



MASDAR ENERGY
LATEST POWER TECHNOLOGY
REVOLUTIONS

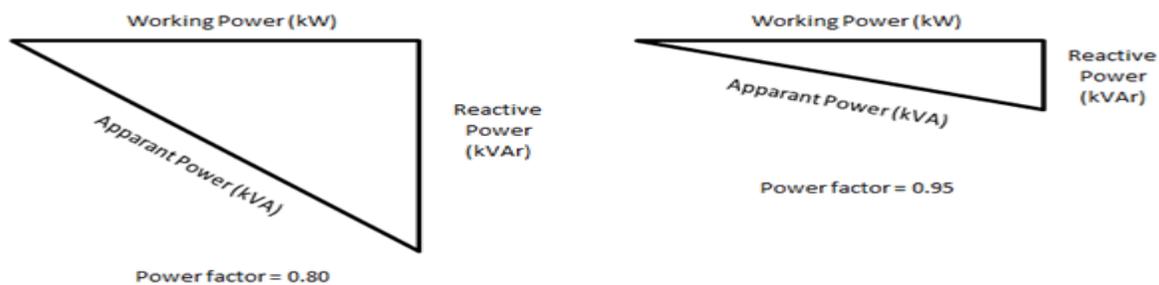


We are proud to provide to our clients the latest revolution technology, the **PSS** or Power Saving System for **commercial and industrial business**

Save power with at least **20%** in KWH and in total monthly bill, how PSS works?

Technical Information's

It is given that the conventional capacitor is acting as reactive power generators. This saves a considerable amount of the reactive power required for sustaining the electromagnetic field. So, by providing the reactive power (KVA_r), they reduce the apparent power (KVA) drawn from the power supply and this in return leads to an improvement in the power factor (PF) as shown below:



Power Factor is defined as the ratio of working power to apparent power.

On the other hand, all capacitors in the APSS panel are well treated with special material, the functioning and effectiveness of capacitors depends largely on the extent of material used to construct the dielectric between the capacitor plates so as to generate active power (P₂) in the load-circuit. The direct impact of generated active power (P₂) is to decrease the required active power (P₁) from the source of power

The amount of (P₂) reaches to be 20% to 30% of the total electric currents, which represents the desired savings in the customers' bills.

The underlying causes of not achieving any savings due to the inadequacy of the materials used and ineffective treatment for capacitors bear in mind that all types of material suffer from aging, which reduces their ability to function properly over time. Thus, capacitors often need to be replaced if used continuously. Also, misplacing inefficient installation considered a key reason for not achieving any savings in KW consumption.

The Advantages of Power Saving System PSS

- Achieves savings from **20 – 30** % of the consumed active power for networks that are supplied through transformers.
- Achieves savings from **30 – 40** % of the fuel consumption for networks that are supplied through generators.
- Power factor improvement that reaches up to **99%** which makes the client benefit from avoiding paying penalties for the reactive power.
- The network resistance is reduced due to the energy exchange between the PSS and the different loads; therefore, the consumed current from the source is reduced.
- **PSS** unit works on minimizing the network losses and acts as a voltage stabilizer to a certain extent which leads to reducing the consumed current from the source.
- **PSS** unit can handle each phase separately, which leads to balancing the load of the network, therefore it minimizes the current flow through the neutral cable of the network.
- **PSS** unit minimizes, in some applications, the harmonics in the network (3rd, 5th, 7th, 9th, 11th & 13th).
- **PSS** unit is a tailor-made panel that is designed according to the network's condition; the capacity of each unit can vary between **20 KVA** to **2000 KVA**.
- In order to achieve the required savings in big networks, we can use several PSS panels.
- **PSS** are of suitable size and don't need any additional facilities.
- **PSS** can be designed to work in any environment.
- With the use of the **PSS**, client saves space and expenses of new equipments and additional devices he might have purchased to increase his network's capacity.

Results and benefits

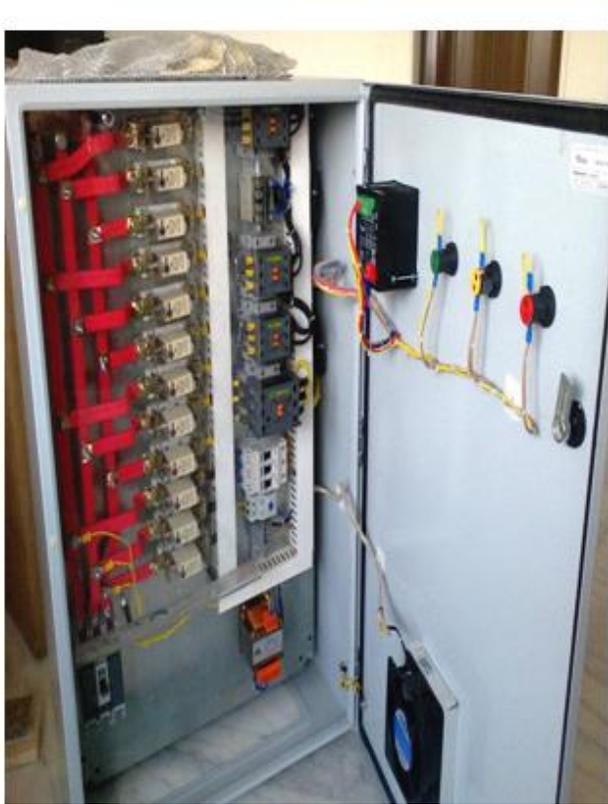
The PSS will have the following direct benefits for the electrical installation:

1. Reduction in KWH consumption by 15% as minimum to 25%
2. Considerable reduction in the current consumption AMPS
3. Considerable reduction in the apparent power KVA
4. Considerable reduction in the reactive power KAVR
5. Optimization of power factors up to 0.99
6. Improvement of cables motors and transformer's efficiency.



Construction Materials All materials carry special specifications and satisfy special requirements for safe operation. **List of the main component of PSS**

Product Type	Country/Co	Standard	Operating Life/Years
Capacitors	FRAKO / Germany	EN60831 – 1/2	3
Controller	DUCATI or ENTES (Italy)	IEC,ANSI, IEEE, B.S.S. IECE1326 Acc.	3/5
Filters	DUCATI / Italy	EN60146, IEEE519	3/4
Contactors	Telemecanique / Schneider	IEC 60947-2, IEC60947-3	3/4
MCCB	Merlin Gerin / Schneider	CEI EN 61921	3/4
FUSES	DUCATI	IEC269, DIN 43620,	3
Skeleton	European made		5



Warranties

- a. One year warranty for the right function of our equipment since the date of project delivery in operation.
- b. Expected life time span is 7 years
- c. Free replacement for any parts of PSS supplied during its warranty period
- d. 15 years installations warranty



Maintenance Service

Masdar offering free services and check up for the first year , as from the second year we will provide maintenance and services contract agreement with resanable cost, we are responsible for providing maintenance and services in order to ensure high quality operation performance



Products Quality

The equipment provided by our company such PSS panel and Cabling are of premium quality and advanced technology. **Masdar Ltd** is co-operating with award winning brands is securing maximum possible electricity saving. All spare parts for the PSS are available and very high European quality (German – Italy) productions

Quote:

The price for the Power Saving System is according to the amperes load at the premises , you are kindly requested to measure your network maximum amperes load and e-mail it to info@masdare.com with 4 highest electricity bills; **Masdar** engineers will prepare the right survey and providing you with best quote

Method of Payment:

50% paid in advance upon PO assignment.

50% payable from the date of project delivery in successful operation.

Quote validation period

The quote is valid for 1 month. It is worth mentioning that to design the PSS for your premises may take 1 month to be completed

For more informations please contact us at info@masdare.com

We wish you good luck

Masdar Ltd Team

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