ENNERGY EXPERTS PRIVATE LIMITED

Ennergy Experts

We Shape Energy



Reduce Electricity bills by improving power quality

Phase comp®

INNOVATIVE PROVEN SOLUTION FOR KVAH OPTIMIZATION

www.ennergyexperts.com

Phasecomp®

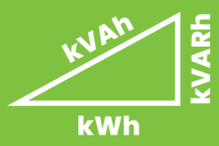
INNOVATIVE PROVEN SOLUTION FOR KVAH OPTIMIZATION

Our technocrats team is involved in Design, Development. Engineering. Manufacturing, Supply. Installation and Commissioning of Proven technology for Fine Reactive Compensation to reduce KVAh and KVA Demand.

We have developed a product`**Phasecomp'** for Commercial and Industrial Loads. The`**Phasecomp'** is installed along with existing APFC/RTPFC systems, which are failed to maintain exact KVAr requirement and fine compensation in frequent fluctuating and critical loads causing higher count in KVAh than Kwh units.

This system successfully compensates the fine gap between Kvah and KWH and nullifies the unbalance between all three phases R. Y, B at Real time through specially developea hybrid switching technology.

POWER FACTOR $PF = \frac{kWh}{kVAh}$



$kVAh - kWh$

$\frac{\text{GUARANTEED POWER FACTOR}}{> 0.992}$

Reduce KVA (MD)

Following are advantages of installing `Phasecomp' in your Electrical network:

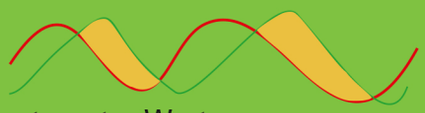
- Fine compensation at real time through Hybrid Switch.
- Nullifies the unbalance load to increase efficiency. Greater efficiency reduces electricity costs and results in commercial savings.
- Equalises the kWh gap units in electricity bills through current injection through Neutral, which reduces the KVAh count and KVA (MD) in electricity bills.
- Improves the power factor consistently during frequent load switching, thus improvement in RKVAh Lag and RKVAh Lead counts in Electricity bills.
- Step less reactive compensation.
- Maintenenace tree (Fit & Forgel solution)
- Compact in Size and floor mounted design. | IP58
- No requirement of AC Fan Cooling systems, etc.



Guaranteed Power Factor > 0.992

Before Power Factor Correction

P.F-0.80

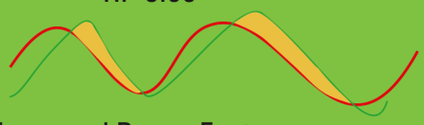


Lag between Voltage and Current creates Waste

No Power Factor Correction system is installed. Low Pf causing more losses.

After Power Factor Correction

P.F-0.95

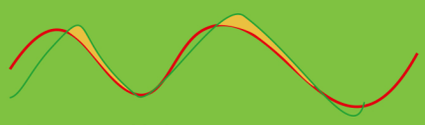


Wasteful Lag is reduced thus improved Power Factor

APFC / RTPFC is installed.But due to unbalanced load Target PF cannot be achieved.KVAH Vs. KWH Gap is more.

After installation of PhaseComp

Guaranteed P.F > 0.992)



Power Factor is further improved near to Unity

`**PhaseComp**' is installed with existing APFC / RTPFCSystem. KVAH Vs. KWH Gap is very less & KVA (MD) count is also low.



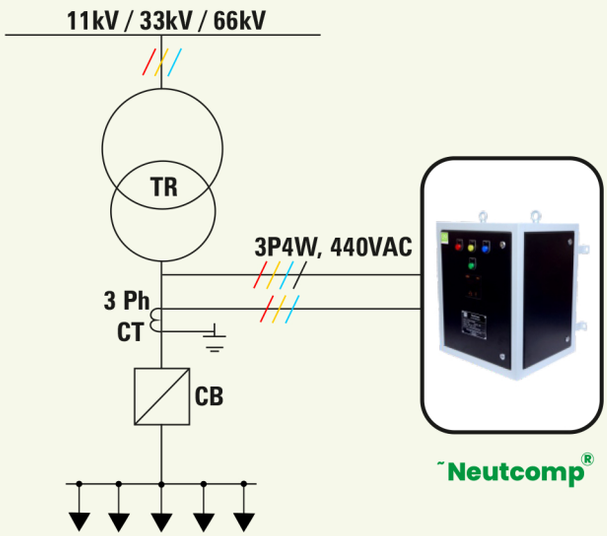
Voltage **Current** **Waste (Increase in KVAh)**

Technical Specifications

PARAMETER	VALUE
- Efficiency	: More than 98.8%
- Reaction Time	: Intelligently
- Target P.F. / Setting	: 0.7IND TO 0.7 CAP
- CT Feedback	: 3 Phase CT
- Accuracy	: Class 0.5
- Supply Voltage	: 440 VAC + -20%
- IP Rating	: IP 58
- Attitude Rating	: Upto1500 Meters
- Humidity	: 10% to 90%RH
- Cable Entry	: Bottom

- Available from 6 AMPS TO 800 AMPS
(Customised Solutions)

Installation of Neutcompin Electrical Network



SAVE PENALTY ON ELECTRICITY BILLS

APPLICATION

Hotels | Hospitals | Commercial Buildings | Offices | Schools

Colleges | Institution | Large Residential | Industries

- Penalty has been introduced for leading power factor
- Incentive is applicable on lagging PF only
- Now power factor is being calculated as:

$$\text{KWH PF} = \checkmark \text{KWh}^2 + (\text{RKVAh Lag})^2 + (\text{RKVAh Lead})^2$$

- If P.F. <0.90, then penalty will be as MERC order
- If P.F. > 0.95 and RKVAh Lag >= RKVAh Lead, then Incentive is applicable as per MERC Order.
- if P.F. > 0.95 and RKVAh Lag < RKVAh Lead, then NO incentive is applicable.

Phasecomp® Minimises The Gap Between KVAh and kWh, thus Saves Electricity Bills

Adjustment	0.000	0.000	0
Assessed Consump	0.000	0.000	0
Total Consumption	100665.000	151583.000	1459
			BILLING D
Billed Demand (KVA)	385 @ Rs.	391	
Assessed P.F.	Avg. P.F.	785	
Billed P.F.	785 L.F.	21	

Before Installation of `Phasecomp'
Gap = kVAh-kWh = 50918 Units
Power Factor = 0.785

Adjustment	0.000	0.000	0
Assessed Consump	0.000	0.000	0
Total Consumption	97876.000	98160.000	4751
			BILLING D
Billed Demand (KVA)	313 @ Rs.	411	
Assessed P.F.	Avg. P.F.	997	
Billed P.F.	997 L.F.	29	

After Installation of `Phasecomp'
Gap = kVAh-kWh =284 Units
Power Factor = 0.997
Also , kVAh reduction upto a great extent

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COFA Studio