

# LAB CONCERN INDIA

Lab Equipments - Educational Software's - Research Lab Equipments

## PRODUCT CATALOGUE 2019-20



### EEE Department

Power Electronics Lab  
Special Machines-Drives Lab  
Equipments Control System Lab  
AC/DC Machines Lab  
Instrumentation Lab  
Power System Lab  
High Voltage Lab

### ECE Department

MP & MC Lab  
Communication Lab equipments  
Optical & Microwave Lab  
RF & Antenna Lab  
VLSI Lab Equipments / Software's  
Circuit Simulation & PCB Design

### Mechanical Department

Manufacturing Technology Lab 1&2  
Fluid Mechanics and Machinery Lab  
Thermal Engineering Lab  
Metrology and Measurements Lab  
Equipments CAD / CAM Lab  
Equipments / Software's  
Mechatronics Lab Equipments  
Refrigeration and Air conditioning  
Heat & Mass Transfer Lab  
PLC lab Equipments  
Robotic Lab Equipments Software's



## COMPANY PROFILE

**LAB CONCERN (INDIA)** started with prime motto to design and develop Hardware and software solutions to keep in tune with the latest developments in the field of technology. We fulfill the requirements of educational institutions imparting technical teaching programmers' in various disciplines across the country and abroad. We design and develop products in par with the developments in the latest technology in varied fields such as Electrical & Electronics and allied areas. We also have a mission and vision to offer best after sales technical and service support with a well trained team headed by a qualified Engineer.

The company has its own R&D wing with more than 5 qualified engineers headed by well qualified and experienced Engineer having more than 15 years of experience in field of Research & development. He was involved in framing concept, design and development of hard core products in the fields of Power Electronics Drives, converters and various levels of inverters.

The company is engaged in design and develop and manufacture the below mentioned educational teaching / training equipments in various fields to fulfill the requirements of the curriculum of all technical Universities and premier institutes such as IIT's, NIT's, Engineering colleges and Polytechnics across the country and abroad.

As part of expansion & strengthening our operations in the market, we have made agreement with the following Multinational Companies for marketing their products in India.

## POWER SYSTEM LAB TRAINERS



µC Type over Voltage Relay

### Electromechanical Relays Test Kit

- Over Current Relay test set up (DMT/IDMT Type)
- Over Voltage Relay test set up (DMT/IDMT Type)
- Under Voltage Relay test set up (DMT/IDMT Type)
- Single Phase Differential Current Relay Test set up (% Biased)
- Three phase Differential Current relay Test set up (% Biased)
- Earth Fault Relay test set up (DMT/IDMT Type)
- Directional Over Current Relay test set up (DMT/IDMT Type)
- Reverse power Relay test set up
- ON Delay & OFF Delay Time delay Relay test set up
- Negative Sequence Current Relay test set up
- Neutral Voltage displacement Relay test setup

### µC Static (Microcontroller) Relays Test Kit

- Over Current Relay test set up (DMT/IDMT Type)
- Over Voltage Relay test set up (DMT/IDMT Type)
- Under Voltage Relay test set up (DMT/IDMT Type)
- Single Phase Differential Current Relay Test set up (% Biased)
- Three phase Differential Current relay Test set up (% Biased)
- Earth Fault Relay test set up (DMT/IDMT Type)
- Directional Over Current Relay test set up (DMT/IDMT Type)
- Reverse power Relay test set up
- ON Delay & OFF Delay Time delay Relay test set up
- Negative Sequence Current Relay test setup

### Protection Panel Simulator

- Motor Protection Relay test Panel / Simulator
- Generator Protection test Panel / Simulator
- Transformer Mertz-prize Protection test Panel / Simulator
- AC Transmission Line Simulator ( ABCD & Power Circle)
- DC Distribution Analyzer (DC Network Analyzer)
- Feeder Protection test Panel / Simulator
- Distance Protection test Panel / Simulator

### Other Relays

- Bucholtz Relay set up
- Transformer Oil Test kit (Oil break down test kit)
- Fault study /Analyzer ( LN ,LL, LLN , Ground Fault)
- Cable Fault Locator Simulator
- FACTS Simulator Trainer (D-STATCOM , SSSC)
- IMPULSE Generator & Measuring Sphere Gap Assembly

### Circuit Breaker Test Kits

- Sf6 -Circuit Breaker Test / Simulator Panel
- Oil Circuit Breaker Test / Simulator Panel (OCB)
- Vacuum Circuit Breaker Test / Simulator Panel (VCB)
- Air Circuit Breaker Test / Simulator Panel (ACB)



Bucholtz Relay Test Kit



Cable Fault Locator



APFC Relay Test



DC Distribution Simulator



Phase Sequence Measurement



µC Relay Test kit



Transmission Line Simulator



E/M type Over Voltage Relay



VCB/OCB Test

VCB

ACB Test Panel





SEMİKRON IGBT POWER MODULE

## SPECIAL MACHINES & DRIVES

### Digital PWM Controllers

dsPIC Microcontroller Based PWM Controller

DSP-2812/28335 Based PWM Controller

FPGA Based PWM Controller

Analogue IC based PWM Controller



DSPIC MICROCONTROLLER, FPGA & DSP PWM CONTROLLER



1 PHASE SCR POWER MODULE

### Power Modules/Converters

- **SEMİKRON** Power Module
- Single phase SCR Power Module
- Three Phase SCR Power Module
- SR-IGBT Power Module
- DC-DC Chopper Power Module
- SCR/TRIAC Project Card
- IGBT/MOSFET Project Card
- **Matrix Converter Power Module**
- **Multilevel Inverter Power Module**
- **LIM-Power Module**
- **DC-DC BUCK-BOOST converter**
- CUK converter
- ZEPIC converter
- ZETA converter
- INTERLEAVED boost converter
- HIGH GAIN boost converter
- SiC Power Module
- T-Type Inverter Power Module



PMSM/BLDC MOTOR COUPLED WITH AC MOTOR LOAD



SR MOTOR POWER MODULE

### Motors

- Single phase Induction Motors
- Three Phase Induction Motors
- PMDC Motors
- DC Shunt Motors
- BLDC Motors
- PMSM/PMSG Motors
- Switched Reluctance Motors
- Linear Induction Motors
- Synchronous Reluctance motor
- Five Phase PMSM/AC motor
- DFIG-SYSTEM/PMSG



AC MOTOR WITH SPRING BALANCE LOAD



CHOPPER POWER MODULE

### Friction /Mechanical Loads Motors

- Spring balance load set up with analogue / Digital load indicator
- Generator coupled load set up
- Eddy Current load set up with analogue / Digital load indicator



PMDc MOTOR & WITH SPRING BALANCE LOAD



STATIC KRAMMER DRIVE



ANPC 5 LEVEL MULTILEVEL INVERTER



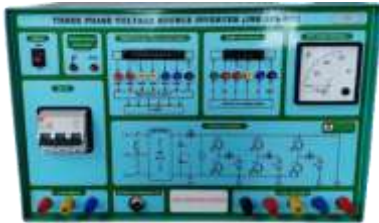
DFIG-WIND EMULATOR

## RENEWABLE ENERGY SOURCE

- DFIG-WIND Emulator
- PMSG Emulator
- PV Grid Tied Inverter with MPPT
- DC Micro Grid
- AC Micro Grid
- Grid Synchronized Inverter for Integrating Three Energy Sources
- Solar based 1ph AC Generation (200W)
- Solar based 3ph AC Generation (200W)
- Solar based 1ph AC Generation (1KW)
- Solar based 3ph AC Generation (1KW)
- Solar based 3ph AC Generation (2KW)
- Solar based 3ph AC Generation (5KW)
- Wind based 1ph AC Generation (200W)
- Wind based 3ph AC Generation (200W)
- Wind based 1ph AC Generation (1KW)
- Wind based 3ph AC Generation (1KW)
- Wind based 3ph AC Generation (2KW)
- Wind based 3ph AC Generation (5KW)
- Hybrid system for 1ph AC Generation 400W
- Hybrid system for 3ph AC Generation 400W
- Hybrid system for 1ph AC Generation (1KW)
- Hybrid system for 3ph AC Generation (1KW)
- Hybrid system for 3ph AC Generation (2KW)
- Hybrid system for 3ph AC Generation (5KW)
- DC-DC converter BUCK-BOOST converter
- CUK converter
- ZEPIC converter
- ZETA converter
- INTERLEAVED boost converter
- HIGH GAIN boost converter
- VSC based FACTS Controller (STATCOM,SSSC and UPFC) in Transmission Line



WIND-SOLAR HYBRID SETUP



3 PH VOLTAGE SOURCE INVERTER



SHUNT ACTIVE POWER FILTER



BLDC-AC MOTOR BACK TO BACK SETUP



CASCADED H-BRIDGE MULTI LEVEL INVERTER



BI-DIRECCIONAL DC-DC CONVERTER



WIND EMULATOR USING PMSG



INTERLEAVED BOOST CONVERTER

**Please Contact:-**  
**LAB CONCERN INDIA**  
 GROUND FLOOR, PLOT NO: 10,  
 NEAR ANNA CHILDRENS PARK,  
 THIRUMALAI NAGAR,  
 GUDUVANCHERY, KANCHIPURAM,  
 CHENNAI, TAMIL NADU-603202  
 Mail:labconcernindia@gmail.com  
 +91-9498357362, 9080350362



SOLAR BASED GRID TIED INVERTER