

CTW INTERNATIONAL LLC



**UNMATCHED ELECTRICAL SAVINGS
BY NEW INNOVATIVE TECHNOLOGY**

INNOVATION

GLOBAL ENERGY SAVING SYSTEM GESS

IMPORTANT NOTICE TO CLIENTS "IONIZATION PROCESS (KNOW-HOW) IS NOT DETAILED IN THIS PRESENTATION BUT IT IS THE SOLE PROPRIATRY OF CTW. QUESTIONS REGARDING THIS TECHNOLOGY SHALL NOT BE ANSWERED."



MADE IN USA

PRESENTED BY

Dr. Mark Shoukry, PE, LEED AP, M ASME, M ASCE

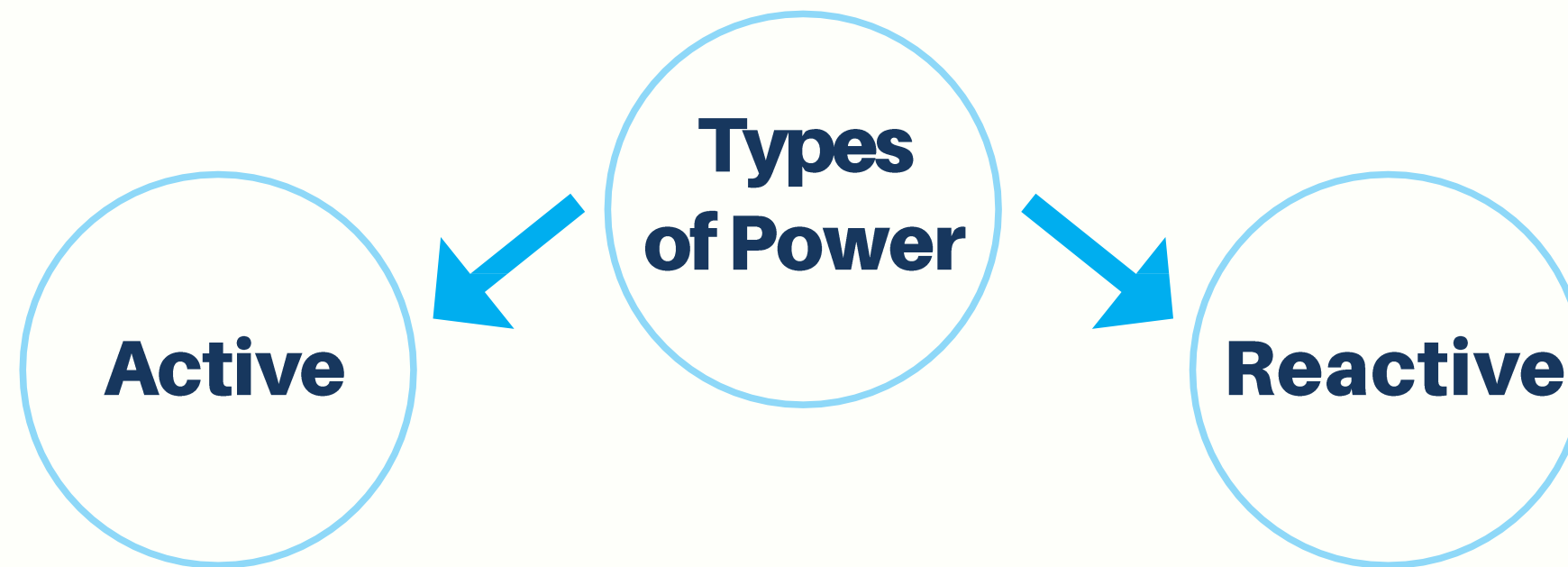
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Introduction

With the excessive needs for energy, the limited power resources became the main problem that pushed scientists to work hard on finding solutions for energy saving, and many engineering institutes, labs and research agencies are working hard in the same direction as well.



In the eighties of the last century, we knew the Power Factor Correction panels (PFC). The function of the PFC is based on adding capacitor banks relative to the load requirements and adds to the load a reactive current that is supplied by the source, which leads to an increase in the consumed active power.

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Global Energy Saving System

Today, our Company is presenting in the market its unique GESS (Global Energy Saving System) panels. GESS is the result of 15 years of researches and modifications in the field of the energy saving. GESS when was applied lately added a new economical value as it reduced the amount of consumed active power and hence reduced the cost of the production and operating expenses .



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The Advantages of the GESS Panel :

- Achieves saving from 20 — 40 % over the consumed active power for networks that are supplied through transformers.
- Achieves saving from 15 — 30 % over the fuel consumption for networks that are supplied through generators
- Power factor improvement that reaches up to 99% which makes the client benefits of eliminating penalties for unneeded reactive power
- The network resistance is reduced due to our innovative ionization technology, which results in reducing current supplied by the source.
- GESS unit works on minimizing the network losses and acts as a voltage stabilizer to a certain extent which leads to reduce the consumed current from the source.



Concept Of Operation



The (GESS) unit had ionic treatment with a combination of special materials creates super-conductivity with a negative resistance which acts as a current source in the network. The innovative technology allows us to add the current component in the direction of the active current and another one in the direction of the reactive current, therefore, we reduce the power consumed (KW) from the source without affecting the load Negative resistance or negative differential resistance (NDR) within the electrical circuit elements which composed of certain materials that over certain voltage ranges, current is a decreasing function of voltage. This range of voltages is known as a negative resistance region. The term negative resistance for situations in which the negatively-sloping portion of the load line passes through the origin, so that a positive absolute value of voltage is associated with a negative absolute value of current. Such a circuit must contain an energy source, and can be used as a form of amplifier Negative resistance phenomenon is a process of injecting an additional excessive power to an existing power source proportional to some disturbance. A negative resistor acts as a proportional additional power source.



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Panel Sizes



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- > **0- 63 AMP one and 3 phases**
35 x 25 x 15 CM or 1'X 8"X6"
- > **63-100 AMP 3 phases**
40 x 30 x 16 CM or 1' 3" X 2'X 6"
- > **100-200 AMP 3 phases**
50 x 40 x 20 CM or 1' 7" X 1' 4" X 7'
- > **200-300 AMP 3 phases**
60 x 40 x 20 CM or 2' X1' 3"X 7"
- > **300-400 AMP 3 phases**
80 x 60 x 45 CM or 2' 6"X 2' X1' 6"
- > **800-1500 AMP 3 phases**
150 x 60 x 45 CM or 4' 9"X2'X1' 6"
- > **1500-3000 AMP 3 phases**
200 x 75 x 65 CM or 6' 6"X 2' 5"X 2' 2"



400-800 AMP 3 phases 100 x 80 x 30 CM





Components of GESS unit

All panel components including the panel itself as well as wires are all UL listed.



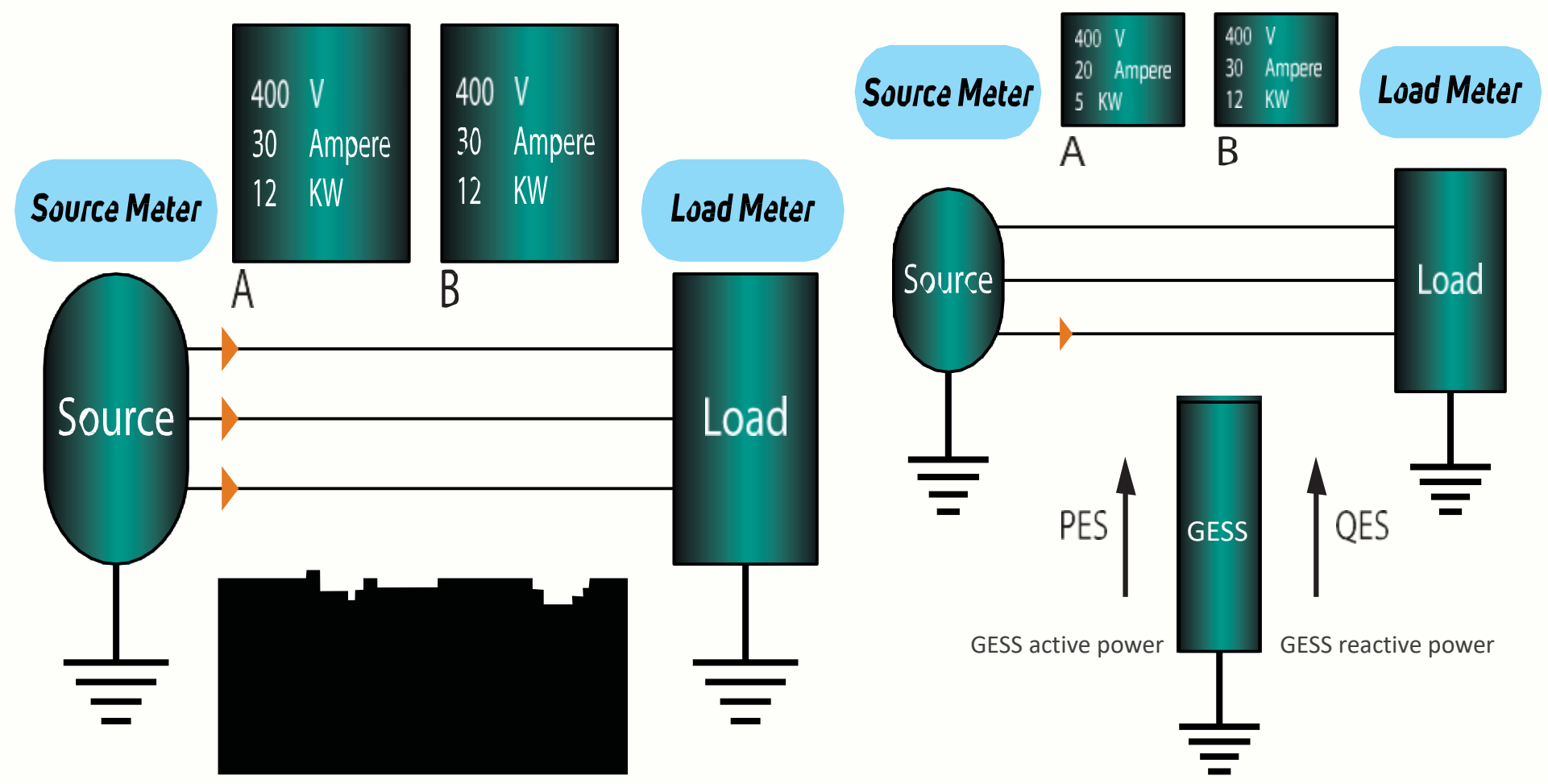
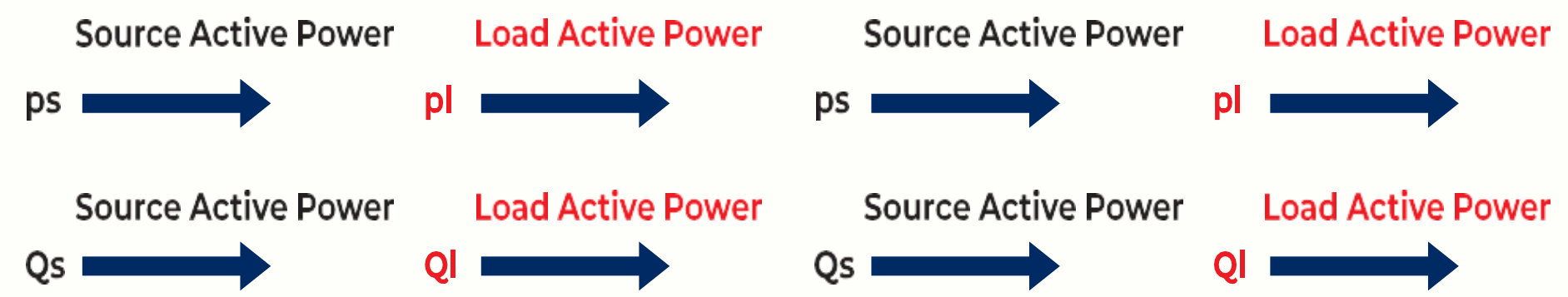
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- > Regulator RG -8 or RG-12 Intes
- > Circuit Breakers Tmax T6 — T7 — TB
- > Contactors 1SBLJ8tO24 R8OJO Various Capacities
- > 1SBL241O24R8O10
- > 1SBL281024 R8O10
- > 1SBL351O24R8O00
- > IS BL431O24R8O00
- > JSBL45JO24R8O00
- > Fuses DIN -type HRC-fuse Various capacities
- > Electronic circuits various

What happens when GESS is connected

Before Connecting

After Connecting





Our Clients





INNOVATION

CONFIDENCE - COMPETENCE - INTEGRITY


Q-check

Leaders in reliability
Líderes en fiabilidad



CERTIFICATE

Certificate Number:
91413

Date First Registered:
28/08/2014

Issued on:
28/08/2014

Date Certificate expires:
27/08/2017

Surveillance audit before:
20/08/2015

Rev. 04/2012



The validity of this certificate can be checked using Q-check or in the website mentioned below.

Further clarifications on the scope or the applicability of the certified system can be obtained from Q-check Certification Services.

Awarded to
AME.

In recognition of the Organization's Quality Management System which complies with:

ISO 9001:2008

For the scope of activities described below:

Trading of electricity panels for electricity consumption.

Authorized by:


Q-check Certification Services
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Fax: +90 2410 108801 Email: info@q-check.com.tr / www.q-check.com.tr



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THANK YOU!

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IN GOD WE TRUST!