

Energy Control and Observation System

Energy Control and Observation System (ECOS) is designed to suite indoor and outdoor requirement of stabilized power supply. This provides stable output voltage and spike free power supply. The unit has following systems integrated in it to accomplish efficient energy and power management with spike free stable voltage. It selects the healthiest phases and further corrects the output voltage to the specified limits. It keeps on monitoring the input supply voltage and shifts the phases accordingly till the input supply phases are within the upper and lower cut off limits. ECOS keeps monitoring the shelter temperature and power plant battery voltage and in case of EB supply failure and low battery or high temperature condition, it switches on the DG. It may be integrated with central NMS system via GPRS modem and can communicate both way and logs events for further analysis and log data can be retrieved from it via RS 232 port.



Some of the important features:

- Static voltage correction with isolation.
- DG Fuel saving logic
- GPRS based static IP networking with NMS server and both way communication
- Real time clock for logging events and DG rest time setting
- Lightning and surge protection
- RS232 port to communicate with Laptop for onsite parameter changes
- Auto phase selector to select best and healthy phases.
- Measurements of various parameters i.e. voltages, currents, power, DC voltage, temperature and display at front panel

Major Components are:

Static Voltage Correction Unit (SVCU): A thyristor based unit to regulate and stabilize power

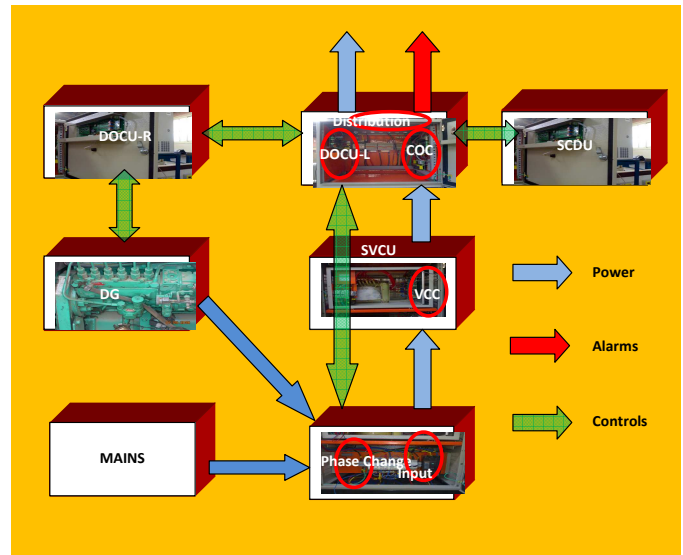
Control and Observation Card (COC): A microprocessor based unit to control entire activities of ECOS

DG Observation and Control Unit (DOCU-R): This unit is placed at DG end and has relays to start and stop DG after getting command from DOCU-L part of COC.

System Display and Control Unit (SDCU): This unit is front panel of ECOS where user can see the displays, change parameters from user friendly interface



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Existing products with TNS:

- 10KVA/15 KVA, 155 V-495 V, 2Phase I/P to 230 V +/- 10%, 1 Phase O/P, single transformer, auto phase selection, 48V DC operated from BTS Power Plant, INDOOR ECOS-IP21
- 10KVA/15 KVA, 240 V-485 V, 2Phase I/P to 230 V +/- 10%, 1 Phase O/P, single transformer, auto phase selection, 48V DC operated from BTS Power Plant, OUT DOOR ECOS- IP43
- 12.5 KVA x 2, 15KVA x 2, 155 V-495 V, 2Phase I/P to 230 V +/- 10%, 1 Phase O/P, two transformers, auto phase selection, 48V DC operated from BTS Power Plant, INDOOR ECOS-IP21
- 1.5 KVA x 2, 15KVA x 2, 240 V-485 V, 2Phase I/P to 230 V +/- 10%, 1 Phase O/P, two transformers, auto phase selection, 48V DC operated from BTS Power Plant, OUTDOOR ECOS-IP43
- EOSs for inputs range 110V – 485V is under development and testing stage.



TNS ECOS is state of art product having latest micro controllers, digital and analogue ICs and compact circuitry. The product is tested in environmental lab under worst conditions to prove its operation stability. A team of innovative ideas are working in R&D to improve the system and cater changing customer requirements. 24x7 customer care ensures timely attendance of faults. Customised ERP system helps logging faults, making analysis, controlling inventory and logging spares used each site. Plant is headed by experience professional and competent work force is deployed for each activity to minimise errors and non conformances.

