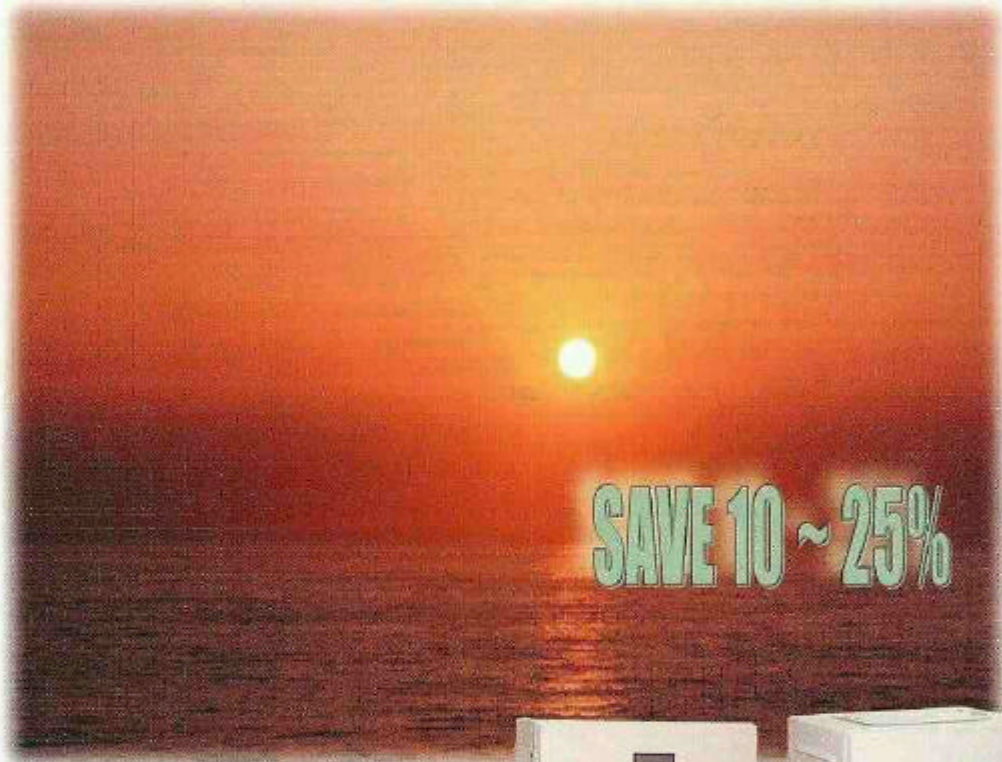




SUNSAVER INTERNATIONAL LTD.

WE SAVE ENERGY ...



SAVE 10 ~ 25%



SUNSAVER

ENERGY SAVING UNIT

THE UNIQUE ENERGY-SAVING DEVICE INVENTED IN JAPAN

SUNSAVER ENERGY SAVING UNIT



Saving Energy

The SunSaver energy saving unit features a revolutionary patented Auto Transformer Reactor System, which saves energy by recycling power input from the source and minimizing the wasteful copper loss and iron loss along the transmission lines and in the electrical equipment.

Recycle Power Effect

= energy saving of about 10 - 25%

Unlike electronic methods, SunSaver does not give rise to harmonics. On the contrary, it filters them.

This energy saving unit is further characterized by its low internal loss, which leads to the highest net energy saving.

Saving Money

As the life of electrical equipment will be shortened when the voltage is too high or too low, it is the economy of money to use electricity within 10% of the limit of the rated voltage. SunSaver substantially reduces energy consumption with only a small drop in voltage without exceeding this limit. As the current is largely reduced, less heat is produced. Thus the life of the electrical equipment is prolonged. And saving energy means saving money.

In general, the pay-back period is less than 2 years

Flexible to Use

For the most cost-effective use of energy, SunSaver allows the user to choose from

3 selectable tapping levels to suit different load conditions and achieve customer satisfaction.

Type TF

(Economy Model)



- Ammeter
- Voltmeter
- Manual By-Pass Select

Type TFP

(Premium Model)



- Digital Energy Meter
- RS485 Data Communication
- Manual / Auto By-Pass Select
- Automatic Voltage Detection
- Saving Taps Selection

Easy to Install

With its **compact size**, Sunsaver is easy to handle. Installation is simply completed by connecting the in- and out-cables.

Strong Service Support

Our qualified electrical engineers will provide pre-sales consultation as well as after-sales service. We offer **10 years warranty** for the transformer.

Versatile in Application

Sunsaver's application is **not limited to lighting systems**. It is also suitable for motors, heaters, air-conditioners, office equipment, etc.

Fully supported by Test Reports

Sunsaver has been proven very effective in energy saving by many laboratories, among which are the Japan Electrical Safety & Environment Technology Laboratories and the Electrical Harmonics Monitoring Station of Guangdong Province. Fully tested, Sunsaver is guaranteed to be **safe and effective**.



JET
Japan

SGS
Singapore, Thailand

SISIR • SIRIM
Singapore, Malaysia

EGAT
Thailand

CNS
Taiwan

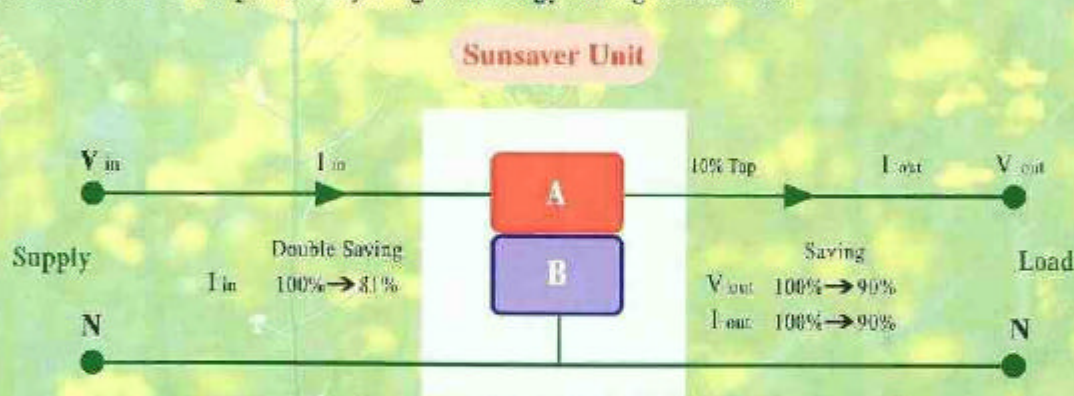
Auto Transformer Reactor System

◆ Transformer Features

- More than 10 years research and development before being patented
- Compact size 3 phase transformer
- High energy density, high efficiency
- Small heat loss
- No power interruption during transition from non-saving to saving mode

◆ Operating Principle

The diagram shows the energy-saving transformer system. Current coil (A) and auxiliary voltage coil (B) are respectively the main winding and the inverse phase energy-saving winding. When the input current from the supply flows through coil (A), magnetic restriction occurs in voltage coil (B). With the coil (B) connected to coil (A) in series, the energy induced by the magnetic restriction from the inverse phase current in coil (B) is expressed as voltage drop in coil (A). Hence double effect power recycling and energy saving is achieved.



	V_{in}	I_{in}	V_{out}	I_{out}	kVA Reduction
Non saving	100 %	100 %	100 %	100 %	—
Saving	100 %	81 %	90 %	90 %	19 % (Double Effect)

◆ Energy saving by reduction of wasteful loss



By means of power recycle effect, the wasteful energy due to heat loss, sound loss and vibration along the transmission lines and in the equipment is largely reduced. With energy saving, the current output capacity of the mains switchboard can be increased by 20% to 30%.

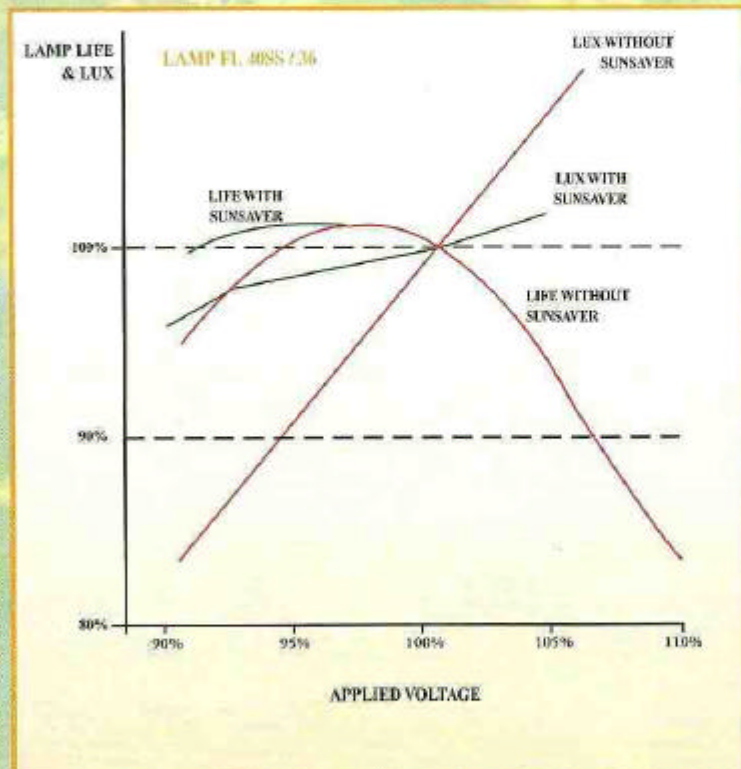
Reference Data

Source: Test on tunnel lighting in HK

Input side of Sun saver	Without Sun saver	With Sun saver	Difference	Difference in Percentage %
Voltage (V)	221.1	221.1	0.0	0.00
Current (A)	92.7	68.4	-24.3	-26.21
Apparent Power (kVA)	61.4	45.4	-16.0	-26.06
Active Power (kW)	51.7	40.9	-10.8	-20.89
Reactive Power (kVar)	33.2	19.7	-13.5	-40.66
Power Factor (p.f.)	0.84	0.90	0.06	7.14

Energy Saving Percentage = 20.89%

Lamp Life and Luminous Lux



* This diagram is made up with several different datum from Sun saver data, Matsushita Catalog and reported by Mr. Sengen of Matsushita Dennshi.

Recommended Applications

- ◆ Factories
- ◆ Airports
- ◆ Offices
- ◆ Car Parks
- ◆ Shopping Complexes
- ◆ Sport Centres
- ◆ Supermarkets
- ◆ Schools
- ◆ Hotels
- ◆ Convenience Stores
- ◆ Banks
- ◆ Highway Toll Plazas
- ◆ Stadiums
- ◆ Workshops
- ◆ Public Libraries
- ◆ Tunnels
- ◆ Book Stores
- ◆ Railway Stations

Standard Specifications

Rated Voltage	220V ~ 240V 50 Hz and 380V - 440V 50 HZ
Dielectric withstanding	AC 1500V/Min
Ambient temperature	0°C ~ 55°C
Over current	10 kV 0.3/sec 200% normal current
TR ₁ Insulating type	Type H
Energy saving operation	Auto Transformer Reactor System

Standard Rating 380V 50Hz 3 phase 4 wire

Model No.	Capacity	Rated Current	Model No.	Capacity	Rated Current
TF 7.5	7.5 kVA	12 A	TF 125	125 kVA	190 A
TF 15	15 kVA	23 A	TF 200	200 kVA	303A
TF 22.5	22.5 kVA	35 A	TF 250	250 kVA	380 A
TF 30	30 kVA	46 A	TF 300	300 kVA	456 A
TF 37.5	37.5 kVA	57 A	TF 400	400 kVA	608 A
TF 45	45 kVA	68 A	TF 500	500 kVA	760 A
TF 60	60 kVA	91 A	TF 600	600 kVA	912 A
TF 75	75 kVA	115 A	TF 700	700 kVA	1064 A
TF 100	100 kVA	152 A	TF 800	800 kVA	1215 A



广州天河北路中信广场 23 楼 18 室

电话: 86-20- 8752 0929 ; 8752 0931

传真: 86-20- 8752 0926

电子邮箱 : salea-china@tfe.com.hk

上海市延安西路 2299 号上海世贸商城 3A16 室

电话: 86-21-6236 0328

传真: 86-21-6236 1792

电子邮箱 : salea-china@tfe.com.hk

香港九龙新蒲岗七宝街 3 号振发工厂大厦地下 B1

电话:(852)2385 2440

传真:(852)2783 8177

电子邮箱 : sales@tfe.com.hk

