magnetic restriction in the reverse phase energy saving winding B, results in Voltage and Current optimization to reduce energy consumption up to 25%.



UNIQUE SELLING PROPOSITION

Assured savings up to 25% in Lighting Load and 15% in mixed load
 Extends the life of discharge lamps and reduces replacement of chokes
 Centralized installation
 Guards the circuit from high voltage spikes and surges
 Improves the power quality
 Virtually maintenance free with 20 years life span
 Payback period is as low as one year depending on usage
 Eligible for 80% depreciation in the first year of its investment under Income Tax act
 Marginal improvement in the Power Factor

Additional Features

Automatic Tab selector and Bypass system
 APFCR along with Energy Saver.
 Lighting Panel cum Energy Savers
 Energy Saver with High/Low Voltage cutoff

TESTED BY :

1. Central Electricity Authority, India
2. Central Power Research Institute, India
3. Chief Electrical Inspectorate to Govt. of Karnataka
4. SIRIM Berhad, Malaysia
5. Jabatan Bekalan Elektrik Dan Gas, Malaysia
6. Tenaga Nasional Berhad, Malaysia

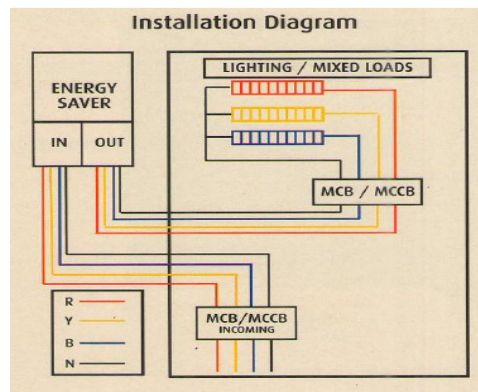
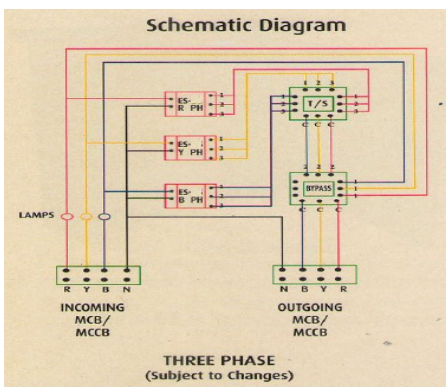
Technical Specifications

INDOOR



RESULT OF ENERGY SAVER ON LIGHTING/MIXED LOAD (APPROX. VALUE)

Parameters	Without ES	With ES
Kw	10	7.5
Current	40A	30A
Frequency	50Hz	50Hz
Harmonics (Current)	20%	12%
Harmonics (Voltage)	5%	3%
Lamp Temp.raise	60° C	45° C
Power Factor	0.85	0.90



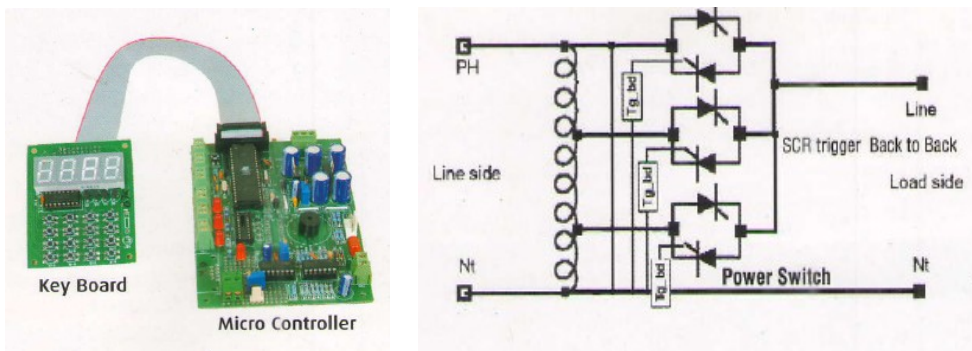
ENERGY SAVER ELECTRONIC AUTOMATION SYSTEM (OPTIONAL)

- Our Principal has a special feature to automatically adjust the following parameters without switching off and on in the lighting load.
- In case of low voltage, the Microcontroller takes the profile of source voltage and automatically by passes the system to direct mode.

- In case of voltage fluctuation, the voltage regulation tap will get adjusted automatically.
- Ignition of lamp at full voltage (1 minute - 99 minutes adjustable)

ADDITIONAL FEATURES OF MICROCONTROLLER

- High voltage cut off (adjustable)
- Four step automatic power factor correction inbuilt relay
- Provision of over current cut off
- Keyboard provision for adjusting the electrical parameters.



Note: Specification changes according to the site conditions and customer's requirement