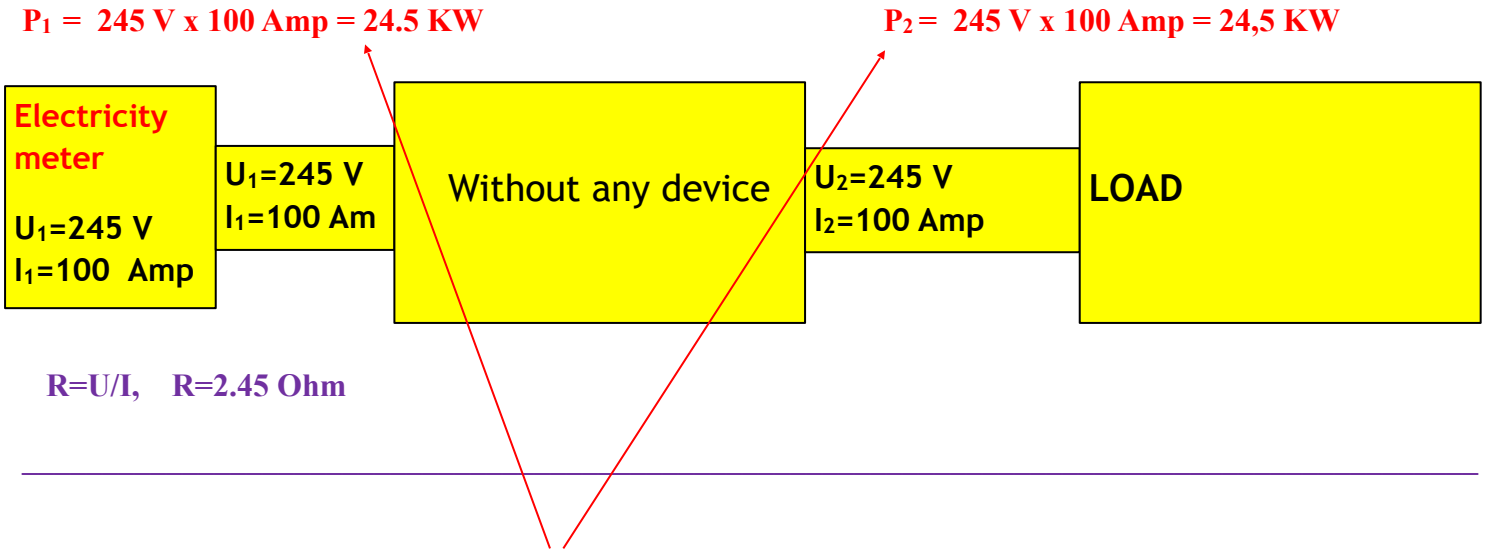
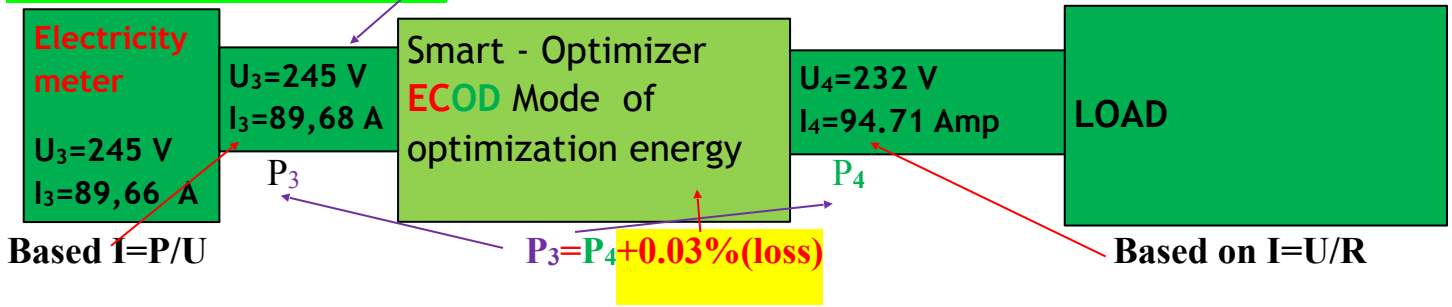


Energy savings = 2,53 KW=(P_2 – P_3)= (245 V * 100 A)-(245 V * 89.68 A)= 24,5 KW - 21,97 KW

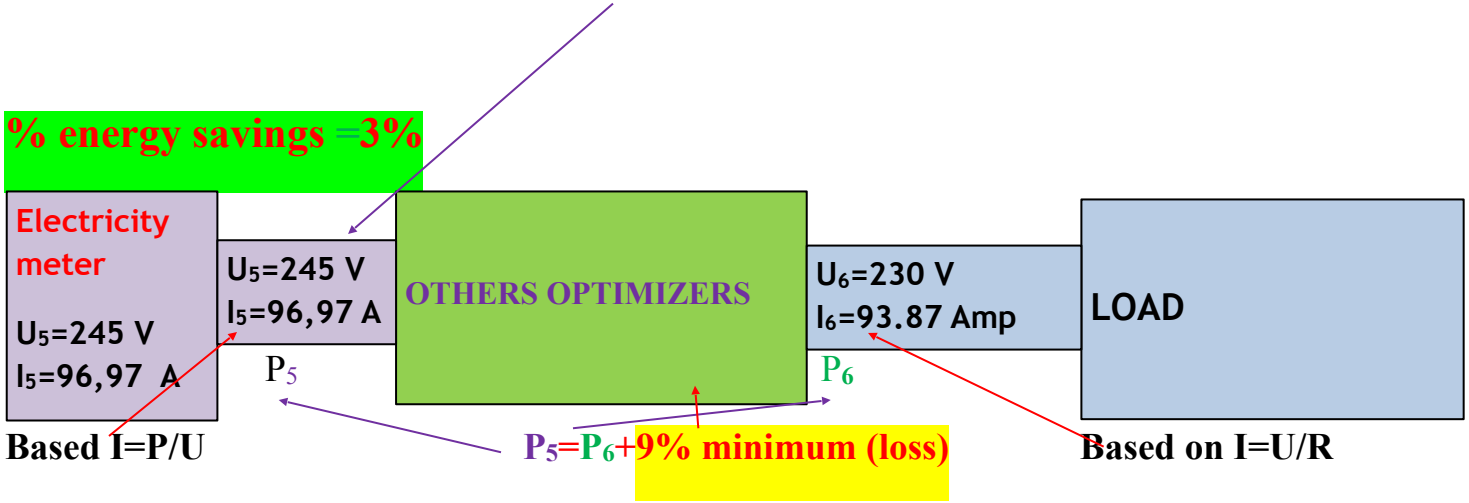
% energy savings =10%



P=U*I

OTHERS OPTIMIZERS

Energy savings = 0,73 KW=(P_2 – P_5)= (245 V * 100 A)-(245 V * 96.97 A)= 24,5 KW - 23,76 KW



P=U*I

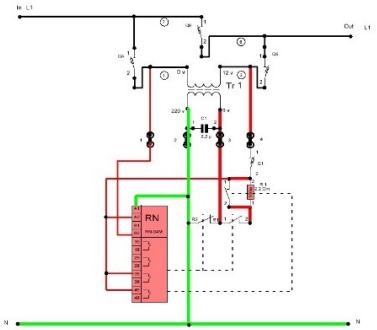
What is the difference between Smart-Optimizer ECOD and regular optimizers?

The answer is in our patented principle of work allowing us to use many times less transformers.

Transformer loss

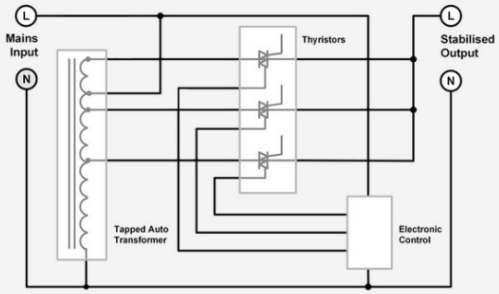
Transformer loss = No load loss + ((% loading/100)^2 * full load copper loss)

OPERATING PRINCIPLE OF SMART-OPTIMIZER ECOD



OPERATING PRINCIPLE OF REGULAR OPTIMIZERS

Solid State Electronic Tap Changer



Design Overview

Using triacs in series with a tapped auto transformer, regulation is achieved by electronically selecting the most appropriate output tap (from typically 8+) on the transformer.

As a stepped regulation solution with a limited number of taps being available they generally offer a poor level of output voltage accuracy (typically ±5% or worse!)

Historically the topology has proven to be highly unreliable with the triacs being prone to firing simultaneously when being subjected to spurious transients, or failing under over voltage or current situations

While a of large number of manufacturers of ordinary optimizers claim energy savings, few manage to mention energy losses caused by such devices.

Heavy weight and large dimensions reveal a device as an ordinary stabilizer or autotransformer and as such coming with sizable energy losses.

Comparison

Manufacturer and type of device	Nominal current Amp	Nominal capacity KVA	W (cm)	H (cm)	D (cm)	Weight (kg)	KW of losses
Smart-Optimizer ECOD-ML-160 (Feigin Electric Co., Ltd.)	**175**	**110**	**70**	**70**	**35**	**95**	**0.6**
OptiNet Basis 160 (ORTEA, Italy)	160	115	undisclosed	undisclosed	undisclosed	390	2.2
VOLTSTREAM OVS3-100H (Ashley-Edison, UK)	151	100	120	96	78	316	undisclosed
CRESCO SAVE 2000 (Cresco Co., Ltd., Thailand)	150	100	80	120	55	300	undisclosed
eSAVER TF 100 (eSaver GmbH, Germany)	145	100	80	150	50	undisclosed	undisclosed
Power Saver SJD 100, (Modern Power Solution, China)	160	110	80	137	30	undisclosed	undisclosed
Z-CEP -100, (Z-CEP EM Malaysia)	undisclosed	undisclosed	undisclosed	undisclosed	undisclosed	undisclosed	undisclosed
ES-25 (ES Electronics, India)	undisclosed	undisclosed	undisclosed	undisclosed	undisclosed	undisclosed	undisclosed